UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

SCHEDULE 14A
Proxy Statement Pursuant to Section 14(a) of the
Securities Exchange Act of 1934

Filed by the Registrant ☒
Filed by a Party other than the Registrant ☐
Check the appropriate box:

☐ Preliminary Proxy Statement

☐ **Confidential, for Use of the Commission Only (as permitted by Rule 14a-6(e)(2))**

☒ Definitive Proxy Statement

☐ Definitive Additional Materials

☐ Soliciting Material under §240.14a-12

SEMA4 HOLDINGS CORP.
(Name of Registrant as Specified in Its Charter)
(Name of Person(s) Filing Proxy Statement, if other than the Registrant)

Payment of Filing Fee (Check the appropriate box):

☐ No fee required.

☒ Fee paid previously with preliminary materials.

☐ Fee computed on table in exhibit required by Item 25(b) per Exchange Act Rules 14a6(i)(1) and 0-11.

SEMA4 HOLDINGS CORP.

333 Ludlow Street
North Tower, 8th Floor
Stamford, Connecticut

Dear Stockholder of Sema4 Holdings Corp.:

You are cordially invited to attend the special meeting of stockholders (the "*Special Meeting*") of Sema4 Holdings Corp. ("*we*," "*us*", "*our*", "*Sema4*" or the "*Company*") to be held on April 27, 2022 at 9:00 a.m. Eastern time. In light of ongoing developments related to the coronavirus ("*COVID-19*") pandemic, after careful consideration, the Company has determined that the Special Meeting will be a virtual meeting conducted exclusively via live webcast in order to facilitate stockholder attendance and participation while safeguarding the health and safety of our stockholders, directors and management team.

At the Special Meeting, Company stockholders will be asked to, among other things, approve the issuance of shares of the Company's Class A common stock, par value $0.0001 per share (the "*Class A common stock*"), in connection with our acquisition of GeneDx, Inc. ("*GeneDx*"), approve the issuance of shares of Class A common stock in connection with a related private placement financing and appoint two directors to our Board of Directors (the "*Board*"). We believe our acquisition of GeneDx will provide significant value to the Company and our stockholders, as we expect the addition of GeneDx to provide the Company with additional revenue, synergistic product offerings that provide breadth to our overall product portfolio, and additional key personnel with expertise in our sector. **Please note, we are asking stockholders to approve the Stock Consideration Issuance Proposal and the PIPE Investment Proposal (as defined and described in more detail in the accompanying proxy statement) in order to comply with listing rule 5635 of the Nasdaq Stock Market, and we are not asking our stockholders to approve the acquisition or the private placement financing.**

In addition, we are holding the Special Meeting in lieu of our 2022 annual meeting of stockholders and, accordingly, our stockholders will also be considering a proposal to elect three Class I directors for a three-year term to expire at our 2025 annual meeting of stockholders.

Each of these proposals (and the other proposals) is more fully described in the proxy statement, which each stockholder is encouraged to carefully read.

Your vote is very important. Whether or not you plan to attend the Special Meeting, please vote as soon as possible by following the instructions in the proxy statement to make sure that your shares are represented at the Special Meeting. Even if you have voted by proxy, you may still vote during the Special Meeting by visiting www.virtualshareholdermeeting.com/SMFR2022SM with your 12-digit control number assigned by Continental Stock Transfer & Trust Company included on your proxy card or obtained from them via email.

On behalf of our Board, I would like to thank you for your support of Sema4 Holdings Corp. and look forward to a successful completion of the acquisition.

By Order of the Board of Directors,

March 31, 2022

/s/ Eric Schadt
Eric Schadt
Chief Executive Officer

The accompanying proxy statement is dated March 31, 2022 and is expected to be first mailed to Company stockholders on or about March 31, 2022.

NOTICE OF SPECIAL MEETING OF

STOCKHOLDERS OF SEMA4 HOLDINGS CORP.

TO BE HELD ON APRIL 27, 2022

To the Stockholders of Sema4 Holdings Corp.:

NOTICE IS HEREBY GIVEN that a special meeting of the stockholders (the "*Special Meeting"*) of Sema4 Holdings Corp., a Delaware corporation (the "*Company*"), will be held on April 27, 2022 at 9:00 a.m. Eastern time. In light of ongoing developments related to the coronavirus ("*COVID-19*") pandemic, after careful consideration, the Company has determined that the Special Meeting will be a virtual meeting conducted exclusively via live webcast in order to facilitate stockholder attendance and participation while safeguarding the health and safety of our stockholders, directors and management team. You or your proxyholder will be able to attend and vote at the Special Meeting online by visiting www.virtualshareholdermeeting.com/SMFR2022SM and using a control number assigned by Continental Stock Transfer & Trust Company. To receive access to the virtual meeting, registered stockholders and beneficial stockholders (those holding shares through a stock brokerage account or by a bank or other nominee) will need to follow the instructions applicable to them provided in the accompanying proxy statement.

At the Special Meeting (in lieu of the 2022 annual meeting of stockholders), you will be asked to consider and vote on:

1. **Proposal No. 1 - The Stock Consideration Issuance Proposal** - For purposes of complying with applicable Nasdaq Stock Market (the "*Nasdaq*") listing rules (the "*Nasdaq Listing Rules*"), to approve the issuance of the Company's Class A common stock, par value $0.0001 per share (the "*Class A common stock*"), in connection with the Acquisition (as defined in the accompanying proxy statement) and as contemplated by the Agreement and Plan of Merger and Reorganization dated January 14, 2022 (the "*Merger Agreement*"), by and among the Company, GeneDx, Inc. ("*GeneDx*"), a wholly-owned subsidiary of OPKO Health, Inc. ("*OPKO*"), OPKO, Orion Merger Sub I, Inc. ("*Merger Sub I*"), a wholly-owned subsidiary of the Company, Orion Merger Sub II, LLC ("*Merger Sub II*" and together with Merger Sub I, "*Merger Subs*"), a wholly-owned subsidiary of the Company, and GeneDx Holding 2, Inc., which will own 100% of GeneDx at the Effective Time (as defined in the accompanying proxy statement) ("*HoldCo*");

2. **Proposal No. 2 - The PIPE Investment Proposal** - For purposes of complying with the Nasdaq Listing Rules, to approve the issuance of the Class A common stock in connection with the PIPE Investment (as defined in the accompanying proxy statement) and as contemplated by the Subscription Agreements (as defined in the accompanying proxy statement);

3. **Proposal No. 3 - The Special Designee Director Election Proposal** - Assuming the Stock Consideration Issuance Proposal and the Charter Amendment Proposal are approved and adopted and the Acquisition is consummated, to appoint two directors who will become directors of the Company effective upon the consummation of the Acquisition;

4. **Proposal No. 4 - The Charter Amendment Proposal** - To adopt an Amendment (the "*Amendment*") to the Third Amended and Restated Certificate of Incorporation of the Company, in the form attached hereto as Annex B (the "*Charter*"), which increases the number of authorized shares of Class A common stock from 380,000,000 to 1,000,000,000;

5. **Proposal No. 5 - The Class I Director Election Proposal** - To elect three Class I directors of the Company, each to serve a three-year term expiring at the Company's 2025 annual meeting of stockholders and until such director's successor is duly elected and qualified;

6. **Proposal No. 6 - The Auditor Ratification Proposal** - To ratify the appointment of Ernst & Young LLP as the Company's independent registered public accounting firm for the fiscal year ending December 31, 2022; and

7. **Proposal No. 7 - Adjournment Proposal** - To approve, if necessary, the adjournment of the Special Meeting to a later date or dates to permit further solicitation and votes of proxies in the event that there are insufficient votes for, or otherwise in connection with any of the proposals presented at the Special Meeting.

The above proposals are more fully described in the accompanying proxy statement, which also includes, as Annex A, a copy of the Merger Agreement, and as Annex B, a copy of the proposed Amendment to the Charter. **We urge you to carefully read the proxy statement in its entirety, including the Annexes and accompanying financial statements of the Company and GeneDx.**

The record date for the Special Meeting is March 22, 2022. Only stockholders of record at the close of business on the record date may vote at the Special Meeting or any adjournment thereof. A complete list of our stockholders of record entitled to vote at the Special Meeting will be available for ten days before the Special Meeting at our principal executive offices for inspection by stockholders during ordinary business hours for any purpose germane to the Special Meeting and electronically during the Special Meeting at www.virtualshareholdermeeting.com/SMFR2022SM.

A majority of the voting power of all outstanding shares of capital stock of the Company entitled to vote must be present in person or by proxy to constitute a quorum for the transaction of business at the Special Meeting. **The Board recommends that you vote "FOR" each of these proposals.**

By Order of the Board of Directors,

/s/ Jason Ryan
Jason Ryan

Executive Chairman

Stamford, Connecticut

March 31, 2022

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PROXY STATEMENT FOR THE SPECIAL MEETING OF STOCKHOLDERS TO BE HELD ON APRIL 27, 2022

The board of directors (the "*Board*") of Sema4 Holdings Corp., a Delaware corporation ("*we*," "*us*", "*our*", "*Sema4*" or the "*Company*"), is soliciting proxies for use at a special meeting of the stockholders to be held on April 27, 2022 at 9:00 a.m. Eastern time (the "*Special Meeting*").

SUMMARY TERM SHEET

This summary term sheet, together with the sections entitled "*Questions and Answers About the Proposals for Stockholders*" and "*Summary of the Proxy Statement*," summarizes certain information contained in this proxy statement, but does not contain all of the information that is important to you. You should carefully read this entire proxy statement, including the attached Annexes, for a more complete understanding of the matters to be considered at the Special Meeting. In addition, for definitions used commonly throughout this proxy statement, including this summary term sheet, please see the section entitled "*Frequently Used Terms*."

- Sema4 is a patient-centered, health intelligence company with a mission to use artificial intelligence, or AI, and machine learning to enable personalized medicine for all. By leveraging leading data scientists and technology, the Company's platform powers remarkable and unique insights that transform the practice of medicine including how disease is diagnosed, treated, and prevented. For more information about the Company, please see the sections entitled "*Sema4's Business*," "*Sema4's Management's Discussion and Analysis of Financial Condition and Results of Operations" and "Management after the Acquisition*."

- There were 244,727,239 shares of Class A common stock, par value $0.0001 per share ("*Class A common stock*"), of the Company, issued and outstanding as of February 22, 2022. There were no shares of Company preferred stock issued and outstanding as of February 22, 2022. In addition, the Company had 21,994,972 public and private warrants to purchase Class A common stock outstanding as of February 22, 2022.

- GeneDx, Inc. ("*GeneDx*"), a wholly-owned subsidiary of OPKO Health, Inc. ("*OPKO*"), is a patient-centric health information company and leader in delivering clinical genomic answers to an ever-increasing community of patients, families and healthcare providers. With more than 20 years of experience in diagnosing rare disorders and diseases, GeneDx has pioneered panels, exome and whole genome sequencing and has developed a proprietary genomic interpretation and information services platform in support of healthcare partners and patients globally. For more information about GeneDx, please see the sections entitled "*GeneDx's Business,*" "*GeneDx's Management's Discussion and Analysis of Financial Condition and Results of Operations" and "Management after the Acquisition"*.

- On January 14, 2022, the Company, Orion Merger Sub I, Inc. ("*Merger Sub I*"), a wholly-owned subsidiary of the Company, and Orion Merger Sub II, LLC ("*Merger Sub II*" and together with Merger Sub I, "*Merger Subs*"), a wholly-owned subsidiary of the Company, entered into the Agreement and Plan of Merger and Reorganization dated January 14, 2022 (the "*Merger Agreement*"), by and among the Company, GeneDx, OPKO, Merger Subs, and GeneDx Holding 2, Inc., which will own 100% of GeneDx at the Effective Time (as defined herein) ("*HoldCo*"). The transactions contemplated by the Merger Agreement, including the Mergers (as defined below), are referred to herein as the "*Acquisition*".

- Pursuant to the terms of the Merger Agreement, Merger Sub I will merge with and into HoldCo (the "*First Merger*"), with HoldCo being the surviving entity of the First Merger and immediately following the First Merger, HoldCo will merge with and into Merger Sub II, with Merger Sub II being the surviving entity of this second merger (the "*Second Merger*" and, together with the First Merger, the "*Mergers*"). After giving effect to the Acquisition and the other transactions contemplated by the Merger Agreement, GeneDx will have been converted into a Delaware limited liability company and be a wholly-owned indirect subsidiary of the Company. The Mergers are intended to qualify for federal income tax purposes as a tax-free reorganization under the provisions of Section 368(a) of the Internal Revenue Code of 1986, as amended.

- Subject to the terms and conditions of the Merger Agreement, the Company will pay consideration to OPKO for the Acquisition of (i) $150 million in cash at the closing of the Acquisition (the "*Closing*"), subject to certain adjustments as provided in the Merger Agreement (the "*Cash Consideration*"), (ii) 80 million shares of Class A common stock (the "*Stock Consideration*"), to be issued at the Closing and (iii) up to $150 million payable in cash and/or shares following the Closing, if certain revenue-based milestones are achieved for each of the fiscal years ending December 31, 2022 and December 31, 2023 (the "*Milestone Payments*").

- Each Milestone Payment, if and to the extent earned under the terms of the Merger Agreement, will be satisfied through the payment and/or issuance of a combination of cash and shares of Class A common stock (valued at $4.86 per share based on the average of the daily volume average weighted price of the Company's Class A common stock over the period of 30 trading days ended January 12, 2022), with such mix to be determined in the Company's sole discretion. If the Milestone Payment in respect of the fiscal year ending December 31, 2022 becomes payable in full, then the Milestone Payment in respect of the fiscal year ending December 31, 2023 is subject to acceleration upon the occurrence of an Acquirer Change in Control, as further described in the Merger Agreement.

- Concurrently with the execution of the Merger Agreement, the Company entered into subscription agreements (collectively, the "*Subscription Agreements*") with certain institutional investors (collectively, the "*PIPE Investors*"). The PIPE Investors include certain existing equity holders of the Company, some of whom own more than 5% of the outstanding shares of Class A common stock and some of whom are affiliated with certain directors of the Company. Pursuant to, and on the terms and subject to the conditions of, the Subscription Agreements, the Company agreed to issue and sell to the PIPE Investors, in private placements to close substantially concurrently with the Closing, an aggregate of 50 million shares of Class A common stock at $4.00 per share, for an aggregate gross purchase price of $200 million (the "*PIPE Investment*," and together with the Acquisition, the "*Transactions*"), before fees and expenses. The Company expects to fund the payment of the Cash Consideration in part with the net proceeds of the PIPE Investment.

  Based on an aggregate of 242,647,604 shares of Class A common stock outstanding as of December 31, 2021, upon completion of the Transactions, at the Closing, the Company expects that: (i) the Company's stockholders (including any shares owned by PIPE Investors prior to the Transactions) will own approximately 65.1% of the outstanding shares of Class A common stock; (ii) the PIPE Investors (excluding any shares owned by the PIPE Investors prior to the Transactions) will own approximately 13.4% of the outstanding shares of Class A common stock; and (iii) OPKO will own approximately 21.5% of the outstanding shares of Class A common stock.

- The Company's management and Board considered various factors in determining whether to approve the PIPE Investment, Merger Agreement and the Acquisition. For more information about the Company's decision-making process, see the section entitled "*The Acquisition—Sema4 Board of Directors' Reasons for the Acquisition*."

- At the Special Meeting, the stockholders of the Company will be asked to vote on:

  - *Proposal No. 1 - The Stock Consideration Issuance Proposal* - To approve the issuance the Class A common stock in connection with the Acquisition and as contemplated by the Merger Agreement for purposes of complying with the Nasdaq listing rules (the "*Nasdaq Listing Rules*");

  - *Proposal No. 2 - The PIPE Investment Proposal* - To approve the issuance of the Class A common stock in connection with the PIPE Investment and as contemplated by the Subscription Agreements for purposes of complying with the Nasdaq Listing Rules;

  - *Proposal No. 3 - The Special Designee Director Election Proposal* - Assuming the Stock Consideration Issuance Proposal and the Charter Amendment Proposal are approved and adopted and the Acquisition is consummated, to appoint two directors who will become directors of the Company effective upon the consummation of the Acquisition;

- *Proposal No. 4 - The Charter Amendment Proposal* - To adopt an Amendment (the "*Amendment*") to the Third Amended and Restated Certificate of Incorporation of the Company, in the form attached hereto as Annex B (the "*Charter"*), which increases the number of authorized shares of Class A common stock from 380,000,000 to 1,000,000,000;

- *Proposal No. 5 - The Class I Director Election Proposal* - To elect three Class I directors of the Company, each to serve a three-year term expiring at the Company's 2025 annual meeting of stockholders and until such director's successor is duly elected and qualified;

- *Proposal No. 6 - The Auditor Ratification Proposal* - To ratify the appointment of Ernst & Young LLP as the Company's independent registered public accounting firm for the fiscal year ending December 31, 2022; and

- *Proposal No. 7 - Adjournment Proposal* - To approve, if necessary, the adjournment of the Special Meeting to a later date or dates to permit further solicitation and votes of proxies in the event that there are insufficient votes for, or otherwise in connection with any of the proposals presented at the Special Meeting.

- Please see the sections entitled "*Proposal No. 1 - The Stock Consideration Issuance Proposal,*" "*Proposal No. 2 - The PIPE Investment Proposal*," "*Proposal No. 3 - The Special Designee Director Election Proposal*," "*Proposal No. 4 - The Charter Amendment Proposal*," "*Proposal No. 5 - The Class I Director Election Proposal*," "*Proposal No. 6 - The Auditor Ratification Proposal*," and "*Proposal No. 7 - The Adjournment Proposal*." The PIPE Investment Proposal and the Special Designee Director Election Proposal are conditioned upon stockholders' approval of the Stock Consideration Issuance Proposal and the Charter Amendment Proposal.

- In connection with the Acquisition, OPKO and the Company have entered into support agreements (the "*Support Agreements*") with certain stockholders of the Company (including certain stockholders that own more than 5% of the outstanding shares of Class A common stock and certain entities affiliated with the Company's directors), whereby such stockholders have agreed to, among other things, vote at the Special Meeting all of their shares of Class A common stock held of record or beneficially (i) to approve the Stock Consideration Proposal, the PIPE Investment Proposal, the Special Designee Director Election Proposal, the Charter Amendment Proposal and the Adjournment Proposal; (ii) to approve any other proposal included in this proxy statement that is recommended by the Board as necessary to consummate the Transactions; and (iii) against any and all other proposals that could reasonably be expected to delay or impair the ability of the Company to consummate the Transactions.

- The Merger Agreement may be terminated at any time prior to the consummation of the Acquisition upon agreement of the parties thereto, or by the Company or OPKO in specified circumstances. For more information about the termination rights under the Merger Agreement, please see the section entitled "*The Acquisition—The Merger Agreement—Termination*."

- The proposed Acquisition involves numerous risks. For more information about these risks, please see the section entitled "*Risk Factors*."

FREQUENTLY USED TERMS

Unless otherwise stated or unless the context otherwise requires, the terms "*we*," "*us*," "*our*," the "*Company*" and "*Sema4*" refer to Sema4 Holdings Corp., a Delaware corporation. In this proxy statement:

"*Acquisition*" means the transactions contemplated by the Merger Agreement, including the Mergers.

"*Amendment*" means the proposed Amendment to the Charter, a form of which, as amended in accordance with the proposal contained in this proxy statement is attached hereto as Annex B.

"*Board*" or "*Board of Directors*" means the board of directors of the Company.

"*Cash Consideration*" means the $150 million in cash to be paid by the Company to OPKO at the Closing pursuant to the Merger Agreement, subject to certain adjustments as provided in the Merger Agreement.

"*Class A common stock*" means the shares of Class A common stock, par value $0.0001 per share, of the Company.

"*Closing*" means the closing of the Acquisition.

"*Code*" means the Internal Revenue Code of 1986, as amended.

"*Charter*" means our Third Amended and Restated Certificate of Incorporation, dated as of July 22, 2021.

"*D.F. King*" means D.F. King & Co., Inc., proxy solicitor to the Company.

"*DGCL*" means the General Corporation Law of the State of Delaware.

"*Earn-Out Shares*" means the shares of Class A common stock issuable pursuant to the Prior Merger Agreement upon the achievement of certain vesting conditions.

"*Effective Time*" means the time the First Merger becomes effective.

"*ESPP*" means the Sema4 Holdings Corp. 2021 Employee Stock Purchase Plan.

"*Exchange Act*" means the Securities Exchange Act of 1934, as amended.

"*First Merger*" means the merger of Merger Sub I with and into HoldCo, with HoldCo as the surviving corporation in the First Merger.

"*GAAP*" means United States generally accepted accounting principles.

"*GeneDx*" means GeneDx, Inc., a New Jersey corporation.

"*GeneDx Group*" means (x) GeneDx and its subsidiaries as of the date of the Merger Agreement and (y) immediately following consummation of the Pre-Closing Restructuring, HoldCo and its direct subsidiary, GeneDx Delaware LLC, together with the subsidiaries of GeneDx Delaware LLC immediately following the Pre-Closing Restructuring.

"*GeneDx Parties*" means (x) GeneDx and HoldCo as of the date of the Merger Agreement until immediately prior to consummation of the Pre-Closing Restructuring and (y) HoldCo and GeneDx Delaware LLC following consummation of the Pre-Closing Restructuring.

"*HSR Act*" means the Hart-Scott-Rodino Antitrust Improvements Act of 1976, as amended.

"*HoldCo*" means GeneDx Holding 2, Inc., which will own 100% of GeneDx immediately following the Effective Time.

"*Investment Company Act*" means the Investment Company Act of 1940, as amended.

"*2021 EIP"* means the Sema4 Holdings Corp. 2021 Equity Incentive Plan.

"*JOBS Act*" means the Jumpstart Our Business Startups Act of 2012.

"leader," "leading," "industry-leading," and other similar statements included in this proxy statement and, in particular, in the sections entitled "Summary Term Sheet," "Summary of the Proxy Statement," "The Acquisition," "Sema4's Business," "Sema4's Management's Discussion and Analysis of Financial Condition and Results of Operations," "GeneDx's Business" and "GeneDx's Management's Discussion and Analysis of Financial Condition and Results of Operations" regarding (i) Sema4 and its products and services are based on Sema4's belief in its competitive advantages in data, analytics and patient and provider engagement, in particular with respect to Sema4's diagnostic solutions and genomic platform and (ii) GeneDx and its products and services are based on Sema4's belief in GeneDx's competitive advantages in the rare disease diagnostics market. Sema4 bases its beliefs regarding these matters, including its estimates of its and GeneDx's respective market share in its sector, on Sema4's collective institutional knowledge and expertise regarding its and GeneDx's industries, markets and technology, which are based on, among other things, publicly available information, reports of government agencies, RFPs and the results of contract bids and awards, industry research firms, and information supplied to Sema4 by GeneDx, as well as Sema4's internal research, calculations and assumptions based on its analysis of such information and data. Sema4 believes these assertions to be reasonable and accurate as of the date of this proxy statement.

"*Lock-Up Holder*" means certain stockholders of OPKO who entered into the Shareholder Agreements with Sema4.

"*Merger Agreement*" means that certain Agreement and Plan of Merger and Reorganization, dated as of January 14, 2022, by and among the Company, Merger Sub I, Merger Sub II, GeneDx, OPKO, and Holdco.

"*Merger Consideration*" means the Cash Consideration and the Stock Consideration.

"*Merger Sub I*" means Orion Merger Sub I, Inc.

"*Merger Sub II*" means Orion Merger Sub II, LLC.

"*Merger Subs*" means Merger Sub I and Merger Sub II.

"*Mergers*" means the First Merger and the Second Merger.

"*Milestone Payments*" means the up to $150 million payable by the Company to OPKO pursuant to the Merger Agreement following the Closing, if certain revenue-based milestones are achieved for each of the fiscal years ending December 31, 2022 and December 31, 2023. Each Milestone Payment, if and to the extent earned under the terms of the Merger Agreement, will be satisfied through the payment and/or issuance of a combination of cash and shares of Class A common stock (valued at $4.86 per share based on the average of the daily volume average weighted price of the Company's Class A common stock over the period of 30 trading days ended January 12, 2022), with such mix to be determined in the Company's sole discretion.

"*Nasdaq*" means the Nasdaq Stock Market.

"*OPKO*" means OPKO Health, Inc.

"*PIPE Investment*" means the private placement pursuant to which the PIPE Investors have collectively subscribed for the PIPE Shares at $4.00 per share, for an aggregate purchase price of $200 million.

"*PIPE Investors*" means certain institutional investors that have committed to invest in the PIPE Investment pursuant to, and on the terms and subject to the conditions of, the Subscription Agreements.

"*PIPE Shares*" means the 50 million shares of Class A common stock to be issued in the PIPE Investment.

"*Pre-Closing Restructuring*" has the meaning ascribed to it in the Merger Agreement.

"*Prior Merger Agreement*" means that certain Agreement and Plan of Merger, dated as of February 9, 2021, as amended, by and among CM Life Sciences, Inc., S-IV Sub, Inc. and Mount Sinai Genomics, Inc. d/b/a Sema4.

"*Related Agreements*" means, collectively, the Shareholder Agreements, the Subscription Agreements and the Support Agreements.

"*RSUs*" means restricted stock units granted under the 2017 EIP, 2021 EIP or pursuant to the Prior Merger Agreement.

"*SEC*" means the United States Securities and Exchange Commission.

"*Second Merger*" means the merger of HoldCo, as the surviving corporation in the First Merger, with and into Merger Sub II, with Merger Sub II as the surviving company.

"*Securities Act*" means the Securities Act of 1933, as amended.

"*Shareholder Agreements*" means, collectively, those certain shareholder agreements entered into on January 14, 2022, between the Company and OPKO and the Lock-Up Holders, pursuant to which OPKO and the Lock-Up Holders have agreed, among other things, to certain transfer restrictions in respect of the shares of Class A common stock to be issued pursuant to the Merger Agreement, which agreement is substantially in the form attached as Exhibit A to the Merger Agreement in Annex A hereto.

"*SOX*" means the Sarbanes-Oxley Act of 2002.

"*Special Meeting*" means the special meeting of the stockholders of the Company (in lieu of the 2022 annual meeting of stockholders) that is the subject of this proxy statement.

"*Stock Consideration*" means the 80 million shares of Class A common stock to be issued by the Company to OPKO at the Closing pursuant to the Merger Agreement.

"*stockholders*" means holders of shares of the Company's Class A common stock.

"*Subscription Agreements*" means, collectively, those certain subscription agreements entered into on January 14, 2022, between the Company and the PIPE Investors, pursuant to which such investors have agreed to purchase the PIPE Shares in the PIPE Investment on the terms and subject to the conditions of the Subscription Agreements, and substantially in the form attached hereto as Annex D.

"*Support Agreements*" means, collectively, those certain support agreements entered into on January 14, 2022, between OPKO, the Company and certain stockholders of the Company, pursuant to which stockholders have agreed to, among other things, vote all of their shares of Class A common stock held of record or beneficially at the Special Meeting (i) to approve the Stock Consideration Proposal, the PIPE Investment Proposal, the Special Designee Director Election Proposal, the Charter Amendment Proposal and the Adjournment Proposal, and substantially in the form attached hereto as Exhibit B to the Merger Agreement in Annex A.

"*Transfer Agent*" means Continental Stock Transfer & Trust Company.

QUESTIONS AND ANSWERS ABOUT THE PROPOSALS FOR STOCKHOLDERS

The questions and answers below highlight only selected information from this proxy statement and only briefly address some commonly asked questions about the proposals to be presented at the Special Meeting, including with respect to the Stock Consideration Issuance Proposal. The following questions and answers do not include all the information that is important to our stockholders. We urge stockholders to carefully read this entire proxy statement, including the Annexes and the other documents referred to herein, to fully understand the proposals and the voting procedures for the Special Meeting, which will be held on April 27, 2022 at 9:00 a.m. Eastern time.

Q: Why am I receiving this proxy statement?

A: Our stockholders are being asked to consider and vote upon the proposals described in this proxy statement.

This proxy statement and its Annexes contain important information about the proposals and the other matters to be acted upon at the Special Meeting. You should read this proxy statement and its Annexes carefully and in their entirety.

Your vote is important. You are encouraged to submit your proxy as soon as possible after carefully reviewing this proxy statement and its Annexes.

Q: When is the Special Meeting?

A: The Special Meeting will be held on April 27, 2022 at 9:00 a.m. Eastern time. In light of ongoing developments related to the coronavirus ("*COVID-19*") pandemic, after careful consideration, the Company has determined that the Special Meeting will be a virtual meeting conducted exclusively via live webcast in order to facilitate stockholder attendance and participation while safeguarding the health and safety of our stockholders, directors and management team. You or your proxyholder will be able to attend the virtual Special Meeting online, vote, view the list of stockholders entitled to vote at the Special Meeting and submit questions during the Special Meeting by visiting www.virtualshareholdermeeting.com/SMFR2022SM and using a control number assigned by Continental Stock Transfer & Trust Company. To receive access to the virtual meeting, registered stockholders and beneficial stockholders (those holding shares through a stock brokerage account or by a bank or other nominee) will need to follow the instructions applicable to them provided in this proxy statement. Because the Special Meeting is completely virtual and being conducted via live webcast, stockholders will not be able to attend the meeting in person.

Q: How can I attend and vote at the Special Meeting?

A:

- If your shares are registered in your name with Continental Stock Transfer & Trust Company and you wish to attend the Special Meeting, go to www.virtualshareholdermeeting.com/SMFR2022SM, and enter the 12-digit control number included on your proxy card or notice of the meeting.
- Beneficial stockholders (those holding shares through a stock brokerage account or by a bank or other nominee) who wish to attend the Special Meeting must obtain a legal proxy by contacting their account representative at the bank, broker, or other nominee that holds their shares and e-mail a copy (a legible photograph is sufficient) of their legal proxy to proxy@continentalstock.com. Beneficial stockholders who e-mail a valid legal proxy will be issued a 12-digit meeting control number that will allow them to attend and participate in the Special Meeting. After contacting Continental Stock Transfer & Trust Company, a beneficial holder will receive an e-mail prior to the meeting with a link and instructions for entering the virtual meeting. Beneficial stockholders should contact Continental Stock Transfer & Trust Company at least five (5) business days prior to the meeting date in order to ensure access.

Q: What are the specific proposals on which I am being asked to vote on at the Special Meeting?

A: You are being asked to consider and vote on proposals to:

1. **Proposal No. 1 - The Stock Consideration Issuance Proposal** - To approve the issuance of the Company's Class A common stock in connection with the Acquisition and as contemplated by the Merger Agreement for purposes of complying with applicable Nasdaq Listing Rules;

2. **Proposal No. 2 - The PIPE Investment Proposal** - To approve the issuance of the Class A common stock in connection with the PIPE Investment and as contemplated by the Subscription Agreements for purposes of complying with the Nasdaq Listing Rules;

3. **Proposal No. 3 - The Special Designee Director Election Proposal** - Assuming the Stock Consideration Issuance Proposal and the Charter Amendment Proposal are approved and adopted and the Acquisition is consummated, to appoint two directors who will become directors of the Company effective upon the consummation of the Acquisition;

4. **Proposal No. 4 - The Charter Amendment Proposal** - To adopt the Amendment to the Charter, in the form attached hereto as Annex B, which increases the number of authorized shares of Class A common stock from 380,000,000 to 1,000,000,000;

5. **Proposal No. 5 - The Class I Director Election Proposal** - To elect three Class I directors of the Company, each to serve a three-year term expiring at the Company's 2025 annual meeting of stockholders and until such director's successor is duly elected and qualified;

6. **Proposal No. 6 - The Auditor Ratification Proposal** - To ratify the appointment of Ernst & Young LLP as the Company's independent registered public accounting firm for the fiscal year ending December 31, 2022; and

7. **Proposal No. 7 - Adjournment Proposal** - To approve, if necessary, the adjournment of the Special Meeting to a later date or dates to permit further solicitation and votes of proxies in the event that there are insufficient votes for, or otherwise in connection with, any of the proposals presented at the Special Meeting.

Q: How does the Board recommend that I vote?

A: The Board recommends that the stockholders of the Company vote:

- "FOR" the Stock Consideration Issuance Proposal;
- "FOR" the PIPE Investment Proposal;
- "FOR" each of the Special Designee Directors;
- "FOR" the Charter Amendment Proposal;
- "FOR" each of the Class I director nominees;
- "FOR" the Auditor Ratification Proposal; and
- "FOR" the Adjournment Proposal

Q: Are certain of the proposals conditioned on one another?

A: Yes. Under the Merger Agreement, the approval of the Stock Consideration Issuance Proposal and the Charter Amendment Proposal presented at the Special Meeting is a condition to the consummation of the Acquisition, and the PIPE Investment Proposal and the Special Designee Director Election Proposal are conditioned upon stockholders' approval of the Stock Consideration Issuance Proposal and the Charter Amendment Proposal.

It is important for you to note that in the event that the Stock Consideration Issuance Proposal or the Charter Amendment Proposal do not receive the requisite vote for approval (including following any adjournments), we will not consummate the Acquisition.

Q: What will happen in the Acquisition?

A: Pursuant to the Merger Agreement, the Company's wholly owned subsidiary, Merger Sub I, will merge with and into HoldCo, with Holdco as the surviving entity. HoldCo will then immediately merge into the Company's wholly owned subsidiary, Merger Sub II, with Merger Sub II surviving the merger as a wholly owned subsidiary of the Company. The Company will pay consideration to OPKO for the Acquisition of (i) $150 million in cash at the Closing, subject to certain adjustments as provided in the Merger Agreement, (ii) 80 million shares of Class A common stock, to be issued at the Closing and (iii) up to $150 million payable in cash and/or shares following the Closing, if certain revenue-based milestones are achieved for each of the fiscal years ending December 31, 2022 and December 31, 2023.

Q: How has the announcement of the Acquisition affected the trading price of the Company's Class A common stock and warrants?

A: On January 14, 2022, the trading date before the public announcement of the Acquisition, the Company's Class A common stock and public warrants closed at $4.04 and $0.75, respectively. On March 30, 2022 the trading date immediately prior to the date of this proxy statement, the Company's Class A common stock and public warrants closed at $3.12 and $0.69, respectively.

Q: How will the Acquisition and the PIPE Investment impact the shares of the Company's Class A common stock outstanding after the Transactions?

A: At the Closing, the issuance of the Stock Consideration and the PIPE Shares will increase the amount of Class A common stock issued and outstanding will increase by 130,000,000 shares of Class A common stock. Additional shares of Class A common stock may also be issued in the future pursuant to the Merger Agreement in connection with the Milestone Payments. The issuance and sale of such shares in the public market could adversely impact the market price of our Class A common stock, even if our business is doing well.

Q: Will the management of the Company change in the Acquisition?

A: We anticipate that all of the executive officers of GeneDx will become employees of the Company following the Acquisition. In addition, pursuant to the Merger Agreement, Katherine Stueland, the current Chief Executive Officer of GeneDx, will become co-Chief Executive Officer of the Company. In accordance with the terms of the Merger Agreement and following the Closing, the Specified Designees (as defined in the Merger Agreement) will join our Board. Please see the sections entitled "*Management After the Acquisition*" and "*The Acquisition*" for additional information.

Q: What equity stake will current stockholders of the Company, the PIPE Investors and OPKO hold in the company after the Closing?

A: Based on an aggregate of 242,647,604 shares of Class A common stock outstanding as of December 31, 2021, upon completion of the Transactions, at the Closing, the Company expects that: (i) the Company's stockholders (including any shares owned by PIPE Investors prior to the Transactions) will own approximately 65.1% of the outstanding shares of Class A common stock; (ii) the PIPE Investors (excluding any shares owned by the PIPE Investors prior to the Transactions) will own approximately 13.4% of the outstanding shares of Class A common stock; and (iii) OPKO will own approximately 21.5% of the outstanding shares of Class A common stock.

Q: Will the Company obtain new financing in connection with the Acquisition?

A: Yes. The PIPE Investors have agreed to purchase 50 million shares of Class A common stock in the aggregate, for $200 million of gross proceeds, pursuant to the Subscription Agreements. Consummation of the PIPE Investment pursuant to the Subscription Agreements is contingent upon, among other things, stockholder approval

of the PIPE Investment Proposal and the Closing of the Acquisition being scheduled to occur substantially concurrently with or immediately following the closing of the PIPE Investment. However, consummation of the PIPE Investment is not a condition to the Closing of the Acquisition. See "*The Acquisition—Related Agreements—Subscription Agreements*." The Company does not currently anticipate obtaining any new debt financing to fund the Acquisition.

Q: What conditions must be satisfied to complete the Acquisition?

A: There are a number of closing conditions in the Merger Agreement, including the approval by the stockholders of the Company of the Stock Consideration Issuance Proposal and the Charter Amendment Proposal. For a summary of the conditions that must be satisfied or waived prior to completion of the Acquisition, please see the section entitled "*The Acquisition—The Merger Agreement*."

Q: Are there any arrangements to help ensure that the Company will have sufficient funds to pay the Cash Consideration?

A: The Company expects to fund the payment of the Cash Consideration with the net proceeds of the PIPE Investment and cash on hand.

In addition, the Company will use the net proceeds of the PIPE Investment and cash on hand to pay the Cash Consideration and certain fees, costs and expenses (including regulatory fees, legal fees, accounting fees, printer fees and other professional fees) that were incurred by the Company and other parties to the Merger Agreement in connection with the transactions contemplated by the Merger Agreement, including the Acquisition, and pursuant to the terms of the Merger Agreement. The Company additionally has cash and cash equivalents of $400.6 million as of December 31, 2021 and $125.0 million of available credit under its existing senior secured credit facility.

Q: Why is the Company proposing the Stock Consideration Issuance Proposal?

A: The approval of the Stock Consideration Issuance Proposal is required under Nasdaq Listing Rules. In addition, the approval of the Stock Consideration Issuance Proposal is a condition to the Closing under the Merger Agreement.

Pursuant to Nasdaq Listing Rule 5635(a), stockholder approval is required prior to the Company's issuance of Class A common stock or other securities convertible into or exercisable for Class A common stock, in connection with the acquisition of the stock or assets of another company and (i) the Class A common stock has, or will have upon issuance, voting power equal to or in excess of 20% of the voting power outstanding before the issuance of such securities, or (ii) the number of shares of Class A common stock to be issued is or will be equal to or in excess of 20% of the number of shares of Class A common stock outstanding before the issuance of such securities.

In connection with the Acquisition, we have agreed to issue 80 million shares of Class A common stock in respect of with the payment of the Stock Consideration. We may also issue, in our sole discretion, a maximum of up to approximately 30.9 million shares of Class A common stock in connection with the potential Milestone Payments. We also expect to issue an aggregate of 50 million shares of Class A common stock at the Closing in connection with the PIPE Investment, which is related to the Acquisition. Because we may issue 20% or more of our outstanding Class A common stock when considering together the Stock Consideration, the PIPE Investment and the potential Milestone Payments, we are required to obtain stockholder approval of such issuances pursuant to Nasdaq Listing Rule 5635(a). For more information, please see the section entitled "*Proposal No. 1 - The Stock Consideration Issuance Proposal*."

Q: Why is the Company proposing the PIPE Investment Proposal?

A: We are also proposing the PIPE Investment Proposal in order to comply with Nasdaq Listing Rule 5635(a), as the issuance of the PIPE Shares is occurring in connection with the Acquisition.

As described above, because we may issue 20% or more of our outstanding Class A common stock when considering together the Stock Consideration, the PIPE Investment and the potential Milestone Payments, we are

required to obtain stockholder approval of such issuances pursuant to Nasdaq Listing Rule 5635(a). For more information, please see the section entitled "*Proposal No. 2 - The PIPE Investment Proposal*."

Q: Why is the Company proposing the Special Designee Director Election Proposal?

A: Assuming the Stock Consideration Issuance Proposal and the Charter Amendment Proposal are approved and adopted and the Acquisition is consummated, our stockholders are being asked to appoint two directors, Katherine Stueland and Richard C. Pfenniger, Jr., who will become directors of the Company effective upon consummation of the Acquisition. The Company believes it is in the best interests of stockholders to allow stockholders to vote upon the election of newly appointed directors. In addition, the inclusion of this proposal is a requirement under the Merger Agreement. Please see the section entitled "*Proposal No. 3 - The Special Designee Director Election Proposal*" for additional information.

Q: Why is the Company proposing the Charter Amendment Proposal?

A: The Amendment that we are asking our stockholders to adopt in connection with the other proposals provides for an amendment to our Charter to increase the number of authorized shares of our Class A common stock from 380,000,000 to 1,000,000,000. Pursuant to Delaware law, we are required to submit the Charter Amendment Proposal to the Company's stockholders for adoption. In addition, such approval is also a condition to the Closing under the Merger Agreement. For additional information please see the section entitled "*Proposal No. 4 - The Charter Amendment Proposal*."

Q: Why is the Company proposing the Class I Director Election Proposal?

A: We are holding the Special Meeting in lieu of our 2022 annual meeting of stockholders. Pursuant to our Charter, the initial term of office of the Company's Class I directors would otherwise expire at our 2022 annual meeting of stockholders. Accordingly, our stockholders are also being asked to elect three Class I directors to serve on the Board each for a three-year term or until such director's successor has been duly elected and qualified, or until such director's earlier death, resignation, retirement or removal. Please see the section entitled "*Proposal No. 5 - The Class I Director Election Proposal*" for additional information.

Q: Why is the Company proposing the Auditor Ratification Proposal?

A: Neither our bylaws or other governing documents or law require stockholder ratification of the appointment of Ernst & Young LLP, as the Company's independent registered public accounting firm. However, the Board is submitting the appointment of Ernst & Young LLP to the stockholders for ratification as a matter of good corporate practice. If the stockholders fail to ratify the selection, the Company's audit committee will reconsider whether or not to continue to retain that firm. Even if the selection is ratified, the audit committee in its discretion may direct the appointment of a different independent registered public accounting firm at any time during the year if it determines that such a change would be in the best interests of the Company and its stockholders. Please see the section entitled "*Proposal No. 6 - The Auditor Ratification Proposal*" for additional information.

Q: Why is the Company proposing the Adjournment Proposal?

A: We are proposing the Adjournment Proposal to allow our Board to adjourn the Special Meeting to a later date or dates to permit further solicitation of proxies in the event that there are insufficient votes for, or otherwise in connection with the approval of any of the proposals presented at the Special Meeting. Please see the section entitled "*Proposal No. 7 - The Adjournment Proposal*" for additional information.

Q: What happens if I sell my shares of Class A common stock before the Special Meeting?

A: The record date for the Special Meeting is earlier than the date that the Acquisition is expected to be completed. If you transfer your shares of Class A common stock after the record date, but before the Special Meeting, unless the transferee obtains from you a proxy to vote those shares, you will retain your right to vote at the Special Meeting. If you transfer your shares of Class A common stock prior to the record date, you will have no right to vote those shares at the Special Meeting.

Q: What constitutes a quorum at the Special Meeting?

A: A majority of the voting power of all outstanding shares of the capital stock of the Company entitled to vote must be present in person or by proxy (which would include presence at the virtual Special Meeting) to constitute a quorum for the transaction of business at the Special Meeting. Abstentions and broker non-votes will be counted as present for the purpose of determining a quorum. In the absence of a quorum, the chairman of the Special Meeting has power to adjourn the Special Meeting. As of the record date for the Special Meeting, a majority of the outstanding shares of the Company representing a majority of voting power would be required to achieve a quorum.

Q: What vote is required to approve the proposals presented at the Special Meeting?

A: ***Proposal No. 1 - The Stock Consideration Issuance Proposal:*** The approval of the Stock Consideration Issuance Proposal requires the affirmative vote of a majority of the votes cast by the stockholders present in person or represented by proxy and entitled to vote at the Special Meeting. Accordingly, under Delaware law, a Company stockholder's failure to vote, as well as an abstention from voting and a broker non-vote, will have no effect on the Stock Consideration Issuance Proposal. Abstentions and broker non-votes will be counted in connection with the determination of whether a valid quorum is established.

Proposal No. 2 - The PIPE Investment Proposal: The approval of the PIPE Investment Proposal requires the affirmative vote of a majority of the votes cast by the stockholders present in person or represented by proxy and entitled to vote at the Special Meeting. Accordingly, under Delaware law, a Company stockholder's failure to vote, as well as an abstention and broker non-vote, will have no effect on the PIPE Investment Proposal. Abstentions and broker non-votes will be counted in connection with the determination of whether a valid quorum is established.

Proposal No. 3 - The Special Designee Director Election Proposal - The approval of the Special Designee Director Election Proposal requires the affirmative vote of a majority of the votes cast by the stockholders present in person or represented by proxy and entitled to vote at the Special Meeting. Accordingly, under Delaware law, a Company stockholder's failure to vote, as well as an abstention and broker non-vote, will have no effect on the Special Designee Director Election Proposal. Abstentions and broker non-votes will be counted in connection with the determination of whether a valid quorum is established.

Proposal No. 4 - The Charter Amendment Proposal: The approval of the Charter Amendment Proposal requires the affirmative vote of holders of a majority of our outstanding shares of Class A common stock entitled to vote at the Special Meeting. Accordingly, a Company stockholder's failure to vote, as well as an abstention from voting and a broker non-vote, will have the same effect as a vote "**AGAINST**" such Charter Amendment Proposal.

Proposal No. 5 - The Class I Director Election Proposal - The approval of the Class I Director Election Proposal requires the affirmative vote of a majority of the votes cast by the stockholders present in person or represented by proxy and entitled to vote at the Special Meeting. Accordingly, under Delaware law, a Company stockholder's failure to vote, as well as an abstention and broker non-vote, will have no effect on the Class I Director Election Proposal. Abstentions and broker non-votes will be counted in connection with the determination of whether a valid quorum is established.

Proposal No. 6 - The Auditor Ratification Proposal - The approval of the Auditor Ratification Proposal requires the affirmative vote of a majority of the votes cast by the stockholders present in person or represented by proxy and entitled to vote at the Special Meeting. Accordingly, under Delaware law, a Company stockholder's failure to vote, as well as an abstention and broker non-vote, will have no effect on the Auditor Ratification Proposal. Abstentions and broker non-votes will be counted in connection with the determination of whether a valid quorum is established.

Proposal No. 7 - The Adjournment Proposal: The approval of the Adjournment Proposal requires the affirmative vote of a majority of the votes cast by the stockholders present in person or represented by proxy and entitled to vote at the Special Meeting. Accordingly, a Company stockholder's failure to vote, as well as an abstention from voting and a broker non-vote, will have no effect on the Adjournment Proposal. Abstentions and broker non-votes will be counted in connection with the determination of whether a valid quorum is established.

Q: How many votes do I have at the Special Meeting?

A: Our stockholders are entitled to one vote on each proposal presented at the Special Meeting for each share of Class A common stock held of record as of March 22, 2022 , the record date for the Special Meeting. As of the close of business on the record date, there were 245,016,425 outstanding shares of our Class A common stock.

Q: How do I vote?

A: If you were a stockholder of record on March 22, 2022, you may vote by granting a proxy. Specifically, you may vote:

- By Mail - You may vote by mail by completing, signing, dating and returning the enclosed proxy card in the postage-paid envelope provided. **Votes submitted by mail must be received by 11:59 pm Eastern time on April 25, 2022.**
- By Internet - You may vote through the Internet using the procedures and instructions described on the proxy card.
- You should sign your name exactly as it appears on the proxy card. If you are signing in a representative capacity (for example, as guardian, executor, trustee, custodian, attorney or officer of a corporation), indicate your name and title or capacity.
- We encourage you to sign and return the proxy card even if you plan to attend the Special Meeting virtually so that your shares will be voted if you are unable to attend the Special Meeting.
- If you receive more than one proxy card, it is an indication that your shares are held in multiple accounts. Please sign and return all proxy cards to ensure that all of your shares are voted.
- Voting at the Special Meeting - We will be hosting the Special Meeting via live webcast. If you attend the Special Meeting, you may submit your vote at the Special Meeting online at www.virtualshareholdermeeting.com/SMFR2022SM, in which case any votes that you previously submitted will be superseded by the vote that you cast at the Special Meeting.

If you hold your shares in street name, you must submit voting instructions to your broker, bank or other nominee. In most instances, you will be able to do this over the Internet, by telephone or by mail. Please refer to information from your bank, broker, or other nominee on how to submit voting instructions.

Q: What will happen if I abstain from voting or fail to vote at the Special Meeting?

A: At the Special Meeting, we will count a properly executed proxy marked "**ABSTAIN**" with respect to a particular proposal as present for purposes of determining whether a quorum is present. For purposes of approval, a failure to vote or an abstention will have no effect on the Stock Consideration Issuance Proposal, the PIPE Investment Proposal, the Special Designee Director Election Proposal, the Class I Director Election Proposal, the Auditor Ratification Proposal and the Adjournment Proposal. However, an abstention or failure to vote will have the same effect as a vote "**AGAINST**" the Charter Amendment Proposal.

Q: What will happen if I sign and return my proxy card without indicating how I wish to vote?

A: Signed and dated proxies received by us without an indication of how the stockholder intends to vote on a proposal will be voted "**FOR**" each proposal presented to the stockholders. The proxyholders may use their discretion to vote on any other matters which properly come before the Special Meeting.

Q: If I am not going to attend the Special Meeting, should I return my proxy card instead?

A: Yes. Whether you plan to attend the Special Meeting or not, please read the enclosed proxy statement carefully. If you are a stockholder of record of our Class A common stock as of the close of business on the record date, you can vote by proxy by mail or through the Internet by following the instructions provided in the enclosed proxy card. Please note that if you are a beneficial owner of our Class A common stock, you may vote by submitting

voting instructions to your broker, bank or nominee, or otherwise by following instructions provided by your broker, bank or nominee. Telephone and internet voting may be available to beneficial owners. Please refer to the vote instruction form provided by your broker, bank or nominee.

Q: What is the difference between a stockholder of record and a "street name" holder?

A: If your shares are registered directly in your name with the Company's transfer agent, Continental Stock Transfer & Trust Company, you are considered the stockholder of record with respect to those shares, and access to proxy materials is being provided directly to you. If your shares are held in a stock brokerage account or by a bank or other nominee, then you are considered the beneficial owner of those shares, which are considered to be held in "street name." Access to proxy materials is being provided to you by your broker, bank or other nominee who is considered the stockholder of record with respect to those shares.

Q: If my shares are held in "street name," will my broker, bank or nominee automatically vote my shares for me?

A: No. Under the rules of various national and regional securities exchanges, your broker, bank, or nominee cannot vote your shares with respect to non-routine matters unless you provide instructions on how to vote in accordance with the information and procedures provided to you by your broker, bank, or nominee.

We believe that all of the proposals presented to the stockholders at this Special Meeting will be considered non-routine, other than the Auditor Ratification Proposal, and, therefore, your broker, bank, or nominee **cannot vote your shares without your instruction** on any of the proposals presented at the Special Meeting other than the Auditor Ratification Proposal. Broker non-votes will be counted for the purposes of determining the existence of a quorum but they will not be counted for purposes of determining the number of votes cast at the Special Meeting. Except with respect to the Auditor Ratification Proposal, your bank, broker, or other nominee can vote your shares only if you provide instructions on how to vote. You should instruct your broker to vote your shares in accordance with directions you provide.

Q: How will a broker non-vote impact the results of each proposal?

A: Broker non-votes will count as a vote "**AGAINST**" the Charter Amendment Proposal but will not have any effect on the outcome of any other proposals.

Q: May I change my vote after I have returned my signed proxy card or voting instruction form?

A: Yes. If you are a holder of record of our Class A common stock as of the close of business on the Record Date, whether you vote by mail, through the Internet or by telephone you can change or revoke your proxy before it is voted at the Special Meeting by:

- delivering a signed written notice of revocation to our Secretary at Sema4 Holdings Corp., 333 Ludlow Street, North Tower, 8th Floor, Stamford, Connecticut 06902, bearing a date later than the date of the proxy, stating that the proxy is revoked;
- signing and delivering a new proxy, relating to the same shares and bearing a later date;
- submitting another proxy over the Internet prior to 11:59 p.m., Eastern Time on April 26, 2022; or
- attending and voting at the Special Meeting and voting, although attendance at the Special Meeting will not, by itself, revoke a proxy.

If you are a beneficial owner of our Class A common stock as of the close of business on the record date, you must follow the instructions of your broker, bank or other nominee to revoke or change your voting instructions.

Q: What should I do if I receive more than one set of voting materials?

A: You may receive more than one set of voting materials, including multiple copies of this proxy statement and multiple proxy cards or voting instruction cards. For example, if you hold your shares in more than one brokerage

account, you will receive a separate voting instruction card for each brokerage account in which you hold shares. If you are a holder of record and your shares are registered in more than one name, you will receive more than one proxy card. Please complete, sign, date and return each proxy card and voting instruction card that you receive in order to cast your vote with respect to all of your shares.

Q: How will the Company's directors and officers vote?

A: The Company's directors and officers will vote affirmatively in favor of each of the proposals.

Q: Do I have appraisal rights if I object to the proposed Acquisition?

A: No. Appraisal rights are not available to holders of our Class A common stock in connection with the Acquisition.

Q: What happens if the Stock Consideration Issuance Proposal or the Charter Amendment Proposal is not approved?

A: If the Stock Consideration Issuance Proposal and the Charter Amendment Proposal are not approved (including following any adjournments) and we do not consummate the Acquisition by August 14, 2022 (which date may be extended, by either our or OPKO's written notice, to October 14, 2022 if, as of the August 14, 2022, any one of certain conditions have not been met) (the "*termination date*"), then we will be unable to complete the Acquisition.

Q: Can the Acquisition be terminated or otherwise not be consummated?

A: There are certain circumstances under which the Merger Agreement may be terminated. Please see the section entitled "*The Acquisition—The Merger Agreement"* for information regarding the parties' specific termination rights.

Q: When is the Acquisition expected to be completed?

A: The closing of the Acquisition is expected to take place on or prior to the third business day following the satisfaction or waiver of the conditions described below in the subsection entitled "*The Acquisition—The Merger Agreement—Conditions to he Acquisition*." The closing is expected to occur in the second quarter of 2022.

For a description of the conditions to the completion of the Acquisition, see the section entitled "*The Acquisition—The Merger Agreement—Conditions to the Acquisition*."

Q: What do I need to do now?

A: You are urged to carefully read and consider the information contained in this proxy statement, including the Annexes, and to consider how the Transactions will affect you as a stockholder. You should then vote as soon as possible in accordance with the instructions provided in this proxy statement and on the enclosed proxy card or, if you hold your shares through a brokerage firm, bank or other nominee, on the voting instruction form provided by the broker, bank or nominee.

Q: Who will solicit and pay the cost of soliciting proxies for the Special Meeting?

A: The Company is soliciting proxies on behalf of its Board. The Company will pay the cost of soliciting proxies for the Special Meeting. The Company has engaged D.F. King to assist in the solicitation of proxies for the Special Meeting. The Company has agreed to pay D.F. King a fee of $7,500, plus disbursements, and will reimburse D.F. King for its reasonable out-of-pocket expenses and indemnify D.F. King and its affiliates against certain claims, liabilities, losses, damages and expenses. The Company will also reimburse banks, brokers and other custodians, nominees and fiduciaries representing beneficial owners of shares of the Company's Class A common stock for their expenses in forwarding soliciting materials to beneficial owners of the Company's Class A common stock and in obtaining voting instructions from those owners. Our directors, officers and employees may also solicit

proxies by telephone, by facsimile, by mail, on the Internet or in person. They will not be paid any additional amounts for soliciting proxies.

Q: Who can help answer my questions?

A: If you have questions about the proposals or if you need additional copies of this proxy statement or the enclosed proxy card you should contact:

333 Ludlow Street
North Tower, 8th Floor
Stamford, Connecticut 06902
Attn: Investor Relations
Email: Investors@Sema4.com

You may also contact our proxy solicitor at:

D.F. King & Co., Inc.
48 Wall Street, 22nd Floor
New York, NY 10005
Stockholders Call (toll-free): (800) 735-3591
Banks and Brokers Call: (212) 269-5550
Email: Sema4@dfking.com

To obtain timely delivery, our stockholders must request the materials no later than five business days prior to the Special Meeting.

You may also obtain additional information about us from documents filed with the SEC by following the instructions in the section entitled "*Where You Can Find More Information*."

If you have questions regarding the certification of your position or delivery of your stock, please contact our Transfer Agent:

Continental Stock Transfer & Trust Company
1 State Street, 30th Floor
New York, New York 10004
Attention: Henry Farrell & Margaret Lloyd
Email: hfarrell@continentalstock.com & mlloyd@continentalstock.com

SUMMARY OF THE PROXY STATEMENT

This summary, together with the sections entitled "*Questions and Answers About the Proposals for Stockholders*" and "*Summary Term Sheet*," summarizes certain information contained in this proxy statement, but does not contain all of the information that is important to you. You should carefully read this entire proxy statement, including the attached Annexes, for a more complete understanding of the matters to be considered at the Special Meeting. Please see the section entitled "*Where You Can Find More Information*" of this proxy statement. In addition, for definitions used commonly throughout this proxy statement, please see the section entitled "*Frequently Used Terms*."

Unless otherwise specified, all share calculations in this proxy statement are based upon 242,647,604 shares of Class A common stock outstanding as of December 31, 2021 and exclude (i) shares of Class A common stock issuable upon the exercise or vesting of the Company's outstanding warrants, options or restricted stock units ("*RSUs*"), (ii) Earn-Out Shares issuable pursuant to the Prior Merger Agreement, and (iii) shares of Class A common stock issuable for future grant or issuance pursuant to the 2021 EIP or the ESPP. In addition, these share calculations assume (i) no outstanding warrants, options or RSUs were exercised or vested after December 31, 2021, (ii) no equity awards of shares of Class A common stock were granted or issued under the Prior Merger Agreement, the 2021 EIP or the ESPP after December 31, 2021, (iii) an equity raise of $200 million of gross proceeds from the PIPE Investment of 50 million shares of Class A common stock at $4.00 per share, and (iv) no issuance of shares of Class A common stock in connection with the Milestone Payments.

The Special Meeting

At the Special Meeting, stockholders will be asked to, among other things, approve the issuance of shares of Class A common stock in connection with the Acquisition, approve the issuance of shares of Class A common stock in connection with the PIPE Investment and appoint two directors to the Board, Katherine Stueland and Richard C. Pfenniger, Jr., in connection with the consummation of the Acquisition. The Company believes the Acquisition will provide significant value to the Company and its stockholders, as the Company expects the addition of GeneDx to provide the Company with additional revenue, synergistic product offerings that provide breadth to the Company's overall product portfolio, and additional key personnel with expertise in the Company's sector.

The Company is asking stockholders to approve the Stock Consideration Issuance Proposal and the PIPE Investment Proposal in order to comply with Listing Rule 5635 of the Nasdaq Stock Market. The Company is not asking stockholders to approve the Acquisition or the PIPE Investment.

In addition, the Company is holding the Special Meeting in lieu of its 2022 annual meeting of stockholders and, accordingly, stockholders will also be considering a proposal to elect three Class I directors, Eli D. Casdin, Joshua Ruch and Michael Pellini, for a three-year term to expire at the Company's 2025 annual meeting of stockholders.

Special Meeting Proposals

Specifically, at the Special Meeting, the stockholders of the Company will be asked to vote on:

- a proposal to approve the issuance of the Company's Class A common stock in connection with the Acquisition and as contemplated by the Merger Agreement for purposes of complying with applicable Nasdaq Listing Rules (*Proposal No. 1 – The Stock Consideration Issuance Proposal*)
- a proposal to approve the issuance of the Company's Class A common stock in connection with the PIPE Investment and as contemplated by the Subscription Agreements for purposes of complying with the Nasdaq Listing Rules (*Proposal No. 2 – The PIPE Investment Proposal*);
- a proposal to, Assuming the Stock Consideration Issuance Proposal and the Charter Amendment Proposal are approved and adopted and the Acquisition is consummated, to appoint two directors who will become directors of the Company effective upon the consummation of the Acquisition (*Proposal No. 3 – The Special Designee Director Election Proposal*);

- a proposal to adopt the Amendment to the Charter, which increases the number of authorized shares of Class A common stock from 380,000,000 to 1,000,000,000 (*Proposal No. 4 – The Charter Amendment Proposal*);
- a proposal to elect three Class I directors of the Company, each to serve a three-year term expiring at the Company's 2025 annual meeting of stockholders and until such director's successor is duly elected and qualified (*Proposal No. 5 – The Class I Director Election Proposal*);
- a proposal to ratify the appointment of Ernst & Young LLP as the Company's independent registered public accounting firm for the fiscal year ending December 31, 2022 (*Proposal No. 6 – The Auditor Ratification Proposal*);
- a proposal to adjourn the Special Meeting to a later date or dates, if necessary, to permit further solicitation and vote of proxies if there are insufficient votes for, or otherwise in connection with, any of the proposals presented at the Special Meeting (*Proposal No. 7 – The Adjournment Proposal*).

Please see the sections entitled "*Proposal No. 1 – The Stock Consideration Issuance Proposal*." "*Proposal No. 2 - The PIPE Investment Proposal*," "*Proposal No. 3 - The Special Designee Director Election Proposal*," "*Proposal No. 4 - The Charter Amendment Proposal*," "*Proposal No. 5 - The Class I Director Election Proposal*," "*Proposal No. 6 - The Auditor Ratification Proposal*," and "*Proposal No. 7 - The Adjournment Proposal*" for more information.

Parties to the Acquisition

The Company

Sema4 was formed in October 2015 as Mount Sinai Genomics, Inc. ("*Legacy Sema4*"), a Delaware corporation, doing business as Sema4, and commenced operations in 2017. On July 22, 2021, Legacy Sema4 completed its business combination with CM Life Sciences, Inc. ("*CMLS*"), a publicly held company, pursuant to which, CMLS acquired Legacy Sema4, with Legacy Sema4 surviving as a wholly-owned subsidiary of CMLS. In connection with the merger, CMLS changed its name to Sema4 Holdings Corp.

Sema4 is a patient-centered, health intelligence company with a mission to use artificial intelligence, or AI, and machine learning, or ML, to enable personalized medicine for all. By leveraging leading data scientists and technology, the Company's platform powers remarkable and unique insights that transform the practice of medicine including how disease is diagnosed, treated, and prevented.

Today, Sema4 has established one of the largest, most comprehensive, and fastest growing integrated health information platforms, collecting and leveraging genomic and clinical data in partnership with patients, healthcare providers and an extensive ecosystem of life science industry contributors. Sema4 is now generating and processing over 47 petabytes of data per month, growing by more than 1 petabyte per month, and maintaining a database that includes 12 million de-identified clinical records, many with genomic profiles, integrated in a way that enables physicians to proactively diagnose and manage disease. This expanding database is a virtuous cycle of data: new data enables Sema4 to further develop, train, and refine predictive models and drive differentiated insights, which models and insights Sema4 deploys through its next generation diagnostic and research solutions and portals to support clinicians and researchers and engage patients, all of which interactions generate more data to continue the cycle. Sema4 is able to provide differentiated insights through diagnostic testing solutions to physicians and patients across the United States in areas such as reproductive health, or Women's Health, population health, and oncology, or Oncology, Sema4 is reimbursed by payors, providers, and patients for providing these services.

While there are many companies seeking to harness the potential of big data to address the challenges within the healthcare ecosystem, Sema4 believes that few have the scale of Sema4 and its origins as a company conceived and nurtured within a world-class health system. We believe Sema4's scale and health system origin have enabled it to build a significant and highly differentiated technological and informational asset positioned to drive precision medicine solutions into the standard of care in an unparalleled way.

Sema4's principal executive office is located at 333 Ludlow Street, North Tower, 8th floor, Stamford, CT 06902, and its telephone number is (800) 298-6470. Sema4's corporate website address is https://www.sema4.com/. Sema4's website and the information contained on, or that can be accessed through, the website is not deemed to be incorporated by reference in, and is not considered part of, this proxy statement.

Merger Subs

Merger Sub I, a Delaware corporation, is a wholly-owned subsidiary of the Company, formed by the Company in January 2022, to consummate the Acquisition. In the Acquisition, Merger Sub I will merge with and into HoldCo, with HoldCo as the surviving corporation in the First Merger.

The mailing address of Merger Sub I's principal executive office is 333 Ludlow Street, North Tower, 8th Floor, Stamford, Connecticut 06902.

Merger Sub II, a Delaware corporation, is a wholly-owned subsidiary of the Company, formed by the Company in January 2022, to consummate the Acquisition. In the Acquisition, HoldCo, as the surviving corporation in the First Merger, will merge with and into Merger Sub II, with Merger Sub II as the surviving company.

The mailing address of Merger Sub II's principal executive office is 333 Ludlow Street, North Tower, 8th Floor, Stamford, Connecticut 06902.

HoldCo

GeneDx Holding 2, Inc., a Delaware corporation, is a wholly owned subsidiary of OPKO, formed by OPKO, to consummate the Mergers. The mailing address of HoldCo's principal executive offices is c/o OPKO Health, Inc., 4400 Biscayne Blvd, Miami, FL 33137.

GeneDx

GeneDx, a New Jersey corporation and wholly-owned subsidiary of OPKO, is a patient-centric health information company and leader in delivering clinical genomic answers to an ever-increasing community of patients, families and healthcare providers. With more than 20 years of experience in diagnosing rare disorders and diseases, GeneDx has pioneered panels, exome and whole genome sequencing and has developed a proprietary genomic interpretation and information services platform in support of healthcare partners and patients globally.

The mailing address of GeneDx's principal executive office is 207 Perry Parkway, Gaithersburg, MD 20877.

OPKO

OPKO, a Delaware corporation, is a multinational biopharmaceutical and diagnostics company that seeks to establish industry-leading positions in large, rapidly growing markets by leveraging its discovery, development, and commercialization expertise and novel and proprietary technologies. GeneDx is currently an indirect wholly owned subsidiary of OPKO. The mailing address of OPKO's principal executive offices is 4400 Biscayne Blvd, Miami, FL 33137.

The Acquisition

On January 14, 2022, the Company and Merger Subs entered into the Merger Agreement with GeneDx, OPKO and HoldCo. Pursuant to the terms of the Merger Agreement, Merger Sub I will merge with and into HoldCo (the "*First Merger*"), with HoldCo being the surviving entity of the First Merger and following the First Merger, HoldCo will merge with and into Merger Sub II, with Merger Sub II being the surviving entity of this second merger (the "*Second Merger*" and, together with the First Merger, the "*Mergers*"). For more information about the transactions contemplated by the Merger Agreement, please see the section entitled "*The Acquisition*." Copy of the Merger Agreement is attached to this proxy statement as Annex A.

Consideration to OPKO

Subject to the terms and conditions of the Merger Agreement, each share of HoldCo common stock issued and outstanding immediately prior to the Effective Time will be cancelled and automatically deemed for all purposes to represent the right to receive a portion of the merger consideration, with OPKO being entitled to receive (collectively, clauses (i) through (ii), the "*Merger Consideration*") (i) $150 million in cash at the closing of the Acquisition (the "*Closing*"), subject to certain adjustments as provided in the Merger Agreement (the "*Cash Consideration*") and (ii) 80,000,000 shares of Class A common stock (the "*Stock Consideration*"). As of the Effective Time, OPKO shall cease to have any other rights in and to HoldCo and each certificate relating to ownership of shares of HoldCo common stock will only represent the right to receive the applicable portion of the Merger Consideration.

In addition, the Company will pay up to $150 million payable following the Closing, if certain revenue-based milestones are achieved for each of the fiscal years ending December 31, 2022 and December 31, 2023 (the "*Milestone Payments*"). Each Milestone Payment, if and to the extent earned under the terms of the Merger Agreement, will be satisfied through the payment and/or issuance of a combination of cash and shares of Class A common stock (valued at $4.86 per share based on the average of the daily volume average weighted price of the Company's Class A common stock over the period of 30 trading days ended January 12, 2022), with such mix to be determined in the Company's sole discretion.

PIPE Investment

Concurrently with the execution of the Merger Agreement, the Company entered into the Subscription Agreements with the PIPE Investors. The PIPE Investors include certain existing equity holders of the Company, some of whom own more than 5% of the outstanding shares of Class A common stock and some of whom are affiliated with certain directors of the Company. Pursuant to, and on the terms and subject to the conditions of, the Subscription Agreements, the Company agreed to issue and sell to the PIPE Investors, in private placements to close substantially concurrently with the Closing, an aggregate of 50 million shares of Class A common stock at $4.00 per share, for an aggregate gross purchase price of $200 million, before fees and expenses. The Company expects to fund the payment of the Cash Consideration in part with the net proceeds of the PIPE Investment.

Related Agreements

Shareholder Agreements

In connection with the entry into the Merger Agreement, we entered into Shareholder Agreements with OPKO and certain stockholders of OPKO (the "*Lock-Up Holders*"), pursuant to which OPKO and the Lock-Up Holders have agreed, respectively, to, among other things, be subject to a lock-up period with respect to the Lock-Up Shares (as defined therein), which will last from the Closing until (a) in the case of the Stock Consideration issued at the Closing, the date that is one (1) year from the Closing Date, (b) if and to the extent earned, in the case of the stock portion of the first Milestone Payment, the date that is one (1) year from the date of issuance for such stock and (c) if and to the extent earned, in the case of the second Milestone Payment, the date that is six (6) months from the date of issuance for such stock (as applicable, the "*Lock-Up Period*"). During this Lock-Up Period, the holders of Lock-Up Shares may not transfer any Lock-Up Shares or engage in any short sales or other hedging or derivative transactions, subject to certain limited exceptions. Following such Lock-Up Period, OPKO and the Lock-Up Holders have agreed to dispose of their Lock-Up Shares in a marketed sale process under certain circumstances for so long as they continue to hold at least 5% of the outstanding Class A common stock.

In addition, OPKO and the Lock-Up Holders have further agreed to certain standstill provisions whereby, subject to certain exceptions, they are obligated to refrain from taking certain actions with respect to the Company's Class A common stock. OPKO and the Lock-Up Holders have also agreed to vote their shares in accordance with the recommendations of the Board for so long as they continue to hold at least 5% of the outstanding Class A common stock. Further, Sema4 has also granted OPKO and the Lock-Up Holders certain customary shelf, piggyback and demand registration rights that require Sema4 to register their Lock-Up Shares for resale under the Securities Act.

Subscription Agreements

In connection with the Acquisition, the Company entered into the Subscription Agreements with the PIPE Investors, pursuant to which, among other things, the Company agreed to issue and sell to the PIPE Investors, in private placements to close immediately prior to the Closing, an aggregate of 50 million shares of Class A common stock at $4.00 per share, for an aggregate purchase price of $200 million. The obligations to consummate the subscriptions are conditioned upon, among other things, customary closing conditions and the consummation of the transactions contemplated by the Merger Agreement. The PIPE Investment will be consummated substantially concurrently with the Closing.

Support Agreements

In connection with the execution of the Merger Agreement, the Company entered into support agreements with certain of its stockholders, a copy of which is attached as Exhibit B to the Merger Agreement (the "*Support Agreements*"). These stockholders include stockholders that own more than 5% of the outstanding shares of Class A common stock and certain entities affiliated with the Company's directors. Pursuant to the Support Agreements, such signatory stockholders have agreed to, among other things, vote to adopt and approve Proposals 1 through 4 and Proposal 7, subject to the terms and conditions of the Support Agreement.

Impact of the Transactions on the Company's Class A common stock

Upon completion of the Transactions, at the Closing, the Company expects that: (i) the Company's stockholders (including any shares owned by PIPE Investors prior to the Transactions) will own approximately 65.1% of the outstanding shares of Class A common stock; (ii) the PIPE Investors (excluding any shares owned by the PIPE Investors prior to the Transactions) will own approximately 13.4% of the outstanding shares of Class A common stock; and (iii) OPKO will own approximately 21.5% of the outstanding shares of Class A common stock. For more information, please see the section entitled "*Unaudited Pro Forma Combined Financial Information*".

The following table illustrates varying ownership levels in the Company:

	Ownership (%)
The Company's stockholders[(1)]	65.1 %
PIPE Investors[(2)]	13.4 %
OPKO	21.5 %
	100.0 %

(1) Includes shares of Class A common stock owned by PIPE Investors prior to the Transactions.
(2) Excludes shares of Class A common stock owned by PIPE Investors prior to the Transactions.

Please see "*Unaudited Pro Forma Combined Financial Information—Description of Acquisition*".

Reasons for the Acquisition

In evaluating the Acquisition, the Board consulted with the Company's management and legal counsel as well as financial and other advisors, and the Board considered and evaluated several factors. In particular, the Board considered, among other things, the following positive factors, although not weighted or in any order of significance:

- ***Leading Industry Position in Rare Diseases and Competitive Advantage of Data Asset***. The Board considered that GeneDx has an industry leading rare disorder franchise, based on strong customer relationships with major hospitals and health systems around the world, calling on medical geneticists and selling into the pediatric and rare disease channels. Further, the Board considered GeneDx's approximately 300,000 clinical exomes and 2.1 million annotated phenotypes collected over the company's nine year history. The Board estimated GeneDx's clinical exome data asset to be the most extensive by any U.S. diagnostics company. Furthermore, the Board considered GeneDx's estimated 70% market share among clinicians ordering exomes as evidence of superior positioning in the market.

- ***Strong Revenue Growth Profile***. The Board considered that GeneDx had estimated 2021 revenue of $116 million, representing 22% growth over the prior year, and estimated 2021 test volume of 145,000, representing 29% over the prior year, as well as the anticipated growth reflected in the projections prepared by GeneDx management.

- ***Experienced Management, Commercial and Laboratory Operations Team With Deep Genetics Expertise***. The Board considered that GeneDx has an experienced management and engineering team, comprising over 100 MDs and PhDs, and approximately 70 professionals in sales, marketing, product and business development. Katherine Stueland, Chief Executive Officer, has more than two decades of experience in the healthcare sector where she has overseen commercial organizations and corporate brand transformations, and helped bring the first cancer immunotherapy to market.

- ***Relationships with Health Systems***. The Board considered that GeneDx has entrenched relationships with leading hospitals, based on its over 100 contracts with children's hospitals in the United States.

- ***Growth and Business Opportunities of the Acquisition***. The Board believed the Acquisition would create a market-leading, AI-driven genomic and clinical data platform with differentiated products across all phases of life, allowing Sema4 to generate increased data from increased testing, grow its patient base, increase its scale, and deliver more clinically actionable insights. Additionally, the Board believed that GeneDx would enable Sema4 to enhance its reach into health systems and biopharma companies. In particular, the Board considered the following opportunities presented by the Acquisition:

    - *Health Systems*. Opportunities for Sema4 to accelerate the uptake of GeneDx's clinical exome sequencing into Sema4's core channels, and for Sema4 to accelerate the adoption of its Oncology solutions through GeneDx's relationships.

    - *Data*. An opportunity for Sema4 to leverage GeneDx's exome database with Sema4's Centrellis platform to drive increased biopharma partnership opportunities.

    - *Scale*. An opportunity Sema4 to be the market leader in both Women's Health and rare disease diagnostics.

    - *Growth and Synergy*. An opportunity for Sema4 to increase its revenues and accelerate its path to profitability.

- ***Benefit of Combining Management and Board Members of both the Company and GeneDx***. The Board considered that GeneDx's management and key employees becoming management and key employees of the Company as part of the Acquisition would provide the necessary experience and knowledge of GeneDx's business and operations, and facilitate the post-Acquisition transition and integration. The Board also considered that the addition of a member of GeneDx's management and board of directors, and an affiliate of OPKO, to the Board as part of the Acquisition would provide Sema4 with additional board members experienced in the life sciences industry generally and with GeneDx's business in particular. For more information about our decision-making process, please see the section entitled "*The Acquisition—Sema4's Board of Directors' Reasons for the Acquisition*."

- ***Due Diligence.*** The Board considered the thoroughness of Sema4's due diligence examinations of GeneDx and discussions with GeneDx's management and financial and legal advisors.

- ***Receipt of Fairness Opinion from its Financial Advisor in connection with the Acquisition***. The Board considered that on January 14, 2022, at a meeting of the Board, Goldman Sachs & Co. LLC ("*Goldman Sachs*") rendered its oral opinion, subsequently confirmed in writing, that, as of January 14, 2022, and based upon and subject to the factors and assumptions set forth therein, the $150 million in cash, the 80 million shares of the Company's Class A common stock, and up to $150 million of contingent payments payable in cash and/or shares of Company's Class A common Stock, based upon achievement of 2022 and 2023 revenue milestones, to be paid to acquire all of the issued and outstanding shares of capital stock of GeneDx pursuant to the Merger Agreement, was fair from a financial point of view to the Company. The

full text of the written opinion of Goldman Sachs, dated January 14, 2022, which sets forth assumptions made, procedures followed, matters considered and limitations on the review undertaken in connection with the opinion, is attached as Annex C to this proxy statement. The opinion of Goldman Sachs is more fully described in the section of this proxy statement entitled "*The Acquisition—Opinion of Sema4's Financial Advisor*."

- ***Other Alternatives***. The Board believed that the proposed Acquisition represents an excellent opportunity for Sema4 and its stockholders based upon its view of the growth prospects and risks associated with GeneDx and its business, and at the time it approved the transaction had not identified another target that it determined would represent a preferred transaction opportunity.

- ***Terms of the Merger Agreement***. The Board believed that the financial and other terms and conditions of the Merger Agreement, including the parties' representations, warranties and covenants, and the conditions to their respective obligations to consummate the Acquisition, are reasonable and were the product of arms' length negotiations between the Company and its advisors and OPKO and its advisors and compare favorably with those in similar acquisition transactions considering GeneDx's business, results of operations, financial condition and prospects.

- ***PIPE Equity Commitment***. A group of growth and life sciences investors, including Pfizer, have committed approximately $200 million in PIPE subscriptions. This was viewed as support from growth and life sciences investors for the opportunities represented by the Transactions, and provides committed capital to fund the Cash Consideration and transaction costs and to fuel the Company's growth.

- ***Stockholder Support***. The Board also considered that the holders of approximately 61% of the outstanding Class A common stock were willing to enter into the Support Agreements originally proposed by OPKO, committing such holders to vote to approve the Stock Consideration Proposal, the PIPE Investment Proposal, the Special Designee Director Election Proposal, the Charter Amendment Proposal and the Adjournment Proposal, which significantly reduces deal uncertainty.

Date and Time of Special Meeting

The Special Meeting will be held on April 27, 2022 at 9:00 a.m. Eastern time at www.virtualshareholdermeeting.com/SMFR2022SM, or at such other date, time and place to which such meeting may be adjourned or postponed, to consider and vote upon the proposals. The Special Meeting will be conducted exclusively via live webcast and so stockholders will not be able to attend the meeting in person. Stockholders may attend the Special Meeting online and vote at the Special Meeting by visiting www.virtualshareholdermeeting.com/SMFR2022SM and entering your 12-digit control number, which is either included on the proxy card you received or obtained through Continental Stock Transfer & Trust Company.

Attending the Special Meeting

- If your shares are registered in your name with Continental Stock Transfer & Trust Company and you wish to attend the online-only Special Meeting, go to www.virtualshareholdermeeting.com/SMFR2022SM, and enter the 12-digit control number included on your proxy card or notice of the meeting.

- Beneficial stockholders (those holding shares through a stock brokerage account or by a bank or other nominee) who wish to attend the virtual meeting must obtain a legal proxy by contacting their account representative at the bank, broker, or other nominee that holds their shares and e-mail a copy (a legible photograph is sufficient) of their legal proxy to proxy@continentalstock.com. Beneficial stockholders who e-mail a valid legal proxy will be issued a 12-digit meeting control number that will allow them to attend and participate in the Special Meeting. After contacting Continental Stock Transfer & Trust Company, a beneficial holder will receive an e-mail prior to the meeting with a link and instructions for entering the virtual meeting. Beneficial stockholders should contact Continental Stock Transfer & Trust Company at least five (5) business days prior to the meeting date in order to ensure access.

Voting Power; Record Date

Only Company stockholders of record at the close of business on March 22, 2022, the record date for the Special Meeting, will be entitled to vote at the Special Meeting. You are entitled to one vote for each share of Class A common stock that you owned as of the close of business on the record date. If your shares are held in "street name" or are in a margin or similar account, you should contact your broker, bank or other nominee to ensure that votes related to the shares you beneficially own are properly counted. On the record date, there were 245,016,425 shares of Class A common stock outstanding and entitled to vote.

Accounting Treatment

The Acquisition will be accounted for using the acquisition method of accounting in accordance with Accounting Standards Codification ("ASC") 805 - Business Combinations. Under the acquisition method of accounting, the total purchase price is allocated to the tangible and identifiable intangible assets and liabilities assumed based on their relative fair values.

Appraisal Rights

Appraisal rights are not available to our stockholders in connection with the Acquisition.

Proxy Solicitation

The Company is soliciting proxies on behalf of its Board. Proxies may be solicited by mail. The Company has engaged D.F. King to assist in the solicitation of proxies.

If a stockholder grants a proxy, it may still vote its shares at the Special Meeting if it revokes its proxy before the Special Meeting. A stockholder may also change its vote by submitting a later-dated proxy, as described in the section entitled "*Special Meeting of Company Stockholders—Revoking Your Proxy*."

Quorum and Required Vote for Proposals for the Special Meeting

A quorum of Company stockholders is necessary to hold a valid meeting. A quorum will be present at the Special Meeting if a majority of the Class A common stock outstanding on the record date and entitled to vote at the Special Meeting is represented in person or by proxy. Abstentions and broker non-votes will count as present for the purposes of establishing a quorum.

The approval of the Stock Consideration Issuance Proposal, the PIPE Investment Proposal, the Class I Director Election Proposal, the Special Designee Director Election Proposal, the Auditor Ratification and the Adjournment Proposal requires the affirmative vote of a majority of the votes cast by holders of our Class A common stock represented in person or by proxy and entitled to vote at the Special Meeting. The approval of the Charter Amendment Proposal requires the affirmative vote of holders of a majority of our outstanding shares of Class A common stock entitled to vote thereon at the Special Meeting.

A failure to vote, a broker non-vote or an abstention will have no effect on the Stock Consideration Issuance Proposal, the PIPE Investment Proposal, the Class I Director Election Proposal, the Special Designee Director Election Proposal, the Auditor Ratification and the Adjournment Proposal. However, an abstention, a broker non-vote or failure to vote will have the same effect as a vote "**AGAINST**" the Charter Amendment Proposal.

The PIPE Investment Proposal and the Special Designee Director Election Proposal are conditioned upon stockholders' approval of the Stock Consideration Issuance Proposal and the Charter Amendment Proposal.

It is important for you to note that in the event that the Stock Consideration Issuance Proposal or the Charter Amendment Proposal do not receive the requisite vote for approval and we do not consummate the Acquisition by August 14, 2022 (which date may be extended, by either party's written notice, to October 14, 2022 if, as of the August 14, 2022, any one of certain conditions have not been met), we will be unable to complete, we will not consummate the Acquisition.

Recommendation to Company Stockholders

Our Board believes that each of the Stock Consideration Issuance Proposal, the PIPE Investment Proposal, the Special Designee Director Election Proposal, the Charter Amendment Proposal, the Class I Director Election Proposal, the Auditor Ratification Proposal and the Adjournment Proposal to be presented at the Special Meeting is in the best interests of the Company and our stockholders and recommends that its stockholders vote "FOR" each of the proposals.

The Company's directors and executive officers have no substantial interests, directly or indirectly, in the Acquisition except (A) to the extent of: (i) their ownership of shares of our Class A common stock (or rights to acquire shares), and (ii) that each officer and director are expected to be employed by and will continue to serve on Sema4's Board following the Acquisition (assuming, in the case of Mr. Casdin, Mr. Ruch and Mr. Pellini, that each are re-elected pursuant to Proposal No. 5), for which they each receive cash and equity compensation, and (B) in connection with the PIPE Investment.

In connection with the Acquisition, the Company has entered into the Subscription Agreements with the PIPE Investors. The PIPE Investors include certain existing equity holders of the Company, some of whom are affiliated with certain directors of the Company. For more information, see "*Certain Relationships and Related Party Transactions*".

Risk Factors

In evaluating the Acquisition and the proposals to be considered and voted on at the Special Meeting, you should carefully review and consider the risk factors set forth under the section entitled "*Risk Factors*" of this proxy statement. The occurrence of one or more of the events or circumstances described in that section, alone or in combination with other events or circumstances, may have a material adverse effect on (i) the ability of the Company and GeneDx to complete the Acquisition, and (ii) the business, cash flows, financial condition and results of operations of GeneDx prior to the consummation of the Acquisition and the Company following the consummation of the Acquisition.

CAUTIONARY NOTE REGARDING FORWARD-LOOKING STATEMENTS

This proxy statement contains certain forward-looking statements within the meaning of the federal securities laws with respect to the proposed Transactions, including statements regarding the anticipated benefits of the Transaction, the anticipated timing of the Transactions, expansion plans, projected future results and market opportunities of Sema4. These statements are based on the current expectations and beliefs of management of the Company and GeneDx, and are subject to a number of factors and uncertainties that could cause actual results to differ materially from those described in the forward-looking statements. These forward-looking statements generally are identified by the words "believe," "project," "expect," "anticipate," "estimate," "intend," "strategy," "future," "opportunity," "plan," "may," "should," "will," "would," "will be," "will continue," "will likely result," and similar expressions. Forward-looking statements are predictions, projections and other statements about future events that are based on current expectations and assumptions and, as a result, are subject to risks and uncertainties. These statements include, but are not limited to statements about the ability of Sema4 and GeneDx prior to the Acquisition, and the Company following the Acquisition, to:

- meet the closing conditions to and complete the Acquisition;
- realize the benefits expected from the Acquisition;
- the occurrence of any event, change or other circumstances that could give rise to the termination of the Merger Agreement;
- the Company's ability to raise financing in the future and comply with restrictive covenants related to its long-term indebtedness;
- the Company's success in retaining or recruiting, or changes required in, its officers, key employees or directors following the Acquisition;
- factors relating to the business, operations and financial performance of GeneDx as a subsidiary of the Company, including:
    - the Company's ability to comply with laws and regulations applicable to its business; and
    - market conditions and global and economic factors beyond the Company's control;
- intense competition and competitive pressures from other companies worldwide in the industries in which the Company operates;
- litigation and the ability to adequately protect the Company's intellectual property rights; and
- other factors detailed under the section entitled "Risk Factors."

Factors that could cause the actual results to differ materially from those described in the forward-looking statements include those set forth in the risk factors included in this proxy statement. Any forward-looking statements made in this proxy statement are qualified in their entirety by the forward-looking statements contained or referred to in this section, and there is no assurance that the actual results or developments anticipated by either the Company or GeneDx will be realized. All subsequent written and oral forward-looking statements concerning the Company, GeneDx, the transactions contemplated by the Merger Agreement or other matters attributable to the Company or GeneDx or any person acting on their behalf are expressly qualified in their entirety by the forward-looking statements above. Except to the extent required by applicable law, the Company and GeneDx are under no obligation (and expressly disclaim any such obligation) to update or revise their forward-looking statements whether as a result of new information, future events, or otherwise.

RISK FACTORS

You should carefully review and consider the following risk factors and the other information contained in this proxy statement, including the financial statements and notes to the financial statements included herein, in evaluating the Acquisition and the proposals to be voted on at the Special Meeting. The following risk factors related to GeneDx apply to the business and operations of GeneDx and will also apply to the business and operations of the Company following the completion of the Acquisition. The occurrence of one or more of the events or circumstances described in these risk factors, alone or in combination with other events or circumstances, may adversely affect the ability to complete or realize the anticipated benefits of the Acquisition, and may have an adverse effect on the business, cash flows, financial condition and results of operations of the Company following the completion of the Acquisition. You should also carefully consider the following risk factors in addition to the other information included in this proxy statement, including matters addressed in the sections entitled "Cautionary Note Regarding Forward-Looking Statements," "Sema4's Management's Discussion and Analysis of Financial Condition and Results of Operations" and "GeneDx's Management's Discussion and Analysis of Financial Condition and Results Of Operations." We or GeneDx may face additional risks and uncertainties that are not presently known to us or GeneDx, or that we or GeneDx currently deem immaterial, which may also impair our or GeneDx's business or financial condition. The following discussion should be read in conjunction with the financial statements and notes to the financial statements included herein.

Risk Factors Summary

The Company and GeneDx's business are subject to a number of risks and uncertainties, including those risks discussed at length below. These risks include, among others, the following:

- GeneDx faces risks related to health epidemics, including the current COVID-19 pandemic, which could have a material adverse effect on its business and results of operations.
- GeneDx expects to continue incurring significant losses, and it may not successfully execute its plan to achieve or sustain profitability.
- The issuance of shares of Class A common stock to OPKO in connection with the Acquisition and to the PIPE Investors in the PIPE Investment will dilute the voting power of Sema4's current stockholders.
- Because the lack of a public market for GeneDx's outstanding shares makes it more difficult to evaluate the value of such shares, OPKO may receive consideration in the Acquisition that is greater than the fair market value of the GeneDx shares.
- Following the Acquisition, OPKO will be a substantial holder of shares of our Class A common stock and sales by OPKO into the market in the future could cause the market price of our Class A common stock to drop significantly, even if our business is doing well.
- The ongoing COVID-19 pandemic has affected and may further materially and adversely affect our business and financial results.
- We face intense competition. If we do not continue to innovate and provide products and services that are useful to users, we may not remain competitive, which could harm our business and operating results.
- If third-party payors, including managed care organizations, private health insurers and government health plans, do not provide adequate reimbursement for our tests, or seek to amend or renegotiate their fee reimbursement schedules, or if we are unable to comply with their requirements for reimbursement, our commercial success could be negatively affected.
- We have limited experience with the development and commercialization of our databases and our health information and genomic platforms.
- If we fail to comply with federal and state laboratory licensing requirements or standards, we could lose the ability to perform our tests or experience disruptions to our business.

- We rely on highly skilled personnel in a broad array of disciplines and, if we are unable to hire, retain or motivate these individuals, or maintain our corporate culture, we may not be able to maintain the quality of our services or grow effectively.
- We need to scale our infrastructure in advance of demand for our products and services, and our failure to generate sufficient demand for our products and services would have a negative impact on our business and our ability to attain profitability.
- We rely on a limited number of suppliers or, in some cases, single suppliers, for some of our laboratory instruments and materials and may not be able to find replacements or immediately transition to alternative suppliers or service providers.
- We rely on a limited number of product and service providers for data infrastructure and analytics capabilities, and any disruption of, or interference with, our use of data and workflow services could adversely affect our business, financial condition, and results of operations, and we may not be able to find replacements or immediately transition to alternative products or service providers.
- Our projections are subject to significant risks, assumptions, estimates and uncertainties, including assumptions regarding adoption of our products and services. As a result, our projected revenues, market share, expenses and profitability may differ materially from our expectations in any given quarter or fiscal year.
- Uncertainty in the development and commercialization of our enhanced or new tests or services could materially adversely affect our business, financial condition and results of operations.
- We currently use, and in the future expect to increase our use of, information and rights from customers, strategic partners, and collaborators for several aspects of our operations, and if we cannot maintain current and enter new relationships with these parties with adequate access and authorization to such information, our business will suffer.
- Our operating results could be subject to significant fluctuation, which could increase the volatility of our stock and warrant prices and cause losses to our stockholders.
- We may need to raise additional capital to fund our existing operations, develop additional products and services, commercialize new products and services or expand our operations and may have difficulties raising capital depending on financial market conditions.
- We expect to make significant investments in our continued research and development of new products and services, which may not be successful.
- We have identified material weaknesses, some of which have a pervasive effect across the organization, and may identify additional material weaknesses or significant deficiencies, in our internal controls over financial reporting. Our failure to remedy these matters could result in a material misstatement of our financial statements and we will incur increased costs and demands on management as a result of compliance with internal control requirements, which could harm our operating results.
- We rely on third-party laboratories to perform certain elements of our service offerings.
- Future changes in FDA enforcement discretion for LDTs could subject our operations to much more significant regulatory requirements.
- For each product and service we are developing that may require FDA premarket review prior to marketing, the FDA may not grant clearance, authorization or premarket approval and failure to obtain necessary approvals for our future products and services would adversely affect our ability to grow our business.
- Compliance with the HIPAA security, privacy and breach notification regulations may increase our costs.

- We face uncertainty related to healthcare reform, pricing, coverage and reimbursement, which could reduce our revenue.
- Our inability to effectively protect our proprietary products, processes, and technologies, including the confidentiality of our trade secrets, could harm our competitive position.
- Security breaches, privacy issues, loss of data and other incidents could compromise sensitive, protected, or personal information related to our business, could prevent it from accessing critical information, and could expose it to regulatory liability, which could adversely affect our business.
- We will incur increased costs and demands on management as a result of compliance with laws and regulations applicable to public companies, which could harm our operating results.

Risks Related to GeneDx's Business

GeneDx faces risks related to health epidemics, including the current COVID-19 pandemic, which could have a material adverse effect on its business and results of operations.

GeneDx's business has been and could continue to be adversely affected by a widespread outbreak of contagious disease, including the COVID-19 pandemic. Global health concerns relating to COVID-19 have negatively affected the macroeconomic environment, and the pandemic has significantly increased economic volatility and uncertainty.

The pandemic has resulted in government authorities implementing numerous measures to try to contain the virus, such as travel bans and restrictions, quarantines, shelter-in-place or stay-at-home orders, and business shutdowns. For example, some of GeneDx's personnel located at its headquarters and other offices in Maryland and elsewhere in the United States, were subject to shelter-in-place or stay-at-home orders from state and local governments. These measures have in the past adversely impacted, and may impact in the future, GeneDx's employees and operations and the operations of its customers, suppliers and business partners, and may continue to negatively impact spending patterns, payment cycles and insurance coverage levels. For example, these measures adversely affected demand for certain of GeneDx's tests, and, while demand for such tests has returned to pre-COVID-19 levels, COVID-19 or variants of the virus may in the future adversely affect demand for such tests. In early 2020, many of GeneDx's customers, including hospitals and clinics, suspended non-emergency appointments and services, which resulted in a significant decrease in its test volume. Travel bans, restrictions and shipment delays also impacted GeneDx's ability to ship tests to and receive samples from its customers. In addition, because GeneDx relies heavily on its direct sales force to sell its tests, its sales cycle, particularly for new customers, has in the past been significantly impacted by shelter-in-place or stay-at-home orders. Some of these measures by government authorities may continue to remain in place for a significant period of time. Even if these measures are lifted, they may be implemented again if COVID-19 is not contained or returns, as has been the case recently. These measures have adversely affected and may continue to adversely affect GeneDx's test volume, sales activities and results of operations.

The spread of COVID-19 caused GeneDx to modify its business practices (including employee travel, mandating that all non-essential personnel work from home, temporary closures of its offices, cancellation of physical participation in sales activities, meetings, events and conferences and increasing inventories of certain supplies because, although GeneDx has not experienced significant disruption in its supply chain, since March 2020, it has experienced supply delays as a result of the COVID-19 pandemic, and GeneDx may take further actions as may be required by government authorities or that it determines are in the best interests of its employees, customers and business partners. There is no certainty that such actions will be sufficient to mitigate the risks posed by the virus or otherwise be satisfactory to government authorities. If significant portions of GeneDx's workforce, particularly its laboratory staff, are unable to work effectively, including due to illness, quarantines, social distancing, government actions or other restrictions in connection with COVID-19 or its variants, GeneDx's operations will be impacted.

The extent to which COVID-19 may in the future impact GeneDx's business, results of operations and financial condition will depend on future developments, which are highly uncertain and cannot be predicted, including, but

not limited to, the duration and spread of the pandemic and variants of the virus, the actions to contain the virus and treat its impact, and how quickly and to what extent normal economic and operating activities can resume. COVID-19 or variants of the virus could limit the ability of GeneDx's customers, suppliers and business partners to perform, including third-party payers' ability to make timely payments to GeneDx during and following the pandemic. Even after COVID-19 and variants of the virus have subsided, GeneDx may continue to experience an adverse impact to its business as a result of its global economic impact, including labor shortages and any recession that has occurred or may occur in the future, and loss of health insurance coverage resulting from pandemic-related job losses.

Specifically, difficult macroeconomic conditions, such as decreases in per capita income and level of disposable income and related health insurance coverage, increased and prolonged unemployment or a decline in consumer confidence as a result of COVID-19, as well as limited or significantly reduced points of access of its tests, could have a material adverse effect on the demand for GeneDx's tests. Under difficult economic conditions, consumers may seek to reduce discretionary spending by forgoing GeneDx's tests. Decreased demand for GeneDx's tests, particularly in the United States, has negatively affected and could continue to negatively affect its overall financial performance. Because GeneDx's revenue is concentrated in the United States, where the impact of COVID-19 continues to be significant, COVID-19 has had, and could continue to have, a disproportionately negative impact on its business and financial results.

To the extent the COVID-19 pandemic continues to adversely affect GeneDx's business and financial results, it may also have the effect of heightening many of the other risks described in this section.

GeneDx expects to continue incurring significant losses, and it may not successfully execute its plan to achieve or sustain profitability.

GeneDx has incurred substantial losses since its inception. For the years ended December 31, 2021 and 2020, GeneDx's net losses were $36.9 million and $34.9 million, respectively. At December 31, 2021, GeneDx's accumulated deficit was $199.4. While its revenue has increased over time, GeneDx expects to continue to incur significant losses as GeneDx invests in its business. GeneDx expects these losses may increase as it focuses on scaling its business and operations and expanding its testing, sequencing and analytical capabilities, which may also increase GeneDx's operating expenses, and GeneDx has experienced and may continue to experience decreases in test volume due to the impact of COVID-19. GeneDx's failure to achieve and sustain profitability in the future would negatively affect its business, financial condition, results of operations and cash flows.

GeneDx launched the first commercially available NGS panels in 2008, diagnostic exome sequencing in 2012, the first rapid exome products in 2015 and a rapid whole genome product in 2020; accordingly, GeneDx has a relatively limited operating history with respect to certain of its testing products and services. GeneDx's limited commercial history makes it difficult to evaluate its current business and makes predictions about its future results, prospects or viability subject to significant uncertainty. GeneDx's prospects must be considered in light of the risks and difficulties frequently encountered by companies in their early stage of development, particularly companies in new and rapidly evolving markets such as genome testing. These risks include an evolving and unpredictable business model and the management of growth. To address these risks, GeneDx must, among other things, increase its customer base; continue to implement and successfully execute its business and marketing strategy; successfully enter into other strategic collaborations or relationships; obtain access to capital on acceptable terms and effectively utilize that capital; identify, attract, hire, retain, motivate and successfully integrate additional employees; continue to expand, automate and upgrade its laboratory, technology and data systems; obtain, maintain and expand coverage and reimbursement by healthcare payers; provide rapid test turnaround times with accurate results at low prices; provide superior customer service; and respond to competitive developments. There can be no assurance GeneDx will be successful in addressing these risks, and the failure to do so could have a material adverse effect on its business, prospects, financial condition and results of operations.

If third-party payers, including managed care organizations, private health insurers and government health plans, do not provide adequate reimbursement for GeneDx's tests or GeneDx is unable to comply with their requirements for reimbursement, its commercial success could be negatively affected.

GeneDx's ability to increase the number of billable tests and its revenue will depend on its success achieving reimbursement for its tests from third-party payers. Reimbursement by a payer may depend on a number of factors, including a payer's determination that a test is appropriate, medically necessary, cost-effective and has received prior authorization. The commercial success of GeneDx's distributed products, including its exome sequencing and whole genome sequencing, will depend in part on the extent to which its customers receive coverage and adequate reimbursement from third-party payers, including as managed care organizations and government payers (e.g., Medicare and Medicaid).

Because each payer makes its own decision as to whether to establish a policy or enter into a contract to cover GeneDx's tests, as well as the amount it will reimburse for a test, seeking these approvals is a time-consuming and costly process. To date, GeneDx has obtained policy-level reimbursement approval or contractual reimbursement for some of its tests from most of the large commercial third-party payers in the United States, certain hospital systems, and the Centers for Medicare & Medicaid Services, or CMS. GeneDx believes that establishing adequate reimbursement from Medicaid is an important factor in gaining adoption from healthcare providers. GeneDx claims for reimbursement from third-party payers may be denied upon submission, and it must appeal the claims. The appeals process is time consuming and expensive and may not result in payment. In cases where there is not a contracted rate for reimbursement, there is typically a greater coinsurance or copayment requirement from the patient, which may result in further delay or decreased likelihood of collection.

In cases where GeneDx has established reimbursement rates with third-party payers, GeneDx faces additional challenges in complying with their procedural requirements for reimbursement. These requirements often vary from payer to payer, and GeneDx has needed additional time and resources to comply with them. GeneDx has also experienced, and may continue to experience, delays in or denials of coverage if it does not adequately comply with these requirements. GeneDx's third-party payers have also requested, and in the future may request, audits of the amounts paid to it. GeneDx has been required to repay certain amounts to payers as a result of such audits, and it could be adversely affected if it is required to repay other payers for alleged overpayments due to lack of compliance with their reimbursement policies. In addition, GeneDx has experienced, and may continue to experience, delays in reimbursement when it transitions to being an in-network provider with a payer.

GeneDx expects to continue to focus its resources on increasing adoption of, and expanding coverage and reimbursement for, its current tests and any future tests it may develop or acquire. If GeneDx fails to expand and maintain broad adoption of, and coverage and reimbursement for, its tests, GeneDx's ability to generate revenue could be harmed and its future prospects and its business could suffer.

GeneDx faces intense competition, which is likely to intensify further as existing competitors devote additional resources to, and new participants enter, the market. If GeneDx cannot compete successfully, it may be unable to increase its revenue or achieve and sustain profitability.

GeneDx's business environment is rapidly evolving and intensely competitive. GeneDx's business faces changing technologies, shifting provider and patient needs, and frequent introductions of rival products and services. To compete successfully, including as one of Sema4's subsidiaries following the completion of the Acquisition, GeneDx must accurately anticipate technology developments and deliver innovative, relevant and useful genetic testing services in a timely manner. As GeneDx's business evolves, the competitive pressure to innovate will encompass a wider range of testing and interpretation and information services. GeneDx must continue to invest significant resources in research and development, including potentially through acquisitions and collaborations, joint ventures and partnerships, in order to enhance its service offerings.

With the development of next generation sequencing, the clinical genetics market is becoming increasingly competitive, and GeneDx expects this competition to intensify in the future. GeneDx faces competition from a variety of sources, including:

- dozens of relatively specialized competitors focused on genetics applied to healthcare, such as Ambry Genetics, a subsidiary of Konica Minolta Inc.; Invitae Corporation, Athena Diagnostics and Blueprint Genetics, subsidiaries of Quest Diagnostics Incorporated; Baylor-Miraca Genetics Laboratories; Centogene AG; Connective Tissue Gene Test LLC, a subsidiary of Health Network Laboratories, L.P.; Emory

Genetics Laboratory, a subsidiary of Eurofins Scientific; Fulgent Genetics, Inc.; Integrated Genetics, Sequenom Inc., Correlagen Diagnostics, Inc., and MNG Laboratories, subsidiaries of Laboratory Corporation of America Holdings; Myriad Genetics, Inc.; Natera, Inc.; Perkin Elmer, Inc.; Exact Sciences and Prevention Genetics, LLC, a subsidiary of Exact Sciences; and Progenity, Inc;

- a few large, established general testing companies with large market share and significant channel power, such as Laboratory Corporation of America Holdings and Quest Diagnostics Incorporated;
- a large number of clinical laboratories in an academic or healthcare provider setting that perform clinical genetic testing on behalf of their affiliated institutions and often sell and market more broadly; and
- a large number of new entrants into the market for genetic information ranging from informatics and analysis pipeline developers to focused, integrated providers of genetic tools and services for health and wellness including Illumina, Inc., which is also one of its suppliers.

Hospitals, academic medical centers and eventually physician practice groups and individual clinicians may also seek to perform at their own facilities the type of genetic testing GeneDx would otherwise perform for them. In this regard, continued development of equipment, reagents, and other materials as well as databases and interpretation services may enable broader direct participation in genetic testing and analysis.

Participants in closely related markets such as clinical trial or companion diagnostic testing could converge on offerings that are competitive with the type of tests GeneDx performs. Instances where potential competitors are aligned with key suppliers or are themselves suppliers could provide such potential competitors with significant advantages.

In addition, the biotechnology and genetic testing fields are intensely competitive both in terms of service and price, and continue to undergo significant consolidation, permitting larger clinical laboratory service providers to increase cost efficiencies and service levels, resulting in more intense competition.

Many of GeneDx's competitors and potential competitors have larger customer bases, greater brand recognition and market penetration, higher margins on their tests, substantially greater financial, technological and research and development resources, selling and marketing capabilities, lobbying efforts, and more experience dealing with third-party payers. As a result, they may be able to respond more quickly to changes in customer requirements, devote greater resources to the development, promotion and sale of their tests than GeneDx does, sell their tests at prices designed to win significant levels of market share, or obtain reimbursement from more third-party payers and at higher prices than GeneDx does. As technologies continue to develop, GeneDx's competitors may be able to offer services that are, or that are seen to be, substantially similar to or better than GeneDx's current services. GeneDx may not be able to compete effectively against these organizations. Increased competition and cost-saving initiatives on the part of governmental entities and other third-party payers are likely to result in pricing pressures, which could harm GeneDx's sales, profitability or ability to gain market share. In addition, competitors may be acquired by, receive investments from or enter into other commercial relationships with larger, well-established and well-financed companies as use of next generation sequencing, including whole genome sequencing, for prenatal, pediatric, congenital disease and rare disorder diagnosis, Neonatal Intensive Care Units ("*NICU*") testing and preventative care increases. Certain of GeneDx's competitors may be able to secure key inputs from vendors on more favorable terms, devote greater resources to marketing and promotional campaigns, adopt more aggressive pricing policies and devote substantially more resources to website and systems development than GeneDx can. In addition, companies or governments that control access to genetic testing through umbrella contracts or regional preferences could promote GeneDx's competitors or prevent GeneDx from performing certain services. In addition, some of GeneDx's competitors have obtained approval or clearance for certain of their tests from the U.S. Food and Drug Administration (the "*FDA*"). If payers decide to reimburse only for tests that are FDA-approved or FDA-cleared, or if they are more likely to reimburse for such tests, GeneDx may not be able to compete effectively unless it obtains similar approval or clearance for its tests. If GeneDx is unable to compete successfully against current and future competitors, it may be unable to increase market acceptance and sales of its tests, which could prevent it from increasing its revenue or achieving profitability.

GeneDx may not be able to manage its future growth effectively, which could make it difficult to execute its business strategy.

GeneDx's expected future growth could create a strain on its and, following completion of the Acquisition, Sema4's organizational, administrative and operational infrastructure, including laboratory operations, quality control, customer service, marketing and sales, and management. GeneDx may not be able to maintain the quality of or expected turnaround times for its tests, or satisfy customer demand as it grows. GeneDx may need to continue expanding its sales force to facilitate growth, and GeneDx may have difficulties locating, recruiting, training and retaining sales personnel. Following the completion of the Acquisition, Sema4's ability to manage GeneDx's growth effectively will require Sema4 to continue to improve GeneDx's operational, financial and management controls, as well as its reporting systems and procedures. As GeneDx grows, any failure of its controls or interruption of its production facilities or systems could have a negative impact on its and Sema4's business and financial operations. If either GeneDx or Sema4 is unable to manage GeneDx's growth effectively, it may be difficult for GeneDx to execute its business strategy and its and Sema4's business could be harmed.

GeneDx relies on highly skilled personnel in a broad array of disciplines and, if it is unable to hire, retain or motivate these individuals it may not be able to maintain the quality of its services or grow effectively.

GeneDx's performance, including its research and development programs and laboratory operations, largely depend on its continuing ability to identify, hire, develop, motivate and retain highly skilled personnel for all areas of its organization, including software developers, geneticists, biostatisticians, certified laboratory scientists and other scientific and technical personnel to process and interpret genetic tests. In addition, GeneDx may need to continue to expand its sales force with qualified and experienced personnel. Competition in GeneDx's industry for qualified employees is intense, and GeneDx may not be able to attract or retain qualified personnel in the future due to the competition for qualified personnel among life science and technology businesses as well as universities and public and private research institutions, particularly in the Washington, D.C. and Baltimore, Maryland areas. If GeneDx is not able to attract and retain the necessary personnel to accomplish its business objectives, it may experience constraints that could adversely affect its ability to scale its business, support its research and development efforts and its clinical laboratory.

GeneDx needs to scale its infrastructure in advance of demand for its tests, and its failure to generate sufficient demand for its tests would have a negative impact on its business and its ability to attain profitability.

GeneDx's success depends in large part on its ability to extend its market position, to provide customers with high-quality test reports quickly and at a lower price than its competitors, and to achieve sufficient test volume to realize economies of scale. GeneDx's overall test volumes grew from approximately 134 thousand to 169 thousand tests processed during the years ended December 31, 2020 and 2021. In addition, GeneDx regularly evaluates and refines its testing process, often significantly updating its workflows, including with respect to exome sequencing and whole genome sequencing. In order to execute GeneDx's business model, it intends to continue to invest heavily in order to significantly scale its infrastructure, including GeneDx's testing capacity, particularly, with respect to exome sequencing and whole genome sequencing to supplement its panel testing capabilities, and information systems, expand its commercial operations, customer service, billing and systems processes and enhance its internal quality assurance program. GeneDx expects that much of this growth will be in advance of demand for its tests. GeneDx's and Sema4's current and future expense levels are to a large extent fixed and are largely based on investment plans and estimates of future revenue. Because the timing and amount of revenue from GeneDx's tests is difficult to forecast, when revenue does not meet expectations, GeneDx may not be able to adjust its spending promptly or reduce spending to levels commensurate with its revenue. Even if GeneDx successfully scales its infrastructure and operations, there can be no assurance that tests will increase at levels consistent with the growth of GeneDx's infrastructure. If GeneDx fails to generate demand commensurate with this growth or if it fails to scale its infrastructure sufficiently in advance of demand to successfully meet such demand, its business, prospects, financial condition and results of operations could be adversely affected.

If GeneDx is not able to continue to generate substantial demand of its tests, its commercial success will be negatively affected.

GeneDx's business model assumes that it will be able to generate significant test volume, particularly with respect to exome sequencing and whole genome sequencing in addition to its panel testing offerings, and it may not succeed in continuing to drive adoption of its tests to achieve sufficient volumes. Inasmuch as detailed genetic data from exome and whole genome sequencing has only recently become available at relatively affordable prices, the continued pace and degree of clinical acceptance of the utility of such testing is uncertain. Specifically, it is uncertain how much genetic data will be accepted as necessary or useful, as well as how detailed that data should be, particularly since medical practitioners may have become accustomed to genetic testing that is specific to one or a few genes and may not embrace the utility of exome sequencing and whole genome sequencing. Given the substantial amount of additional information available from a broad-based testing panel such as GeneDx's, there may be distrust as to the reliability of such information when compared with more limited and focused genetic tests. To generate further demand for GeneDx's tests, GeneDx will need to continue to make clinicians aware of the benefits of its tests, including the price, the breadth of its testing options, and the benefits of having additional genetic data available from which to make treatment decisions. A lack of or delay in clinical acceptance of GeneDx's exome sequencing and whole genome sequencing testing, or its legacy broad-based panels testing, would negatively impact sales and market acceptance of GeneDx's tests and limit its revenue growth and potential profitability. Genetic testing is expensive and many potential customers may be sensitive to pricing. In addition, potential customers may not adopt GeneDx's tests if adequate reimbursement is not available, or if GeneDx is not able to maintain low prices relative to its competitors.

If GeneDx is not able to generate demand for its tests at sufficient volume, or if it takes significantly more time to generate this demand than GeneDx anticipates, GeneDx's business, prospects, financial condition and results of operations could be materially harmed.

GeneDx has devoted a portion of its resources to the development and commercialization of exome sequencing and whole genome sequencing, and to research and development activities related to such sequencing and the analysis thereof, including clinical and regulatory initiatives to obtain diagnostic clearance and marketing approval. The demand for these regulated products is relatively unproven, and GeneDx may not be successful in achieving market awareness and demand for these products through its and, following completion of the Acquisition, Sema4's sales and marketing operations.

GeneDx's success will depend on its ability to use rapidly changing genetic data to interpret test results accurately and consistently, and its failure to do so would have an adverse effect on its operating results and business and harm its reputation.

GeneDx's success depends on its ability to provide reliable, high-quality tests that incorporate rapidly evolving information about the role of genes and gene variants in disease and clinically relevant outcomes associated with those variants. Errors, such as failure to detect genomic variants with high accuracy, or mistakes, such as failure to identify, or incompletely or incorrectly identifying, gene variants or their significance, could have a significant adverse impact on GeneDx's business.

GeneDx classifies variants in accordance with published guidelines as benign, likely benign, variants of uncertain significance, likely pathogenic or pathogenic, and these guidelines are subject to change. Interpretation of some guidelines is open to clinical or scientific judgment and thus may vary between experts. In addition, it is GeneDx's practice to offer support to clinicians and geneticists ordering its tests regarding which genes or panels to order as well as interpretation of genetic variants. GeneDx also relies on clinicians to interpret what it reports and to incorporate specific information about an individual patient into the physician's treatment decision.

The marketing, sale and use of GeneDx's genetic tests could subject it to liability for errors in, misunderstandings of, or inappropriate reliance on, information it provides to clinicians, geneticists or customers, and lead to claims against GeneDx if someone were to allege that a test failed to perform as it was designed, if GeneDx failed to correctly interpret the test results, if GeneDx failed to update the test results due to a reclassification of the variants according to new published guidelines, or if the ordering physician were to

misinterpret test results or improperly rely on them when making a clinical decision. A professional liability claim could result in substantial damages and be costly and time-consuming for GeneDx or, following completion of the Acquisition, Sema4 to defend. Although GeneDx maintains liability insurance, including for errors and omissions, there can be no assurance that such insurance would fully protect GeneDx or, following completion of the Acquisition, Sema4 from the financial impact of defending against these types of claims or any judgments, fines or settlement costs arising out of any such claims. Any liability claim, including an errors and omissions liability claim, brought against GeneDx or, following completion of the Acquisition, Sema4, with or without merit, could increase GeneDx's or Sema4's insurance rates or prevent GeneDx or Sema4 from securing insurance coverage in the future. Additionally, any liability lawsuit could cause injury to GeneDx's reputation or cause it to suspend sales of its tests. The occurrence of any of these events could have an adverse effect on GeneDx's, and, following completion of the Acquisition, Sema4's reputation and results of operations.

GeneDx's industry is subject to rapidly changing technology and new and increasing amounts of scientific data related to genes and genetic variants and their role in disease. GeneDx's failure to develop tests to keep pace with these changes could make it obsolete.

In recent years, there have been numerous advances in methods used to analyze very large amounts of genomic information and the role of genetics and gene variants in disease and treatment therapies. GeneDx's industry has and will continue to be characterized by rapid technological change, increasingly larger amounts of data, frequent new testing service introductions and evolving industry standards, all of which could make GeneDx's tests obsolete. As the fields of genomic analysis and health information become more widely known to the public, GeneDx anticipates that competition will further increase. GeneDx's future success will also depend on its ability to keep pace with the evolving needs of its customers on a timely and cost-effective basis and to pursue new market opportunities that develop as a result of technological and scientific advances. GeneDx's tests could become obsolete and its business adversely affected unless it continually update its offerings to reflect new scientific knowledge about genes and genetic variations and their role in diseases and treatment therapies.

GeneDx relies on a limited number of suppliers or, in some cases, sole suppliers, for some of its laboratory instruments, materials and services, and it may not be able to immediately transition to alternative suppliers.

GeneDx relies on a limited number of suppliers for certain laboratory substances used in the chemical reactions incorporated into its processes, (which are referred to herein as "reagents"), as well as sequencers and other equipment and materials which GeneDx uses in its laboratory operations. GeneDx does not have short- or long-term agreements with all of its suppliers, and its suppliers could cease supplying these materials and equipment at any time, or fail to provide GeneDx with sufficient quantities of materials or materials that meet its specifications. GeneDx's laboratory operations could be interrupted if it encounters delays or difficulties in securing these reagents, sequencers or other equipment or materials, and if it cannot obtain an acceptable substitute. If the supply of reagents, sequencers or other equipment or materials GeneDx receives does not meet its quality control or performance standards, GeneDx may not be able to use such items, or if it uses them not knowing that they are of inadequate quality (which occasionally occurs with respect to certain reagents), GeneDx's tests may not work properly or at all, or may provide erroneous results, and GeneDx may be subject to significant delays caused by interruption in production or manufacturing or to lost revenue from such interruption or from spoiled tests. In addition, any natural or other disaster, acts of war or terrorism, shipping embargoes, labor unrest, political instability, outbreak of disease or similar events at the facilities of GeneDx's third-party suppliers' that cause a loss of manufacturing capacity would heighten the risks that GeneDx faces. Any such interruption could significantly affect GeneDx's business, financial condition, results of operations and reputation. GeneDx relies on Illumina as a predominate supplier of next generation sequencers and associated reagents, maintenance and repair services. Any disruption in Illumina's operations could impact GeneDx's supply chain and laboratory operations as well as GeneDx's ability to conduct its tests, and it could take a substantial amount of time to integrate replacement equipment into GeneDx's laboratory operations.

GeneDx believes that there are only a few other manufacturers that are currently capable of supplying and servicing the equipment necessary for its laboratory operations, including sequencers and various associated reagents. The use of equipment or materials provided by these replacement suppliers would require GeneDx to alter its laboratory operations. Transitioning to a new supplier would be time consuming and expensive, may result in

interruptions in laboratory operations, could affect the performance specifications of laboratory operations or could require that GeneDx revalidate its tests. There can be no assurance that GeneDx will be able to secure alternative equipment, reagents and other materials, and bring such equipment, reagents and materials on line and revalidate them without experiencing interruptions in its workflow. In the case of an alternative supplier for Illumina, GeneDx cannot make any assurance that replacement sequencers and associated reagents will be available or will meet its quality control and performance requirements for its laboratory operations. If GeneDx encounters delays or difficulties in securing, reconfiguring or revalidating the equipment and reagents it requires for its tests, GeneDx's business, financial condition, results of operations and reputation could be adversely affected.

If GeneDx's laboratories become inoperable due to disasters, health epidemics or for any other reasons, it will be unable to perform tests and its business will be harmed.

GeneDx performs all of its tests at its production facilities in Gaithersburg, Maryland. GeneDx's laboratories and the equipment it uses to perform its tests would be costly to replace and could require substantial lead time to replace and qualify for use. GeneDx's laboratories may be harmed or rendered inoperable by natural or man-made disasters, including flooding, fire and power outages, or by health epidemics, which may render it difficult or impossible for GeneDx to perform its tests for some period of time. The inability to perform GeneDx's tests or the backlog that could develop if its laboratories are inoperable for even a short period of time may result in the loss of customers or harm its reputation. Although GeneDx maintains insurance for damage to its property and the disruption of its business, this insurance may not be sufficient to cover all potential losses and may not continue to be available to GeneDx on acceptable terms, if at all.

Ethical, legal and social concerns related to the use of genetic information could reduce demand for GeneDx's tests.

Genetic testing has raised ethical, legal and social issues regarding privacy rights and the appropriate uses of the resulting information. Governmental authorities could, for social or other purposes, limit or regulate the use of genetic information or genetic testing or prohibit testing for genetic predisposition to certain conditions, particularly for those that have no known cure. Similarly, these concerns may lead customers to refuse to use, or clinicians to be reluctant to order, genomic tests even if permissible, or withhold or withdraw consent for GeneDx's use of their data. These and other ethical, legal and social concerns may limit market acceptance of GeneDx's tests or reduce the potential markets for its tests, either of which could have an adverse effect on GeneDx's business, financial condition or results of operations.

GeneDx currently uses, and in the future expects to increase its use of, information and rights from customers, strategic partners, and collaborators for several aspects of its operations, and if GeneDx cannot maintain current and enter new relationships with these parties with adequate access and authorization to such information, its business will suffer.

Accessing, combining, curating, and analyzing health information, including longitudinal patient medical history data and genetic data, are core features of GeneDx's exome and genome sequencing solutions and key elements of its long term business model. The regulatory landscape around the storage, processing and deidentification of genetic data is evolving globally and greatly impacts the ability of GeneDx, its strategic partners and its collaborators to process and use the data in connection with its products and services.

GeneDx's future success depends in part on its ability to maintain and grow its existing relationships and to establish new relationships. Many factors may impact the success of such collaborations, including GeneDx's ability to perform its obligations, its collaborators' satisfaction with GeneDx's services, its collaborators' performance of their obligations to GeneDx, its collaborators' internal priorities, resource allocation decisions and competitive opportunities, the ability to obtain regulatory approvals, disagreements with collaborators, the costs required of either party to the collaboration and related financing needs, and operating, legal and other risks in any relevant jurisdiction. GeneDx's ability to support such collaborations may also depend on factors outside of its control including the willingness of customers to engage with it and share their data, societal perspectives on privacy, and the willingness of health systems to establish collaborations, relationships and programs utilizing their data, all of which may impact the utility of these databases and the insights GeneDx will be able to generate from expanding

datasets. In addition to reducing GeneDx's revenue or delaying the development of future services and revenue streams, the loss of one or more of these relationships may reduce GeneDx's access to research, longitudinal patient health data, clinical trials or computing technologies that facilitate the collection and incorporation of new information into the databases GeneDx manages and to which it has access. All of the risks relating to testing service development, regulatory clearance, authorization or approval and commercialization described herein apply to GeneDx derivatively through the activities of its collaborators. GeneDx engages in conversations with companies regarding potential collaborations on an ongoing basis. These conversations may not result in a commercial agreement. Even if an agreement is reached, the resulting relationship may not be successful, and any products and services developed as part of the collaboration may not produce successful outcomes. Speculation in the industry about GeneDx's existing or potential collaborations can be a catalyst for adverse speculation about GeneDx, or its products or services, which can adversely affect GeneDx's reputation and its business.

GeneDx's business may suffer if it does not retain its senior management.

GeneDx depends on its senior management. The loss of services of members of GeneDx's senior management team, including Katherine Stueland, the Chief Executive Office of GeneDx, could adversely affect its business until suitable replacements can be found. There may be a limited number of persons with the requisite skills to serve in these positions and GeneDx may be unable to locate or employ qualified personnel on acceptable terms.

Professional liability suits against GeneDx could result in expensive and time-consuming litigation, payment of substantial damages and increases in its insurance rates.

The sale and use of GeneDx's exome and genome sequencing solutions could lead to professional liability claims, including class action lawsuits. GeneDx may also be subject to liability for errors in the test results it provides to healthcare providers or customers or for a misunderstanding of, or inappropriate reliance upon, the information such tests provides. Claims could also arise out of planned interpretation and information services or any of GeneDx's other activities. A professional liability claim could result in substantial damages, be costly and time consuming to defend, and cause material harm to GeneDx's business, reputation or financial condition. There can be no assurance that GeneDx's liability insurance would protect GeneDx's or, following the completion of the Acquisition, Sema4's assets from the financial impact of defending a professional liability claim. Any claim brought against GeneDx with or without merit, could increase its or, following completion of the Acquisition, Sema4's liability insurance rates or prevent GeneDx or Sema4 from securing insurance coverage in the future.

GeneDx's inability to effectively protect its proprietary technologies, including the confidentiality of its trade secrets, could harm its competitive position.

GeneDx's success and ability to compete depends to a large extent on its ability to develop proprietary technologies and to maintain adequate protection of its intellectual property in the United States and other countries. The laws of some foreign countries do not protect proprietary rights to the same extent as the laws of the United States, and GeneDx may encounter difficulties in establishing and enforcing its proprietary rights outside of the United States. In addition, the proprietary positions of companies developing and commercializing tools for molecular diagnostics, including GeneDx's, generally are uncertain and involve complex legal and factual questions.

GeneDx currently relies upon trade secret protection and copyright, as well as non-disclosure agreements and invention assignment agreements with its employees, consultants and third parties to protect its confidential and proprietary information. Although GeneDx's competitors have utilized and are expected to continue utilizing similar methods and have aggregated and are expected to continue to aggregate similar databases of genetic testing information, GeneDx's success will depend upon its ability to develop proprietary methods and databases and to defend any advantages afforded to it by such methods and databases relative to its competitors. If GeneDx does not protect its intellectual property adequately, competitors may be able to use its methods and databases and thereby erode any competitive advantages it may have.

GeneDx will be able to protect its proprietary rights from unauthorized use by third parties only to the extent that its proprietary technologies are effectively maintained as trade secrets. GeneDx expects to rely primarily upon trade secrets and proprietary know-how protection for its confidential and proprietary information, and it has taken security measures to protect this information. These measures, however, may not provide adequate protection for

GeneDx's trade secrets, know-how or other confidential information. Among other things, GeneDx seeks to protect its trade secrets and confidential information by entering into confidentiality agreements with employees and consultants. There can be no assurance that any confidentiality agreements that GeneDx has with employees and consultants will provide meaningful protection for its trade secrets and confidential information or will provide adequate remedies in the event of unauthorized use or disclosure of such information. Accordingly, there also can be no assurance that GeneDx's trade secrets will not otherwise become known or be independently developed by competitors. Enforcing a claim that a party illegally disclosed or misappropriated a trade secret can be difficult, expensive and time-consuming, and the outcome is unpredictable. In addition, trade secrets may be independently developed by others in a manner that could prevent legal recourse by GeneDx. If any of GeneDx's confidential or proprietary information, such as its trade secrets, were to be disclosed or misappropriated, or if any such information was independently developed by a competitor, GeneDx's competitive position could be harmed.

Third parties may assert that GeneDx's employees or consultants have wrongfully used or disclosed confidential information or misappropriated trade secrets.

GeneDx employs individuals who were previously employed at universities or genetic testing, diagnostic or other healthcare companies, including its competitors or potential competitors. Although GeneDx tries to ensure that its employees and consultants do not use the proprietary information or know-how of others in their work for it, GeneDx may be subject to claims that it or its employees or consultants have inadvertently or otherwise used or disclosed intellectual property, including trade secrets or other proprietary information, of a former employer or other third parties. Further, GeneDx may be subject to ownership disputes in the future arising, for example, from conflicting obligations of consultants or others who are involved in developing its intellectual property. Litigation may be necessary to defend against these claims. If GeneDx fails in defending against any such claims, in addition to paying monetary damages, GeneDx may lose valuable intellectual property rights or personnel. Even if GeneDx is successful in defending against such claims, litigation could result in substantial costs and be a distraction to management and other employees.

Risks Related to Sema4's Business, Industry and Operations

The ongoing COVID-19 pandemic has affected and may further materially and adversely affect our business and financial results.

The ongoing COVID-19 pandemic, together with related precautionary measures in response to the initial outbreak and resurgences, materially disrupted our business during certain periods in 2020 and 2021 and may continue to disrupt our business for an unknown period of time. Since the initial outbreak, the territories in which we market, sell, distribute and perform our tests and performs our health information and data science services continue to address the COVID-19 pandemic in varying ways, including stay-at-home orders, temporarily closing businesses, restricting gatherings, restricting travel, and mandating social distancing, face coverings and proof of vaccination. Despite recent progress in the administration of vaccines, the future impact and the level and nature of the disruption caused by the COVID-19 pandemic continues to be unpredictable, may be cyclical and long-lasting and may vary from location to location, and the emergence of new variant strains of COVID-19, including Delta and Omicron, in regions that have reopened have necessitated, and may in the future necessitate, renewed government restrictions. As a result, we experienced a significant impact to our 2020 and 2021 operating results, including our order volumes, revenues, margins, and cash utilization, among other measures and may experience further impacts in future periods depending on the evolution of the COVID-19 pandemic.

Throughout 2020 and 2021, both we and our partners undertook a number of precautionary measures in response to the virus, including requiring employees to work remotely, restricting travel and limiting interactions in person, and we expect to adjust our precautionary measures at our various locations based on local recovery levels, vaccination rates and applicable governmental regulations. For example, a portion of our sales force has recommenced field-based interactions, although access to healthcare providers remains impaired and the industry continues to resume normal activities. Our business could be negatively affected in the future if it takes excessive, ineffective or inadequate precautions

The ongoing COVID-19 pandemic has materially impacted our business in 2020 and 2021 and may continue to impact our business for an unknown period of time. Such impacts have included and may include the following:

- Healthcare providers or patients have canceled or delayed scheduling, and for an extended period of time may continue to cancel or delay scheduling, standard wellness visits and other non-emergency appointments and procedures (including oncology and pregnancy-related screenings), contributing to a decline in orders for our products or services;
- Restrictions on travel, commerce and shipping may prevent patients and pathologists from shipping samples to our clinical laboratories;
- Illnesses, quarantines, financial hardships, restrictions on travel, commerce and shipping, or other consequences of the pandemic, may disrupt our supply chain or other business relationships, and we or other parties may assert rights under force majeure clauses to excuse performance;
- We have experienced, and for an extended period of time may continue to experience, reduced volumes at our clinical laboratories and we may need to suspend operations at some or all of our clinical laboratories;
- We have taken, and may take additional, cost cutting measures, which may hinder our efforts to commercialize our products or delay the development of future products and services. Further, we might not realize all of the cost savings we expect to achieve as a result of those efforts;
- We and our partners have postponed or cancelled clinical studies, which may delay or prevent our launch of future products and services;
- Some or all of our workforce, much of which continues to work remotely in an effort to reduce the spread of COVID-19, may be infected by the virus or otherwise distracted;
- A combination of factors, including infection from the virus, supply shortfalls, and inability to obtain or maintain equipment, could adversely affect our lab capacity and our ability to meet the demand for our testing services; and
- We may inaccurately estimate the duration or severity of the COVID-19 pandemic, which could cause us to misalign our staffing, spending, activities and precautionary measures with current or future market conditions.

Despite our efforts, the ultimate impact of the COVID-19 pandemic, or the impact of the emergence of new strains of the virus and any future resurgences of COVID-19 or variant strains, depends on factors beyond our knowledge or control, including availability and distribution of effective medical treatments and vaccines, the duration and severity of the pandemic, third-party actions taken to contain its spread and mitigate its public health effects and short- and long-term changes in the behaviors of medical professionals and patients resulting from the pandemic.

Additionally, the economic consequences of the COVID-19 pandemic have, and may continue to, adversely impacted financial markets, resulting in high share price volatility, reduced market liquidity, and substantial declines in the market prices of the securities of many publicly traded companies. Volatile or declining markets for equities could adversely affect our ability to raise capital in the future when needed through the sale of shares of common stock or other equity or equity-linked securities. If these market conditions persist when and if we need to raise capital, and if we are able to sell shares of our common stock under then prevailing market conditions, we might have to accept lower prices for our shares and issue a larger number of shares than might have been the case under better market conditions, resulting in significant dilution of the interests of our stockholders.

Due to the high degree of uncertainty regarding the implementation and impact of the CARES Act and other legislation related to COVID-19, there can be no assurance that we will be able to comply with the applicable terms and conditions of the CARES Act and retain such assistance.

On March 27, 2020, the CARES Act was signed into law, aimed at providing emergency assistance and health care for individuals, families, and businesses affected by the COVID-19 pandemic and generally supporting the U.S. economy. The CARES Act, among other things, includes provisions relating to refundable payroll tax credits, deferment of employer social security payments, net operating loss carryback periods, alternative minimum tax credit refunds, and modifications to the net interest deduction limitations. The CARES Act and similar legislation intended to provide assistance related to the COVID-19 pandemic also authorized $175.0 billion in funding to be distributed by the U.S. Department of Health and Human Services, or the HHS, to eligible health care providers. This funding, known as the Provider Relief Fund, is designated to fund eligible healthcare providers' healthcare-related expenses or lost revenues attributable to COVID-19. On December 27, 2020, the Consolidated Appropriations Act, 2021 was signed into law, which adds $3.0 billion to the Provider Relief Fund. Payments from the Provider Relief Fund are subject to certain eligibility criteria, as well as reporting and auditing requirements, but do not need to be repaid to the U.S. government if recipients comply with the applicable terms and conditions.

In 2020, we received $5.4 million as part of the stimulus, comprised of $2.6 million received under the Provider Relief Fund, or PRF, distribution and $2.8 million received under the Employee Retention Credit, or ERC, distribution. In 2021, we received an additional $5.6 million under the PRF distribution. PRF distributions to healthcare providers are not loans and will not be required to be repaid; however, as a condition to receiving these payments, providers must agree to certain terms and conditions and submit sufficient documentation demonstrating that the funds are being used for healthcare-related expenses or lost revenue attributable to the COVID-19 pandemic. ERC distributions are refundable tax credits for 50% of qualified wages paid to employees during the pandemic. A company is eligible for the ERC if it has not received a Paycheck Protection Program loan under the Cares Act and (1) its operations have been fully or partially suspended because of COVID-19 or (2) its gross receipts in a calendar quarter in 2020 declined by more than 50% from the same period in 2019. At the time of applying for the ERC, we concluded that the eligibility requirements were met. However, subsequent to the filing of the application, our revenue was revised due to a change in estimate as a result of finalizing our accounting records, which impacted the applicable periods and calculations for determining eligibility, and may no longer meet the eligibility requirements. As such, we have deferred the recognition of the ERC distribution and recorded the proceeds in other liabilities on the balance sheets as of December 31, 2021 and December 31, 2020.

Due to the high degree of uncertainty regarding the implementation of the CARES Act, the Consolidated Appropriations Act, 2021 and other stimulus legislation, and due to our revenue revisions, there can be no assurance that the terms and conditions of the PRF, ERC or other relief programs will not change or be interpreted in ways that affect our ability to comply with such terms and conditions in the future, which could affect our ability to retain such assistance. We will continue to monitor our compliance with the terms and conditions of the PRF, including demonstrating that the distributions received have been used for healthcare-related expenses or lost revenue attributable to COVID-19, and the ERC. If we are unable to comply with current or future terms and conditions, our ability to retain some or all of the distributions received may be impacted, and we may be subject to actions including payment recoupment, audits and inquiries by governmental authorities, and criminal, civil or administrative penalties.

Other companies or institutions may develop and market novel or improved technologies, which may make our technologies less competitive or obsolete.

We operate in a rapidly evolving and highly competitive industry. There are a number of private and public companies that offer products or services or have announced that they are developing products or services that compete, or may one day compete, with our products or services. Some of our current and potential competitors possess greater brand recognition, financial and other resources and development capabilities than we do. As the fields of genomic analysis and health information become more widely known to the public, we anticipate that competition will further increase. We expect to compete with a broad range of organizations in the U.S. and other countries that are engaged in the development, production and commercialization of genetic screening products,

including women's health and oncology screening products, health information services, and analytics, and data science services, and other diagnostic products. These competitors include:

- companies that offer clinical, research and data clinical services, molecular genetic testing and other clinical diagnostics, life science research and drug discovery services, data services and healthcare analytics, and consumer genetics products;
- academic and scientific institutions;
- governmental agencies; and
- public and private research organizations.

We may be unable to compete effectively against our competitors either because their products and services are superior or because they may have more expertise, experience, financial resources, or stronger business relationships. These competitors may have broader product lines and greater name recognition than we do. Furthermore, we must compete successfully in our existing markets, including women's health and oncology, but also in any new markets we expand into. Even if we successfully develop new marketable products or services, our current and future competitors may develop products and services that are more commercially attractive than ours, and they may bring those products and services to market earlier or more effectively than we are able to. If we are unable to compete successfully against current or future competitors, we may be unable to increase market acceptance for and sales of our tests and services, which could prevent us from increasing or sustaining our revenues or achieving sustained profitability.

We face intense competition. If we do not continue to innovate and provide products and services that are useful to users, we may not remain competitive, which could harm our business and operating results.

Our business environment is rapidly evolving and intensely competitive. Our businesses face changing technologies, shifting provider and patient needs, and frequent introductions of rival products and services. To compete successfully, we must accurately anticipate technology developments and deliver innovative, relevant and useful products, services, and technologies in a timely manner. As our businesses evolve, the competitive pressure to innovate will encompass a wider range of products and services. We must continue to invest significant resources in research and development, including through acquisitions and collaborations (such as the pending Acquisition on GeneDx discussed herein), joint ventures and partnerships, in order to enhance our current diagnostics and health information and data science technologies, and existing and new products and services based off these technologies.

We have many competitors in different industries. Our current and potential domestic and international competitors range from large and established companies to emerging start-ups in addition to academic and scientific institutions, and public and private research organizations. Some competitors have longer operating histories in various sectors. They can use their experience and resources in ways that could affect our competitive position, including by making acquisitions, continuing to invest heavily in research and development and in talent, initiating intellectual property claims (whether or not meritorious), and continuing to compete aggressively for our customers and partners in the market for health information and data science products and services. Our competitors may be able to innovate and provide products and services faster than we can or may foresee the need for products and services before we do.

Our operating results may also suffer if our products and services are not responsive to the needs of our customers and partners. As technologies continue to develop, our competitors may be able to offer products and services that are, or that are seen to be, substantially similar to or better than our current products and services. This may force us to compete in different ways and expend significant resources in order to remain competitive. If our competitors are more successful than us in developing compelling products and services for or in attracting and retaining customers or partners in the market for health information and data science products and services, our operating results could be harmed.

If third-party payors, including managed care organizations, private health insurers and government health plans, do not provide adequate reimbursement for our tests, or seek to amend or renegotiate their fee reimbursement schedules, or if we are unable to comply with their requirements for reimbursement, our commercial success could be negatively affected.

Our ability to increase the number of billable tests and our revenue therefrom will depend on our success in achieving reimbursement for our tests from third-party payors. Reimbursement by a payor may depend on a number of factors, including a payer's determination that a test is appropriate, medically necessary, cost-effective and has received prior authorization. The commercial success of our current and future products, if approved, will depend on the extent to which our customers receive coverage and adequate reimbursement from third-party payors, including managed care organizations and government payers (e.g., Medicare and Medicaid).

Since each payer makes its own decision as to whether to establish a policy or enter into a contract to cover our tests, as well as the amount it will reimburse for a test, seeking these approvals is a time-consuming and costly process. In addition, the determination by a payer to cover and the amount it will reimburse for our tests will likely be made on an indication-by-indication basis and may consider our billing practices and reimbursements from other payors and from our patient billing programs. To date, we have obtained policy-level reimbursement approval or contractual reimbursement for some indications for our tests from most of the large commercial third-party payors in the United States, and the Centers for Medicare & Medicaid Services, or CMS, provides reimbursement for our multi-gene tests for hereditary breast and ovarian cancer-related disorders as well as other tests. We believe that establishing adequate reimbursement from Medicare is an important factor in gaining adoption from healthcare providers. Our claims for reimbursement from third-party payors may be denied upon submission, and we must appeal the claims. The appeals process is time consuming and expensive and may not result in payment. In cases where there is not a contracted rate for reimbursement, there is typically a greater coinsurance or copayment requirement from the patient, which may result in further delay or decreased likelihood of collection.

A significant portion of the payments for our tests are paid or reimbursed under insurance programs with third-party payors. To contain reimbursement and utilization rates, third-party payors often attempt to, or do in fact, amend or renegotiate their fee reimbursement schedules. Loss of revenue caused by third-party payor cost containment efforts or an inability to negotiate satisfactory reimbursement rates could have a material adverse effect on our revenue and results of operations.

Furthermore, in cases where we or our partners have established reimbursement rates with third-party payors, we face additional challenges in complying with their procedural requirements for reimbursement. These requirements often vary from payer to payer and are reassessed by third party payors on a regular basis, and we have needed additional time and resources to comply with them. We have also experienced, and may continue to experience, delays in or denials of coverage if we do not adequately comply with these requirements. Our third-party payors have also requested, and in the future may request, audits of the amounts paid to us. We have been required to repay certain amounts to payers as a result of such audits, and we could be adversely affected if we are required to repay other payers for alleged overpayments due to lack of compliance with their reimbursement policies. In addition, we have experienced, and may continue to experience, delays in reimbursement when we transition to being an in-network provider with a payer.

We expect to continue to focus our resources on increasing adoption of, and expanding coverage and reimbursement for, our current tests and any future tests we may develop or acquire. If we fail to expand and maintain broad adoption of, and coverage and reimbursement for, our tests, our ability to generate revenue could be harmed and our future prospects and our business could suffer.

We have limited experience with the development and commercialization of our databases and our health information and genomic platforms.

We have limited experience with the development or commercialization of clinical or research products in connection with the databases we manage and to which we have access, including our Centrellis and Traversa platforms. Our partners' usage of an advanced machine learning engine for therapeutic decision-making are at an early stage of development and usage under current and proposed collaborations, and we are continuing to develop

new processes that may support the development of new therapeutics applications such as the delivery of personalized clinically actionable insights into clinical reports, clinical trial matching, real-world evidence trials, and clinical decision support, via an advanced programmable interface layer. Although our partners have invested significant financial resources to develop and utilize new technologies to support preclinical studies and other early research and development activities, and provide general and administrative support for these operations, our future success is dependent on our current and future partners' ability to successfully derive actionable insights from the database and our platform, and our partners' ability, where applicable, to obtain regulatory approval for new therapeutic solutions based off existing models or to obtain regulatory approval and marketing for, and to successfully commercialize, new therapeutics. The use of our platform and the databases it manages and to which it has access for these purposes will require additional regulatory investments for Centrellis, such as "good practice" quality guidelines and regulations, or GxP, and data quality and integrity controls.

Ethical, legal and social concerns related to the use of genomic medicine and health information analysis could reduce demand for our tests.

Genomic medicine and health information analysis has raised ethical, legal and social issues regarding privacy rights and the appropriate uses of the resulting information. Domestic and international governmental and regulatory authorities could, for social or other purposes, such as data privacy, limit or regulate the use of health information or health information testing or prohibit testing for specific information derived from health information testing, including, for example, data on genetic predisposition to certain conditions, particularly for those that have no known cure. Similarly, these concerns may lead patients to refuse to use, or clinicians to be reluctant to order, genomic tests as part of health information assessment even if permissible, or lead patients to withhold or withdraw consent for our use of their data. These and other ethical, legal and social concerns may limit market acceptance of our tests or services or reduce the potential markets for our tests, or services either of which could have an adverse effect on our business, research, financial condition or results of operations.

If we fail to comply with federal and state laboratory licensing requirements or standards, we could lose the ability to perform our tests or experience disruptions to our business.

We are subject to Clinical Laboratory Improvement Amendments of 1988, or CLIA, a federal law that regulates clinical laboratories that perform testing on specimens derived from humans for the purpose of providing information for the diagnosis, prevention or treatment of disease. CLIA regulations establish specific standards with respect to personnel qualifications, facility administration, proficiency testing, quality control, quality assurance and inspections. CLIA certification is also required in order for us to be eligible to bill state and federal healthcare programs, as well as many private third-party payors, for our tests. We have current CLIA, CAP, and other certifications to conduct our tests at our laboratories in Connecticut. To renew these certifications, we are subject to survey and inspection on a regular basis and at the request of the certifying bodies. Moreover, CLIA inspectors may make random inspections of our clinical reference laboratories.

We would also be required to maintain in-state licenses if we were to conduct testing in other states. Several states require the licensure of out-of-state laboratories that accept specimens from certain states.

In addition to having laboratory licenses in New York, our clinical reference laboratories are approved on test-specific bases for the tests they run as laboratory-developed tests, or LDTs, by the New York State Department of Health, or NYDOH. Other states may adopt similar licensure requirements in the future, which may require us to modify, delay or stop our operations in such jurisdictions. We may also be subject to regulation in foreign jurisdictions as we seek to expand international utilization of our tests or such jurisdictions adopt new licensure requirements, which may require review of our tests in order to offer them or may have other limitations such as restrictions on the transport of samples necessary for us to perform our tests that may limit our ability to make our tests available outside of the United States. Complying with licensure requirements in new jurisdictions may be expensive, time-consuming, and subject us to significant and unanticipated delays.

Failure to comply with applicable clinical laboratory licensure requirements or standards may result in a range of enforcement actions, including license suspension, limitation, or revocation, directed plan of action, onsite monitoring, civil monetary penalties, criminal sanctions, and cancellation of the laboratory's approval to receive

Medicare and Medicaid payment for our services, as well as significant adverse publicity. Any sanction imposed under CLIA, its implementing regulations, or state or foreign laws or regulations governing clinical laboratory licensure, or our failure to renew our CLIA certifications, a state or foreign license, or accreditation, could have a material adverse effect on our business, financial condition and results of operations. Even if we were able to bring our laboratory back into compliance, we could incur significant expenses and potentially lose revenue in doing so.

The College of American Pathologists, or CAP, maintains a clinical laboratory accreditation program. CAP asserts that its program is "designed to go well beyond regulatory compliance" and helps laboratories achieve the highest standards of excellence to positively impact patient care. While not required to operate a CLIA-certified laboratory, many private insurers require CAP accreditation as a condition to contracting with clinical laboratories to cover their tests. In addition, some countries outside the United States require CAP accreditation as a condition to permitting clinical laboratories to test samples taken from their citizens. We have CAP accreditations for our laboratories. Failure to maintain CAP accreditation could have a material adverse effect on the sales of our tests and the results of our operations.

Risks Related to Our Business Model

We rely on highly skilled personnel in a broad array of disciplines and, if we are unable to hire, retain or motivate these individuals, or maintain our corporate culture, we may not be able to maintain the quality of our services or grow effectively.

Our performance, including our research and development programs and laboratory operations, largely depends on our continuing ability to identify, hire, develop, motivate and retain highly skilled personnel for all areas of our organization, including software developers, geneticists, biostatisticians, bioinformaticians, data scientists, certified laboratory directors and technicians and other scientific and technical personnel to process and interpret our tests and related data. In addition, we may need to continue to expand our sales force with qualified and experienced personnel. Competition in our industry for qualified employees is intense, and we may not be able to attract or retain qualified personnel in the future due to the competition for qualified personnel among life science and technology businesses as well as universities and public and private research institutions, particularly in the New York City and the tri-state area. Further, we may be unable to obtain the necessary visas for foreign personnel to work in the United States. In addition, our compensation arrangements, such as our equity award programs, may not always be successful in attracting new employees and retaining and motivating our existing employees. If we are not able to attract and retain the necessary personnel to accomplish our business objectives, we may experience constraints that could adversely affect our ability to scale our business, support our research and development efforts and our clinical laboratories. We believe that our corporate culture fosters innovation, creativity and teamwork. However, as our organization grows, we may find it increasingly difficult to maintain the beneficial aspects of our corporate culture. This could negatively impact our ability to retain and attract employees and our future success.

The loss of any member or change in structure of our senior management team could adversely affect our business.

Our success depends in large part upon the skills, experience and performance of members of our executive management team and others in key leadership positions. The efforts of these persons will be critical to us as we continue to develop our technologies and test processes and focus on scaling our business. If we were to lose one or more key executives, including our founder and CEO, Dr. Eric Schadt, we may experience difficulties in competing effectively, developing our tests and technologies and implementing our business strategy. Only certain of our executives have employment contracts, and the majority of our employees are at-will, which means that either we or any employee may terminate their employment at any time or in the notice period set forth in an executive's contract. We do not carry key person insurance for any of our executives or employees. In addition, we do not have a long-term retention agreement in place with our CEO. Furthermore, we compete against other leading companies in the diagnostics, health information, and data sciences markets for top talent. If such competitors offer better compensation or opportunities, there is no guarantee that we would be able to retain our key executives.

Our founder and CEO, Eric Schadt, and certain other of our employees have performed, and will continue to perform, duties for or on behalf of Mount Sinai.

Our founder CEO, Eric Schadt, and certain of our other employees continue to perform duties for or on behalf of the Mount Sinai Health System, which refer to together with its related entities as Mount Sinai. In the case of Dr. Schadt, in addition to serving as our CEO and as a director, Dr. Schadt also serves as the Dean for Precision Medicine and a professor at Icahn School of Medicine at Mount Sinai, or ISMMS. We expect Dr. Schadt to continue to devote a substantial amount of time to the obligations of managing a public company while maintaining certain duties for Mount Sinai. Though we do not expect Dr. Schadt's role as a CEO and a director to conflict with his roles at Mount Sinai, there can be no guarantee that such conflicts will not occur in the future.

We may not be able to manage our future growth effectively, which could make it difficult to execute our business strategy.

Our expected future growth could create a strain on our organizational, administrative and operational infrastructure, including data and laboratory operations, quality control, customer service, marketing and sales, and management. We may not be able to maintain the quality of or expected turnaround times for our products or services, or satisfy customer demand as it grows. We may need to continue expanding our sales force to facilitate our growth, and we may have difficulties locating, recruiting, training and retaining sales personnel. Our ability to manage our growth effectively will require us to continue to improve our operational, financial and management controls, as well as our reporting systems and procedures. As we grow, any failure of our controls or interruption of our facilities or systems could have a negative impact on our business and financial operations. We plan to develop and launch new versions of our Centrellis and Traversa platforms and our core diagnostic products, which will affect a broad range of business processes and functional areas. The time and resources required to implement these new systems is uncertain, and failure to complete these activities in a timely and efficient manner could adversely affect our operations. Future growth in our business could also make it difficult for it to maintain our corporate culture. If we are unable to manage our growth effectively, it may be difficult for us to execute our business strategy and our business could be harmed.

We need to scale our infrastructure in advance of demand for our products and services, and our failure to generate sufficient demand for our products and services would have a negative impact on our business and our ability to attain profitability.

Our success depends in large part on our ability to extend our market position, to provide customers with high-quality health reports and health information and data science services in a manner that differentiates us from our competitors, and to deploy technologies and achieve sufficient volumes to realize economies of scale. In order to execute our business model, we intend to continue to invest heavily in order to significantly scale our infrastructure, including our lab infrastructure and testing capacity and our information and computing systems, expand our commercial operations, customer service, billing and systems processes and enhance our internal quality assurance program. We will also need to enhance our capacity for data privacy management as we scale our infrastructure. We expect that much of this growth will be in advance of both demand for our products and services as well as our ability to diversify our offerings, including services related to Centrellis and Traversa and the databases we manage and to which we have access, and our ability to find appropriate partners through collaborations and acquisitions. Our current and future expense levels are to a large extent fixed and are largely based on our investment plans and our estimates of future revenue. Because the timing and amount of revenue from our products and services are difficult to forecast, when revenue does not meet our expectations, we may not be able to adjust our spending promptly or reduce our spending to levels commensurate with our revenue. Even if we are able to successfully scale our infrastructure and operations while successfully diversifying our offering, we cannot assure you that demand for our products and services, including our Centrellis platform, will increase at levels consistent with the growth of our infrastructure. If we fail to generate demand commensurate with this growth or if we fail to scale our infrastructure sufficiently in advance of demand to successfully meet such demand, our business, prospects, financial condition and results of operations could be adversely affected.

International expansion of our business could expose us to business, regulatory, political, operational, financial and economic risks associated with doing business outside of the United States.

When cleared, authorized or approved, we and our collaborators may market, sell, and distribute our products and services outside of the United States, and our business would be subject to risks associated with doing business outside of the United States, including an increase in our expenses and diversion of our management's attention from the development of future products and services. Accordingly, our business and financial results in the future could be adversely affected due to a variety of factors, including:

- multiple, conflicting and changing laws and regulations such as privacy, security and data use regulations, tax laws, export and import restrictions, economic sanctions and embargoes, employment laws, anticorruption laws, regulatory requirements, reimbursement or payer regimes and other governmental;
- approvals, permits and licenses;
- failure by us, our collaborators or our distributors to obtain regulatory clearance, authorization or approval for the use of our products and services in various countries;
- additional potentially relevant third-party patent rights;
- complexities and difficulties in obtaining intellectual property protection and enforcing our intellectual property;
- difficulties in staffing and managing foreign operations, including repatriating foreign earned profits;
- complexities associated with managing multiple payer reimbursement regimes, government payers or patient self-pay systems;
- difficulties in negotiating favorable reimbursement negotiations with governmental authorities;
- logistics and regulations associated with shipping samples, including infrastructure conditions and transportation delays;
- limits in our ability to penetrate international markets if we are not able to conduct our clinical diagnostic services locally;
- financial risks, such as longer payment cycles, difficulty collecting accounts receivable, the impact of local and regional financial crises on demand and payment for our products and services and exposure to foreign currency exchange rate fluctuations;
- international regulations and license requirements that may restrict foreign investment in and operation of the internet, IT infrastructure, data centers and other sectors, and international transfers of data;
- natural disasters, political and economic instability, including wars, terrorism and political unrest, and outbreak of disease;
- boycotts, curtailment of trade and other business restrictions; and
- regulatory and compliance risks that relate to maintaining accurate information and control over sales and distributors' activities that may fall within the purview of the Foreign Corrupt Practices Act of 1977, or FCPA, its books and records provisions, or its anti-bribery provisions or laws similar to the FCPA in other jurisdictions in which we may in the future operate, such as the United Kingdom's Bribery Act of 2010 and anti-bribery requirements of member states in the European Union, or EU.

Any of these factors could significantly harm our future international expansion and operations and, consequently, our revenue and results of operations.

Unfavorable U.S. or global economic conditions could adversely affect our business, financial condition or results of operations.

Our results of operations could be adversely affected by general conditions in the global economy and financial markets. A severe or prolonged economic downturn or increase in inflation rates could result in a variety of risks to our business, including weakened demand for our products and services and our ability to raise additional capital when needed on favorable terms, if at all. A weak declining or inflationary economy could strain our collaborators and suppliers, possibly resulting in supply disruption, or cause delays in their payments to us. Any of the foregoing could harm our business and we cannot anticipate all of the ways in which the current economic climate and financial market conditions could adversely impact our business.

We rely on a limited number of suppliers or, in some cases, single suppliers, for some of our laboratory instruments and materials and may not be able to find replacements or immediately transition to alternative suppliers or service providers.

We have sourced and will continue to source components of our diagnostic testing workflow, including sequencers and other laboratory equipment, reagents, lab supplies and other laboratory services and materials and related services, from third parties.

Our failure to maintain a continued supply of our sequencers and other laboratory equipment, reagents, lab supplies and other laboratory services and materials, along with the right to use certain hardware and software and related services, would adversely impact our business, financial condition, and results of operations. In particular, while we are seeking to validate our tests on additional sequencing platforms we have not, to date, validated a viable alternative sequencing platform on which our testing could be run in a commercially viable manner. These efforts will require significant resources, expenditures and time and attention of management, and there is no guarantee that we will be successful in implementing any such sequencing platforms in a commercially sustainable way. We also cannot guarantee that we will appropriately prioritize or select alternative sequencing platforms on which to focus our efforts, in particular given our limited product and research and development resources and various business initiatives, which could result in increased costs and delayed timelines or otherwise adversely impact our business and results of operations.

Because we rely on third-party manufacturers, we do not control the manufacture of these components, including whether such components will meet our quality control requirements, nor the ability of our suppliers to comply with applicable legal and regulatory requirements. In many cases, our suppliers are not contractually required to supply these components to the quality or performance standards that we require. If the supply of components we receive does not meet our quality control or performance standards, we may not be able to use the components, or if we use them not knowing that they are of inadequate quality, which occasionally occurs with respect to certain reagents, our tests may not work properly or at all, or may provide erroneous results, and we may be subject to significant delays caused by interruption in production or manufacturing or to lost revenue from such interruption or from spoiled tests. In addition, any natural or other disaster, acts of war or terrorism, shipping embargoes, labor unrest, political instability, outbreak of disease or similar events at our third-party manufacturers' facilities that cause a loss of manufacturing capacity would heighten the risks that it faces.

In the event of any adverse developments with our sole suppliers, or if any of our sole suppliers modifies any of the components they supply to us, our ability to supply our products may be interrupted, and obtaining substitute components could be difficult or require us to re-design or re-validate our products. Our failure to maintain a continued supply of components, or a supply that meets our quality control requirements, or changes to or termination of our agreements or inability to renew our agreements with these parties or enter into new agreements with other suppliers could result in the loss of access to important components of our tests and impact our test performance or affect our ability to perform our tests in a timely manner or at all, which could impair, delay or suspend our commercialization activities. In the event that we transition to a new supplier from any of our sole suppliers, doing so could be time-consuming and expensive, may result in interruptions in our ability to supply our products to the market, could affect the performance of our tests or could require that we re-validate our affected tests using replacement equipment and supplies, which could delay the performance of our tests, impact diagnostic

solutions and heath information derived from such tests, and result in increased costs. Any of these occurrences could have a material adverse effect on our business, financial condition and results of operations.

We rely on a limited number of product and service providers for data infrastructure and analytics capabilities, and any disruption of, or interference with, our use of data and workflow services could adversely affect our business, financial condition, and results of operations, and we may not be able to find replacements or immediately transition to alternative products or service providers.

We currently rely upon third-party services for data storage and workflow management, including cloud storage solution providers, such as Amazon Web Services, or AWS, and Google Cloud Platform, or GCP. We rely on each of AWS and GCP features to complete several vital workflows in our health information and data science service delivery. To varying degrees some of those services are proprietary to how each platform performs in connection with our current usage of the services. Further, we have also built several proprietary workflows with our vendor and partner Command Health where we maintain versions of developed software on such platforms.

Nearly all of our data storage and analytics are conducted on, and the data and content we generate on our platforms are processed through, servers hosted by these providers, particularly AWS and GCP. We also rely on email service providers, bandwidth providers, internet service providers and mobile networks to deliver communications to patients, physicians and partners and to allow patients, physicians and our partners to access various offerings from our platforms. If our third-party vendors are unable or unwilling to provide the services necessary to support our business, or if our agreements with such vendors are terminated, our operations could be significantly disrupted. Some of our vendor agreements may be unilaterally terminated by the licensor for convenience, including with respect to AWS or GCP, and if such agreements are terminated, we may not be able to enter into similar relationships in the future on reasonable terms or at all.

Any damage to, or failure of, our systems or the systems of our third-party data centers or our other third-party providers could result in interruptions to the availability or functionality of database and platforms. As a result, we could lose health information data and miss opportunities to acquire and retain patients, physicians and partners including health systems and pharmaceutical and biotech companies, which could result in decreased revenue. If for any reason our arrangements with our data centers or third-party providers are terminated or interrupted, such termination or interruption could adversely affect our business, financial condition and results of operations. We exercise little control over these providers, which increases our vulnerability to problems with the services they provide. We could incur additional expense in arranging for new or redesigned facilities, technology, services and support. In addition, the failure of our third-party data centers or any other third-party providers to meet our capacity needs or any system failure as a result of reliance on third parties, including network, software or hardware failure, which causes a delay or interruption in our services and products, including our ability to handle existing or increased processing of data on our platforms, could have a material adverse effect on our business, revenues, operating results and financial condition.

Our current and future products and services may never achieve significant commercial market acceptance.

Our success depends on the market's confidence that we can provide data-driven research and diagnostic products and services that improve clinical outcomes, lower healthcare costs and enable better product development by pharmaceutical and biotech, or Biopharma, companies. Failure of our products and services, or those jointly developed with our collaborators, to perform as expected or to be updated to meet market demands could significantly impair our operating results and our reputation. We believe patients, health systems, clinicians, academic institutions and Biopharma companies are likely to be particularly sensitive to defects, errors, inaccuracies and delays with our products and services. Furthermore, inadequate performance of these products or services may result in lower confidence in our Centrellis platform in general.

We and our collaborators may not succeed in achieving significant commercial market acceptance for our current or future products and services due to a number of factors, including:

- Our ability to demonstrate the utility of our platforms including Centrellis and Traversa, and related products and services and their potential advantages over existing clinical artificial intelligence technology,

life sciences research, clinical diagnostic and drug discovery technologies to academic institutions, Biopharma companies and the medical community;

- Our ability, and that of our collaborators, to perform clinical trials or other research to gather adequate evidence and/or to secure and maintain FDA and other regulatory clearance authorization or approval for our products or products developed based off our platform;
- the agreement by third-party payors to reimburse our products or services, the scope and extent of which will affect patients' willingness or ability to pay for our products or services and will likely heavily influence physicians' decisions to recommend our products or services;
- the rate of adoption of our platforms and related products and services by academic institutions, clinicians, patients, key opinion leaders, advocacy groups and Biopharma companies; and
- the impact of our investments in product and services, and technological innovation and commercial growth.

Additionally, our customers and collaborators, including Mount Sinai, may decide to decrease or discontinue their use of our products and services due to changes in their research and development plans, failures in their clinical trials, financial constraints, the regulatory environment, negative publicity about our products and services, competing products or the reimbursement landscape, all of which are circumstances outside of our control. We may not be successful in addressing these or other factors that might affect the market acceptance of our products, services and technologies. Failure to achieve widespread market acceptance of our platform and related products and services would materially harm our business, financial condition and results of operations.

Our projections are subject to significant risks, assumptions, estimates and uncertainties, including assumptions regarding adoption of our products and services. As a result, our projected revenues, market share, expenses and profitability may differ materially from our expectations in any given quarter or fiscal year.

We operate in rapidly changing and competitive industries and our projections are subject to the risks and assumptions made by our management with respect to these industries. Operating results are difficult to forecast as they generally depend on our assessment of the timing of adoption of our current and future products and services, which is uncertain. Furthermore, as we invest in the continued development of new businesses that have yet to achieve significant commercial success, whether because of competition or otherwise, we may not recover the often substantial up-front costs of developing and marketing those products and services or recover the opportunity cost of diverting management and financial resources away from other products or services. Additionally, our business may be affected by reductions in customer or partner demand as a result of a number of factors which may be difficult to predict. Similarly, our assumptions and expectations with respect to margins and the pricing of our products and services may not prove to be accurate as a result of competitive pressures or customer or partner demands. This may result in decreased revenue, and we may be unable to adopt measures in a timely manner to compensate for any unexpected shortfall in revenue. This inability could cause our operating results in a given quarter or year to be higher or lower than expected. Any failure to achieve our projected operating results could harm the trading price of our securities and our financial position.

We have estimated the sizes of the markets for our current and future products and services, and these markets may be smaller than we estimate.

Our estimates of the annual addressable markets for our current products and services and those under development are based on a number of internal and third-party estimates, including, without limitation, the number of patients who have developed one or more of a broad range of cancers, the number of individuals who are at a higher risk for developing one or more of a broad range of cancers, the number of individuals who have developed or are at a higher risk of developing certain disorders, the number of individuals with certain infectious diseases. The estimates also depend on whether we or our collaborators are able to engage, diagnose or treat patients through or using our products and services, the number of potential clinical tests utilized per treatment course per patient, the ongoing engagement by patients, physicians and health systems on our platforms, and the assumed prices at which we can sell our current and future products and services for markets that have not been established. While we

believe our assumptions and the data underlying our estimates are reasonable, these assumptions and estimates may not be correct and the conditions supporting our assumptions or estimates may change at any time, thereby reducing the predictive accuracy of these underlying factors. As a result, our estimates of the annual addressable market for our current or future products and services may prove to be incorrect. If the actual number of patients who would benefit from our products or services, the price at which we can sell future products and services or the annual addressable market for our products or services is smaller than we have estimated, it may impair our sales growth and have an adverse impact on our business.

Uncertainty in the development and commercialization of our enhanced or new tests or services could materially adversely affect our business, financial condition and results of operations.

Our success will depend in part on our ability to effectively introduce enhanced or new offerings. The focus of our research and development efforts has expanded beyond our current products and services, focused substantially on women's health and oncology, as we are now also applying our expertise in processing and analyzing new areas, such as rare diseases. In recent years we have developed and/or launched several new products or enhanced versions of existing products, including products leveraging alternative sequencing technologies, and we expect to continue our efforts in all of these areas and more. The development and launch of enhanced or new tests requires the completion of certain clinical development and commercialization activities that are complex, costly, time-intensive and uncertain, and requires us to accurately anticipate patients', clinicians', payors' and other counterparties' attitudes and needs as well as emerging technology and industry trends. This process is conducted in various stages, and each stage presents the risk that we will not achieve our goals.

We have relatively limited experience developing and commercializing products and services outside of the fields of women's health and oncology diagnostics, and we may not be successful in our current or future efforts to do so. We also have limited experience forecasting our future financial performance from our new products and services, and our actual results may fall below our financial guidance or other projections, or the expectations of analysts or investors, which could cause the price of our common stock and warrants to decline. We may experience research and development, regulatory, marketing and other difficulties that could delay or prevent our introduction of enhanced or new tests and result in increased costs and the diversion of management's attention and resources from other business matters, such as from our current product and service offerings, which currently represent the significant majority of our current revenues. For example, any tests that we may enhance or develop may not prove to be clinically effective in clinical trials or commercially, or may not meet our desired target product profile, be offered at acceptable cost and with the sensitivity, specificity and other test performance metrics necessary to address the relevant clinical need or commercial opportunity; our test performance in commercial experience may be inconsistent with our validation or other clinical data; we may not be successful in achieving market awareness and demand, whether through our own sales and marketing operations or through collaborative arrangements; healthcare providers may not order or use, or third-party payors may not reimburse for, any tests that we may enhance or develop; or we may otherwise have to abandon a test or service in which we have invested substantial resources. For example, we are subject to the risk that the biological characteristics of the genetic mutations we seek to target, and upon which our technologies rely, are uncertain and difficult to predict. We may also experience unforeseen difficulties when implementing updates to our processes.

We cannot assure you that we can successfully complete the development of any new or enhanced product, or that we can establish or maintain the collaborative relationships that may be essential to our collaborators' goals, including clinical development or commercialization efforts. For example, clinical development requires large numbers of patient specimens and, for certain products, may require large, prospective, and controlled clinical trials. We may not be able to identify and help enroll patients or collect a sufficient amount of appropriate health data in a timely manner; or we may experience delays during data analysis process due to slower than anticipated supplies of patient data, or due to changes in study design or inputs, or other unforeseen circumstances; or we or our collaborators may be unable to afford or manage the large-sized clinical trials that some of our planned future products may require. Further, the publication of clinical data in peer-reviewed journals is a crucial step in commercializing and obtaining reimbursement for certain diagnostic solutions such as the ones offered by us, and our inability to control when, if ever, results are published may delay or limit our ability to derive sufficient revenues from any diagnostic solution that is the subject of or component in a study. Peer-reviewed publications regarding our products may be limited by many factors, including delays in the completion of, poor design of, or

lack of compelling data from, clinical studies, as well as delays in the review, acceptance and publication process. If our diagnostic solutions or the technology underlying our current and future diagnostic solutions do not receive sufficient favorable exposure in peer-reviewed publications, the rate of clinician adoption of our diagnostic solutions and positive reimbursement coverage determinations for our diagnostic solutions could be negatively affected.

In addition, development of the data necessary to obtain regulatory clearance and approval of tests is time-consuming and carries with it the risk of not yielding the desired results. The performance achieved in published studies may not be repeated in later studies that may be required to obtain premarket clearance or approval from the U.S. Food and Drug Administration, or the FDA. Limited results from earlier-stage verification studies may not predict results from studies in larger numbers of subjects drawn from more diverse populations over longer periods of time. Unfavorable results from ongoing preclinical and clinical studies may delay, limit or prevent regulatory approvals or clearances or commercialization of our product candidates, or could result in delays, modifications or abandonment of ongoing analytical or future clinical studies, or abandonment of a product development program, any of which could have a material adverse effect on our business, operating results or financial condition.

These and other factors beyond our control could result in delays or other difficulties in the research and development, approval, production, launch, marketing or distribution of enhanced or new tests and could adversely affect our competitive position and results of operations.

We currently use, and in the future expect to increase our use of, information and rights from customers, strategic partners, and collaborators for several aspects of our operations, and if we cannot maintain current and enter new relationships with these parties with adequate access and authorization to such information, our business will suffer.

Accessing, combining, curating, and analyzing health information, including longitudinal patient medical history data and genetic data, are core features of the Centrellis platform and key elements of our long term business model. The regulatory landscape around the storage, processing and deidentification of genetic data is evolving globally and greatly impacts the ability of us, our strategic partners and collaborators to process and use the data in connection with our products and services.

We have limited resources to conduct our health information services, data analysis, life sciences research, clinical diagnostics and drug discovery operations and have not yet fully established infrastructure for sales, marketing or distribution in connection with our products and services. Accordingly, we have entered into service and collaboration agreements under which our partners, including health systems, have provided, and may in the future provide, funding, data access, and other resources for developing and potentially commercializing our products and services. These collaborations may result in us incurring significant expenses in pursuit of potential products and services, and we may not be successful in identifying, developing or commercializing any potential products or services.

Our future success depends in part on our ability to maintain and grow our existing relationships, including with Mount Sinai, and to establish new relationships. Many factors may impact the success of such collaborations, including our ability to perform our obligations, our collaborators' satisfaction with our products and services, our collaborators' performance of their obligations to us, our collaborators' internal priorities, resource allocation decisions and competitive opportunities, the ability to obtain regulatory approvals, disagreements with collaborators, the costs required of either party to the collaboration and related financing needs, and operating, legal and other risks in any relevant jurisdiction. Our ability to support such collaborations may also depend on factors outside of our control including the willingness of patients to engage with us and share their data, societal perspectives on privacy, and the willingness of health systems to establish collaborations, relationships and programs utilizing their data, all of which may impact the utility of these databases and the insights we will be able to generate from expanding datasets. In addition to reducing our revenue or delaying the development of our future products and services, the loss of one or more of these relationships may reduce our access to research, longitudinal patient health data, clinical trials or computing technologies that facilitate the collection and incorporation of new information into the databases we manage and to which we have access. All of the risks relating to product and service development, regulatory clearance, authorization or approval and commercialization described herein apply to us derivatively through the activities of our collaborators. We engage in conversations with companies regarding potential collaborations on an

ongoing basis. These conversations may not result in a commercial agreement. Even if an agreement is reached, the resulting relationship may not be successful, and any products and services developed as part of the collaboration may not produce successful outcomes. Speculation in the industry about our existing or potential collaborations can be a catalyst for adverse speculation about us, or our products or services, which can adversely affect our reputation and our business.

If our products and services do not perform as expected, we may not realize the expected benefits of such products and services.

The success of our products depends on the market's confidence that we can provide reliable products and services that enable high quality diagnostic testing and health information services with high sensitivity and specificity and short turnaround times. There is no guarantee that the accuracy and reproducibility we have demonstrated to date will continue as our product deliveries increase and our product and service portfolio expands.

Our products and services use a number of complex and sophisticated biochemical and bioinformatics processes, many of which are highly sensitive to external factors. An operational, technological or other failure in one of these complex processes or fluctuations in external variables may result in sensitivity or specificity rates that are lower than we anticipate or result in longer than expected turnaround times. In addition, labs are required to validate their processes before using our products for clinical purposes. These validations are outside of our control. If our products do not perform, or are perceived to not have performed, as expected or favorably in it to competitive products, our operating results, reputation, and business will suffer, and we may also be subject to legal claims arising from product limitations, errors, or inaccuracies.

If our sales and development or other collaborations and commercial relationships are not successful and we are not able to offset the resulting impact through our own efforts or through agreements with new partners, our commercialization activities may be impaired and our financial results could be adversely affected.

Part of our business strategy is to develop relationships with health systems, biopharma companies, and other partners to utilize our products and to provide access to data. Developing and commercializing products with third parties reduces our control over such development and commercialization efforts and subjects us to the various risks inherent in a joint effort with a third party, such as delays, operational issues, technical difficulties and other contingencies outside of our influence or control. The financial condition of these third parties could weaken, or they could terminate their relationship with us and/or stop sharing data or other information; reduce their marketing efforts relating to our products; develop and commercialize, or otherwise utilize competing products in addition to or in lieu of our tests; merge with or be acquired by a competitor of us or a company that chooses to de-prioritize the efforts to utilize our products or provide us with adequate data; or otherwise breach their agreements with us. Further, we must expend resources to operationalize our existing collaborations with our health system partners, which requires substantial effort in areas such as integrations for testing workflow, EMR, consents, marketing, and billing. To the extent, we are not successful at operationalizing existing collaborations with health partners, we may not be able to further improve or pursue new agreements with additional partners. Furthermore, our partners may misappropriate our trade secrets or use our proprietary information in such a way as to expose us to litigation and potential liability; and our compliance risk may increase to the extent that we are responsible for our partners' activities. Disagreements or disputes with our health systems and other partners, including disagreements over customers, proprietary or other rights or our or their compliance with financial or other contractual obligations, might cause delays or impair the development or commercialization of our products, services, and technologies, lead to additional responsibilities for us with respect to new products, services and technologies, or result in litigation or arbitration, any of which would divert management attention and resources and be time-consuming and expensive. As is typical for companies in our industry, it is continually evaluating and pursuing various strategic or commercial relationships, some of which may involve the sale and issuance of our common stock, which could result in additional dilution of the percentage ownership of our stockholders and could cause the price of our common stock and warrants to decline.

If our relationships are not successful, our ability to develop and improve of products, services and technologies, and to successfully execute our commercial strategy regarding such products, services and technologies, could be compromised.

We may seek to grow our business through acquisitions of complementary products or technologies, and the failure to manage acquisitions, or the failure to integrate them with our existing business, could have a material adverse effect on our business, financial condition and operating results.

From time to time, we may consider opportunities to acquire other products or technologies that may enhance our product platform or technology, expand the breadth of our markets or customer base, or advance our business strategies. Potential acquisitions involve numerous risks, including:

- problems assimilating the acquired products or technologies;
- issues maintaining uniform standards, procedures, controls and policies;
- unanticipated costs associated with acquisitions;
- diversion of management's attention from our existing business;
- risks associated with entering new markets in which we have limited or no experience; and
- increased legal and accounting costs relating to the acquisitions or compliance with regulatory matters.

For example, we are exposed to these and other risks in connection with the pending Acquisition of GeneDx. See "*—Risks Related to the Acquisition*". We do not know if we will be able to identify any other acquisitions we deem suitable, whether we will be able to successfully complete any acquisitions on favorable terms or at all, or whether we will be able to successfully integrate any acquired products or technologies. Our potential inability to integrate any acquired products or technologies effectively may adversely affect our business, operating results and financial condition.

If we are unable to deploy and maintain effective sales, marketing and medical affairs capabilities, we will have difficulty achieving market awareness and selling our products and services.

To achieve commercial success for our tests and our future products and services, we must continue to develop and grow our sales, marketing and medical affairs organizations to effectively explain to healthcare providers the reliability, effectiveness and benefits of our current and future products and services as compared to alternatives. We may not be able to successfully manage our dispersed or inside sales forces or our sales force may not be effective. Because of the competition for their services, we may be unable to hire, partner with or retain additional qualified sales representatives or marketing or medical affairs personnel, either as our employees or independent contractors or through independent sales or other third-party organizations. Market competition for commercial, marketing and medical affairs talent is significant, and we may not be able to hire or retain such talent on commercially reasonable terms, if at all.

Establishing and maintaining sales, marketing and medical affairs capabilities will be expensive and time-consuming. Our expenses associated with maintaining our sales force may be disproportionate to the revenues we may be able to generate on sales of the certain tests or any future products or services.

We may never become profitable.

Sema4 has incurred losses since Sema4 was formed and we expect to continue to generate significant operating losses for the foreseeable future. As of December 31, 2021 and December 31, 2020, we have an accumulated deficit of approximately $575.4 million and $330.1 million, respectively. We expect to continue investing significantly toward development and commercialization of our health information technology and other products and services. If our revenue does not grow significantly, we will not be profitable. We cannot be certain that the revenue from the sale of any products or services based on our technologies will be sufficient to make us profitable.

Our operating results could be subject to significant fluctuation, which could increase the volatility of our stock and warrant prices and cause losses to our stockholders.

Our revenues and results of operations may fluctuate significantly, depending on a variety of factors, including the following:

- our success in marketing and selling, and changes in demand for, our tests, and the level of reimbursement and collection obtained for such tests;
- seasonal and environmental variations affecting healthcare provider recommendations for our tests and patient compliance with healthcare provider recommendations, including without limitation holidays, weather events, and circumstances such as the outbreak of coronavirus or influenza that may limit patient access to medical practices for diagnostic tests and preventive services;
- our success in collecting payments from third-party payors, patients and collaborative partners, variation in the timing of these payments and recognition of these payments as revenues;
- the pricing of our tests, including potential changes in CMS or other reimbursement rates;
- circumstances affecting our ability to provide our tests, including weather events, supply shortages, or regulatory or other circumstances that adversely affect our ability to manufacture our tests or process tests in our clinical laboratories;
- circumstances affecting our ability to provide health information and data science services to biopharma partners, including software or hardware failures, insufficient capacity, regulatory changes or other circumstances that adversely affect the ability of us to deliver these services;
- fluctuations in the amount and timing of our selling and marketing costs and our ability to manage costs and expenses and effectively implement our business;
- our research and development activities, including the timing of clinical trials; and
- our ability to collect, use, and commercialize data in a changing regulatory environment at a time when the public is growing increasingly concerned about privacy.

Our revenue growth rate could decline over time, and it may experience downward pressure on our operating margins in the future.

Our revenue growth rate could decline over time as a result of a number of factors, including increasing competition and the continued expansion of our business into a variety of new fields. Changes in geographic mix and product and service mix and an increasing competition for tests may also affect our revenue growth rate. We may also experience a decline in our revenue growth rate as our revenues increase to higher levels, if there is a decrease in the rate of adoption of our products, services, and technologies, among other factors.

In addition to a decline in our revenue growth rate, we may also experience downward pressure on our gross operating margins resulting from a variety of factors, such as the continued expansion of our business into new fields, including new products and services, as well as significant investments in new areas, all of which may have margins lower than those that we generate from testing. We may also experience downward pressure on our gross operating margins from increasing competition and increased costs for many aspects of our business. We may also pay increased fees to our partners as well as increased acquisition costs. We may also face an increase in infrastructure costs, supporting other businesses. Additionally, our expenditures to promote new products and services or to distribute certain products and services or increased investment in our innovation efforts across our Centrellis platform may affect our operating margins.

Due to these factors and the evolving nature of our business, our historical projected revenue growth rate and historical gross operating margins may not be indicative of our future performance.

We may need to raise additional capital to fund our existing operations, develop additional products and services, commercialize new products and services or expand our operations.

Sema4 has incurred net losses and negative cash flows from operations since its inception, including net losses of $245.4 million, $241.3 million and $29.7 million for the years ended December 31, 2021, 2020 and 2019, respectively. As of December 31, 2021, we had an accumulated deficit of $575.4 million. We expect to continue to generate significant operating losses for the foreseeable future, and we may therefore also seek to sell common or preferred equity or convertible debt securities, enter into a credit facility or another form of third-party funding or seek other debt financing.

We may also consider raising additional capital in the future to expand our business, to pursue strategic investments, to take advantage of financing opportunities or for other reasons, including to:

- increase our sales and marketing efforts to drive market adoption of our current and future products and services;
- fund development efforts for our current and future products and services;
- expand our products and services into other disease indications and clinical applications;
- acquire, license or invest in technologies;
- acquire or invest in complementary businesses or assets; and
- finance capital expenditures and general and administrative expenses.

In particular, in connection with the pending Acquisition of GeneDx, we have entered into subscription agreements with certain institutional investors pursuant to which we have agreed to issue and sell to the investors, in private placements to close substantially concurrently with the closing of the Acquisition, an aggregate of 50 million shares of our common stock at $4.00 per share, for an aggregate gross purchase price of $200 million, before fees and expenses.

Our present and future funding requirements will depend on many factors, including:

- our ability to achieve revenue growth;
- our rate of progress in establishing payer coverage and reimbursement arrangements with commercial third-party payors and government payers;
- the cost of expanding our laboratory operations and offerings, including our sales and marketing efforts;
- our rate of progress in, and cost of the sales and marketing activities associated with, establishing adoption of our Centrellis solution;
- our rate of progress in, and cost of research and development activities associated with, products and services in research and early development;
- the effect of competing technological, product and market developments;
- costs related to international expansion; and
- the potential cost of and delays in product development as a result of any regulatory oversight applicable to our products and services.

The various ways we could raise additional capital carry potential risks. If we raise funds by issuing equity securities, like in the PIPE Investment, dilution to our stockholders could result. Any preferred equity securities issued also could provide for rights, preferences or privileges senior to those of holders of our common stock. If we raise funds by issuing debt securities, those debt securities would have rights, preferences and privileges senior to

those of holders of our common stock. The terms of debt securities issued or borrowings pursuant to a credit agreement could impose significant restrictions on our operations. If we raise funds through collaborations and licensing arrangements, we might be required to relinquish significant rights to our technologies or products and services or grant licenses on terms that are not favorable to us.

We expect to make significant investments in our continued research and development of new products and services, which may not be successful.

We are seeking to leverage and deploy our Centrellis and Traversa platforms to develop a pipeline of future disease-specific research, diagnostic and therapeutic products and services. For example, we are attempting to extend current products into additional indications and sample types, and we are developing our population health program, and our pharmacogenomics solutions with a view toward advancing the development of tests designed to identify genetic variants for drug response that are associated with medically actionable and clinically relevant data to make more informed treatment decisions. We expect to incur significant expenses to advance these development efforts, but they may not be successful.

Developing new products and services is a speculative and risky endeavor. Products or services that initially show promise may fail to achieve the desired results or may not achieve acceptable levels of analytical accuracy or clinical utility. We may need to alter our products in development and repeat analysis or clinical studies before we identify a potentially successful product or service. Product development is expensive, may take years to complete and can have uncertain outcomes. Failure can occur at any stage of the development. If, after development, a product or service appears successful, we or our collaborators may, depending on the nature of the product or service, still need to obtain FDA and other regulatory clearances, authorizations or approvals before we can market it. In the case of clinical products, the FDA's clearance, authorization or approval pathways are likely to involve significant time, as well as additional research, development and clinical study expenditures. The FDA may not clear, authorize or approve any future product or service we develop. Even if we develop a product or service that receives regulatory clearance, authorization or approval, or succeeds in initial product testing, we or our collaborators would need to commit substantial resources to commercialize, sell and market it before it could be profitable, and the product or service may never be commercially successful. Additionally, development of any product or service may be disrupted or made less viable by the development of competing products or services.

New potential products and services may fail at any stage of development or recalled after commercialization and if we determine that any of our current or future products or services are unlikely to succeed, we may abandon them without any return on our investment. If we are unsuccessful in developing additional products or services, our potential for growth may be impaired.

We have identified material weaknesses, some of which have a pervasive effect across the organization, and may identify additional material weaknesses or significant deficiencies, in our internal controls over financial reporting. Our failure to remedy these matters could result in a material misstatement of our financial statements.

In the course of preparing Legacy Sema4's financial statements for 2020, 2019 and 2018, we identified material weaknesses in our internal control over financial reporting as of December 31, 2020, which could, if not remediated, result in material misstatements in our financial statements. These material weaknesses had not been fully remediated as of December 31, 2021. In addition, during 2021, management identified a misclassification related to certain costs included within cost of services for the years ended December 31, 2021, 2020 and 2019. A material weakness is a deficiency, or combination of deficiencies, in internal control over financial reporting, such that there is a reasonable possibility that a material misstatement of the annual or interim financial statements will not be prevented or detected on a timely basis. The material weaknesses identified related to the fact that we did not design and maintain accounting policies, procedures and controls to ensure complete, accurate and timely financial reporting in accordance with U.S. GAAP. Specifically, the material weaknesses identified included the following:

- We did not design and maintain accounting policies, processes and controls to analyze, account for and report our revenue arrangements in accordance with ASC 606, Revenue from Contracts with Customers, and ASC 605, Revenue Recognition.

- We did not design and maintain formal accounting policies, procedures and controls to achieve complete, accurate and timely financial accounting, reporting and disclosures, including controls over the preparation and review of account reconciliations and journal entries; the accounting for cost capitalization policies in accordance with ASC 330, Inventory, and ASC 350-40, Intangibles – Goodwill and Other – Internal-Use Software; and the application of ASC 840, Leases.

- We had not developed and effectively communicated to our employees our accounting policies and procedures, which resulted in inconsistent practices. Since these entity level programs have a pervasive effect across the organization, management has determined that these circumstances constitute a material weakness.

- Our accounting and operating systems lacked controls over access, and program change management that are needed to ensure access to financial data is adequately restricted to appropriate personnel.

- We do not have sufficient, qualified finance and accounting staff with the appropriate U.S. GAAP technical accounting expertise to identify, evaluate and account for accounting and financial reporting, and effectively design and implement systems and processes that allow for the timely production of accurate financial information in accordance with internal financial reporting timelines, commensurate with our size and the nature and complexity of our operations. As a result, we did not design and maintain formal accounting policies, processes and controls related to complex transactions necessary for an effective financial reporting process.

Our management is in the process of implementing a remediation plan that is expected to include policies and procedures to support internal control over financial reporting for a public company as well as supplementing the accounting and finance function with robust technical accounting and financial reporting experience and training. However, we cannot guarantee that the steps we have taken or may subsequently take have been or will be sufficient to remediate the material weaknesses or ensure that our internal controls are effective. For a discussion of our remediation plan and actions, see the section entitled "*Sema4's Management's Discussion and Analysis of Financial Condition and Results of Operations*." However, as noted above, as of December 31, 2021, the material weaknesses have not yet been fully remediated.

Furthermore, as a public company, we are required to comply with certain rules and requirements related to our disclosure controls and procedures and our internal control over financial reporting. Any failure to develop or maintain effective controls as a public company, any deficiencies found in the technology system we use to support our controls, or any difficulties encountered in their implementation or improvement, could harm our operating results or cause us to fail to meet our reporting obligations and may result in a restatement of our financial statements for prior periods. For more information, see "*Risks Related to Being a Public Company—Our internal controls over financial reporting may not be effective and our independent registered public accounting firm may not be able to certify as to their effectiveness, which could have a significant and adverse effect on our business and reputation.*"

Our ability to use our net operating loss carry forwards and certain other tax attributes may be limited.

At December 31, 2021, our total gross deferred tax assets were $160.5 million. Due to our lack of earnings history, future deductible temporary differences related to compensation and uncertainties surrounding our ability to generate future taxable income, our net deferred tax assets have been fully offset by a valuation allowance. The deferred tax assets are primarily comprised of federal and state tax net operating losses and tax credit carryforwards, stock-based compensation and other tax deductible temporary differences.

Furthermore, under Section 382 of the Internal Revenue Code of 1986, as amended, or the Internal Revenue Code, if a corporation undergoes an "ownership change," the corporation's ability to use its pre-change net operating loss carryforwards, or NOLs, and other pre-change tax attributes (such as research tax credits) to offset its future taxable income may be limited. In general, an "ownership change" occurs if there is a cumulative change in its ownership by "5% shareholders" that exceeds 50 percentage points over a rolling three-year period. Our existing NOLs and tax credit carryovers may be subject to limitations arising from previous ownership changes, and if we undergo one or more ownership changes in connection with completed acquisitions, including the business

combination or the pending Acquisition, or future transactions in our stock, our ability to utilize NOLs and tax credit carryovers could be further limited by Section 382 of the Internal Revenue Code. As a result, if we earn future taxable income, our ability to use our pre-change net operating loss and tax credit carryforwards to offset U.S. federal taxable income may be subject to limitations, which could potentially result in increased future tax liability to us. In addition, the Tax Cuts and Jobs Act limits the deduction for NOLs to 80% of current year taxable income and eliminates NOL carrybacks. Further, there may also be periods during which the use of NOLs is suspended or otherwise limited, which could accelerate or permanently increase state liability.

Risks Related to Our Key Relationships

We rely on third-party laboratories to perform certain elements of our service offerings.

A limited but meaningful portion of our genomic analysis services is performed by third-party laboratories and service providers, while the remaining portion is performed in our laboratories. The third-party laboratories are subject to contractual obligations to perform these services for us, but are not otherwise under our control. We therefore do not control the capacity and quality control efforts of these third-party laboratories other than through our ability to enforce contractual obligations on volume and quality systems, and we have no control over such laboratories' compliance with applicable legal and regulatory requirements. We also have no control over the timeliness of such laboratories' performance of their obligations to us, and the third-party laboratories that we have contracted with have in the past had, and occasionally continue to have, issues with delivering results to us or resolving issues with us within the time frames we expected or established in our contracts with them, which sometimes results in longer than expected turnaround times for, or negatively impacts the performance of, these tests and services. In the event of any adverse developments with these third-party laboratories or their ability to perform their obligations in a timely manner and in accordance with the standards that we and our customers expect, our ability to service customers may be delayed, interrupted or otherwise adversely affected, which could result in a loss of customers and harm to our reputation. Furthermore, when these issues arise, we have had to expend time, management's attention and other resources to address and remedy such issues.

We may not have sufficient alternative backup if one or more of the third-party laboratories that we contract with are unable to satisfy their obligations to us with sufficient performance, quality and timeliness, including as a result of the ongoing COVID-19 pandemic. Any natural or other disaster, acts of war or terrorism, shipping embargoes, labor unrest, political instability, outbreaks of disease or similar events at one or more of these third-party laboratories' facilities that causes a loss of capacity would heighten the risks that we face. Changes to or termination of agreements or inability to renew agreements with these third-party laboratories or enter into new agreements with other laboratories that are able to perform such portions of our service offerings could impair, delay or suspend our efforts to market and sell these services. In addition, certain third-party payors, including some state Medicaid payers, that we are under contract with may take the position that sending out testing to third-party laboratories and billing for such tests is contrary to the terms of its provider agreement and may refuse to pay us for the testing. If any of these events occur, our business, financial condition and results of operations could suffer. Further, some state laws impose anti-markup restrictions that prevent an entity from realizing a profit margin on outsourced testing. If we are unable to markup outsourced testing, our revenues and operating margins may suffer.

We rely on Mount Sinai, a related party, and its clinicians for a portion of our test volume in connection with our diagnostic solutions and for data programs, and we have entered into certain other arrangements with Mount Sinai.

We rely on Mount Sinai, which is a related party, and its clinicians for a portion of our test volumes in connection with our diagnostic solutions and for a significant portion of the de-identified clinical records in our databases. In addition, we sublease certain facilities from Mount Sinai, we provide certain research and data services to Mount Sinai, and we and Mount Sinai have entered into certain collaborative and commercial arrangements. Furthermore, we may in the future enter into other contracts for services or other engagements with Mount Sinai.

Mount Sinai is primarily made up of not-for-profit hospitals, a medical and graduate school and employed clinicians. The charitable missions of the Mount Sinai entities include patient care, teaching and research. As such,

the Mount Sinai entities are required to deal with us strictly on an arms-length, fair market value basis, and the interests of Mount Sinai may not necessarily be aligned with our interests or those of our other stockholders.

We are subject to risks as a result of our reliance on Mount Sinai, and if our transactions and relationship with Mount Sinai were to cease, our business could be disrupted and it could have a material adverse effect on our business, research, financial condition and results of operations.

In addition, ISMMS is one of our significant stockholders. ISMMS has entered into a support agreement in connection with the Acquisition, whereby ISMMS has agreed to, among other things, be bound by certain transfer restrictions. Following the expiration of these transfer restrictions, ISMMS may choose to dispose of some or all of the shares of our common stock held by it. Any disposal of shares of common stock by ISMMS, or the perception that these sales could occur, could cause the market price of our stock or warrants to decline.

We rely on commercial courier delivery services to transport samples to our facilities in a timely and cost-efficient manner and if these delivery services are disrupted, our business could be harmed.

Our core business depends on our ability to quickly and reliably deliver test results to our customers. We typically receive blood, saliva, or tissue samples for analysis at our laboratory facilities within days of collection from the patient. Disruptions and errors in these delivery service and accessioning errors and breaches, whether due to error by the courier service, labor disruptions, bad weather, natural disaster, terrorist acts or threats, outbreaks of disease or for other reasons, could adversely affect specimen integrity, our ability to process or store samples in a timely manner and to service our customers, and ultimately our reputation and our business. In addition, if we are unable to continue to obtain expedited delivery services on commercially reasonable terms, our operating results may be adversely affected.

Risks Related to Legal, Regulatory and Compliance

We may be subject to increased compliance risks as a result of our rapid growth, including our dependence on our sales, marketing and billing efforts.

We have had to expand our training and compliance efforts in line with our increasing reliance on personnel in our sales, marketing and billing functions, and our expansion of these functions in line with the overall growth in our business. We continue to monitor our personnel, but we have in the past experienced, and may in the future experience, situations in which employees fail to strictly adhere to our policies. In addition, sales and marketing activities in the healthcare space are subject to various rules and regulations. Moreover, our billing and marketing messaging can be complex and nuanced, and there may be errors or misunderstandings in our employees' communication of such messaging. Furthermore, we utilize text messaging, email, phone calls and other similar methods to communicate with patients who are existing or potential users of our products for various business purposes. These activities subject us to laws and regulations relating to communications with consumers, such as the CAN-SPAM Act and the Telephone Consumer Protection Act, violations of which could subject us to claims by consumers, who may seek actual or statutory damages, which could be material in the aggregate. As we continue to scale up our sales and marketing efforts in line with the growth in our business, in particular our increased pace of product launches as well as further geographical expansion, we face an increased need to continuously monitor and improve our policies, processes and procedures to maintain compliance with a growing number and variety of laws and regulations, including with respect to consumer marketing. To the extent that there is any violation, whether actual, perceived or alleged, of our policies or applicable laws and regulations, we may incur additional training and compliance costs, may receive inquiries from third-party payors or other third parties, or be held liable or otherwise responsible for such acts of non-compliance. Any of the foregoing could adversely affect our cash flow and financial condition.

If we use hazardous materials in a manner that causes injury, we could be liable for resulting damages.

Our activities currently require the use of hazardous chemicals and biological material. We cannot eliminate the risk of accidental contamination or injury to employees or third parties from the use, storage, handling or disposal of these materials. In the event of contamination or injury, we could be held liable for any resulting damages, and any liability could exceed our resources or any applicable insurance coverage we may have. Additionally, we are subject

on an ongoing basis to federal, state and local laws and regulations governing the use, storage, handling and disposal of these materials and specified waste products. The cost of compliance with these laws and regulations may become significant, and our failure to comply may result in substantial fines or other consequences, and either could negatively affect our operating results.

We and our partners will have to maintain compliance with FDA requirements for research, products and services and failure to maintain compliance with FDA requirements may prevent or delay the marketing of our products and services.

Even if we have obtained marketing authorization, we will have to comply with the scope of that clearance, authorization or approval. Failure to secure and to comply with clearance, authorization or approval or the additional, extensive and ongoing post-marketing obligations imposed by the FDA or other regulatory requirements of other regulatory agencies could result in unanticipated compliance expenditures, a range of administrative enforcement actions, injunctions and criminal prosecution. FDA post-market obligations include, among other things, compliance with the FDA QSR, establishing registration and device listings, labeling requirements, reporting of certain adverse events and malfunctions, and reporting of certain recalls. In addition, circumstances may arise that cause us to recall equipment used in connection with our research, products and services. Such recalls could have an adverse effect on our ability to provide those products and services, which in turn would adversely affect our financial condition. our collaborators will also be required to maintain FDA clearance, authorization or approval for the products and services that we jointly develop. Any failure by us or our collaborators to maintain such clearance, authorization or approval could impair or cause a delay in our ability to profit from these collaborations.

Future changes in FDA enforcement discretion for LDTs could subject our operations to much more significant regulatory requirements.

We currently offer a laboratory-develop test, or LDT, version of certain tests. The FDA has a policy of enforcement discretion with respect to, or LDTs, whereby the FDA does not actively enforce its medical device regulatory requirements for such tests. However, in October 2014, the FDA issued two draft guidance documents stating that the FDA intended to modify its policy of enforcement discretion with respect to LDTs in a risk-based manner consistent with the existing classification of medical devices. Although the FDA halted finalization of the guidance in November 2016 to allow for further public discussion on an appropriate oversight approach to LDTs and to give Congressional authorizing committees the opportunity to develop a legislative solution, it is unclear if Congress or the FDA will modify the current approach to the regulation of LDTs in a way that would subject our current or future services marketed as LDTs to the enforcement of FDA regulatory requirements. The FDA Commissioner and the Director of the Center for Devices and Radiological Health, or CDRH, have expressed significant concerns regarding disparities between some LDTs and *in vitro* diagnostics that have been reviewed, cleared, authorized or approved by the FDA. If the FDA were to determine that certain tests offered by us as LDTs are not within the policy for LDTs for any reason, including new rules, policies or guidance, or due to changes in statute, our tests may become subject to extensive FDA requirements or our business may otherwise be adversely affected. If the FDA were to disagree with our LDT status or modify our approach to regulating LDTs, we could experience reduced revenue or increased costs, which could adversely affect our business, prospects, results of operations and financial condition. If required, the regulatory marketing authorization process required to bring our current or future LDTs into compliance may involve, among other things, successfully completing additional clinical validations and submitting to and obtaining clearance from the FDA for a premarket clearance (510(k)) submission or authorization for a *de novo* or approval of a PMA. Furthermore, pending legislative proposals, if passed, such as the VALID Act, could create new or different regulatory and compliance burdens on us and could have a negative effect on our ability to keep products on the market or develop new products, which could have a material effect on our business. In the event that the FDA requires marketing authorization of our LDTs in the future, the FDA may not ultimately grant any clearance, authorization or approval requested by us in a timely manner, or at all. In addition, if the FDA inspects our laboratory in relation to the marketing of any FDA-authorized test, any enforcement action the FDA takes might not be limited to the FDA-authorized test carried by us and could encompass our other testing services.

Recently, the FDA has also taken a more active role in certain diagnostic areas, including the oversight of pharmacogenetic, or PGx, and COVID-19 tests. In 2019, the FDA contacted several laboratories to demand changes

to PGx test reports and marketing materials. In February 2020, the FDA issued a statement indicating that it continues to have concerns about the claims that certain clinical laboratories make with respect to their PGx tests, and published tables that list PGx associations for which the FDA has determined that the data support therapeutic management recommendations, a potential impact on safety or response, or a potential impact on pharmacokinetic properties only, respectively. To date, however, the FDA has not provided any general guidance on the types of claims or other characteristics that will cause a PGx test to fall outside FDA's enforcement discretion. As such, the extent to which the FDA will allow any laboratory to offer PGx tests in their current form without meeting FDA regulatory requirements for medical devices is unclear at this time.

For each product and service we are developing that may require FDA premarket review prior to marketing, the FDA may not grant clearance, authorization or premarket approval and failure to obtain necessary approvals for our future products and services would adversely affect our ability to grow our business.

Before we begin to manufacture, label and market additional clinical diagnostic products for commercial diagnostic use in the United States, we may be required to obtain either clearance, marketing authorization or approval from the FDA, unless an exemption applies or the FDA exercises its enforcement discretion and refrains from enforcing its requirements. For example, the FDA currently has a policy of refraining from enforcing its medical device requirements with respect to LDTs, which the FDA considers to be a type of *in vitro* diagnostic test that is designed, manufactured and used within a single properly licensed laboratory.

The process of obtaining PMA is much more rigorous, costly, lengthy and uncertain than the 510(k) clearance process. In the PMA approval process, the FDA must determine that a proposed device is safe and effective for its intended use based, in part, on extensive data, including, but not limited to, technical, preclinical, clinical trial, manufacturing and labeling data. Conversely, in the 510(k) clearance process, the FDA must determine that a proposed device is "substantially equivalent" to a legally marketed "predicate" device in order for the product to be cleared for marketing. To be "substantially equivalent," the proposed device must have the same intended use as the predicate device, and either have the same technological characteristics or if it has different technological characteristics as the predicate device, the proposed device must be as safe and effective as, and not raise different questions of safety or effectiveness than, the predicate device. Clinical data is sometimes required to support substantial equivalence. For lower-risk devices that would otherwise automatically be placed into Class III, which require a PMA because no predicate device is available and the devices do not fall within an existing 510(k)-exempt classification, an applicant may submit a *de novo* request to down classify the device into Class II or Class I, which would not require a PMA. In the *de novo* process, the FDA must determine that general and special controls are sufficient to provide reasonable assurance of the safety and effectiveness of a device, which is low to moderate risk and has no predicate. In other words, the applicant must justify the "down-classification" to Class I or II for a new product type that would otherwise automatically be placed into Class III, but is lower risk. Clinical data may be required. For laboratory tests for which FDA clearance, authorization or approval is required, the FDA may also require data to support analytical and clinical validity.

The 510(k), *de novo* and PMA processes can be expensive and lengthy and require the payment of significant fees, unless an exemption applies. The FDA's 510(k) clearance pathway usually takes from three to nine months from submission, but it can take longer for a novel type of product. The FDA's *de novo* classification pathway usually takes from six to 12 months, but for many applicants can take up to 18 months or more.

The process of obtaining a PMA generally takes from one to three years, or even longer, from the time the PMA is submitted to the FDA until an approval is obtained. Any delay or failure to obtain necessary regulatory clearances, authorizations or approvals would have a material adverse effect on our business, financial condition and prospects.

The FDA can delay, limit or deny clearance, authorization or approval of a device for many reasons, including:

- the inability to demonstrate to the satisfaction of the FDA that the products are safe or effective for their intended uses;
- the disagreement of the FDA with the design, conduct or implementation of the clinical trials or the analysis or interpretation of data from preclinical studies, analytical studies or clinical trials;

- serious and unexpected adverse device effects experienced by participants in clinical trials;
- the data from preclinical studies, analytical studies and clinical trials may be insufficient to support clearance, authorization or approval, where required;
- the inability to demonstrate that the clinical and other benefits of the device outweigh the risks;
- an advisory committee, if convened by the FDA, may recommend against approval of a PMA or other application or may recommend that the FDA require, as a condition of approval, additional preclinical studies or clinical trials, limitations on approved labeling or distribution and use restrictions, or even if an advisory committee makes a favorable recommendation, the FDA may still not approve the product;
- the FDA may identify deficiencies in our marketing application;
- the FDA may identify deficiencies in our or our collaborators' manufacturing processes, facilities or analytical methods;
- the potential for policies or regulations of the FDA or applicable foreign regulatory bodies to change significantly in a manner rendering clinical data or regulatory filings insufficient for clearance, authorization or approval; and
- the FDA or foreign regulatory authorities may audit clinical trial data and conclude that the data is not sufficiently reliable to support a PMA.

There are numerous FDA personnel assigned to review different aspects of marketing submissions, which can present uncertainties based on their ability to exercise judgment and discretion during the review process. During the course of review, the FDA may request or require additional data and information, and the development and provision of these data and information may be time-consuming and expensive. The process of obtaining regulatory clearances, authorizations or approvals to market a medical device can be costly and time-consuming, and we may not be able to obtain these clearances, authorizations or approvals on a timely basis, or at all for our products in development. If we are unable to obtain clearance, authorization or approval for any products for which it plans to seek clearance, authorization or approval, our business may be harmed.

Modifications to our products with FDA marketing authorization may require new FDA clearances, authorizations or approvals, or may require it to cease marketing or recall the modified clinical diagnostic products or future clinical products until clearances are obtained.

Any modification to a 510(k)-cleared device that significantly affects its safety or effectiveness, or that constitutes a major change in its intended use, could require a new 510(k) clearance, a new *de novo* authorization or approval of a PMA. The FDA requires every manufacturer to make this determination in the first instance, but the FDA may review any manufacturer's decision. The FDA may not agree with our decisions regarding whether new clearances, authorizations or approvals are necessary.

For any product approved pursuant to a PMA, we would be required to seek supplemental approval for many types of modifications to the approved product. The FDA requires manufacturers in the first instance to determine whether a PMA supplement or other regulatory filing is needed or whether the change may be reported via the PMA Annual Report, but may disagree with a company's assessment.

If the FDA disagrees with our determination, which it may not review until we submit an annual report or the FDA conducts an inspection or other inquiry, and requires us to seek new clearances, authorizations or approvals for modifications to our previously cleared, authorized or approved clinical diagnostic products for which we have concluded new clearances, authorizations or approvals are unnecessary, we may be required to cease marketing or distribution of these clinical diagnostic products or to recall the modified products until we obtain clearance, authorization or approval. We may also be subject to enforcement action, including, among other things, significant regulatory fines or penalties.

In addition, for example, we plan to match our test reports for certain indications to identified mutations with FDA-approved targeted therapies or relevant clinical trials of targeted therapies. If a patient or physician who orders a test using one of our products is unable to obtain, or be reimbursed for the use of, targeted therapies because they are not indicated in the FDA-approved label for treatment, the patient is unable to enroll in an identified clinical trial due to the enrollment criteria of the trial, or some other reason, the ordering physician may conclude the test report does not contain actionable information. If physicians do not believe our products consistently generate actionable information about their patients' disease or condition, they may be less likely to use our products.

Furthermore, we cannot provide assurance that customers will always use these products in the manner in which they are intended. Any intentional or unintentional misuse of these products by customers could lead to substantial civil and criminal monetary and non-monetary penalties, and could result in significant legal and investigatory fees.

Our business is subject to various complex laws and regulations applicable to clinical diagnostics. We could be subject to significant fines and penalties if we or our partners fail to comply with these laws and regulations.

As a provider of clinical diagnostic products and services, we and our partners are subject to extensive and frequently changing federal, state, local and foreign laws and regulations governing various aspects of our business.

In particular, the clinical laboratory and healthcare industry is subject to significant governmental certification and licensing regulations, as well as federal, state and foreign laws regarding:

- test ordering and billing practices;
- marketing, sales and pricing practices;
- health information privacy and security, including HIPAA and comparable state laws;
- insurance;
- anti-markup legislation;
- fraud and abuse; and
- consumer protection.

We are also required to comply with FDA regulations, including with respect to our labeling and promotion activities. In addition, advertising and marketing of our clinical products are subject to regulation by the Federal Trade Commission, or FTC, and advertising of laboratory services is regulated by certain state laws. Violation of any FDA requirement could result in enforcement actions, such as seizures, injunctions, civil penalties and criminal prosecutions, and violation of any FTC or state law requirement could result in injunctions and other remedies, all of which could have a material adverse effect on our business. Most states also have similar regulatory and enforcement authority for devices. Additionally, most foreign countries have authorities comparable to the FDA and processes for obtaining marketing approvals. Obtaining and maintaining these approvals, and complying with all laws and regulations, may subject us to similar risks and delays as those we could experience under FDA, FTC and state regulation. We incur various costs in complying and overseeing compliance with these laws and regulations. The growth of our business and sales organization, the acquisition of additional businesses, such as the pending Acquisition of GeneDx, or products and services and our expansion outside of the U.S. may increase the potential of violating these laws, regulations or our internal policies and procedures.

Healthcare policy has been a subject of extensive discussion in the executive and legislative branches of the federal and many state governments and healthcare laws and regulations are subject to change. Development of the existing commercialization strategy for our tests and planned development of products in our pipeline has been based on existing healthcare policies. We cannot predict what additional changes, if any, will be proposed or adopted or the effect that such proposals or adoption may have on our business, financial condition and results of operations.

If we or our partners, fail to comply with these laws and regulations, it could incur significant fines and penalties and our reputation and prospects could suffer. Additionally, any such partners could be forced to cease offering our products and services in certain jurisdictions, which could materially disrupt our business. An adverse outcome could include us being required to pay treble damages, incur civil and criminal penalties, paying attorneys' fees, entering into a corporate integrity agreement, being excluded from participation in government healthcare programs, including Medicare and Medicaid, and other adverse actions that could materially and adversely affect our business, financial condition and results of operations.

Compliance with the HIPAA security, privacy and breach notification regulations may increase our costs.

The HIPAA privacy, security and breach notification regulations, including the expanded requirements under HITECH, establish comprehensive federal standards with respect to the uses and disclosures of protected health information, or PHI, by health plans, healthcare providers and healthcare clearinghouses, in addition to setting standards to protect the confidentiality, integrity and security of PHI. The regulations establish a complex regulatory framework on a variety of subjects, including:

- the circumstances under which uses and disclosures of PHI are permitted or required without a specific authorization by the patient, including but not limited to treatment purposes, activities to obtain payments for our services, and our healthcare operations activities;
- a patient's rights to access, amend and receive an accounting of certain disclosures of PHI;
- requirements to notify individuals if there is a breach of their PHI;
- the contents of notices of privacy practices for PHI;
- administrative, technical and physical safeguards required of entities that use or receive PHI;
- deidentification of PHI; and
- the protection of computing systems maintaining electronic PHI.

We have implemented practices intended to meet the requirements of the HIPAA privacy, security and breach notification regulations, as required by law. We are required to comply with federal privacy, security and breach notification regulations as well as varying state privacy, security and breach notification laws and regulations, which may be more stringent than federal HIPAA requirements. In addition, for healthcare data transfers from other countries relating to citizens and/or residents of those countries, we must comply with the laws of those countries. The federal privacy regulations under HIPAA restrict our ability to use or disclose patient identifiable data, without patient authorization, for purposes other than payment, treatment, healthcare operations and certain other specified disclosures such as public health and governmental oversight of the healthcare industry.

HIPAA provides for significant fines and other penalties for wrongful use or disclosure of PHI, including potential civil and criminal fines and penalties. Computer networks are always vulnerable to breach and unauthorized persons may in the future be able to exploit weaknesses in the security systems of our computer networks and gain access to PHI. Additionally, we share PHI with third-parties who are legally obligated to safeguard and maintain the confidentiality of PHI. Unauthorized persons may be able to gain access to PHI stored in such third-parties computer networks. Any wrongful use or disclosure of PHI by us or such third-parties, including disclosure due to data theft or unauthorized access to us or our third-parties computer networks, could subject it to fines or penalties that could adversely affect our business and results of operations. Although the HIPAA statute and regulations do not expressly provide for a private right of damages, we could also be liable for damages under state laws to private parties for the wrongful use or disclosure of confidential health information or other private personal information.

Some of our activities may subject it to risks under federal and state laws prohibiting 'kickbacks' and false or fraudulent claims.

In addition to FDA marketing and promotion restrictions, several other types of state and federal healthcare fraud and abuse laws have been applied in recent years to restrict certain marketing practices in the healthcare product and service industry and to regulate billing practices and financial relationships with healthcare providers, hospitals and other healthcare providers. These laws include a federal law commonly known as the Medicare/Medicaid anti-kickback law, and several similar state laws, which prohibit payments intended to induce healthcare providers or others either to refer patients or to acquire or arrange for or recommend the acquisition of healthcare products or services. While the federal law applies only to referrals, products or services for which payment may be made by a federal healthcare program, state laws often apply regardless of whether federal funds may be involved. These laws constrain the sales, marketing and other promotional activities of manufacturers of medical devices and providers of laboratory services by limiting the kinds of financial arrangements, including sales programs, that may be used with hospitals, healthcare providers, laboratories and other potential purchasers or prescribers of medical devices and laboratory services. Other federal and state laws generally prohibit individuals or entities from knowingly presenting, or causing to be presented, claims for payment from Medicare, Medicaid, or other third-party payors that are false or fraudulent, or are for items or services that were not provided as claimed.

In 2018, Congress passed the Eliminating Kickbacks in Recovery Act, or EKRA, as part of the Substance Use-Disorder Prevention that Promotes Opioid Recovery and Treatment for Patients and Communities Act. Similar to the Medicare/Medicaid anti-kickback law, EKRA imposes criminal penalties for knowing or willful payment or offer, or solicitation or receipt, of any remuneration, whether directly or indirectly, overtly or covertly, in cash or in kind, in exchange for the referral or inducement of laboratory testing (among other healthcare services) unless a specific exception applies. However, unlike the Medicare/Medicaid anti-kickback law, EKRA is not limited to services covered by federal or state healthcare programs but applies more broadly to services covered by "healthcare benefit programs," including commercial insurers. As currently drafted, EKRA potentially expands the universe of arrangements that could be subject to government enforcement under federal fraud and abuse laws. In addition, while the Medicare/Medicaid anti-kickback law includes certain exceptions that are widely relied upon in the healthcare industry, including compensating employees on a percentage basis, not all of those same exceptions apply under EKRA. EKRA expressly does not protect employee compensation that varies by the number of individuals referred to a laboratory, the number of tests performed by a laboratory, or the amount billed to or received from a health benefit program from individuals referred to a laboratory. Because EKRA is a relatively new law, there is no agency guidance and only one court has addressed the application of EKRA. That case was decided by the United States District Court of Hawaii and involved a lawsuit between a laboratory and an employee. The Court ruled that the commission-based compensation provisions of the laboratory employee's contract did not violate EKRA. Although this may be a favorable interpretation of EKRA for laboratory compensation structures, we cannot be assured that courts in our jurisdiction will reach the same conclusion or that the decision will not be overturned if there is an appeal. Because EKRA is a relatively new law, there is no agency guidance or court precedent to indicate how and to what extent it will be applied and enforced. We cannot assure you that our relationships with healthcare providers, hospitals, customers, our own sales representatives, or any other party will not be subject to scrutiny or will survive regulatory challenge under EKRA.

Additionally, to avoid liability under federal false claims laws, we or our partners must carefully and accurately code claims for reimbursement, proactively monitor the accuracy and appropriateness of claims and payments received, diligently investigate any credible information indicating that we or our partners may have received an overpayment, and promptly return any overpayments. Medicare payments are subject to audit, including through the Comprehensive Error Rate Testing, or CERT, program, and payments may be recouped by CMS if it is determined that they were improperly made. Currently, a small percentage of our revenues are generated by payments from Medicare. The federal anti-kickback statute and certain state-level false claims laws prescribe civil and criminal penalties (including fines) for noncompliance that can be substantial. In addition, various states have enacted false claim laws analogous to the federal laws that apply where a claim is submitted to any third-party payor and not only a governmental payer program. While we continually strive to comply with these complex requirements, interpretations of the applicability of these laws to marketing and billing practices are constantly evolving and even an unsuccessful challenge could cause adverse publicity and be costly to respond to, and thus could harm our business and prospects. Our failure to comply with applicable laws could result in various adverse consequences that could have a material adverse effect upon our business, including the exclusion of our products and services from government programs and the imposition of civil or criminal sanctions.

Our business could be harmed by the loss, suspension or other restriction on a license, certification or accreditation, or by the imposition of a fine or penalties, under CLIA, our implementing regulations or other state, federal and foreign laws and regulations affecting licensure or certification, or by future changes in these laws or regulations.

Federal law requires virtually all clinical laboratories to comply with CLIA, which generally involves becoming certified by the federal and state government for the testing that will be performed and complying with various operational, personnel, facilities administration, quality and proficiency testing requirements intended to ensure that testing services are accurate and reliable. CLIA certification is also a prerequisite to be eligible to bill state and federal healthcare programs, as well as many private third-party payors, for laboratory research and clinical diagnostic testing services. For example, as a condition of our CLIA certification, a laboratory may be subject to survey and inspection every other year, additional random inspections and surprise inspections based on complaints received by state or federal regulators. The biennial survey and inspection is conducted by CMS, a CMS agent or, if the laboratory holds a CLIA certificate of accreditation, a CMS-approved accreditation organization, such as CAP. Sanctions for failure to comply with CLIA requirements, including proficiency testing violations, may include suspension, revocation or limitation of a laboratory's CLIA certificate, which is necessary to conduct business, as well as the imposition of significant civil, administrative or criminal sanctions against the lab, its owners and other individuals. In addition, we are subject to regulation under certain state laws and regulations governing laboratory licensure. Some states have enacted laboratory licensure and compliance laws that are more stringent than CLIA. Changes in state licensure laws that affect our ability to offer and provide research and diagnostic products and services across state or foreign country lines could materially and adversely affect our business. In addition, state and foreign requirements for laboratory certification may be costly or difficult to meet and could affect our ability to receive specimens from certain states or foreign countries.

Any sanction imposed under CLIA, its implementing regulations or state or foreign laws or regulations governing licensure, or our failure to renew a CLIA certificate, a state or foreign license or accreditation, could have a material adverse effect on our business.

We may never obtain approval in the EU or in any other foreign country for any of our products or services and, even if we do, we or our partners and collaborators may never be able to commercialize them in another jurisdiction, which would limit our ability to realize their full market potential.

In order to eventually market any of our current or future products and services in any particular foreign jurisdiction, we must establish compliance with numerous and varying regulatory requirements on a jurisdiction-by-jurisdiction basis regarding quality, safety, performance, privacy and efficacy. In addition, clinical trials or clinical investigations conducted in one country may not be accepted by regulatory authorities in other countries, and regulatory clearance, authorization or approval in one country does not guarantee regulatory clearance, authorization or approval in any other country. Approval processes vary among countries and can involve additional product testing and validation and additional administrative review periods.

Seeking foreign regulatory clearance, authorization or approval could result in difficulties and costs for us and our collaborators and require additional preclinical studies, clinical trials or clinical investigations which could be costly and time-consuming. Regulatory requirements and ethical approval obligations can vary widely from country to country and could delay or prevent the introduction of our products and services in those countries. The foreign regulatory clearance, authorization or approval process involves all of the risks and uncertainties associated with FDA clearance, authorization or approval. We currently have limited experience in obtaining regulatory clearance, authorization or approval in international markets. If we or our collaborators fail to comply with regulatory requirements in international markets or to obtain and maintain required regulatory clearances, authorizations or approvals in international markets, or if those approvals are delayed, our target market will be reduced and our ability to realize the full market potential of our products and services will be unrealized.

Complying with numerous statutes and regulations pertaining to our business is an expensive and time-consuming process, and any failure to comply could result in substantial penalties.

Our operations are subject to other extensive federal, state, local and foreign laws and regulations, all of which are subject to change. These laws and regulations currently include, among others:

- HIPAA, which establishes comprehensive federal standards with respect to the privacy and security of protected health information and requirements for the use of certain standardized electronic transactions;
- amendments to HIPAA under HITECH, which strengthen and expand HIPAA privacy and security compliance requirements, increase penalties for violators and expand vicarious liability, extend enforcement authority to state attorneys general, and impose requirements for breach notification;
- the General Data Protection Regulation, or GDPR, which imposes strict privacy and security requirements on controllers and processors of European personal data, including enhanced protections for "special categories" of personal data, including sensitive information such as health and genetic information of data subjects;
- the CCPA, which, among other things, regulates how subject businesses may collect, use, disclose and/or sell the personal information of consumers who reside in California, affords rights to consumers that they may exercise against businesses that collect their information, and requires implementation of reasonable security measures to safeguard personal information of California consumers;
- the federal Anti-Kickback Statute, which prohibits knowingly and willfully offering, paying, soliciting or receiving remuneration, directly or indirectly, overtly or covertly, in cash or in kind, to induce or in return for the referral of an individual, for the furnishing of or arrangement for the furnishing of any item or service for which payment may be made in whole or in part by a federal healthcare program, or the purchasing, leasing, ordering, arranging for, or recommend purchasing, leasing or ordering, any good, facility, item or service for which payment may be made, in whole or in part, under a federal healthcare program;
- EKRA, which prohibits payments for referrals to recovery homes, clinical treatment facilities, and laboratories and reaches beyond federal health care programs, to include private insurance;
- the federal physician self-referral law, known as the Stark Law, which prohibits a physician from making a referral to an entity for certain designated health services covered by the Medicare program, including laboratory and pathology services, if the physician or an immediate family member has a financial relationship with the entity unless an exception applies, and prohibits an entity from billing for designated health services furnished pursuant to a prohibited referral;
- the federal false claims law, which imposes liability on any person or entity that, among other things, knowingly presents, or causes to be presented, a false or fraudulent claim for payment to the federal government;
- the federal Civil Monetary Penalties Law, which prohibits, among other things, the offering or transfer of remuneration to a Medicare or state healthcare program beneficiary if the person knows or should know it is likely to influence the beneficiary's selection of a particular provider, practitioner or supplier of services reimbursable by Medicare or a state healthcare program, unless an exception applies;
- the HIPAA fraud and abuse provisions, which create new federal criminal statutes that prohibit, among other things, defrauding health care benefit programs, willfully obstructing a criminal investigation of a healthcare offense and falsifying or concealing a material fact or making any materially false statements in connection with the payment for healthcare benefits, items or services;
- other federal and state fraud and abuse laws, such as anti-kickback laws, prohibitions on self-referral, fee-splitting restrictions, insurance fraud laws, anti-markup laws, prohibitions on the provision of tests at no or discounted cost to induce physician or patient adoption, and false claims acts, which may extend to services reimbursable by any third-party payer, including private insurers;

- the 21st Century Cures Act information blocking prohibition, which prohibits covered actors from engaging in certain practices that are likely to interfere with the access, exchange, or use of electronic health information;
- the Physician Payments Sunshine Act and similar state laws that require reporting of certain payments and other transfers of value made by applicable manufacturers, directly or indirectly, to or on behalf of covered recipients including physicians (defined to include doctors, dentists, optometrists, podiatrists and chiropractors) and teaching hospitals as well as ownership and investment interests held by physicians and their immediate family members.
- Beginning in 2022, applicable manufacturers also will be required to report such information regarding its relationships with physician assistants, nurse practitioners, clinical nurse specialists, certified registered nurse anesthetists and certified nurse midwives during the previous year;
- state laws that limit or prohibit the provision of certain payments and other transfers of value to certain covered healthcare providers;
- the prohibition on reassignment of Medicare claims, which, subject to certain exceptions, precludes the reassignment of Medicare claims to any other party;
- state laws that prohibit other specified practices, such as billing clinicians for testing that they order; waiving coinsurance, copayments, deductibles and other amounts owed by patients; billing a state Medicaid program at a price that is higher than what is charged to one or more other payers;
- similar foreign laws and regulations that may apply to us in the countries in which we operate or may operate in the future; and
- laws that relate to maintaining accurate information and control over activities that may fall within the purview of the U.S. Foreign Corrupt Practices Act, its books and records provisions, or anti-bribery provisions.

We have adopted policies and procedures designed to comply with these laws and regulations. In the ordinary course of our business, we conduct internal reviews of our compliance with these laws. Our compliance may also be subject to governmental review. The growth of our business and our expansion outside of the United States may increase the potential of violating these laws or our internal policies and procedures. The risk of us being found in violation of these or other laws and regulations is further increased by the fact that many have not been fully interpreted by the regulatory authorities or the courts, and their provisions are open to a variety of interpretations. Any action brought against us for violation of these or other laws or regulations, even if we successfully defend against it, could cause us to incur significant legal expenses and divert our management's attention from the operation of our business. If our operations are found to be in violation of any of these laws and regulations, we may be subject to any applicable penalty associated with the violation, including significant administrative, civil and criminal penalties, damages, fines, imprisonment, exclusion from participation in Federal healthcare programs, refunding of payments received by us and curtailment or cessation of our operations, which may impact existing contracts with key payors, collaborators, health systems, and commercial partners. Any of the foregoing consequences could seriously harm our business and our financial results.

We face uncertainty related to healthcare reform, pricing, coverage and reimbursement, which could reduce our revenue.

Healthcare reform laws, including the Patient Protection and Affordable Care Act or ACA, and the Protecting Access to Medicare Act of 2014, or PAMA, are significantly affecting the U.S. healthcare and medical services industry. Existing legislation, and possible future legal and regulatory changes, including potential repeal or modification of the ACA, elimination of penalties regarding the individual mandate for coverage, or approval of health plans that allow lower levels of coverage for preventive services, could materially change the structure and finances of the health insurance system and the methodology for reimbursing medical services, drugs and devices, including our current and future products and services. The ACA has also been the subject of various legal

challenges and in December 2018, a federal district court in Texas found that the ACA's "individual mandate" was unconstitutional such that the whole of the ACA is invalid. The decision was appealed, and in December 2019, the Fifth Circuit Court of Appeals affirmed certain portions of the district court's decision but remanded to the district court to determine if any portions of the ACA may still be valid. If the plaintiffs in this case, or in any other case challenging the ACA, are ultimately successful, insurance coverage for our tests could be materially and adversely affected. Any change in reimbursement policy could result in a change in patient cost-sharing, which could adversely affect a provider's willingness to prescribe and patient's willingness and ability to use our tests and any other product or service we may develop. Healthcare reforms, which may intend to reduce healthcare costs, may have the effect of discouraging third-party payors from covering certain kinds of medical products and services, particularly newly developed technologies, or other products or tests we may develop in the future. We cannot predict whether future healthcare reform initiatives will be implemented at the federal or state level or the effect any such future legislation or regulation will have on it. The taxes imposed by new legislation, cost reduction measures and the expansion in the government's role in the U.S. healthcare industry may result in decreased profits to us, which may adversely affect our business, financial condition and results of operations.

PAMA presents significant uncertainty for future CMS reimbursement rates for our tests. Because Medicare currently covers a significant number of patients, any reduction in the CMS reimbursement rate for our tests would negatively affect our revenues and our business prospects. Under PAMA, CMS reimbursement rates for clinical diagnostic laboratory tests are updated every three years, or annually for clinical laboratory tests that are considered "advanced diagnostic laboratory tests". The CMS reimbursement rates for clinical diagnostic laboratory tests are updated based on the volume-weighted median of private payer rates for each clinical diagnostic laboratory test based on data submitted by certain applicable laboratories. Further, laboratories that fail to report or erroneously report required payment information may be subject to substantial civil money penalties. There can be no assurance under PAMA that adequate CMS reimbursement rates will continue to be assigned to our tests. Congress could modify or repeal PAMA in the future or CMS could modify regulations under PAMA, and any such action could have the effect of reducing the CMS reimbursement rate for our tests. Further, it is possible that Medicare or other federal payers that provide reimbursement for our tests may suspend, revoke or discontinue coverage at any time, may require co-payments from patients, or may reduce the reimbursement rates payable to us. Any such action could have a negative impact on our revenues.

Coverage of our screening products that we may develop may also depend, in whole or in part, on whether payers determine, or courts and/or regulatory authorities determine, coverage is required under applicable federal or state laws mandating coverage of certain cancer screening services.

Several states have laws mandating coverage for preventive services, such as certain cancer screening services, applicable to certain health insurers. However, not all of these laws apply to our current tests and not all of these laws presently mandate coverage for patients within the certain age ranges. We and payers may disagree about how these mandates apply to our tests and we may find the mandates difficult to enforce. Further, if the ACA is repealed, replaced or overturned, or even if it is not, states may decide to modify their laws, which may include repeal of those coverage mandates that we believe currently apply to our oncology tests.

Outside of the U.S., we would largely depend on public or government-controlled payers for coverage of our oncology tests. As compared to many more routine diagnostic tests, our oncology tests are more complicated, expensive and are performed in a central, specialized lab. In order to accommodate the unique characteristics of our diagnostic products, public payers in certain non-U.S. markets have designed reimbursement frameworks specifically for each test type. These payers could decide to modify or discontinue these special frameworks, potentially leading to lower reimbursement prices or the impossibility of providing the test in the market. These changes could also impose additional administrative burdens on us, if it were to ever sell our tests in foreign jurisdictions, including complex public tendering procedures, or on ordering physicians, which could adversely affect the number of payers covering the test or the number of orders placed. Public payers could condition reimbursement of our tests upon performance of our tests locally or, even in laboratories owned or operated by the payers. Any such change would adversely affect our ability to continue to serve those patients through our labs. We may develop future oncologic tests that could be performed locally by laboratory partners and in hospitals around the world, however those developments efforts may be unsuccessful and any such tests that we may develop may not be approved by regulators or accepted by payers or patients.

Product and professional liability suits against us could result in expensive and time-consuming litigation, payment of substantial damages and increases in our insurance rates.

The sale and use of our solutions, products and services could lead to product or professional liability claims, including class action lawsuits. We may also be subject to liability for errors in the test results including health information it provides to healthcare providers or patients or for a misunderstanding of, or inappropriate reliance upon, the information it provides. Claims could also arise out of clinical studies we may conduct or any of our other activities. A product or professional liability claim could result in substantial damages, be costly and time consuming to defend, and cause material harm to our business, reputation or financial condition. We cannot assure you that our liability insurance would protect our assets from the financial impact of defending a product or professional liability claim. Any claim brought against us, with or without merit, could increase our liability insurance rates or prevent it from securing insurance coverage in the future.

Errors, defects, or mistakes in our products or services, and operations could harm our reputation, decrease market acceptance of our products or services.

We are creating new products and services, many of which are initially based on largely untested technologies. As all of our products and services progress, we or others may determine that it made product or service-level scientific or technological mistakes. The diagnostic and testing processes utilize a number of complex and sophisticated molecular, biochemical, informatics, and mechanical processes, many of which are highly sensitive to external factors. An operational or technological failure in one of these complex processes or fluctuations in external factors may result in less efficient processing or variation between testing runs. Refinements to our processes may initially result in unanticipated issues that reduce the efficiency or increase variability. In particular, sequencing, which is a key component of these processes, could be inefficient with higher than expected variability thereby increasing total sequencing costs and reducing the number of samples we can process in a given time period. Therefore, inefficient or variable processes can cause variability in our operating results and damage our reputation.

In addition, our laboratory operations could result in any number of errors or defects. Our quality assurance system may fail to prevent it from inadvertent problems with samples, sample quality, lab processes including sequencing, software, data upload or analysis, raw materials, reagent manufacturing, assay quality or design, or other components or processes. In addition, our assays may have quality or design errors, and we may have inadequate procedures or instrumentation to process samples, assemble our proprietary primer mixes and commercial materials, upload and analyze data, or otherwise conduct our laboratory operations. If we provide products or services with undiscovered errors to our customers, our clinical diagnostics may falsely indicate a patient has a disease or genetic variant, fail to assess a patient's risk of getting a disease or having a child with a disease, or fail to detect disease or variant in a patient who requires or could benefit from treatment or intervention. We believe our customers are likely to be particularly sensitive to product and service defects, errors and delays, including if our products and services fail to indicate the presence of residual disease with high accuracy from clinical specimens or if we fail to list or inaccurately indicate the presence or absence of disease in our test report or analysis. In drug discovery, such errors may interfere with our collaborators' clinical studies or result in adverse safety or efficacy profiles for their products in development. This may harm our customers' businesses and may cause it to incur significant costs, divert the attention of key personnel, encourage regulatory enforcement action against it, create a significant customer relations problem for us and cause our reputation to suffer. We may also be subject to warranty and liability claims for damages related to errors or defects in our products or services. Any of these developments could harm our business and operating results.

We are subject to increasingly complex taxation rules and practices, which may affect how we conduct our business and our results of operations.

As our business grows, we are required to comply with increasingly complex taxation rules and practices. We are subject to tax in multiple U.S. tax jurisdictions and may be subject to foreign tax jurisdictions in the future. The development of our tax strategies requires additional expertise and may impact how we conduct our business. Our future effective tax rates could be unfavorably affected by changes in, or interpretations of, tax rules and regulations in the jurisdictions in which we do business or by changes in the valuation of our deferred tax assets and liabilities. Furthermore, we provide for certain tax liabilities that involve significant judgment. We are and may be subject to

the examination of our tax returns by federal, state and foreign tax authorities. If our tax strategies are ineffective or it is not in compliance with domestic and international tax laws, as applicable, our financial position, operating results and cash flows could be adversely affected.

Risks Related to Our Intellectual Property and Trade Secrets

Our inability to effectively protect our proprietary products, processes, and technologies, including the confidentiality of our trade secrets, could harm our competitive position.

We currently rely upon trade secret protection and copyright, as well as non-disclosure agreements and invention assignment agreements with our employees, consultants and third parties, and to a limited extent patent protection, to protect our confidential and proprietary information. Although our competitors have utilized and are expected to continue utilizing similar methods and have aggregated and are expected to continue to aggregate similar databases of genetic testing information, our success will depend upon our ability to develop proprietary methods and databases and to defend any advantages afforded by our methods and databases relative to our competitors. If we do not protect our intellectual property adequately, competitors may be able to use our methods and databases and thereby erode any competitive advantages we may have.

We will be able to protect our proprietary rights from unauthorized use by third parties only to the extent that our proprietary technologies are covered by valid and enforceable patents or are effectively maintained as trade secrets. In this regard, we have applied, and we intend to continue applying, for patents covering such aspects of our technologies as it deems appropriate. However, we expect that potential patent coverage we may obtain will not be sufficient to prevent substantial competition. In this regard, we believe it is probable that others will independently develop similar or alternative technologies or design around those technologies for which we may obtain patent protection. In addition, any patent applications we file may be challenged and may not result in issued patents or may be invalidated or narrowed in scope after they are issued. Questions as to inventorship or ownership may also arise. Any finding that our patents or applications are unenforceable could harm our ability to prevent others from practicing the related technology, and a finding that others have inventorship or ownership rights to our patents and applications could require us to obtain certain rights to practice related technologies, which may not be available on favorable terms, if at all. If we initiate lawsuits to protect or enforce our patents, or litigate against third-party claims, which would be expensive, and we lose, we may lose some of our intellectual property rights. Furthermore, these lawsuits may divert the attention of our management and technical personnel.

We expect to rely substantially upon trade secrets and proprietary know-how protection for our confidential and proprietary information, and we have taken security measures to protect this information. These measures, however, may not provide adequate protection for our trade secrets, know-how or other confidential information. Among other things, we seek to protect our trade secrets and confidential information by entering into confidentiality agreements with employees and consultants. There can be no assurance that any confidentiality agreements that we have with our employees and consultants will provide meaningful protection for our trade secrets and confidential information or will provide adequate remedies in the event of unauthorized use or disclosure of such information. Accordingly, there also can be no assurance that our trade secrets will not otherwise become known or be independently developed by competitors. Enforcing a claim that a party illegally disclosed or misappropriated a trade secret can be difficult, expensive and time-consuming, and the outcome is unpredictable. In addition, trade secrets may be independently developed by others in a manner that could prevent legal recourse by us. If any of our confidential or proprietary information, such as our trade secrets, were to be disclosed or misappropriated, or if any such information was independently developed by a competitor, our competitive position could be harmed.

Any inability to effectively protect our proprietary technologies under certain jurisdictions and legal regimes could harm our competitive position.

Our success and ability to compete in certain jurisdictions and under certain legal regimes depend to a large extent on our ability to develop proprietary products and technologies and to maintain adequate protection of our intellectual property in the United States and other countries; this becomes increasingly important as we expand our operations and enter into strategic collaborations with partners to develop and commercialize products. The laws of some foreign countries do not protect proprietary rights to the same extent as the laws of the United States, and we

may encounter difficulties in establishing and enforcing its proprietary rights outside of the United States. In addition, the proprietary positions of companies developing and commercializing tools for molecular diagnostics, including our own, generally are uncertain and involve complex legal and factual questions. This uncertainty may materially affect our ability to defend or obtain patents or to address the patents and patent applications owned or controlled by our collaborators and licensors.

Any of these factors could adversely affect our ability to obtain commercially relevant or competitively advantageous patent protection for our products.

If patent regulations or standards are modified, such changes could have a negative impact on our business.

From time to time, the U.S. Supreme Court, other federal courts, the U.S. Congress or the USPTO may change the standards of patentability and validity of patents within the cancer screening and diagnostics space, and any such changes could have a negative impact on our business.

There have been several cases involving "gene patents" and diagnostic claims that have been considered by the U.S. Supreme Court. In March 2012, the Supreme Court *in Mayo Collaborative Services v. Prometheus Laboratories, Inc,* found a patented diagnostic method claim unpatentable because the relationship between a metabolite concentration and optimized dosage was a patent-ineligible "law of nature." In June 2013, the Supreme Court ruled in *ACLU v. Myriad Genetics, Inc,* that an isolated genomic DNA sequence is not patent eligible while cDNA is eligible. The *Prometheus and Myriad* decisions, as well as subsequent case law, affect the legal concept of subject matter eligibility by seemingly narrowing the scope of the statute defining patentable inventions.

In December 2014 and again in 2019, the USPTO published revised guidelines for patent examiners to apply when examining process claims for patent eligibility in view of several recent Supreme Court decisions, including *Mayo, Association for Molecular Pathology v. Myriad Genetics, Inc.*, and *Alice Corporation Pty. Ltd. v. CLS Bank International*, and others. The guidance indicates that claims directed to a law of nature, a natural phenomenon, or an abstract idea that do not meet the eligibility requirements should be rejected as non-statutory, patent ineligible subject matter. While these guidelines may be subject to review and modification by the USPTO over time, we cannot assure you that our intellectual property strategy or patent portfolio will not be negatively impacted by the decisions described above, rulings in other cases or changes in guidance or procedures issued by the USPTO.

Additional substantive changes to patent law, whether new or associated with the America Invents Act — which substantially revised the U.S. patent system — may affect our ability to obtain, enforce or defend our patents. Accordingly, it is not clear what, if any, impact these substantive changes will ultimately have on the cost of prosecuting our patent applications, our ability to obtain patents based on our discoveries and our ability to enforce or defend our issued patents, all of which could have a material adverse effect on our business.

If we are not able to adequately protect our trade secrets and other proprietary information, including the databases we manage and to which we have access, the value of our technology and products could be significantly diminished.

We rely on trade secret and proprietary know-how protection for our confidential and proprietary information and have taken security measures to protect this information. These measures, however, may not provide adequate protection. For example, we have a policy of requiring our consultants, advisors and collaborators, including, for example, our strategic collaborators with whom we seek to develop and commercialize products, to enter into confidentiality agreements and our employees to enter into invention, non-disclosure and in certain cases non-compete agreements. However, breaches of our physical or electronic security systems, or breaches caused by our employees who failing to abide by their confidentiality obligations during or upon termination of their employment with us, could compromise these protection efforts. Any action we take to enforce our rights may be time-consuming, expensive, and possibly unsuccessful. Even if successful, the resulting remedy may not adequately compensate us for the harm caused by the breach. These risks are heightened in countries where laws or law enforcement practices may not protect proprietary rights as fully as in the United States or Europe. Any unauthorized use or disclosure of, or access to, our trade secrets, know-how or other proprietary information, whether accidentally or through willful misconduct, could have a material adverse effect on our programs and our strategy, and on our ability to compete effectively.

If our trademarks and trade names are not adequately protected, we may not be able to build name recognition in our markets of interest, and our business may be adversely affected.

Failure to maintain our trademark registrations, or to obtain new trademark registrations in the future, could limit our ability to protect our trademarks and impede our marketing efforts in the countries in which we operate. We may not be able to protect our rights to trademarks and trade names which we may need to build name recognition with potential partners or customers in our markets of interest. As a means to enforce our trademark rights and prevent infringement, we may be required to file trademark claims against third parties or initiate trademark opposition proceedings. This can be expensive and time-consuming, and possibly unsuccessful. our registered or unregistered trademarks or trade names may be challenged, infringed, circumvented, declared generic or determined to infringe on other marks.

Our pending trademark applications in the United States and in other foreign jurisdictions where we may file may not be successful. Even if these applications result in registered trademarks, third parties may challenge these trademarks in the future. Over the long term, if we are unable to establish name recognition based on our trademarks and trade names, then we may not be able to compete effectively, and our business may be adversely affected.

Litigation or other proceedings resulting from either third-party claims of patent infringement, or asserting infringement by third parties of our technology, could be costly, time-consuming, and could limit our ability to commercialize our products or services.

Our success depends in part on our non-infringement of the patents or intellectual property rights of third parties, and our ability to successfully prevent third parties from infringing our intellectual property. We operate in a crowded technology area in which there has been substantial litigation and other proceedings regarding patent and other intellectual property rights in the genetic diagnostics industry. Third parties, including our competitors, have asserted and may in the future assert that we are infringing their intellectual property rights. We may also become subject to and/or initiate future intellectual property litigation as our product portfolio and the level of competition in our industry grow.

Because the U.S. Patent & Trademark Office, or USPTO, maintains patent applications in secrecy until a patent application publishes or the patent is issued, we have no way of knowing if others may have filed patent applications covering technologies used by it or our partners. Additionally, there may be third-party patents, patent applications and other intellectual property relevant to our technologies that may block or compete with our technologies. From time-to-time we have received correspondence from third parties alleging to hold intellectual property rights that could block our development or commercialization of products. While none of these inquiries to date have had any material effect on it, we may receive inquiries in the future that could have a material effect on our business. Even if third-party claims are without merit, defending a lawsuit may result in substantial expense to us and may divert the attention of management and key personnel. In addition, we cannot provide assurance that it would prevail in any such suits to the extent necessary to conduct our business according to our strategic plan or that the damages or other remedies, if any, awarded against it would not be substantial. Claims of intellectual property infringement may require that we, or our strategic partners, enter into unsustainably high royalty or license agreements with third parties that may only be available on unacceptable terms, if at all. In addition, we could experience delays in product introductions or sales growth while we attempt to develop non-infringing alternatives. These claims could also result in injunctions against the further development and commercial sale of services or products containing our technologies, which would have a material adverse effect on our business, financial condition and results of operations.

Further, patents and patent applications owned by us may become the subject of interference proceedings in the USPTO to determine priority of invention, which could result in substantial cost to us as well as a possible adverse decision as to the priority of invention of the patent or patent application involved. An adverse decision in an interference proceeding may result in the loss of rights under a patent or patent application subject to such a proceeding. We cannot predict whether, or offer any assurance that, the patent infringement claims may initiate in the future will be successful. We are and may become subject to counterclaims by patent infringement defendants. Our patents may be declared invalid or unenforceable, or narrowed in scope. Even if we prevail in an infringement action, we cannot assure you that it would be adequately compensated for the harm to our business. If we are unable

to enjoin third-party infringement, our revenues may be adversely impacted and we may lose market share; and such third-party product may continue to exist in the market, but fail to meet our regulatory or safety standards, thereby causing irreparable harm to our reputation as a provider of quality products, which in turn could result in loss of market share and have a material adverse effect on our business, financial condition and our results of operations.

In addition, our agreements with some of our customers, suppliers, and other entities with whom we do business require us to defend or indemnify these parties to the extent they become involved in patent infringement claims, including the types of claims described in this risk factor. We have agreed, and may in the future agree, to defend or indemnify third parties if we determine it to be in the best interests of our business relationships. If we are required or agree to defend or indemnify third parties in connection with any infringement claims, we could incur significant costs and expenses that could adversely affect our business, financial condition and results of operations.

Our use of open-source software could subject our business to possible litigation or cause us to subject our platform to unwanted open-source license conditions that could negatively impact our sales.

A limited but meaningful portion of our platforms and products incorporate open-source software, and we will incorporate open-source software into other offerings or products in the future. Such open-source software is generally licensed by its authors or other third parties under open-source licenses. There is little legal precedent governing the interpretation of certain terms of these licenses, and therefore the potential impact of these terms on our business is unknown and may result in unanticipated obligations regarding our products and technologies. If an author or other third party that distributes such open-source software were to allege that we had not complied with the conditions of one or more of these licenses, we could be required to incur significant legal expenses defending against such allegations. In addition, if we combine our proprietary software with open-source software in a certain manner, under some open-source licenses, we could be required to release the source code of our proprietary software, which could substantially help our competitors develop products that are similar to or better than our products.

We rely on strategic collaborative and licensing arrangements with third parties to develop critical intellectual property. We may not be able to successfully establish and maintain such intellectual property.

The development and commercialization of our products and services rely, directly or indirectly, upon strategic collaborations and licensing agreements with third parties. Such arrangements provide us with intellectual property and other business rights crucial to our product development and commercialization. We have incorporated licensed technology into our tests. Our dependence on licensing, collaboration and other similar agreements with third parties may subject it to a number of risks. There can be no assurance that any current contractual arrangements between us and third parties or between our strategic partners and other third parties will be continued on materially similar terms and will not be breached or terminated early. Any failure to obtain or retain the rights to necessary technologies on acceptable commercial terms could require us to re-configure our products and services, which could negatively impact their commercial sale or increase the associated costs, either of which could materially harm our business and adversely affect our future revenues and ability to achieve sustained profitability.

We expect to continue and expand our reliance on collaborative and licensing arrangements. Establishing new strategic collaborations and licensing arrangements is difficult and time-consuming. Discussions with potential collaborators or licensors may not lead to the establishment of collaborations on favorable terms, if at all. To the extent we agree to work exclusively with one collaborator in a given area, our opportunities to collaborate with other entities could be limited. Potential collaborators or licensors may reject collaborations with it based upon their assessment of our financial, regulatory or intellectual property position or other factors. Even if we successfully establish new collaborations, these relationships may never result in the successful commercialization of any product or service. In addition, the success of the projects that require collaboration with third parties will be dependent on the continued success of such collaborators. There is no guarantee that our collaborators will continue to be successful and, as a result, we may expend considerable time and resources developing products or services that will not ultimately be commercialized.

Risks Related to Cybersecurity, Privacy and Information Technology

Interruption, interference with, or failure of our information technology and communications systems could hurt our ability to effectively provide our products and services, which could harm our reputation, financial condition, and operating results.

The availability of our products and services and fulfillment of our customer contracts depend on the continuing operation of our information technology and communications systems. Our systems are vulnerable to damage, interference, or interruption from terrorist attacks, natural disasters, the effects of climate change (such as sea level rise, drought, flooding, wildfires, and increased storm severity), power loss, telecommunications failures, computer viruses, ransomware attacks, computer denial of service attacks, phishing schemes, or other attempts to harm or access our systems. Some of our data centers are located in areas with a high risk of major earthquakes or other natural disasters. Our data centers are also subject to break-ins, sabotage, and intentional acts of vandalism, and, in some cases, to potential disruptions resulting from problems experienced by facility operators. Some of our systems are not fully redundant, and disaster recovery planning cannot account for all eventualities.

The occurrence of a natural disaster, closure of a facility, or other unanticipated problems at our data centers could result in lengthy interruptions in our service. In addition, our products and services are highly technical and complex and may contain errors or vulnerabilities, which could result in interruptions in or failure of our services or systems.

Security breaches, privacy issues, loss of data and other incidents could compromise sensitive, protected, or personal information related to our business, could prevent it from accessing critical information, and could expose it to regulatory liability, which could adversely affect our business.

In the ordinary course of our business, we collect and store sensitive data, including PHI, personally identifiable information, genetic information, credit card information, intellectual property and proprietary business information owned or controlled by us or our customers, payers and other parties. We manage and maintain our applications and data utilizing a combination of on-site systems, managed data center systems and cloud-based systems. We also communicate PHI and other sensitive patient data through our various customer tools and platforms. In addition to storing and transmitting sensitive data that is subject to multiple legal protections, these applications and data encompass a wide variety of business-critical information including research and development information, commercial information, and business and financial information. We face a number of risks relative to protecting this critical information, including loss of access risk, inappropriate disclosure, inappropriate modification, and the risk of our being unable to adequately monitor and modify our controls over our critical information. Any technical problems that may arise in connection with the data that we access and our systems, including those that are hosted by third-party providers, could result in interruptions to our business and operations or exposure to security vulnerabilities. These types of problems may be caused by a variety of factors, including infrastructure changes, intentional or accidental human actions or omissions, software errors, malware, viruses, security attacks, fraud, spikes in customer usage and denial of service issues. From time to time, large third-party web hosting providers have experienced outages or other problems that have resulted in their systems being offline and inaccessible. Such outages could materially impact our business and operations.

The secure processing, storage, maintenance and transmission of this critical information are vital to our operations and business strategy, and we devote significant resources to protecting such information. Although we take what we believe to be reasonable and appropriate measures, including a formal, dedicated enterprise security program, to protect sensitive information from various compromises (including unauthorized access, disclosure, or modification or lack of availability), our information technology and infrastructure may be vulnerable to attacks by hackers or viruses or breached due to employee error, malfeasance or other disruptions. Any such breach or interruption could compromise our networks and the information stored therein could be accessed by unauthorized parties, altered, publicly disclosed, lost or stolen.

Further, some of our customer tools and platforms are currently accessible through a portal and there is no guarantee that we can protect our portal from a security breach. Unauthorized access, loss or dissemination could also disrupt our operations (including our ability to conduct our analyses, provide test results, bill payers or patients,

process claims and appeals, provide customer assistance, conduct research and development activities, collect, process and prepare company financial information, provide information about our tests and other patient and physician education and outreach efforts through our website, and manage the administrative aspects of our business) and damage our reputation, any of which could adversely affect our business. In addition to data security risks, we also face privacy risks. Should we actually violate, or be perceived to have violated, any privacy promises our business makes to patients or consumers, it could be subject to a complaint from an affected individual or interested privacy regulator, such as the FTC, a state Attorney General, an EU Member State Data Protection Authority, or a data protection authority in another international jurisdiction. This risk is heightened given the sensitivity of the data we collect.

Any security compromise that causes an apparent privacy violation could also result in legal claims or proceedings; liability under federal, state, foreign, or multinational laws that regulate the privacy, security, or breach of personal information, such as but not limited to the HIPAA, HITECH, state data security and data breach notification laws, the EU's GDPR, the UK Data Protection Act of 2018; and related regulatory penalties. Penalties for failure to comply with a requirement of HIPAA or HITECH vary significantly, and, depending on the knowledge and culpability of the HIPAA-regulated entity, may include civil monetary penalties of up to $1.5 million per calendar year for each provision of HIPAA that is violated. A person who knowingly obtains or discloses individually identifiable health information in violation of HIPAA may face a criminal penalty of up to $50,000 and up to one-year imprisonment. The criminal penalties increase if the wrongful conduct involves false pretenses or the intent to sell, transfer or use identifiable health information for commercial advantage, personal gain or malicious harm. Penalties for unfair or deceptive acts or practices under the FTC Act or state Unfair and Deceptive Acts and Practices, or UDAP, statutes may also vary significantly.

There has been unprecedented activity in the development of data protection regulation around the world. As a result, the interpretation and application of consumer, health-related and data protection laws in the United States, Europe and elsewhere are often uncertain, contradictory and in flux. The GDPR took effect on May 25, 2018. The GDPR took effect on May 25, 2018. The GDPR applies to any entity established in the EU as well as extraterritorially to any entity outside the EU that offers goods or services to, or monitors the behavior of, individuals who are located in the EU. The GDPR imposes strict requirements on controllers and processors of personal data, including enhanced protections for "special categories" of personal data, which includes sensitive information such as health and genetic information of data subjects. The GDPR also grants individuals various rights in relation to their personal data, including the rights of access, rectification, objection to certain processing and deletion. The GDPR provides an individual with an express right to seek legal remedies if the individual believes his or her rights have been violated. Failure to comply with the requirements of the GDPR or the related national data protection laws of the member states of the EU, which may deviate from or be more restrictive than the GDPR, may result in significant administrative fines issued by EU regulators. Maximum penalties for violations of the GDPR are capped at 20 million euros or 4% of an organization's annual global revenue, whichever is greater.

Further, the United Kingdom's decision to leave the EU, often referred to as Brexit, has created uncertainty with regard to data protection regulation in the United Kingdom. In particular, it is still unclear whether the transfer of personal information from the EU to the United Kingdom will in the future remain lawful under the GDPR. The United Kingdom-EU post-Brexit trade deal provides that transfers of personal information to the United Kingdom will not be treated as restricted transfers to a non-EU country for a period of up to six months from January 1, 2021. However, unless the EU Commission makes an "adequacy finding" with respect to the United Kingdom before the end of that transition period, from that date the United Kingdom will be a "third country" under the GDPR and transfers of personal information from the EU to the United Kingdom will require an "adequacy mechanism," such as the SCCs.

Additionally, the implementation of GDPR has led other jurisdictions to either amend or propose legislation to amend their existing data privacy and cybersecurity laws to resemble the requirements of GDPR. For example, on June 28, 2018, California adopted the CCPA. The CCPA regulates how certain for-profit businesses that meet one or more CCPA applicability thresholds collect, use, and disclose the personal information of consumers who reside in California. Among other things, the CCPA confers to California consumers the right to receive notice of the categories of personal information that will be collected by a business, how the business will use and share the personal information, and the third parties who will receive the personal information; the CCPA also confers rights

to access, delete, or transfer personal information; and the right to receive equal service and pricing from a business after exercising a consumer right granted by the CCPA. In addition, the CCPA allows California consumers the right to opt out of the "sale" of their personal information, which the CCPA defines broadly as any disclosure of personal information to a third party in exchange for monetary or other valuable consideration. The CCPA also requires a business to implement reasonable security procedures to safeguard personal information against unauthorized access, use, or disclosure. California amended the law in September 2018 to exempt all PHI collected by certain parties subject to HIPAA, and further amended the law in September 2020 to clarify that de-identified data as defined under HIPAA will also be exempt from the CCPA. The California Attorney General's final regulations implementing the CCPA took effect on August 14, 2020. The CCPA provides for civil penalties for violations, as well as a private right of action for data breaches resulting from a business's failure to implement and maintain reasonable data security procedures that is expected to increase data breach litigation. In addition, California voters recently approved the California Privacy Rights Act of 2020, or CPRA, that is scheduled to go into effect on January 1, 2023. The CPRA would, among other things, amend the CCPA to give California residents the ability to limit the use of their sensitive information, provide for penalties for CPRA violations concerning California residents under the age of 16, and establish a new California Privacy Protection Agency to implement and enforce the law. Other jurisdictions in the United States are beginning to propose laws similar to CCPA. Some observers have noted that the CCPA could mark the beginning of a trend toward more stringent privacy legislation, which could increase our potential liability and adversely affect our business, results of operations, and financial condition.

It is possible the GDPR, CCPA and other emerging United States and international data protection laws may be interpreted and applied in manner that is inconsistent with our practices. If so, this could result in government-imposed fines or orders requiring that we change our practices, which could adversely affect our business. In addition, these privacy laws and regulations may differ from country to country and state to state, and our obligations under these laws and regulations vary based on the nature of our activities in the particular jurisdiction, such as whether we collect samples from individuals in the local jurisdiction, perform testing in the local jurisdiction, or process personal information regarding employees or other individuals in the local jurisdiction. Complying with these various laws and regulations could cause us to incur substantial costs or require it to change our business practices and compliance procedures in a manner adverse to our business. We can provide no assurance that it is or will remain in compliance with diverse privacy and data security requirements in all of the jurisdictions in which we do business. Failure to comply with privacy and data security requirements could result in a variety of consequences, or damage to our reputation, any of which could have a material adverse effect on our business.

Data privacy and security concerns relating to our technology and our practices could damage our reputation, subject it to significant legal and financial exposure, and deter current and potential users or customers from using our products and services. Software bugs or defects, security breaches, and attacks on our systems could result in the improper disclosure and use of user data and interference with our users and customers' ability to use our products and services, harming our business operations and reputation.

Concerns about our practices with regard to the collection, use, disclosure, or security of personal information or other data-privacy-related matters, even if unfounded, could harm our reputation, financial condition, and operating results. Our policies and practices may change over time as expectations regarding privacy and data change.

Our products and services involve the storage and transmission of protected health information and other personal information, proprietary information, and bugs, theft, misuse, defects, vulnerabilities in our products and services, and security breaches expose it to a risk of loss of this information, improper use and disclosure of such information, litigation, and other potential liability. Systems and control failures, security breaches, failure to comply with our privacy policies, and/or inadvertent disclosure of user data could result in government and legal exposure, seriously harm our reputation and brand and, therefore, our business, and impair our ability to attract and retain users or customers. We expect to continue to expend significant resources to maintain security protections that shield against bugs, theft, misuse, or security vulnerabilities or breaches.

We experience cyber-attacks and other attempts to gain unauthorized access to our systems on a regular basis. We may experience future security issues, whether due to employee error or malfeasance or system errors or vulnerabilities in our or other parties' systems, which could result in significant legal and financial exposure.

Government inquiries and enforcement actions, litigation, and adverse press coverage could harm our business. We may be unable to anticipate or detect attacks or vulnerabilities or implement adequate preventative measures. Attacks and security issues could also compromise trade secrets and other sensitive information, harming our business.

While we have dedicated significant resources to privacy and security incident response capabilities, including dedicated worldwide incident response teams, our response process may not be adequate, may fail to accurately assess the severity of an incident, may not respond quickly enough, or may fail to sufficiently remediate an incident. As a result, we may suffer significant legal, reputational, or financial exposure, which could harm our business, financial condition, and operating results.

We depend on our scientific computing and information technology and management systems and any failure of these systems could harm our business.

We depend on scientific computing and information technology and management systems, including third-party cloud computing infrastructure, operating systems and artificial intelligence platforms, for significant elements of our operations, including our laboratory information management system, clinical database, analytical platform, laboratory workflow tools, customer and collaborator reporting and related functions. We also depend on our proprietary workflow software to support new product and service launches and regulatory compliance.

We use complex software processes and bioinformatic pipelines to manage samples and evaluate sequencing result data. These are subject to initial design or ongoing modifications which may result in unanticipated issues that could cause variability in patient results, leading to service disruptions or errors, resulting in liability.

We have installed, and expects to expand, a number of enterprise software systems that affect a broad range of business processes and functional areas, including systems laboratory operations, handling human resources, financial controls and reporting, contract management, regulatory compliance and other infrastructure operations, and patient consent and information management. In addition to these business systems, we have installed, and intends to extend, the capabilities of both our preventative and detective security controls by augmenting the monitoring and alerting functions, the network design and the automatic countermeasure operations of our technical systems. These information technology and telecommunications systems support a variety of functions, including laboratory operations, test validation, sample tracking, quality control, customer service support, billing and reimbursement, research and development activities, scientific and medical curation and general administrative activities. In addition, our third-party billing and collections provider depends upon technology and telecommunications systems provided by outside vendors.

Information technology and telecommunications systems are vulnerable to damage from a variety of sources, including telecommunications or network failures, malicious internal or external human acts and natural disasters. Moreover, despite network security and back-up measures, some of our servers are potentially vulnerable to physical or electronic break-ins, computer viruses and similar disruptive problems. Despite the precautionary measures we have taken to prevent unanticipated problems that could affect our information technology and telecommunications systems, failures or significant downtime of these systems or those used by our collaborators or subcontractors could prevent it from conducting our comprehensive screening analysis, clinical diagnostics and drug discovery, preparing and providing reports to researchers, clinicians and our collaborators, billing payers, handling physician inquiries, conducting research and development activities and managing the administrative aspects of our business. Any disruption or loss of information technology or telecommunications systems on which critical aspects of our operations depend could have an adverse effect on our business and our reputation, and we may be unable to regain or repair our reputation in the future.

Our ability to transfer data stored outside of the United States could be limited by international regulations or other action by foreign governments, which could adversely affect our business.

Some of the data we process in the ordinary course of our business may be stored outside of the United States. In order to process such data, we may need to transfer them to countries other than those where they are stored. Should a foreign government adopt a regulation restricting the international transfer of such data, we may not be able to process them, which could adversely impact our business.

Risks Related to Being a Public Company

We will incur increased costs and demands on management as a result of compliance with laws and regulations applicable to public companies, which could harm our operating results.

As a public company, we incur significant legal, accounting and other expenses, including costs associated with public company reporting requirements. In addition, the Sarbanes-Oxley Act of 2002, the Sarbanes-Oxley Act, as well as rules implemented by the SEC and Nasdaq, impose a number of requirements on public companies, including with respect to corporate governance practices. The SEC and other regulators have continued to adopt new rules and regulations and make additional changes to existing regulations that require the company's compliance. In addition, the Dodd-Frank Wall Street Reform and Consumer Protection Act, or the Dodd-Frank Act, enacted in 2010, includes significant corporate governance and executive-compensation-related provisions. Our management and other personnel will need to devote a substantial amount of time to these compliance and disclosure obligations. If these requirements divert the attention of our management and personnel from other aspects of our business concerns, they could have a material adverse effect on our business, financial condition and results of operations. Moreover, these rules and regulations applicable to public companies substantially could increase our legal, accounting and financial compliance costs, require that we hire additional personnel and make some activities more time consuming and costly.

A market for our securities may not continue, which would adversely affect the liquidity and price of our securities.

The price of our securities may fluctuate significantly due to general market and economic conditions. An active trading market for our securities may not be sustained. In addition, the price of our securities can vary due to general economic conditions and forecasts, our general business condition and the release of our financial reports. You may be unable to sell your securities when desired or at an acceptable price unless an active trading market can be sustained.

If we do not meet the expectations of investors, stockholders or financial analysts, the market price of our securities may decline.

If we do not meet the expectations of investors or securities analysts, the market price of our securities may decline. In addition, fluctuations in the price of our securities could contribute to the loss of all or part of your investment. If an active market for our securities does not continue, the trading price of our securities could be volatile and subject to wide fluctuations in response to various factors, some of which are beyond our control. Any of the factors listed below could have a material adverse effect on your investment in our securities and our securities may trade at prices significantly below the price you paid for them. In such circumstances, the trading price of our securities may not recover and may experience a further decline.

Factors affecting the trading price of our securities may include:

- actual or anticipated fluctuations in our quarterly financial results or the quarterly financial results of companies perceived to be similar to us;
- changes in the market's expectations about our operating results;
- the public's reaction to our press releases, our other public announcements and our filings with the SEC;
- speculation in the press or investment community;
- announcements of technological innovation, new products, acquisitions, strategic alliances, significant agreements by us or competitors;
- success of competitors;
- our operating results falling below our financial guidance or other projections or failing to meet the expectation of securities analysts or investors in a particular period;

- changes in financial estimates and recommendations by securities analysts concerning us or the market in general;
- operating and stock price performance of other companies that investors deem comparable to us;
- our ability to market new and enhanced products on a timely basis;
- changes in laws and regulations affecting our business;
- commencement of, or involvement in, litigation involving us;
- changes in our capital structure, such as future issuances of securities or the incurrence of additional debt (including the potential issuance of shares of common stock in connection with the pending Acquisition of GeneDx and the PIPE Investment);
- the inability to complete the Acquisition due to the failure to satisfy the conditions to the consummation of the Acquisition, including receipt of the required stockholder approval or the required regulatory approvals;
- risks that the proposed Acquisition disrupts our current plans and operations or affects our ability to retain or recruit key employees;
- risks related to the Acquisition diverting management's or employees' attention from ongoing business operations;
- the effect of the pending Acquisition on our business relationships (including, without limitation customers, strategic partners, collaborators and suppliers), operating results and business generally;
- the amount of the costs, fees, expenses and charges related to the Acquisition;
- the volume of shares of our common stock available for public sale;
- any major change in our Board or management;
- sales of substantial amounts of common stock by our directors, officers or significant stockholders or the perception that such sales could occur;
- the expiration of the market stand-off or contractual lock-up agreements;
- the realization of any of the risk factors described herein;
- additions or departures of key personnel;
- failure to comply with the requirements of Nasdaq;
- failure to comply with the Sarbanes-Oxley Act or other laws or regulations;
- actual, potential or perceived control, accounting or reporting problems;
- changes in accounting principles, policies and guidelines; and
- general economic and political conditions such as recessions, inflation and interest rates, fuel prices, international currency fluctuations and acts of war or terrorism.

Broad market and industry factors may materially harm the market price of our securities irrespective of our operating performance. The stock market in general and Nasdaq have experienced price and volume fluctuations that have often been unrelated or disproportionate to the operating performance of the particular companies affected. The trading prices and valuations of these stocks, and of our securities, may not be predictable. A loss of investor confidence in the market for the stocks of other companies which investors perceive to be similar to us could depress our stock price regardless of our business, prospects, financial conditions or results of operations. A decline in the

market price of our securities also could adversely affect our ability to issue additional securities and our ability to obtain additional financing in the future.

In the past, securities class action litigation has often been initiated against companies following periods of volatility in their stock price. This type of litigation could result in substantial costs and divert our management's attention and resources, and could also require us to make substantial payments to satisfy judgments or to settle litigation.

If securities or industry analysts cease publishing research or reports about us, our business, or our market, or if they change their recommendations regarding our common stock adversely, then the price and trading volume of our common could decline.

The trading market for our common stock is influenced by the research and reports that industry or securities analysts publish about us, our business, our market, or our competitors. If any of the analysts who cover us change their recommendation regarding our stock adversely, or provide more favorable relative recommendations about our competitors, the price of our common stock would likely decline. If any analyst who covers us were to cease coverage of us or fail to regularly publish reports on us, we could lose visibility in the financial markets, which could cause our stock price or trading volume to decline.

Changes in laws, regulations or rules, or a failure to comply with any laws, regulations or rules, may adversely affect our business, investments and results of operations.

We are subject to laws, regulations and rules enacted by national, regional and local governments and Nasdaq. In particular, we are required to comply with certain SEC, Nasdaq and other legal or regulatory requirements. Compliance with, and monitoring of, applicable laws, regulations and rules may be difficult, time consuming and costly. Those laws, regulations or rules and their interpretation and application may also change from time to time and those changes could have a material adverse effect on our business, investments and results of operations. In addition, a failure to comply with applicable laws, regulations or rules, as interpreted and applied, could have a material adverse effect on our business and results of operations.

Anti-takeover provisions contained in our Amended and Restated Certificate of Incorporation and Restated Bylaws, as well as provisions of Delaware law, could impair a takeover attempt.

Our Amended and Restated Certificate of Incorporation (which we refer to as our "Charter") contains provisions that may discourage unsolicited takeover proposals that stockholders may consider to be in their best interests. We are also subject to anti-takeover provisions under Delaware law, which could delay or prevent a change of control. Together, these provisions may make more difficult the removal of management and may discourage transactions that otherwise could involve payment of a premium over prevailing market prices for our securities. These provisions will include:

- no cumulative voting in the election of directors, which limits the ability of minority stockholders to elect director candidates;
- a classified board of directors with three-year staggered terms, which could delay the ability of stockholders to change the membership of a majority of the Board;
- the requirement that directors may only be removed from the Board for cause;
- the right of our Board to elect a director to fill a vacancy created by the expansion of our Board or the resignation, death or removal of a director in certain circumstances, which prevents stockholders from being able to fill vacancies on our Board;
- a prohibition on stockholder action by written consent, which forces stockholder action to be taken at an annual or special meeting of our stockholders;
- a prohibition on stockholders calling a special meeting and the requirement that a meeting of stockholders may only be called by a majority of the board, our chairman of the board or our chief executive officer and

may not be called by any other person, which may delay the ability of our stockholders to force consideration of a proposal or to take action, including the removal of directors;

- the requirement that changes or amendments to certain provisions of our Charter must be approved by holders of at least two-thirds of our common stock; and
- advance notice procedures that stockholders must comply with in order to nominate candidates to our Board or to propose matters to be acted upon at a meeting of stockholders, which may discourage or deter a potential acquirer from conducting a solicitation of proxies to elect the acquirer's own slate of directors or otherwise attempting to obtain control of us.

The JOBS Act permits "emerging growth companies" like us to take advantage of certain exemptions from various reporting requirements applicable to other public companies that are not emerging growth companies.

We currently qualify as an "emerging growth company" as defined in Section 2(a)(19) of the Securities Act, as modified by the JOBS Act. As such, we take advantage of certain exemptions from various reporting requirements applicable to other public companies that are not emerging growth companies for as long as we continue to be an emerging growth company, including: (i) the exemption from the auditor attestation requirements with respect to internal control over financial reporting under Section 404 of the Sarbanes-Oxley Act; (ii) the exemptions from say-on-pay, say-on-frequency and say-on-golden parachute voting requirements; and (iii) reduced disclosure obligations regarding executive compensation in our periodic reports. As a result, our stockholders may not have access to certain information they deem important. We will remain an emerging growth company until the earliest of (i) the last day of the fiscal year: (a) following September 1, 2025, the fifth anniversary of the initial public offering of CMLS; (b) in which we have total annual gross revenue of at least $1.07 billion; or (c) in which we are deemed to be a large accelerated filer, which means the market value of our common stock that is held by non-affiliates exceeds $700.0 million as of the prior June 30th, and (ii) the date on which we have issued more than $1.0 billion in non-convertible debt during the prior three-year period.

In addition, Section 107 of the JOBS Act also provides that an emerging growth company can take advantage of the exemption from complying with new or revised accounting standards provided in Section 7(a)(2)(B) of the Securities Act as long as we are an emerging growth company. An emerging growth company can therefore delay the adoption of certain accounting standards until those standards would otherwise apply to private companies. The JOBS Act provides that a company can elect to opt out of the extended transition period and comply with the requirements that apply to non-emerging growth companies, but any such election to opt out is irrevocable. We have elected to avail ourselves of such extended transition period, which means that when a standard is issued or revised and it has different application dates for public or private companies, we, as an emerging growth company, can adopt the new or revised standard at the time private companies adopt the new or revised standard. This may make comparison of our financial statements with another public company that is neither an emerging growth company nor an emerging growth company that has opted out of using the extended transition period difficult or impossible because of the potential differences in accounting standards used.

Additionally, we are a "smaller reporting company" as defined in Item 10(f)(1) of Regulation S-K. Smaller reporting companies may take advantage of certain reduced disclosure obligations, including, among other things, providing only two years of audited consolidated financial statements. We will remain a smaller reporting company until the last day of the fiscal year in which (i) the market value of our common stock held by non-affiliates exceeds $250 million as of the prior June 30, or (ii) our annual revenues exceeded $100 million during such completed fiscal year and the market value of our common stock held by non-affiliates exceeds $700 million as of the prior June 30.

We cannot predict if investors will find our common stock less attractive because we rely on these exemptions. If some investors find our common stock less attractive as a result, there may be a less active trading market for our common stock and our stock price may be more volatile.

Our internal controls over financial reporting may not be effective and our independent registered public accounting firm may not be able to certify as to their effectiveness, which could have a significant and adverse effect on our business and reputation.

As a public company, we are required to comply with the SEC's rules implementing Sections 302 and 404 of Sarbanes-Oxley Act, which require management to certify financial and other information in our quarterly and annual reports and provide an annual management report on the effectiveness of internal control over financial reporting. To comply with the requirements of being a public company, we are required to provide management's assessment on internal controls, and we may need to undertake various actions, such as implementing additional internal controls and procedures and hiring additional accounting or internal audit staff. Further, as an emerging growth company, our independent registered public accounting firm is not required to formally attest to the effectiveness of our internal controls over financial reporting pursuant to Section 404 until the date we are no longer an emerging growth company. At such time, our independent registered public accounting firm may issue a report that is adverse in the event that it is not satisfied with the level at which the controls of the company are documented, designed or operating.

Testing and maintaining these controls can divert our management's attention from other matters that are important to the operation of our business. If we identify material weaknesses in the internal control over financial reporting of the company or are unable to comply with the requirements of Section 404 or assert that our internal control over financial reporting is effective, or if our independent registered public accounting firm is unable to express an opinion as to the effectiveness of our internal controls over financial reporting when we no longer qualify as an emerging growth company, investors may lose confidence in the accuracy and completeness of our financial reports and the market price of our common stock could be negatively affected, and we could become subject to investigations by the SEC or other regulatory authorities, which could require additional financial and management resources.

Our Amended and Restated Certificate of Incorporation designates the Court of Chancery of the State of Delaware and federal court within the State of Delaware as the exclusive forum for certain types of actions and proceedings that our stockholders may initiate, which could limit a stockholder's ability to obtain a favorable judicial forum for disputes with us or our directors, officers or employees.

Our Charter designates the Court of Chancery of the State of Delaware and federal court within the State of Delaware as the exclusive forum for certain types of actions and proceedings that our stockholders may initiate, which could limit a stockholder's ability to obtain a favorable judicial forum for disputes with us or our directors, officers or employees.

Our Charter provides that, subject to limited exceptions, the Court of Chancery of the State of Delaware and federal court within the State of Delaware will be exclusive forums for any:

- derivative action or proceeding brought on our behalf;
- action asserting a claim of breach of a fiduciary duty owed by, or other wrongdoing by, any of our directors, officers, stockholders, employees or agents to us or our stockholders;
- action asserting a claim against the us or any of our directors, officers, stockholders, employees or agents arising pursuant to any provision of the General Corporation Law, our Charter or our Restated Bylaws (which we refer to as our "Bylaws") or as to which the General Corporation Law confers jurisdiction on the Court of Chancery of the State of Delaware:
- action to interpret, apply, enforce or determine the validity of our Charter or our Bylaws; or
- other action asserting a claim against us or any of our directors, officers, stockholders, employees or agents that is governed by the internal affairs doctrine.

This choice of forum provision does not apply to actions brought to enforce a duty or liability created under the Exchange Act or any other claim for which federal courts have jurisdiction. Furthermore, in accordance with our

Bylaws, unless we consent in writing to the selection of an alternative forum, the federal district courts of the United States will be, to the fullest extent permitted by law, the exclusive forum for the resolution of any complaint asserting a cause of action arising under the Securities Act. Any person or entity purchasing or otherwise acquiring or holding any interest in any of our securities shall be deemed to have notice of and consented to our exclusive forum provision in our Bylaws and the choice of forum provision in our Charter.

These provisions may limit a stockholder's ability to bring a claim in a judicial forum that it finds favorable for disputes with us or any of our directors, officers, or other employees, which may discourage lawsuits with respect to such claims. Alternatively, if a court were to find the choice of forum provisions contained in our Charter to be inapplicable or unenforceable in an action, we may incur additional costs associated with resolving such action in other jurisdictions, which could harm our business, results of operations and financial condition.

The stockholders will not be deemed to have waived our compliance with the federal securities laws and the regulations promulgated thereunder.

Any person or entity purchasing or otherwise acquiring or holding any interest in any of our securities shall be deemed to have notice of and consented to our exclusive forum provisions, including the choice of forum provision. These provisions may limit a stockholders' ability to bring a claim, and may result in increased costs for a stockholder to bring a claim in a judicial forum of their choosing for disputes with us or our directors, officers, or other employees, which may discourage lawsuits against us and our directors, officers, and other employees.

Risks Related to Our Common Stock and Warrants

We may amend the terms of the public warrants in a manner that may be adverse to holders with the approval by the holders of at least 50% of the then-outstanding public warrants. As a result, the exercise price of a holder's public warrants could be increased, the exercise period could be shortened and the number of shares of our common stock purchasable upon exercise of a public warrant could be decreased, all without the approval of that warrant holder.

Our public warrants were issued in registered form under a warrant agreement between Continental Stock Transfer & Trust Company, as warrant agent, and us. The warrant agreement provides that the terms of the public warrants may be amended without the consent of any holder to cure any ambiguity or correct any defective provision, but requires the approval by the holders of at least 50% of the then-outstanding public warrants to make any change that adversely affects the interests of the registered holders. Accordingly, we may amend the terms of the public warrants in a manner adverse to a holder if holders of at least 50% of the then-outstanding public warrants approve of such amendment. Although our ability to amend the terms of the public warrants with the consent of at least 50% of the then-outstanding public warrants is unlimited, examples of such amendments could be amendments to, among other things, increase the exercise price of the public warrants, convert the warrants into cash or stock, shorten the exercise period or decrease the number of shares of common stock purchasable upon exercise of a public warrant.

We may redeem unexpired public warrants prior to their exercise at a time that is disadvantageous to warrant holders, thereby making their public warrants worthless.

We have the ability to redeem outstanding public warrants at any time after they become exercisable and prior to their expiration, at a price of $0.01 per public warrant; provided that the last reported sales price of our common stock equals or exceeds $18.00 per share (as adjusted for stock splits, stock dividends, reorganizations, recapitalizations and the like) for any 20 trading days within a 30 trading-day period ending on the third trading day prior to the date on which we give notice of such redemption to the warrant holders. If and when the public warrants become redeemable by us, we may exercise our redemption right even if we are unable to register or qualify the underlying securities for sale under all applicable state securities laws. We will use our best efforts to register or qualify such shares of common stock under the blue sky laws of the state of residence in those states in which the warrants were offered by us. Redemption of the outstanding public warrants could force the warrant holders: (i) to exercise their public warrants and pay the exercise price therefor at a time when it may be disadvantageous for them to do so; (ii) to sell their public warrants at the then-current market price when they might otherwise wish to hold their public warrants; or (iii) to accept the nominal redemption price which, at the time the outstanding public

warrants are called for redemption, is likely to be substantially less than the market value of their public warrants. None of the private placement warrants will be redeemable by us so long as they are held by CMLS Holdings LLC, or the Former Sponsor, or its permitted transferees.

Our warrants are exercisable for our common stock, which will increase the number of shares eligible for future resale in the public market and result in dilution to our stockholders.

As of December 31, 2021, our public warrants are exercisable for 14,758,305 shares of common stock at $11.50 per share. Our private warrants are exercisable for 7,236,667 shares of common stock at $11.50 per share. The additional shares of our common stock issuable upon exercise of our warrants will result in dilution to the then existing holders of our common stock and increase the number of shares eligible for resale in the public market. Sales of substantial numbers of such shares in the public market could adversely affect the market price of our common stock.

In addition, the assumptions used in preparing the pro forma financial information may not prove to be accurate and other factors may affect our financial condition or results of operations. Any potential decline in our financial condition or results of operations may cause significant variations in our stock price.

Our warrants are accounted for as liabilities and the changes in value of our warrants could have a material effect on our financial results.

Included on our balance sheet as of December 31, 2021 are derivative liabilities related to our warrants. Accounting Standards Codification 815, Derivatives and Hedging, or ASC 815, provides for the remeasurement of the fair value of such derivatives at each balance sheet date, with a resulting non-cash gain or loss related to the change in the fair value being recognized in earnings in the statement of operations. As a result of the recurring fair value measurement, our financial statements and results of operations may fluctuate quarterly, based on factors, which are outside of our control. Due to the recurring fair value measurement, we expect that we will recognize non-cash gains or losses on our warrants each reporting period and that the amount of such gains or losses could be material.

Future resales of our common stock could cause the market price of our common stock to drop significantly, even if our business is doing well.

Sales of a significant number of shares of our common stock in the public market could occur at any time. These sales, or the perception in the market that the holders of a large number of shares intend to sell shares, could reduce the market price of our common stock.

Immediately after the closing of our July 2021 business combination: (i) former holders of Legacy Sema4 common stock owned approximately 64.89% of our total outstanding common stock, (ii) holders of public shares owned 18.43% of our total outstanding common stock, (iii) the Former Sponsor and certain of CMLS's other initial stockholders owned 4.61% of our total outstanding common stock and (iv) the Merger PIPE Investors owned approximately 12.07% of our total outstanding shares of common stock.

Although the Former Sponsor and certain of our stockholders were subject to certain lock-up restrictions regarding the transfer of our common stock following the consummation of the business combination, these lock-up restrictions expired on January 18, 2022. However, certain of our existing stockholders have also entered into support agreements in connection with the Acquisition, whereby these stockholders have agreed to, among other things, be bound by certain transfer restrictions. Furthermore, we have filed a registration statement on Form S-1 related to the offer and sale from time to time by the selling securityholders named in the prospectus that forms a part of that registration statement of up to 236,223,401 shares of common stock and 7,236,667 warrants, which registration statement has been declared effective by the SEC. Because the business combination lock-up restrictions have expired and the registration statement is available for use, and as the transfer restrictions under the support agreement end, the market price of our common stock could decline if the holders of our common stock sell them or are perceived by the market as intending to sell them.

There is no guarantee that the public warrants will ever be in the money, and they may expire worthless and the terms of our public warrants may be amended.

The exercise price for the public warrants is $11.50 per share of common stock. There is no guarantee that the public warrants will ever be in the money prior to their expiration, and as such, the public warrants may expire worthless.

Risks Related to the Acquisition

The issuance of shares of Class A common stock to OPKO in connection with the Acquisition and to the PIPE Investors in the PIPE Investment will dilute the voting power of Sema4's current stockholders.

Pursuant to the Merger Agreement, at the Effective Time, Sema4 will issue shares of Class A common stock to OPKO which, together with our Class A common stock to be issued in the PIPE Investment, will represent approximately 34.9% of the Company on a fully diluted basis after the Acquisition. In addition, pursuant to the Subscription Agreements, Sema4 will issue shares of Class A common stock to the PIPE Investors which, together with our Class A common stock to be issued to OPKO at the Effective Time, will represent approximately 34.9% of the Company on a fully diluted basis after the Closing. Accordingly, the issuance of shares of Class A common stock to OPKO in connection with the Acquisition and the PIPE Investors in connection with the PIPE Investment will reduce the relative voting power of each share of Class A common stock held by our current stockholders. Consequently, our stockholders as a group will have less influence over the management and policies of the Company after the Transactions than prior to the Transactions.

Because the lack of a public market for GeneDx's outstanding shares makes it more difficult to evaluate the value of such shares, OPKO may receive consideration in the Acquisition that is greater than the fair market value of the GeneDx shares.

GeneDx is a wholly owned subsidiary of OPKO and its outstanding capital stock is not traded in any public market. The lack of a public market makes it difficult to determine the fair market value of GeneDx or its shares of capital stock. Since the number of shares of Class A common stock to be issued to OPKO in the Acquisition was determined based on negotiations between the parties, it is possible that the value of our Class A common stock to be issued to OPKO in connection with the Acquisition will be greater than the fair market value of GeneDx.

Following the Acquisition, OPKO will be a substantial holder of shares of our Class A common stock and sales by OPKO into the market in the future could cause the market price of our Class A common stock to drop significantly, even if our business is doing well.

As a result of the Acquisition, OPKO will become the owner of at least 80 million shares of Class A common stock. OPKO is subject to transfer restrictions and requirements to dispose of its shares in marketed sales processes under the Shareholder Agreements, but those restrictions and requirements are finite and subject to exceptions.

If the shares held by OPKO or the other Lock-Up Holders are sold, or if it is perceived that they will be sold in the public market, the trading price of our Class A common stock could decline. For more information on the Lock-Up Shares and the applicable Lock-Up Periods see "*The Acquisition—Shareholder Agreements*".

Our ability to successfully effect the Acquisition and to be successful thereafter will be dependent upon the efforts of our key personnel, including the key personnel of GeneDx. The loss of key personnel could negatively impact the operations and profitability of our Company following the Acquisition and its financial condition could suffer as a result.

Our ability to successfully effect our Acquisition is dependent upon the efforts of our key personnel, including the key personnel of GeneDx (who are expected to become our employees as of the Closing). Although our key personnel are expected to remain with the Company in their current roles following the Acquisition, it is possible that we will lose some key personnel, the loss of which could negatively impact the operations and profitability of our Company's business following the Acquisition.

GeneDx's success depends to a significant degree upon the continued contributions of senior management, certain of whom would be difficult to replace. Departure by certain of GeneDx's officers could have a material adverse effect on GeneDx's business, financial condition, or operating results. The services of such personnel may not continue to be available to the Company following the Closing. See "*—Risks Related to GeneDx's Business— GeneDx's business may suffer if it does not retain its senior management.*"

The Company and GeneDx will be subject to business uncertainties and contractual restrictions while the Acquisition is pending.

Uncertainty about the effect of the Acquisition on employees and third parties may have an adverse effect on the Company and GeneDx. These uncertainties may impair our or GeneDx's ability to retain and motivate key personnel and could cause third parties that deal with any of us or them to defer entering into contracts or making other decisions or seek to change existing business relationships. If key employees depart because of uncertainty about their future roles and the potential complexities of the Acquisition, our or GeneDx's business could be harmed. In addition, GeneDx's ability to make changes to its business may be restricted by covenants in the Merger Agreement, which restrictions generally require GeneDx to conduct its business in the ordinary course and subject it to a variety of specified limitations absent the Company's prior written consent. GeneDx may find that these and other contractual restrictions in the Merger Agreement may delay or prevent it from responding, or limit its ability to respond, effectively to competitive pressures.

The completion of the PIPE Investment is not a condition to the consummation of the Merger Agreement.

Pursuant to the terms of the Merger Agreement, we are not required to complete any private placement financing including the PIPE Investment in order to consummate the Merger Agreement. The Company will be required to close the Acquisition even if the PIPE Investment is not consummated. If we consummate the Merger Agreement without completing the PIPE Investment, we may need additional financing in the future to support our business, pursue strategic investments, or and pursue our growth strategy. Please see the section entitled "*The Acquisition—The Merger Agreement—Conditions to the Acquisition*" for additional information.

The exercise of discretion by our directors and officers in agreeing to changes to the terms of or waivers of closing conditions in the Merger Agreement may result in a conflict of interest when determining whether such changes to the terms of the Merger Agreement or waivers of conditions are appropriate and in the best interests of our stockholders.

In the period leading up to the Closing, other events may occur that, pursuant to the Merger Agreement, would cause the Company to agree to amend the Merger Agreement, to consent to certain actions, to waive in whole or in part one or more of the conditions to our obligations to complete the Acquisition (with the exception of the condition that our stockholders approve the Acquisition) or to waive rights that we are entitled to under the Merger Agreement. Such events could arise because of changes in the course of GeneDx's business, a request by GeneDx to undertake actions that would otherwise be prohibited by the terms of the Merger Agreement or the occurrence of other events that would have a material adverse effect on GeneDx's business and would entitle the Company to terminate the Merger Agreement. In any of such circumstances, it would be in the discretion of the Company, acting through the Board, to grant its consent or waive its rights. The existence of the financial and personal interests of the directors (including the members of the transaction committee that supervised the Company's consideration of the Acquisition) described elsewhere in this proxy statement may result in a conflict of interest on the part of one or more of the directors between what he or she may believe is best for the Company and our stockholders and what he or she may believe is best for himself or herself or his or her affiliates in determining whether or not to take the requested action. As of the date of this proxy statement, we do not believe there will be any changes or waivers that our directors and officers would be likely to make after the proposed stockholder approvals have been obtained at the Special Meeting. Please see the section entitled "*The Acquisition—The Merger Agreement—Conditions to the Acquisition*" for additional information.

We and GeneDx will incur significant transaction and transition costs in connection with the Acquisition.

We have incurred and expect to incur significant, non-recurring costs in connection with consummating the Acquisition. We may also incur additional costs to retain key employees. All expenses incurred in connection with

the Merger Agreement and the Acquisition, including all legal, accounting, consulting, investment banking and other fees, expenses and costs, will be for the account of the party incurring such fees, expenses and costs or paid by the Company following the Closing.

The anticipated benefits of the Acquisition may not be realized fully or at all or may take longer to realize than expected.

The Acquisition involves the integration of two companies that have previously operated independently. Prior to the announcement, Sema4 and GeneDx did not conduct any integration planning for the two companies, and their ability to do so prior to consummation of the Acquisition may be substantially limited by applicable law. After the Acquisition, the two companies will devote significant management attention and resources to integrating the two businesses. Delays in this process could adversely affect the combined company's business, financial results, financial condition and stock price. Even if Sema4 and GeneDx are able to integrate their business operations successfully, there can be no assurance that this integration will result in the realization of the full benefits of synergies, cost savings, innovation and operational efficiencies that they currently expect from this integration or that these benefits will be achieved within the anticipated time frame.

If the Acquisition's benefits do not meet the expectations of investors, stockholders or financial analysts, the market price of our securities may decline.

If the benefits of the Acquisition do not meet the expectations of investors or securities analysts, the market price of the Company's securities may decline. The market values of our securities at the time of the Acquisition may vary significantly from their prices on the date the Merger Agreement was executed, the date of this proxy statement, or the date on which our stockholders vote at the Special Meeting.

For additional factors that may affect the trading price of the Company's securities see "*—Risks Related to Being a Public Company—If we do not meet the expectations of investors, stockholders or financial analysts, the market price of our securities may decline*."

The Stock Consideration is not adjustable based on the market price of our Class A common stock so the Stock Consideration at the Closing may have a greater or lesser value than at the time the Merger Agreement was signed.

The Merger Agreement provides that a fixed number of shares of our Class A common stock will be issued as the Stock Consideration at the Closing. Any changes in the market price of our Class A common stock before the completion of the Acquisition will not affect the number of shares OPKO will be entitled to receive pursuant to the Merger Agreement. Therefore, if before the completion of the Acquisition, the market price of our Class A common stock increases from the market price on January 14, 2022, then OPKO could receive Stock Consideration with substantially greater value for its shares of GeneDx's capital stock than the value of our Class A common stock when Sema4 entered into the Merger Agreement.

Prospective financial information regarding GeneDx and Sema4 may not prove accurate.

In performing its financial analysis and rendering its opinion, Goldman Sachs & Co. LLC, the financial advisor to Sema4, reviewed and relied on, among other things, forecasts for GeneDx, which were prepared by GeneDx management and adjusted by management of Sema4, financial forecasts for Sema4, and pro forma financial forecasts for the combined company after giving effect to the Acquisition. This prospective financial information reflects numerous assumption and estimate, including, without limitation, as to industry performance, general business, economic, regulatory, market and financial conditions and other future events. This prospective financial information was not prepared with a view to public disclosure, is subject to significant economic, competitive, industry, and other uncertainties and may not be achieved in full, at all, or within projected timeframes. The failure of GeneDx's or Sema4's business to achieve projected results could have a material adverse effect on the price of Sema4's securities and financial condition following the Acquisition.

The unaudited pro forma combined financial information in this proxy statement is presented for illustrative purposes only and may not be reflective of the operating results and financial condition of Sema4 following completion of the Acquisition.

The unaudited pro forma combined financial information in this proxy statement is presented for illustrative purposes only and is not necessarily indicative of what Sema4's actual financial condition or results of operations would have been had the Acquisition been completed on the dates indicated. The unaudited pro forma combined financial information is subject to a number of assumptions, and does not take into account any synergies related to the proposed transaction. Further, Sema4's actual results and financial condition after the Acquisition may differ materially and adversely from the unaudited pro forma combined financial data that is included in this proxy statement. The unaudited pro forma combined financial information reflects adjustments based upon preliminary estimates of the fair value of assets to be acquired and liabilities to be assumed. The final acquisition accounting will be based upon the actual purchase price and the fair value of the assets and liabilities of GeneDx as of the date of the completion of the Acquisition. In addition, subsequent to the Closing Date, there will be further refinements of the acquisition accounting as additional information becomes available. Accordingly, the final acquisition accounting may differ materially from the unaudited pro forma combined financial information reflected in this proxy statement. For further discussion, see "*Unaudited Pro Forma Combined Financial Information*".

Sema4 has not obtained, and does not expect to obtain, an updated opinion from Goldman Sachs & Co. LLC, reflecting changes in circumstances that may have occurred since the signing of the Merger Agreement.

The opinion rendered to the Board by Goldman Sachs & Co. LLC was provided in connection with, and at the time of, the Board's evaluation of the Acquisition on January 14, 2022. The opinion was based on financial forecasts and other information made available to Goldman Sachs & Co. LLC as of the date of its opinion, which may have changed, or may change, after the date of such opinion. Sema4 has not obtained an updated opinion from Goldman Sachs & Co. LLC as of the date of this proxy statement. Sema4 does not expect to obtain an updated opinion prior to completion of the Acquisition. Changes in the operations and prospects of Sema4 or GeneDx, general market and economic conditions and other factors which may be beyond the control of Sema4 or GeneDx, and on which the opinion was based, may have altered the prices or values of shares of our Class A common stock or shares of GeneDx common stock since the date of such opinion, or may alter such values and prices by the time the Acquisition is completed. The opinion does not speak as of any date other than the date of such opinion. For a description of Goldman Sachs & Co. LLC's opinion, see "*The Acquisition—Opinion of Sema4's Financial Advisor*".

Sema4 may be the target of transaction related lawsuits which could result in substantial costs and may delay or prevent the Acquisition from being completed. If the Acquisition is completed, Sema4 will also assume GeneDx's risks arising from various legal proceedings.

Securities class action lawsuits and derivative lawsuits are often brought against companies that have entered into merger agreements. Even if the lawsuits are without merit, defending against these claims can result in substantial costs and divert management time and resources. An adverse judgment could result in monetary damages, which could have a negative impact on Sema4's and GeneDx's respective liquidity and financial condition. Additionally, if a plaintiff is successful in obtaining an injunction prohibiting completion of the Acquisition, then that injunction may delay or prevent the Acquisition from being completed, which may adversely affect Sema4's and GeneDx's respective business, financial condition and results of operation. There can be no assurance that complaints will not be filed with respect to the Acquisition.

One of the conditions to completion of the Acquisition is the absence of any injunction or order being in effect that prohibits completion of the Acquisition. Accordingly, if a plaintiff is successful in obtaining any injunction or order prohibiting the completion of the Acquisition, then such injunction or order may prevent the Acquisition from being completed, or from being completed within the expected timeframe.

In addition, if Sema4 completes the Acquisition, it will assume GeneDx's risks arising from legal proceedings. In addition, following the Closing of the Acquisition, the strategies or motivations of a party or parties with respect to actual or potential litigation against Sema4 may change. Sema4 cannot predict with certainty the eventual

outcome of GeneDx's pending or future legal proceedings and the ultimate outcome of such matters could be material to the Company's results of operations, cash flows and financial condition following the Acquisition.

Finally, the Acquisition may result in post-transaction disputes with OPKO or the other counterparties to the Merger Agreement and the Related Agreements regarding a number of matters, including any post-closing adjustments to the Cash Consideration, the occurrence or non-occurrence of any Milestone Event or payment of any Milestone Payment or any liabilities for which Sema4 or OPKO believes it was indemnified under the Merger Agreement.

UNAUDITED PRO FORMA COMBINED FINANCIAL INFORMATION

Introduction

The following unaudited pro forma combined financial statements are based on the historical consolidated financial statements of Sema4 and historical combined financial statements of GeneDx and are adjusted to give effect to the pending Acquisition. In order to finance the Acquisition, Sema4 entered into Subscription Agreements with the PIPE Investors. The PIPE Investment is expected to close substantially concurrently with the closing of the Acquisition.

Sema4 is a patient-centered, health intelligence company with a mission to use artificial intelligence, or AI, and machine learning to enable personalized medicine for all. Sema4's integrated information platform leverages longitudinal patient data, AI-driven predictive modeling, and genomics in combination with other molecular and high-dimensional data in our efforts both to deliver better outcomes for patients and to transform the practice of medicine, including how disease is diagnosed, treated, and prevented. Sema4 is headquartered in Stamford, Connecticut.

GeneDx, is a patient-centric health information company and leader in delivering clinical genomic answers to an ever-increasing community of patients, families and healthcare providers. With more than 20 years of experience in diagnosing rare disorders and diseases, GeneDx have pioneered panels, exome and whole genome sequencing and have developed a proprietary genomic interpretation and information services platform in support of healthcare partners and patients globally. GeneDx is headquartered in Elmwood Park in New Jersey.

The following unaudited pro forma combined balance sheet as of December 31, 2021, combines the audited historical consolidated balance sheet of Sema4 as of December 31, 2021, with the audited historical combined carve out balance sheets of GeneDx as of December 31, 2021, giving effect to the Acquisition, the PIPE Investment and all factually supportable adjustments that are directly attributable to the Transactions, as if they had been consummated as of that date.

The following unaudited pro forma combined statements of operations for the year ended December 31, 2021, combine the historical consolidated statements of comprehensive loss of Sema4 and the historical combined carve out statements of comprehensive loss of GeneDx for such periods, giving effect to the Acquisition, the PIPE Investment and all factually supportable adjustments that are directly attributable to the Transactions, as if they had been consummated on January 1, 2021, the beginning of the earliest period presented.

The unaudited pro forma combined financial information presented is based on the assumptions and adjustments described in the accompanying notes. The unaudited pro forma combined financial information is derived from the respective historical consolidated financial statements of Sema4 and combined carve out financial statements of GeneDx as described further in Note 2 — *Basis of Presentation*. The unaudited pro forma combined financial information includes adjustments which are preliminary and may be revised upon closing. There can be no assurance that such revisions will not result in material changes. The unaudited pro forma combined financial information is presented for illustrative purposes only and is not necessarily indicative of the results or financial position that would have occurred or that may occur in the future had the Acquisition and PIPE been completed on the dates indicated, nor is it necessarily indicative of the future operating results or financial position of Sema4 after the Acquisition. Future results may vary significantly from the results reflected because of various factors.

The unaudited pro forma combined financial information has been compiled in a manner consistent with the accounting policies adopted by Sema4. Upon completion of the Acquisition, Sema4 will perform a more detailed review of the GeneDx accounting policies. As a result of that review, differences could be identified between the accounting policies of the two companies that, when conformed, have a material impact on the combined financial statements.

UNAUDITED PRO FORMA COMBINED BALANCE SHEET
AS OF DECEMBER 31, 2021
(in thousands)

	Historical		Pro Forma	
	Sema4	GeneDx	Pro forma Adjustment (Note 4)	Pro Forma Balance Sheet
ASSETS				
Current assets:				
Cash and cash equivalents	$ 400,569	$ 144	$ 49,201 a1	$ 449,914
Accounts receivable	26,509	20,341	—	46,850
Due from related parties	54	—	—	54
Inventory	33,456	7,828	—	41,284
Prepaid expenses	19,154	3,422	(594) b5	21,982
Other current assets	3,802	1,804	—	5,606
Total current assets	483,544	33,539	48,607	565,690
Property and equipment, net	62,719	28,277	—	90,996
Restricted cash	900	—	—	900
Other assets	6,930	53	—	6,983
Intangible assets	—	166,888	50,112 e1	217,000
Goodwill	—	282,024	6,936 f	288,960
Due from Parent and its subsidiaries	—	5	(5) b2	—
Operating lease right of use assets	—	5,789	(5,789) c	—
Investment in related companies	—	205	(205) b1	—
Total assets	$ 554,093	$ 516,780	$ 99,656	$ 1,170,529
LIABILITIES AND STOCKHOLDERS' EQUITY				
Current liabilities:				
Accounts payable	$ 44,693	$ 5,397	$ —	$ 50,090
Accrued expenses	20,108	15,565	—	35,673
Due to related parties	2,623	—	—	2,623
Current portion of capital lease obligations	3,419	—	—	3,419
Current contract liabilities	473	—	—	473
Other current liabilities	29,968	571	—	30,539
Income tax payable	—	180	(180) b3	—
Total current liabilities	101,284	21,713	(180)	122,817
Long-term debt, net of current portion	11,000	—	—	11,000
Capital lease obligation, net of current portion	18,427	—	—	18,427
Other liabilities	3,480	—	15,800 a3	19,280
Earn-out liabilities	10,244	—	—	10,244
Warrant liability	21,555	—	—	21,555
Operating lease liabilities	—	9,936	(9,936) c	—
Deferred tax liabilities, net	—	24,063	(24,063) b4	—
Total liabilities	165,990	55,712	(18,379)	203,323
STOCKHOLDERS' EQUITY				
Sema4 Class A common stock, $0.0001 par value	24	—	13 a1,a2	37
Additional paid-in capital	963,520	660,506	(148,292) g	1,475,734
Accumulated deficit	(575,441)	(199,438)	266,314 b4	(508,565)
Total stockholders' equity	388,103	461,068	118,035	967,206
Total liabilities and stockholders' equity	$ 554,093	$ 516,780	$ 99,656	$ 1,170,529

UNAUDITED PRO FORMA COMBINED STATEMENT OF OPERATIONS
FOR THE YEAR ENDED DECEMBER 31, 2021
(in thousands, except share and per share amounts)

	Historical		Pro forma	
	Sema4	GeneDx	Pro Forma Adjustments (Note 4)	Pro Forma Statement of Operations
Revenue:				
Diagnostic test revenue	$ 205,100	$ 116,595	$ —	$ 321,695
Other revenue	7,095	—	—	7,095
Total revenue	212,195	116,595	—	328,790
Cost of services	228,797	84,361	—	313,158
Total gross profit (loss)	(16,602)	32,234	—	15,632
Operating expenses:				
Research and development	105,162	12,377	—	117,539
Selling and marketing	112,738	12,145	7,219 d1,d3	132,102
General and administrative	205,988	40,294	11,113 d2,d3	257,395
Related party expenses	5,659	—	—	5,659
Amortization of intangible assets	—	16,813	(16,813) e3	—
Loss from operations	(446,149)	(49,395)	(1,519)	(497,063)
Other income (expense):				
Change in fair value of warrant and earn-out contingent liabilities	198,401	—	—	198,401
Interest income	79	—	—	79
Interest expense	(2,835)	—	—	(2,835)
Other income (expense), net	5,114	(44)	40 b1	5,110
Total other income (expense), net	200,759	(44)	40	200,755
Net loss before income taxes	(245,390)	(49,439)	(1,479)	(296,308)
Provision or benefit for income taxes	—	12,547	54,329 d4	66,876
Net loss	$ (245,390)	$ (36,892)	$ 52,850	$ (229,432)
Weighted average shares outstanding, basic and diluted	108,077,439	—	130,000,000	238,077,439
Basic and diluted net loss per share	$ (2.27)	$ —	$ —	$ (0.96)

NOTES TO UNAUDITED PRO FORMA COMBINED FINANCIAL INFORMATION

1. Description of Acquisition

On January 14, 2022, Sema4, Merger Sub I and Merger Sub II entered into the Merger Agreement with GeneDx, a wholly-owned subsidiary of OPKO, Holdco and OPKO.

After giving effect to the Acquisition and the other transactions contemplated by the Merger Agreement, GeneDx will have converted into a Delaware limited liability company and be a wholly-owned indirect subsidiary of Sema4. Subject to the terms and conditions of the Merger Agreement, Sema4 will pay consideration to OPKO, for the Acquisition of (i) $150 million in cash at the closing of the Acquisition, subject to certain adjustments as provided in the Merger Agreement, (ii) 80 million shares of Sema4's Class A common stock to be issued at the Closing and (iii) up to $150 million payable following the Closing, if certain revenue-based milestones are achieved for each of the fiscal years ending December 31, 2022 and December 31, 2023. Each Milestone Payment, if and to the extent earned under the terms of the Merger Agreement, will be satisfied through the payment and/or issuance of a combination of cash and shares of Class A common stock (valued at $4.86 per share based on the average of the daily volume average weighted price of Class A common stock over the period of 30 trading days ended January 12, 2022), with such mix to be determined in Sema4's sole discretion.

Additionally, in connection with entering into the Merger Agreement and as a condition under the Merger Agreement, Sema4 entered into Subscription Agreements for the PIPE Investment to sell $200 million in Class A common stock at a price of $4.00 per share to the PIPE Investors.

2. Basis of Presentation

The unaudited pro forma financial information set out below has been prepared in accordance with Article 11 of Regulation S-X, as amended by the SEC Final Rule Release No. 33 10786, Amendments to Financial Disclosures About Acquired and Disposed Businesses ("*Regulation S-X*"), using accounting policies in accordance with GAAP.

The unaudited pro forma combined financial statements have been derived from and should be read in conjunction with:

- the accompanying notes to the unaudited pro forma combined financial statements;
- the audited historical consolidated financial statements of Sema4 as of December 31, 2021, and the related notes, in each case, included in this proxy statement;
- the (i) audited historical combined carve out financial statements of GeneDx as of and for the year ended December 31, 2021, and the related notes, in each case, included in this proxy statement; and
- the sections of the proxy statement entitled "*Sema4's Management's Discussion and Analysis of Financial Condition and Results of Operations*" and "*GeneDx's Management's Discussion and Analysis of Financial Condition and Results of Operations*" and the other financial information included elsewhere in this proxy statement.

The completion of the Acquisition is subject to various closing conditions, including, among others, (i) approval by Sema4's stockholders of the issuance of the Stock Consideration under the Merger Agreement, (ii) delivery of closing certificates, including the Closing Certificate, Allocation Schedule Certificate, and Good Standing Certificates, each as defined in the Merger Agreement, (iii) the accuracy of the representations of GeneDx and Sema4, (iv) the performance by GeneDx and Sema4 in all material respects of their respective obligations under the Merger Agreement, and (v) no material adverse effect, litigation, injunctions or restraints

The unaudited pro forma combined financial statements assume that (i) the all proposals required to be approved under the Merger Agreement are approved by Sema4's stockholders and (ii) all other Acquisition-related transactions are consummated. Management elected not to present any adjustments related to synergies or dis-synergies that may exist.

The unaudited pro forma combined financial statements have been prepared for illustrative purposes only and are not intended to represent or be indicative of the consolidated financial results of operations in future periods or the results that actually would have been achieved if Sema4 and GeneDx had been a combined company during the periods presented. The actual results of operations may differ significantly from the pro forma amounts reflected herein due to a variety of factors. The unaudited pro forma combined statement of operations does not reflect any operating efficiencies and/or cost savings that Sema4 may achieve with respect to the combined company.

The Acquisition will be accounted for using the acquisition method of accounting in accordance with Accounting Standards Codification ("ASC") 805 - Business Combinations. Under the acquisition method of accounting, the total purchase price is allocated to the tangible and identifiable intangible assets and liabilities assumed based on their relative fair values. The excess of the purchase price over the net assets is recorded as goodwill. The purchase price allocations is preliminary because valuation of the net assets is still being finalized. Accordingly, the pro forma adjustments related to the purchase price allocations and certain other estimates, assumptions, and adjustments are preliminary and subject to change, which changes could be significant.

3. GeneDx Accounting Policies Historical Financial Statement Reclassification

GeneDx's historical combined carve out financial statements were prepared in accordance with U.S. GAAP. Sema4 performed certain procedures for the purposes of identifying material differences in significant accounting policies between Sema4 and GeneDx, and any accounting adjustments that would be required in connection with adopting uniform policies. These procedures included a review of GeneDx's standalone combined carve out financial statements and preliminary discussion with GeneDx management. Sema4 does not believe there are any differences in the accounting policies that will result in material adjustments to Sema4's consolidated financial statements. Upon completion of the Acquisition, or as more information becomes available, Sema4 will perform a more detailed review of the GeneDx accounting policies. As a result of that review, differences could be identified between the accounting policies of the two companies that, when conformed, could have a material impact on the combined financial statements.

Additionally, $12.1 million included as selling, general and administrative in GeneDx's historical financial information included within the unaudited pro forma combined financial information has been reclassified to selling and marketing to conform the presentation to that of Sema4.

4. Adjustments to unaudited pro forma combined financial information

The adjustments included in the unaudited preliminary pro forma combined financial statements are as follows:

a) Estimated aggregate purchase price consideration and allocation:

The aggregate purchase price consideration is estimated to be approximately $478.8 million as follows (in millions):

Cash Consideration	$150.0
Less: Closing Net Working Capital Adjustment	(10.2)
Cash Consideration [(a1)]	139.8
Add: Stock Consideration [(a2)]	323.2
Add: Fair value of Contingent Consideration [(a3)]	15.8
Aggregate Purchase Price Consideration	$478.8

a1) This represents cash consideration estimated net of net working capital adjustment ($10.2 million) based on the closing net working capital target of $22 million, as stated in the Merger Agreement. This cash consideration is offset by gross proceeds of $200 million which is based on 50 million shares of Class A common stock at a price of $4.00 per share in accordance with the Subscription Agreements that have been entered into with PIPE investors. The $200 million gross proceeds are offset by the estimated incremental transaction costs to be paid by Sema4 for $11 million, resulting in an approximately $49 million adjustment to cash and cash equivalents.

a2) 80 million shares of Sema4 Class A common stock will be issued to the seller upon closing of the Acquisition. We estimated the Stock Consideration based on a per share price of $4.04, which was the closing price of the Class A common stock on January 14, 2022, the date the Merger Agreement was signed.

a3) The fair value of the $15.8 million Milestone Payment is estimated using a Monte Carlo simulation valuation model. Pay-out of this consideration is dependent upon GeneDx achieving 2022 and 2023 revenue target of $163 million and $219 million, respectively.

The purchase price allocations for the assets acquired and liabilities assumed are based on preliminary valuations and are subject to change as we obtain additional information (in thousands).

Cash and cash equivalents		$ 144
Accounts receivables, net		20,341
Inventory		7,828
Other current assets	d2	4,632
Non-current assets	b1,b2,c	28,330
Current liabilities	b3	(21,533)
Deferred tax liabilities	b4,c	(66,876)
Fair value of net assets acquired		(27,134)
Goodwill	f	288,960
Identifiable Intangible	e	217,000
Aggregate purchase price	a	$ 478,826

	Pro Forma	-10% change	+10% change
Price per share	$4.04	$3.64	$4.44
Purchase price (in thousands)	$478,826	$446,506	$511,146
$ change vs pro forma (in thousands)	n/a	$(32,320)	$32,320

The estimated value of the purchase price consideration does not purport to represent the actual value of the total Merger Consideration that will be paid when the Acquisition is completed. The Stock Consideration will be remeasured at the closing date at the then-current market price. The value we use then will result in a per share value difference from the $4.04 per share assumed in the calculation, and that difference may be material. For example, an increase or decrease of 10% in the closing price of shares of Sema4's Class A common stock from the closing price assumed in these unaudited pro forma combined financial statements would change the value of the purchase price by approximately $32.3 million.

b) Elimination of GeneDx's historical balance sheet accounts that are not acquired or assumed by Sema4:

b1) As part of the pre-closing condition, GeneDx will exit the joint venture investment that had a carrying value of $0.2 million. Therefore, the related investment balance and impairment loss of $0.04 million is eliminated.

b2) Represents adjustment to eliminate the carrying value of intercompany receivables.

b3) Represents adjustment to eliminate the income tax payable.

b4) Deferred tax liabilities of $24.1 million were adjusted due to certain deferred tax assets being absorbed by OPKO and the write off of historical intangible assets. Therefore, they do not carry over. Additionally, there are deferred tax liabilities recorded for $66.9 million related to intangible assets that will result in the release of Sema4's valuation allowance in a corresponding amount. The impact of the valuation allowance release is reflected in the unaudited pro forma combined statement of operations as well as the accumulated deficit.

b5) Represents adjustment to eliminate the prepaid bonus of GeneDx executives.

c) This adjustment relates to eliminating the affect of the ASC 842, Leases ("ASC 842") which was adopted by GeneDx because Sema4 did not adopt the ASC 842 as of December 31, 2021. Therefore, the adjustment removed the carrying value of the right of use assets ($5.8 million) and lease liabilities ($9.9 million). As an emerging growth company, the Company elected to adopt the ASC 842 under the extended transition period available, which will be effective for the annual period beginning on January 1, 2022 and all interim periods within the year ended December 31, 2023. Early adoption is permitted.

d) Adjustment of GeneDx's historical income statement accounts relates to the following (in millions):

d1) Adjustment of $7.2 million of selling and marketing expense is primarily related to the amortization expense of identifiable intangible assets (e2) and stock-based compensation adjustment (d3).

d2) Adjustment of $11.1 million of general and administrative expense is primarily related to the amortization expense of identifiable intangible assets (e2) and stock-based compensation adjustment (d3).

d3) Stock-based compensation adjustment represents estimated $6.2 million of Sema4 stock awards that are agreed to be granted to certain executives once the transaction closes. We only considered the contingent grants made to certain GeneDx executives who are continuing their employment with Sema4. The grant date fair value for options were calculated using a Black-Scholes option-pricing model, using the closing share price as of January 14, 2022 of $4.04, risk free rate of 1.64%, expected life of 5.5 years, volatility 65.2% and dividend yield of zero. The fair value of the restricted stock units are calculated using Sema4's closing share price as of January 14, 2022, $4.04. The expense is reduced by $1.2 million of stock-based compensation recorded for the executives and reflected in GeneDx financial information under their current employment agreement with GeneDx.

d4) Income tax benefit of $12.5 million is eliminated as we expect GeneDx's parent company to absorb this benefit. In addition, we adjust for $66.9 million of income tax benefit related to the deferred tax liabilities of identifiable intangible assets created in connection with the Acquisition.

e) Reflects the adjustment to record the fair values of the identifiable intangible assets created in connection with the Acquisition.

The fair value of GeneDx's trade name and trademarks and developed technology intangible assets were determined using the relief from royalty method under the income approach, which estimates the cost savings generated by a company related to the ownership of an asset for which it would otherwise have had to pay royalties or license fees on revenues earned through the use of the asset. The discount rate used is determined at the time of measurement based on an analysis of the implied internal rate of return of the transaction, weighted average cost of capital, and weighted average return on assets.

The fair value of the customer relationships was calculated using a multi-period excess earnings method, a form of the income approach, which incorporates the estimated future cash flows to be generated from GeneDx's existing customer base. Excess earnings are the earnings remaining after deducting the market rates of return on the estimated values of contributory assets, including debt-free net working capital, tangible assets, and other identifiable intangible assets. The excess earnings are thereby calculated for each year of a multi-year projection period and discounted to present value. The primary components of this method consist of the customer attrition rate, determination of excess earnings, and an appropriate rate of return.

The following table summarizes the estimated fair values of GeneDx's identifiable intangible assets and their estimated useful lives determined (in million):

	Useful Life (in years)	Estimated Fair Value	Annual Amortization
Trade Names and Trademarks (General and administrative)	17	$ 32.0	$ 1.9
Developed Technology (General and administrative)	9	50.0	5.6
Customer Relationships (Selling and marketing)	20	135.0	6.8
Total		217.0	$ 14.3 e2)
Less: Historic GeneDx Intangible Assets		(166.9)	(16.8) e3)
Pro forma adjustment		$ 50.1 e1	

e3) Represents adjustment to eliminate the amortization of historic GeneDx intangible assets of $16.8 million.

f) Based on the preliminary purchase price allocations performed, the estimated goodwill of $289.0 million is recognized from the Acquisition resulting the adjustment of $7.0 million. The historic GeneDx goodwill of $282.0 million is eliminated.

g) Represents elimination of GeneDx's historical additional paid-in capital and adjustment to Sema4's common stock and additional paid capital for the stock considerations and PIPE financing (in millions).

Additional paid-in capital	Amount
Elimination of GeneDx historical additional paid-in capital	$ (660.5)
Stock consideration a2)	323.2
PIPE financing a1)	199.9
PIPE financing cost a1)	(10.9)
Total	$ (148.3)

COMPARATIVE SHARE INFORMATION

The following table sets forth historical comparative per share information of Sema4 and GeneDx, each on a stand-alone basis, and the unaudited pro forma combined per share information after giving effect to the Acquisition and the PIPE Investment.

The historical information should be read in conjunction with the historical financial statements of Sema4 and GeneDx included elsewhere in this proxy statement. The unaudited pro forma combined per share information is derived from, and should be read in conjunction with, the information contained in the section of this proxy statement entitled "*Unaudited Pro Forma Combined Financial Information*."

The unaudited pro forma combined per share information does not purport to represent what the actual results of operations of the Company would have been had the Acquisition been completed or project Sema4's and GeneDx's results of operations that may be achieved after the Acquisition.

For the year ended December 31, 2021	**Historical**		**Pro Forma**
(in thousands, except share and per share amounts)	**Sema4**	**GeneDx**	**Sema4**
Net loss	$ (245,390)	$ (36,892)	$ (229,432)
Net loss available to common stockholders	$ (245,390)	$ (36,892)	$ (229,432)
Weighted average common shares outstanding, basic and diluted	108,077,439	—	238,077,439
Net loss per share attributable to common stockholders, basic and diluted	$ (2.27)	$ —	$ (0.96)

SPECIAL MEETING OF COMPANY STOCKHOLDERS

This proxy statement is being provided to Company stockholders as part of a solicitation of proxies by the Board for use at the Special Meeting of Stockholders to be held on April 27, 2022, and at any adjournment or postponement thereof. This proxy statement contains important information regarding the Special Meeting, the proposals on which you are being asked to vote and information you may find useful in determining how to vote and voting procedures.

This proxy statement is being first mailed on or about March 31, 2022 to all stockholders of record of the Company as of March 22, 2022, the record date for the Special Meeting. Stockholders of record who owned Class A common stock at the close of business on the record date are entitled to receive notice of, attend and vote at the Special Meeting. On the record date, there were 245,016,425 shares of Class A common stock outstanding.

Date and Time of Special Meeting

The Special Meeting will be held on April 27, 2022 at 9:00 a.m. Eastern time at www.virtualshareholdermeeting.com/SMFR2022SM, or at such other date, time and place to which such meeting may be adjourned or postponed, to consider and vote upon the proposals. The Special Meeting will be conducted exclusively via live webcast and so stockholders will not be able to attend the meeting in person. Stockholders may attend the Special Meeting online and vote at the Special Meeting by visiting www.virtualshareholdermeeting.com/SMFR2022SM and entering your 12-digit control number, which is either included on the proxy card you received or obtained through Continental Stock Transfer & Trust Company.

Attending the Special Meeting

- If your shares are registered in your name with Continental Stock Transfer & Trust Company and you wish to attend the online-only Special Meeting, go to www.virtualshareholdermeeting.com/SMFR2022SM, and enter the 12-digit control number included on your proxy card or notice of the meeting.
- Beneficial stockholders (those holding shares through a stock brokerage account or by a bank or other nominee) who wish to attend the virtual meeting must obtain a legal proxy by contacting their account representative at the bank, broker, or other nominee that holds their shares and e-mail a copy (a legible photograph is sufficient) of their legal proxy to proxy@continentalstock.com. Beneficial stockholders who e-mail a valid legal proxy will be issued a 12-digit meeting control number that will allow them to attend and participate in the Special Meeting. After contacting Continental Stock Transfer & Trust Company, a beneficial holder will receive an e-mail prior to the meeting with a link and instructions for entering the virtual meeting. Beneficial stockholders should contact Continental Stock Transfer & Trust Company at least five (5) business days prior to the meeting date in order to ensure access.

Voting Power; Record Date

As a stockholder of the Company, you have a right to vote on certain matters affecting the Company. The proposals that will be presented at the Special Meeting and upon which you are being asked to vote are summarized below and fully set forth in this proxy statement. You will be entitled to vote or direct votes to be cast at the Special Meeting if you owned shares of our Class A common stock at the close of business on March 22, 2022, which is the record date for the Special Meeting. You are entitled to one vote for each share of our Class A common stock that you owned as of the close of business on the record date. If your shares are held in “street name” or are in a margin or similar account, you should contact your broker, bank or other nominee to ensure that votes related to the shares you beneficially own are properly counted. On the record date, there were 245,016,425 shares of Class A common stock outstanding.

Proposals at the Special Meeting

At the Special Meeting, Company stockholders will vote on the following proposals:

- **Proposal No. 1 - The Stock Consideration Issuance Proposal** - To approve the issuance of the Company's Class A common stock in connection with the Acquisition and as contemplated by the Merger Agreement for purposes of complying with applicable Nasdaq Listing Rules;
- **Proposal No. 2 - The PIPE Investment Proposal** - To approve the issuance of the Class A common stock in connection with the PIPE Investment and as contemplated by the Subscription Agreements for purposes of complying with the Nasdaq Listing Rules;
- **Proposal No. 3 - The Special Designee Director Election Proposal** - Assuming the Stock Consideration Issuance Proposal and the Charter Amendment Proposal are approved and adopted and the Acquisition is consummated, to appoint two directors who will become directors of the Company effective upon the consummation of the Acquisition;
- **Proposal No. 4 - The Charter Amendment Proposal -** To adopt the Amendment to the Charter, in the form attached hereto as Annex B, which increases the number of authorized shares of Class A common stock from 380,000,000 to 1,000,000,000;
- **Proposal No. 5 - The Class I Director Election Proposal** - To elect three Class I directors of the Company, each to serve a three-year term expiring at the Company's 2025 annual meeting of stockholders and until such director's successor is duly elected and qualified;
- **Proposal No. 6 - The Auditor Ratification Proposal** - To ratify the appointment of Ernst & Young LLP as the Company's independent registered public accounting firm for the fiscal year ending December 31, 2022;
- **Proposal No. 7 - Adjournment Proposal** - To approve, if necessary, the adjournment of the Special Meeting to a later date or dates to permit further solicitation and votes of proxies in the event that there are insufficient votes for, or otherwise in connection with, any of the proposals presented at the Special Meeting.

THE BOARD RECOMMENDS THAT YOU VOTE "**FOR**" EACH OF THESE PROPOSALS.

Quorum and Required Vote for Proposals for the Special Meeting

A quorum of Company stockholders is necessary to hold a valid meeting. A quorum will be present at the Special Meeting if a majority of the Company's Class A common stock outstanding on the record date and entitled to vote at the Special Meeting is represented in person or by proxy. Abstentions and broker non-votes will count as present for the purposes of establishing a quorum.

The approval of the Stock Consideration Issuance Proposal, the PIPE Investment Proposal, the Special Designee Director Election Proposal, the Class I Director Election Proposal, the Auditor Ratification Proposal and the Adjournment Proposal requires the affirmative vote of a majority of the votes cast by holders of our Class A common stock represented in person or by proxy and entitled to vote at the Special Meeting. The approval of the Charter Amendment Proposal requires the affirmative vote of holders of a majority of our outstanding shares of Class A common stock entitled to vote thereon at the Special Meeting.

Under these voting standards, a failure to vote, a broker non-vote or an abstention will have no effect on the Stock Consideration Issuance Proposal and the Adjournment Proposal. However, an abstention, a broker non-vote or failure to vote will have the same effect as a vote "**AGAINST**" the Charter Amendment Proposal.

The transactions contemplated by the Merger Agreement will be consummated only if the Stock Consideration Issuance Proposal and the Charter Amendment proposal are approved at the Special Meeting. The PIPE Investment

Proposal and the Special Designee Director Election Proposal are conditioned upon stockholders' approval of the Stock Consideration Issuance Proposal and the Charter Amendment Proposal.

It is important for you to note that in the event that the Stock Consideration Issuance Proposal and the Charter Amendment Proposal do not receive the requisite vote for approval, we will not consummate the Acquisition.

Recommendation to Company Stockholders

Our Board believes that each of the Stock Consideration Issuance Proposal, the PIPE Investment Proposal, the Special Designee Director Election Proposal, the Charter Amendment Proposal, the Class I Director Election Proposal, the Auditor Ratification Proposal and the Adjournment Proposal to be presented at the Special Meeting is in the best interests of the Company and our stockholders and recommends that its stockholders vote "FOR" each of the proposals.

Our directors and executive officers have no substantial interests, directly or indirectly, in the matters set forth in the Acquisition (A) except to the extent of: (i) their ownership of shares of our Class A common stock (or rights to acquire shares), and (ii) that each officer and director are expected to be employed by and will continue to serve on Sema4's Board following the Acquisition (assuming, in the case of Mr. Casdin, Mr. Ruch and Mr. Pellini, that each are re-elected pursuant to Proposal No. 5), for which they each receive cash and equity compensation, and (B) in connection with the PIPE Investment.

In connection with the Acquisition, the Company has entered into the Subscription Agreements with the PIPE Investors. The PIPE Investors include certain existing equity holders of the Company, some of whom are affiliated with certain directors of the Company. For more information, see "*Certain Relationships and Related Party Transactions*".

Abstentions and Broker Non-Votes

Abstentions are considered present for the purposes of establishing a quorum. Abstentions and broker non-votes will have the same effect as a vote "**AGAINST**" the Charter Amendment Proposal, but will have no effect on the Stock Consideration Issuance Proposal, the PIPE Investment Proposal, the Special Designee Director Election Proposal, the Class I Director Election Proposal, the Auditor Ratification Proposal and the Adjournment Proposal.

In general, if your shares are held in "street" name and you do not instruct your broker, bank or other nominee on a timely basis on how to vote your shares, your broker, bank or other nominee, in its sole discretion, may either leave your shares unvoted or vote your shares on routine matters, but not on any non-routine matters. **None of the proposals at the Special Meeting are routine matters, other than the Auditor Ratification Proposal As such, without your voting instructions, your brokerage firm cannot vote your shares on any proposal to be voted on at the Special Meeting other than the Auditor Ratification Proposal.**

Voting Your Shares - Stockholders of Record

If you are a Company stockholder of record, you may vote by mail, through the Internet or at the Special Meeting. Each share of our Class A common stock that you own in your name entitles you to one vote on each of the proposals for the Special Meeting. Your one or more proxy cards show the number of shares of our Class A common stock that you own.

Voting by Mail - You can vote your shares by completing, signing, dating and returning the enclosed proxy card in the postage-paid envelope provided. By signing the proxy card and returning it in the enclosed prepaid and addressed envelope, you are authorizing the individuals named on the proxy card to vote your shares at the Special Meeting in the manner you indicate. We encourage you to sign and return the proxy card even if you plan to attend the Special Meeting so that your shares will be voted if you are unable to attend the Special Meeting. If you receive more than one proxy card, it is an indication that your shares are held in multiple accounts. Please sign and return all proxy cards to ensure that all of your shares are voted. If you sign and return the proxy card but do not give instructions on how to vote your shares, your shares of our Class A common stock will be voted as recommended by our Board.

Voting by Internet - All stockholders of record can vote through the Internet using the procedures and instructions described on the proxy card. Street name holders may vote by Internet if their bank or broker makes those methods available, in which case the bank or broker will enclose the instructions with the proxy materials. The Internet voting procedures are designed to authenticate stockholders' identities, allow stockholders to vote their shares and to confirm that their instructions have been properly recorded.

Voting at the Meeting - We will be hosting the Special Meeting via live webcast. If you attend the Special Meeting, you may submit your vote at the Special Meeting online at www.virtualshareholdermeeting.com/SMFR2022SM, in which case any votes that you previously submitted will be superseded by the vote that you cast at the Special Meeting. See "*—Attending the Special Meeting*" above for further details on how to attend the Special Meeting.

Our Board recommends voting "**FOR**" the Stock Consideration Issuance Proposal, "**FOR**" the PIPE Investment Proposal, "**FOR**" the Special Designee Director Election Proposal, "**FOR**" the Charter Amendment Proposal, "**FOR**" the Class I Director Election Proposal, "**FOR**" the Auditor Ratification Proposal and "**FOR**" the Adjournment Proposal. Votes submitted by mail must be received by 11:59 pm Eastern time on April 25, 2022.

Voting Your Shares - Beneficial Owners

If your shares are held in an account at a brokerage firm, bank or other nominee, then you are the beneficial owner of shares held in "street name" and this proxy statement is being sent to you by that broker, bank or other nominee. The broker, bank or other nominee holding your account is considered to be the stockholder of record for purposes of voting at the Special Meeting. As a beneficial owner, you have the right to direct your broker, bank or other nominee regarding how to vote the shares in your account by following the instructions that the broker, bank or other nominee provides you along with this proxy statement. As a beneficial owner, if you wish to vote at the Special Meeting, you will need to obtain a legal proxy from your bank, broker, or other nominee and e-mail a copy (a legible photograph is sufficient) of such legal proxy to proxy@continentalstock.com. You will then be issued a 12-digit meeting control number that will allow you to attend and participate in the Special Meeting. Please see "*—Attending the Special Meeting*" above for further details on how to attend the Special Meeting.

Revoking Your Proxy

If you give a proxy, you may revoke it at any time before the Special Meeting or at the Special Meeting by doing any one of the following:

- delivering a signed written notice of revocation to our Secretary at Sema4 Holdings Corp., 333 Ludlow Street, North Tower, 8th Floor, Stamford, Connecticut 06902, bearing a date later than the date of the proxy, stating that the proxy is revoked;
- signing and delivering a new proxy, relating to the same shares and bearing a later date;
- submitting another proxy over the Internet prior to 11:59 p.m., Eastern Time on April 26, 2022; or
- attending and voting at the Special Meeting and voting, although attendance at the Special Meeting will not, by itself, revoke a proxy.

If you are a beneficial owner of our Class A common stock as of the close of business on the record date, you must follow the instructions of your broker, bank or other nominee to revoke or change your voting instructions.

No Additional Matters

The Special Meeting has been called only to consider the approval of the Stock Consideration Issuance Proposal, the PIPE Investment Proposal, the Special Designee Director Election Proposal, the Charter Amendment Proposal, the Class I Director Election Proposal, the Auditor Ratification Proposal and the Adjournment Proposal. Under our bylaws, other than procedural matters incident to the conduct of the Special Meeting, no other matters may be considered at the Special Meeting if they are not included in this proxy statement, which serves as the notice of the Special Meeting.

Who Can Answer Your Questions About Voting

If you have any questions about how to vote or direct a vote in respect of your shares of our Class A common stock, you may contact D.F. King, our proxy solicitor, at:

D.F. King & Co., Inc.
48 Wall Street, 22nd Floor
New York, NY 10005
Stockholders Call (toll-free): (800) 735-3591
Banks and Brokers Call: (212) 269-5550
Email: Sema4@dfking.com

Appraisal Rights

Appraisal rights are not available to holders of shares of our Class A common stock in connection with the Acquisition.

Proxy Solicitation Costs

The Company is soliciting proxies on behalf of its Board. This proxy solicitation is being made by mail and over the Internet, but also may be made by telephone or in person. The Company has engaged D.F. King to assist in the solicitation of proxies for the Special Meeting. The Company and its directors, officers and employees may also solicit proxies in person. The Company will ask banks, brokers and other institutions, nominees and fiduciaries to forward the proxy materials to their principals and to obtain their authority to execute proxies and voting instructions.

The Company will bear the entire cost of the proxy solicitation, including the preparation, assembly, printing, mailing and distribution of the proxy materials. The Company will pay D.F. King a fee of $ 7,500, plus disbursements, reimburse D.F. King for its reasonable out-of-pocket expenses and indemnify D.F. King and its affiliates against certain claims, liabilities, losses, damages and expenses for their services as our proxy solicitor. We will reimburse brokerage firms and other custodians for their reasonable out-of-pocket expenses for forwarding the proxy materials to our stockholders. Directors, officers and employees of the Company who solicit proxies will not be paid any additional compensation for soliciting proxies.

THE ACQUISITION

Our stockholders should carefully read this proxy statement in its entirety for more detailed information concerning the Merger Agreement, which is attached as Annex A to this proxy statement. Please see the subsection entitled "*—The Merger Agreement*" below, for additional information and a summary of certain terms of the Merger Agreement. You are urged to carefully read the Merger Agreement in its entirety.

We may consummate the Acquisition only if the Stock Consideration Issuance Approval and the Charter Amendment Proposal is approved by the affirmative vote of the holders of a majority of the votes cast by holders of our Class A common stock represented in person or by proxy and entitled to vote at the Special Meeting.

The Merger Agreement

This section describes the material terms of the Merger Agreement. The description in this section and elsewhere in this proxy statement is qualified in its entirety by reference to the complete text of the Merger Agreement, a copy of which is attached as Annex A to this proxy statement. This summary does not purport to be complete and may not contain all of the information about the Merger Agreement that is important to you. You are encouraged to read the Merger Agreement carefully and in its entirety. This section is not intended to provide you with any factual information about the Company, GeneDx or any other party to the Merger Agreement. Such information with respect to the Company and GeneDx can be found elsewhere in this proxy statement.

The Merger Agreement contains representations, warranties and covenants that the respective parties made to each other as of the date of the Merger Agreement or other specific dates. The assertions embodied in those representations, warranties and covenants were made for purposes of allocating risk in the contract among the respective parties and are subject to important qualifications and limitations agreed to by the parties in connection with negotiating the Merger Agreement. The representations, warranties and covenants in the Merger Agreement are also modified in important part by the underlying confidential disclosure schedules, which we refer to as the "Schedules," which are not filed publicly and which are subject to a contractual standard of materiality different from that generally applicable to stockholders and were used for the purpose of allocating risk among the parties rather than establishing matters as facts. We do not believe that the Schedules contain information that is material to an investment or voting decision. Capitalized terms used but not defined in this section shall have the respective meanings ascribed to such terms in the Merger Agreement.

Effects of the Acquisition

As a result of the Acquisition, Merger Sub I will merge with and into HoldCo (the "*First Merger*"), with HoldCo being the surviving entity of the First Merger and following the First Merger, HoldCo will merge with and into Merger Sub II, with Merger Sub II being the surviving entity of this second merger (the "*Second Merger*" and, together with the First Merger, the "*Mergers*"). The certificate of formation and operating agreement of Merger Sub II will continue to be the certificate of formation and operating agreement of Merger Sub II as in effect immediately prior to the Acquisition.

Merger Consideration

Subject to the terms and conditions of the Merger Agreement, each share of HoldCo common stock issued and outstanding immediately prior to the effective time will be cancelled and automatically deemed for all purposes to represent the right to receive a portion of the merger consideration, with OPKO being entitled to receive (i) the Cash Consideration, (ii) the Stock Consideration and (iii) if and only to the extent payable pursuant to the Merger Agreement, the Milestone Payments (which may be paid in cash, shares of Class A common stock or a combination of the two). The number of shares of Class A common stock that OPKO is entitled to receive as a result of the Acquisition, as otherwise contemplated by the Merger Agreement, shall be adjusted to appropriately reflect the effect of any stock split, split-up, reverse stock split, stock dividend or distribution (including any dividend or distribution of securities convertible into Class A common stock), extraordinary cash dividend, reorganization, recapitalization, reclassification, combination, exchange of shares or other like change with respect to Class A common stock occurring on or after the date hereof and prior to the closing of the Acquisition (the "*Closing*").

Following the Closing, upon the occurrence of a Milestone Event, the Company will be obligated to pay milestone payments (each, a "*Milestone Payment*") to OPKO on the terms described in the Merger Agreement. Each Milestone Payment shall be satisfied through the payment and issuance of a combination of cash and shares of Class A common stock (valued at $4.86 (the "*Share Value*")), with such mix to be determined in Company's sole discretion. If the Milestone Payment in respect of the first Milestone Event becomes payable in full, then the Milestone Payment owing in respect of the second Milestone Event is subject to acceleration upon the occurrence of an Acquirer Change in Control, as further described in the Merger Agreement. The Cash Consideration is subject to closing-related adjustments, based on the GeneDx Group's debt, net working capital and transaction expenses at the closing of the Acquisition, which are subject to a customary true-up process. The Company has agreed to bear a portion of the GeneDx Group's operating expenses during the pre-closing period, which will be funded by OPKO through an intercompany note, up to $15 million through the first 6 months following the signing of the Merger Agreement, and 50% of such cost during the seventh month and thereafter. Accordingly, the GeneDx Group's debt at closing will include only a portion of the GeneDx Group's obligation in respect of financing provided by OPKO during the pre-closing period in order to fund the GeneDx Group's operations in accordance with the agreed pre-closing budget and evidenced by an inter-company note mid-term rate.

Subject to the terms and conditions of the Merger Agreement, (a) the first Milestone Payment of $112.5 million will become due and payable if the revenue of the GeneDx Group for the fiscal year 2022 equals or exceeds $163 million and (b) the second Milestone Payment of $37.5 million will become due and payable if the revenue of the GeneDx Group for the fiscal year 2023 equals or exceeds $219 million (each of clauses (a) and (b), a "*Milestone Event*"); provided that 80% of the Milestone Payment for the First Milestone Period or the Second Milestone Period, as applicable, shall become payable in respect of such period if the GeneDx Group achieves 90% of the applicable Milestone Event revenue target for such period set forth in the table above, which amount will scale on a linear basis up to 100% of the applicable Milestone Payment at 100% of the applicable revenue target. The second Milestone Payment is subject to acceleration and will become automatically due and payable in full if (i) a Company change in control occurs prior to the end of the Second Milestone Period and (ii) the full amount of the fist Milestone Payment was earned. Each Milestone Payment will be satisfied through the payment and issuance of a combination of cash and shares of our Class A common stock (based on the Share Value), with such mix to be determined in the Company's sole discretion.

Closing and Effective Time of the Acquisition

Unless the parties otherwise mutually agree, the Closing will take place on the date which is no more later than the third (3rd) business day after the date on which all of the closing conditions have been satisfied or waived (other than those conditions that by their terms are to be satisfied at the Closing) (such date, the "*Closing Date*"). See "*—The Merger Agreement—Conditions to the Acquisition*" for a more complete description of the conditions that must be satisfied prior to closing.

On the Closing Date, the Company and HoldCo will effect the First Merger by filing a certificate of merger with the Secretary of State of the State of Delaware, and the First Merger will become effective at the time the first certificate of merger has been duly filed. The time at which the First Merger becomes effective is referred to in this proxy statement as the "*effective time*". Immediately following the First Merger, HoldCo and Merger Sub II will effect the Second Merger by filing a certificate of merger with the Secretary of State of the State of Delaware, and the Second Merger will become effective at the time the second certificate of merger has been duly filed. The time at which the Second Merger becomes effective is referred to in this proxy statement as the "*second merger effective time*".

As of the date of this proxy statement, the parties expect that the Acquisition will be effective during the second quarter of 2022. However, there can be no assurance as to when or if the Acquisition will occur.

If the Acquisition is not completed by August 14, 2022, which date may be extended, by either our or OPKO's written notice, to October 14, 2022 if, as of August 14, 2022, any one of certain conditions have not been met (the "*termination date*"), then the Merger Agreement may be terminated by either the Company or OPKO. A party may not terminate the Merger Agreement pursuant to the provision described in this paragraph if the failure of the Closing to occur by the termination date is due primarily to the failure of the party seeking to terminate the Merger

Agreement to fulfill any obligations of such party set forth in the Merger Agreement. See "*—The Merger Agreement—Termination*".

Covenants and Agreements

Conduct of Businesses Prior to the Completion of the Acquisition

Each of OPKO and the GeneDx Parties have agreed that, prior to the Closing or earlier valid termination of the Merger Agreement, except (i) as set forth in the Schedules or an agreed pre-closing budget, (ii) to the extent necessary to comply with the GeneDx Parties' obligations under this Agreement, including completion of the Pre-Closing Restructuring, (iii) as required by applicable law ("*Applicable Legal Requirements*") or (iv) with the written consent of the Company (such consent not to be unreasonably withheld, conditioned or delayed) (collectively, the exceptions set forth in clauses (i) through (iv), the "*Specified Exceptions*"), it will, and cause each member of the GeneDx Group to use commercially reasonable efforts to conduct and operate their respective businesses in the ordinary course and in compliance in all material respects with Applicable Legal Requirements and an agreed pre-closing budget, pay its debts and Taxes when due (subject to good faith disputes regarding such debts and Taxes), pay or perform other material obligations when due and use its commercially reasonable efforts to preserve intact its present business organizations, keep available the services of its present officers and key employees and preserve its present relationships with customers, suppliers, distributors, licensors and licensees. In addition to the general covenants above, each of OPKO and the GeneDx Parties have agreed that prior to the Closing, subject to the Specified Exceptions, it will not, and will cause each member of the GeneDx Group not to:

- amend the governing documents of any member of the GeneDx Group;
- acquire (by merger, consolidation or combination, or acquisition of stock or assets) any person or division or assets (other than in the ordinary course of business) thereof, or otherwise effect any merger, consolidation or reorganization of any member of the GeneDx Group, or effect any conversion or restructuring of any equity or equity-linked interest, purchase any securities of, voting interests in or any assets of any Person, other than acquiring or purchasing equipment or supplies in the ordinary course of business;
- split, combine or reclassify the outstanding shares of HoldCo Common Stock (as defined in the Merger Agreement) nor enter into any agreement with respect to voting of any of HoldCo Common Stock;
- declare, set aside or pay any dividend or other distribution, payable in cash, stock, property or otherwise, in respect of any HoldCo Common Stock;
- purchase, redeem or otherwise acquire any shares of HoldCo Common Stock or any securities convertible or exchangeable or exercisable for any shares of HoldCo Common Stock;
- transfer, lease, license, guarantee, sell, mortgage, pledge, dispose of or encumber any material asset, except for (i) the incurrence of certain permitted encumbrances, (ii) non-exclusive licenses of GeneDx's intellectual property in the ordinary course of business, (iii) sales or other dispositions of inventory and other assets in the ordinary course of business, (iv) sales of obsolete or written off assets and (v) sales or dispositions for an amount less than $500,000 in the aggregate;
- incur any indebtedness or issue any debt securities or warrants or other rights to acquire debt securities of any member of the GeneDx Group or assume, guarantee or endorse, as an accommodation or otherwise, the obligations of any other person for indebtedness or capital obligations, in the case of any of the foregoing, other than (i) incurrences of Indebtedness (as defined in the Merger Agreement) under the agreed pre-closing budget and (ii) the incurrence of debt by OPKO;
- issue, sell, pledge, dispose of or encumber any shares of, or securities convertible into or exchangeable or exercisable for, or options, warrants, calls, commitments or rights of any kind to acquire, any shares of HoldCo Common Stock;

- make any change in accounting methods, principles or practices (including for Tax purposes), except as required by accounting standards or by applicable law or a governmental authority;
- revalue any of its material assets except as required by GAAP;
- other than in the ordinary course of business, enter into certain contracts, or amend, modify or consent to the termination of any such contract or the applicable member of the GeneDx Group's rights thereunder, or waive, release or assign any rights or claims thereunder;
- enter into, modify, amend or terminate any contract, or waive, release, assign or fail to exercise or pursue any material rights or claims thereunder, other than in the ordinary course of business, which if so entered into, modified, amended, terminated, waived, released, assigned, or not exercised or pursued would reasonably be expected to (i) adversely affect in any material respect any member of the GeneDx Group; (ii) impair in any material respect the ability of any of the GeneDx Parties or OPKO to perform its obligations under the Merger Agreement; or (iii) prevent or materially delay the consummation of the Mergers;
- make any loan, advance, capital contribution to, or investment in, any person other than business expense advances to employees of any member of the GeneDx Group in the ordinary course of business;
- enter into any contract to the extent consummation of the Acquisition or compliance with the provisions of the Merger Agreement would reasonably be expected to conflict with, or result in a violation or breach of, or default (with or without notice or lapse of time, or both) under, or give rise to a right of, or result in, termination, cancellation or acceleration of any obligation or to the loss of a benefit under, or result in the creation of any encumbrance (other than permitted encumbrances) in or upon any of the properties or other assets (including intellectual property) of the any member of the GeneDx Group under, or require the Company to license or transfer any GeneDx intellectual property or other material assets (other than permitted encumbrances) under such contract;
- effect certain transactions with respect to intellectual property;
- enter into any agreement with any related parties;
- grant any severance or termination pay (cash, equity or otherwise) to any GeneDx employee or contractor or adopt any new severance plan, or amend or modify or alter in any material respect any severance plan, agreement or arrangement existing on the date of the Merger Agreement;
- (i) make or change any material tax election, except to the extent required by applicable law or in furtherance of the Pre-Closing Restructuring, (ii) adopt or change any tax accounting method, (iii) agree or settle any material claim or assessment in respect of taxes, (iv) file any material amendment to any material tax return, (v) enter into any tax allocation agreement, tax sharing agreement, tax indemnity agreement or closing agreement relating to any tax, (vi) surrender any right to claim a material tax refund or extend or waive the limitation period applicable to any claim or assessment in respect of taxes, or (vii) take any other similar action relating to the filing of any tax return or the payment of any tax; in the case of each of the immediately preceding clauses (i) through (vii), if such action would have the effect of increasing the tax liability of acquirer or its affiliates for any period ending after the Closing Date or decreasing any tax attribute of HoldCo or GeneDx existing on the Closing Date;
- commence any material proceeding;
- except for proceedings with respect to which an insurer has the right to control the decision to settle, waive, release, assign, or compromise any claim, litigation, complaint, investigation or proceeding, waive, release, assign, settle, pay, discharge or satisfy any proceeding other than in the ordinary course of business;
- make any capital expenditures or commitments, capital additions or capital improvements in excess of such amounts specified in the agreed pre-closing budget;

- fail to keep or cause to be kept the material existing insurance policies (or substantial equivalents) of any member of the GeneDx Group as in force on the date of the Merger Agreement;
- employ or use any contractor or consultant that, to GeneDx's knowledge, employs any person that is: (A) debarred by the FDA, or excluded from participation in government programs (or subject to any similar sanction of any other applicable governmental authority); or (B) who is the subject of an FDA debarment investigation or proceeding (or similar proceeding of any other applicable governmental authority); or
- authorize, agree or enter into an agreement to do any of the foregoing.

Notwithstanding anything to the contrary in the Merger Agreement, the Company, OPKO and the GeneDx Parties acknowledge and agree that (x) nothing in the Merger Agreement shall give the Company, directly or indirectly, the right to control or direct GeneDx's operations for purposes of the HSR Act prior to the expiration or termination of any applicable waiting period pursuant to the HSR Act, (y) no consent of the Company shall be required with respect to any matter set forth in the Merger Agreement to the extent the requirement of such consent would violate any antitrust law, and (z) nothing in the Merger Agreement shall prevent or limit the Pre-Closing Restructuring or the transactions contemplated thereby.

HSR Act and Regulatory Approvals

On January 28, 2022, GeneDx and the Company filed the notifications required by the HSR Act in respect of the Acquisition. The 30-day HSR Act waiting period expired at 11:59 p.m. on February 28, 2022.

At any time before or after consummation of the Acquisition, notwithstanding expiration of the waiting period under the HSR Act, the applicable competition authorities could take such action under applicable antitrust laws as each deems necessary or desirable in the public interest, including seeking to enjoin the consummation of the Acquisition. Private parties may also seek to take legal action under the antitrust laws under certain circumstances. GeneDx and the Company agreed to furnish to each other as promptly as reasonably practicable all information required for any application or other filing to be made by the other pursuant to any applicable law relating to antitrust, and the Company has agreed to use reasonable best efforts to promptly take any and all steps necessary to avoid or eliminate impediments under any applicable antitrust law that may be asserted by any governmental authority or other person so as to enable the parties to close the Acquisition. However, the Company shall not be required to take any remedial action under any applicable antitrust laws which would otherwise have the effect of preventing or delaying the Closing, unless such remedial actions would not, individually or in the aggregate, reasonably be expected to be materially detrimental to the benefits to be derived by the Company and its affiliates as a result of the Acquisition and the other transactions contemplated by the Merger Agreement. Further, the Company and its affiliates will not be obligated to contest, administratively or in court, any litigated Proceeding under any applicable antitrust law seeking to enjoin the Acquisition and the other Transactions, or to impose any Remedial Actions (as such term is defined in the Merger Agreement) upon the Company, OPKO or GeneDx and their respective affiliates.

GeneDx and the Company have agreed to work together and promptly supply the other with any information which may be required and reasonable assistance as the other may request in order to effectuate any filings or applications pursuant to the Merger Agreement. Except where prohibited by applicable antitrust laws relating to the exchange of information, each of OPKO and the Company Parties (as defined in the Merger Agreement), on one hand, and the Company, on the other, shall use commercially reasonable efforts to (i) consult with the other party prior to taking a position with respect to any such filing, (ii) permit the other party to review and discuss in advance, and consider in good faith, the views of the other in connection with any analyses, appearances, presentations, memoranda, briefs, white papers, arguments, opinions and proposals before making or submitting any of the foregoing to any governmental authority in connection with any investigations or proceedings in connection with the Merger Agreement or the Acquisition (including under any antitrust or fair trade applicable Law), (iii) coordinate with the other party in preparing and exchanging such information and (iv) promptly provide the other party (and its counsel) with copies of all filings, presentations or submissions (and a summary of any oral presentations) made by such party with any governmental authority in connection with the Merger Agreement or the Acquisition (though sensitive negotiation and deal valuation materials may be redacted); provided that the final determination as to the

strategy for dealing with the FTC, the DOJ or any other applicable governmental authority shall be made by the Company.

Each of the Company and GeneDx has agreed not to participate in any meeting or material discussion with any governmental authorities with respect to any of the filings, applications, investigation, or other inquiry listed above without giving the other party prior notice of the meeting or discussion and, to the extent permitted by the relevant governmental authority, the opportunity to attend and participate in such meeting or discussion (which, at the request of either party, shall be limited to outside antitrust counsel only).

Each of the Company and GeneDx have agreed to pay 50% of all filing fees incurred in connection with the submission of any regulatory filing or notice required to be made or given in connection with the Acquisition, and each did pay 50% of the required HSR Act filing fee.

Proxy Solicitation

The Company has agreed to, as promptly as reasonably practicable following the date of the Merger Agreement (but in no event later than March 15, 2022), prepare (and OPKO and the GeneDx Parties have agreed to provide reasonable assistance in connection therewith), and file with the SEC, the proxy statement. The Company has also agreed to use its reasonable best efforts to ensure that the proxy statement complies in all material respects with the applicable provisions of the Exchange Act and to use its reasonable best efforts to cause the proxy statement to be mailed to the holders of Class A common stock as promptly as practicable following the date on which the Company files with the SEC the proxy statement in definitive form, following confirmation from the staff of the SEC (whether orally or in writing) that the comment process with respect to the proxy statement, if any, has concluded. The Company has also agreed to promptly (and in any event within one business day) notify OPKO upon the receipt of any comments from the SEC or any request from the SEC for amendments or supplements to the proxy statement, and, as promptly as practicable after receipt thereof, to provide OPKO with copies of all correspondences between it and its representatives, on the one hand, and the SEC, on the other hand, and all written comments with respect to the proxy statement received from the SEC and to advise OPKO of any oral comments with respect to the proxy statement received from the SEC. The Company has agreed to use its reasonable best efforts to respond as promptly as practicable to any comments received from the SEC with respect to the proxy statement. The Company has further agreed to provide OPKO a reasonable opportunity to review and comment on documents or responses (including the proposed final version of such document or response) to be submitted to the SEC. OPKO and the GeneDx Parties have, in turn, agreed to reasonably cooperate to prepare appropriate responses thereto (and will provide each other with copies of any such responses given to the SEC) and make such modifications to the proxy statement as shall be reasonably appropriate.

No Solicitation

Each of OPKO and the GeneDx Parties have agreed that neither it nor any of its officers and directors shall, and that it shall use its reasonable best efforts to cause its employees, equityholders, controlled affiliates, agents and representatives not to, directly or indirectly:

- solicit, initiate, encourage, facilitate, entertain, discuss or negotiate any offer or proposal for an Acquisition Proposal, or any of the foregoing which would be reasonably expected to lead to an Acquisition Proposal (as defined below);
- engage in discussions with any person with respect to any Acquisition Proposal, furnish to any Person any non-public information with respect to any Acquisition Proposal or take any other action relating to (or which would reasonably be expected to be used for the purpose of formulating an offer or proposal with respect to), or otherwise assist, cooperate with, facilitate or encourage any effort or attempt by any such Person with regard to, any Acquisition Proposal;
- approve, agree to, accept, endorse or recommend any Acquisition Proposal;
- enter into any letter of intent or similar document or any Contract, agreement or commitment contemplating or otherwise relating to any Acquisition Proposal; or

- submit any Acquisition Proposal to the vote of the stockholder of any GeneDx Party.

Each of OPKO, HoldCo and the Company, as applicable, has agreed to provide written notice to the Company of any offer or proposal (formal or informal) relating to, or that would reasonably be expected to lead to, an Acquisition Proposal or any request for nonpublic information or inquiry related to or which would reasonably be expected to lead to an Acquisition Proposal, and to keep the Company reasonably informed on a current basis in relation to any such proposal or modification thereof.

"*Acquisition Proposal*" means any proposal or offer from any Person relating to any direct or indirect acquisition or purchase of a material portion of the assets, net revenues or net income of the Company, or 50% or more of the aggregate equity interests of the Company, any tender offer or exchange offer that if consummated would result in any Person beneficially owning 50% or more of the aggregate equity interests of the Company, any merger, consolidation, business combination, recapitalization, liquidation, dissolution or similar transaction involving the acquisition of 50% or more of the aggregate equity interests or assets of the Company, in each case, other than the Transactions, any material joint venture or other strategic investment in or involving the Company, including any third party financing, investment in or recapitalization of the Company. For the elimination of doubt, the PIPE Investment is not an Acquisition Proposal.

Restrictive Covenants

For a period of four years from the Closing, OPKO has agreed not to, directly or indirectly, (a) solicit the employment or services (whether as an employee, consultant, independent contractor or otherwise) of any employee of the GeneDx Group as of Closing or any person who had been an employee of the GeneDx Group within the 12-month period immediately preceding the Closing, without the Company's prior written consent, or (b) hire in any capacity (whether as an employee, consultant, independent contractor or otherwise) any Key Employee, unless such person has been terminated by the Company or any of its affiliates subsequent to the Closing and who has not been employed or engaged by the GeneDx Group for a period of at least six months prior to the date of such hire, without the Company's prior written consent; provided that "solicit the employment or services" shall be deemed not to include generalized searches for employees through media advertisements of general circulation, employment search firms, open job fairs or otherwise.

For a period of four years following the Closing, OPKO has agreed not to, directly or indirectly, engage in the GeneDx business anywhere in the world.

Insurance; D&O Indemnification

Subject to the terms and conditions of the Merger Agreement and the applicable terms and limitations of any such insurance policy, OPKO has agreed to (i) seek recovery on behalf of the Company for certain damages related to pre-Closing occurrences that are covered under OPKO's occurrence-based third party liability insurance policies and (ii) delivery any proceeds recovered for such claims (calculated net of reasonable expenses incurred in procuring such recovery and any increase in premiums or retroactive premium adjustments or chargebacks paid by or on behalf of OPKO to the extent resulting from such claims, and taking into account the available coverage under each such available insurance policy) to the Company.

Each of the Company, OPKO and HoldCo agreed that all rights to indemnification, advancement of expenses and exculpation from liability for or in connection with acts or omissions occurring at any time prior to or on the Closing Date (including in connection with the Merger Agreement and the Transactions), that now exist in favor of any person who prior to or on the Closing Date is or was a current or former director, manager, officer or employee of any member of the GeneDx Group, or who at the request of OPKO, HoldCo or any of their respective affiliates served prior to or on the Closing Date as a director, officer, member, manager, employee, trustee or fiduciary of any other entity of any type, including as provided in the governing documents of any member of the GeneDx Group, will survive the Closing and will continue in full force and effect following the Closing Date. In furtherance (and not in limitation of) the foregoing, for the six year period following the Closing Date, the Company has agreed to cause the GeneDx Group to maintain in the governing documents of each applicable member of the GeneDx Group provisions with respect to indemnification, advancement of expenses and exculpation from liability that in each such respect are at least as favorable to each D&O indemnified person as those contained in such member's governing

documents as in effect on the date hereof, which provisions will not be amended, repealed or otherwise modified in any manner that would adversely affect the rights thereunder of any such D&O indemnified person.

Notwithstanding the foregoing, OPKO's directors and officers insurance policies, in each case as in effect as of the Closing Date, shall be the first and primary recourse for any indemnification to which any D&O indemnified person may be entitled under the foregoing. For the six-year period following the Closing Date, OPKO agrees to treat any such claim for indemnification against its directors and officers insurance policies as a Valid Pre-Closing Claim (as such term is defined in the Merger Agreement) in accordance with Section 5.1(a) of the Merger Agreement.

Other Covenants and Agreements

The Merger Agreement contains other covenants and agreements, including covenants related to:

- confidentiality restrictions and limitations on public statements pertaining to the Transactions;
- OPKO, GeneDx and the Company providing access, subject to certain specified restrictions and conditions, to the other party and its respective representatives reasonable access to GeneDx's and the Company's (as applicable) and its subsidiary's properties, records, systems, contracts and commitments;
- the delivery of certain notices and use of commercially reasonable efforts by OPKO and the applicable GeneDx Party to obtain all consents, waivers and approvals from all persons that are necessary for the execution and delivery of, and the performance of its obligations pursuant to, the Merger Agreement and the ancillary agreements contemplated thereunder; GeneDx using commercially reasonable efforts to enter into certain new contracts in accordance with the terms of the Merger Agreement, and in the event not entered into prior to the Closing, cooperating with the Company following Closing to (a) implement arrangements (including subleasing, sublicensing or subcontracting) (i) to provide the underlying rights and benefits of GeneDx to the Company, the Surviving Entity and their designated affiliates and (ii) for the Surviving Entity or the Company or their designated affiliate to assume all GeneDx obligations thereunder and (b) obtain any requisite consent, substitution, novation, or amendment required to transfer the portion of such seller contract attributable to the GeneDx business to the Company, the Surviving Entity, or their designated affiliate;
- agreement to promptly provide the other party with written notice of certain events and developments during the pre-closing period;
- delivery of monthly interim financial statements and audited consolidated financial statements of the GeneDx Group for the 12-month period ended December 31, 2021;
- filing of tax returns and payment of certain taxes following the Closing, the intended tax treatment of the Transactions, treatment of tax refunds received following the Closing, and handling of certain post-closing actions related to taxes;
- employment terms and benefits for continuing employees of the GeneDx Group following the Closing;
- negotiation, finalization and entry into a mutually agreed transition services agreement to address certain shared services and contracts following the Closing; and
- completion of the Pre-Closing Restructuring prior to the Closing.

Representations and Warranties

The Merger Agreement contains representations and warranties made by GeneDx to the Company relating to a number of matters, including but not limited to, the following:

- corporate organization and qualification;
- subsidiaries;

- due authorization;
- capitalization;
- title to and sufficiency of assets;
- compliance with environmental laws and regulations;
- absence of certain activities and changes;
- material contracts;
- non-contravention and restrictions on business;
- financial statements;
- undisclosed liabilities;
- taxes;
- compliance with law;
- permits;
- regulatory matters;
- litigation;
- employment matters;
- employee benefit plans;
- intellectual property;
- privacy, data and data security;
- transactions with certain persons;
- insurance;
- no brokers;
- books and records;
- bank accounts;
- customers, suppliers and third-party payors;
- inventory; and
- disclaimer of other warranties.

Certain of these representations and warranties are qualified as to "*materiality*" or "*material adverse effect*". For purposes of the Merger Agreement, a "*material adverse effect*" with respect to GeneDx means any event, change, condition, circumstance, effect, development, occurrence or state of facts that, individually or in the aggregate with all other such effects, has, or would reasonably be expected to have, a material adverse effect on (a) the condition (financial or otherwise), business, results of operations or assets of the GeneDx Group (taken as a whole) or (b) the ability of OPKO or the GeneDx Parties to perform their respective obligations under the Merger Agreement; provided that no effect attributable to any of the following shall be taken into account in determining the existence of a "material adverse effect" solely for purposes of clause (a) above: (i) conditions affecting the industry, financial

markets or securities markets in, or the economy as a whole of, the United States, (ii) changes in law or accounting standards (or, in each case, any interpretation thereof) after the Closing Date, (iii) earthquakes, hostilities, acts of war, sabotage or terrorism or military actions, epidemic, public health event or pandemic (including COVID-19 and any worsening thereof (including any COVID-19 response measures)), (iv) any actions required under the Merger Agreement or otherwise negotiated separately to obtain any approval or authorization under applicable antitrust or competition laws for the consummation of the Transactions, (v) the announcement or pendency of the Merger Agreement and the consummation of the Transactions (including the effects of such announcement and pendency on relationships with customers, suppliers, governmental authorities, employees or other third-party relationships), (vii) any actions taken (or omitted to be taken) by or at the written request of the Company or as required by the Merger Agreement, or (viii) any failure, in and of itself, of the GeneDx Group to meet any internal or published projections, forecasts or revenue or earnings predictions for any period (it being understood that the underlying causes of the facts or occurrences giving rise to such failure may be taken into account in determining whether a "material adverse effect" has occurred), except, in the case of the forgoing clauses (i), (ii) and (iii), to the extent such conditions, changes or events disproportionately affect the GeneDx Group relative to similarly situated industry participants (in which case the incremental disproportionate impact or impacts may be taken into account in determining whether there has been a "material adverse effect"). The Merger Agreement also contains representations and warranties made by the Company to GeneDx relating to a number of matters, including the following:

- corporate organization and qualification;
- authorization;
- capitalization;
- non-contravention;
- compliance with laws;
- securities law matters;
- no proceedings;
- no brokers;
- no insolvency proceedings;
- not an investment company;
- anti-corruption laws;
- taxes;
- compliance with environmental laws and regulations;
- litigation;
- merger sub activities; and
- disclaimer of other warranties.

This summary and the copy of the Merger Agreement attached to this proxy statement as Annex A are included solely to provide investors with information regarding the terms of the Merger Agreement. They are not intended to provide factual information about the parties or any of their respective subsidiaries or affiliates. The Merger Agreement contains representations and warranties by the Company and GeneDx, which were made only for purposes of that agreement and as of specific dates. The representations, warranties and covenants in the Merger Agreement were made solely for the benefit of the parties to the Merger Agreement, may be subject to limitations agreed upon by the contracting parties, including being qualified by confidential disclosures made for the purposes of allocating contractual risk between the parties to the Merger Agreement instead of establishing these matters as

facts, and may be subject to standards of materiality applicable to the contracting parties that differ from those generally applicable to investors. Investors are not third-party beneficiaries under the Merger Agreement, and in reviewing the representations, warranties and covenants contained in the Merger Agreement or any descriptions thereof in this summary, it is important to bear in mind that such representations, warranties and covenants or any descriptions thereof were not intended by the parties to the Merger Agreement to be characterizations of the actual state of facts or condition of the Company, GeneDx or any of their respective subsidiaries or affiliates. Moreover, information concerning the subject matter of the representations, warranties and covenants may change after the date of the Merger Agreement, which subsequent information may or may not be fully reflected in public disclosures.

Escrow Fund and Indemnification

Escrow Fund

At the Closing, the Company will (a) withhold from the Merger Consideration otherwise payable or issuable, as the case may be, $13,470,000 in cash and 8,314,815 shares of its Class A common stock (collectively, the "*Escrow Amount*") and (b) deposit the Escrow Amount into a third-party escrow to be held for a period of 12 months following the Closing Date as a fund for OPKO's indemnification obligations, as further described below. The Escrow Amount will be held and released subject to and in accordance with the terms and conditions set forth in the Merger Agreement and the Escrow Agreement.

Survival; Claims Period

The representations and warranties contained in the Merger Agreement that are not Fundamental Representations will survive the Closing until the date that is 12 months following the Closing Date and the Fundamental Representations shall survive until the expiration of the applicable statute of limitations. All of the covenants and other agreements of OPKO, the Company Parties, the Company and the Merger Subs in the Merger Agreement to be performed at or prior to the Closing shall survive until the date that is 12 months following the Closing Date and all other covenants and other agreements of such parties contained in the Merger Agreement will survive until fully performed or fulfilled.

The period during which the Acquirer Indemnified Parties may assert a claim for indemnification in respect of any of the specified matters set forth in clauses (c) through (f) below shall survive indefinitely, except for the Repayment Obligations Indemnity, which period shall expire on the date that is two years following the Closing Date.

OPKO Indemnification Obligations

From and after the Closing, subject to the terms and conditions set forth in the Merger Agreement, OPKO has agreed to indemnify, defend and hold harmless the Company and certain of its affiliates and representatives (the "*Acquirer Indemnified Parties*") from and against any and all damages asserted against, suffered, sustained, accrued or incurred by such Acquirer Indemnified Party as a result of or relating to:

(a) the breach of, or any inaccuracy in, any representation or warranty of the GeneDx Parties or OPKO in the Merger Agreement or certain certificates delivered in connection with the Closing;

(b) any breach of or failure to perform any covenant or obligation of GeneDx or OPKO under this Agreement;

(c) any liabilities not related to the GeneDx business;

(d) any Indebtedness of the GeneDx Group or transaction expenses of the GeneDx Group to the extent not taken into account in the calculation of the Cash Consideration in accordance with the Merger Agreement;

(e) any Pre-Closing Taxes; or

(f) (i) certain repayment obligations, to the extent not taken into account in the calculation of the Cash Consideration (the "*Repayment Obligations Indemnity*") and (ii) the Pre-Closing Restructuring.

Company Indemnification Obligations

From and after the Closing, subject to the terms and conditions set forth in the Merger Agreement, the Company has agreed to indemnify, defend and hold harmless OPKO and its affiliates (excluding, after the Closing, the Surviving Entity and the other members of the GeneDx Group) representatives (the "*OPKO Indemnified Parties*" and together with the Acquirer Indemnified Parties, the "*Indemnified Parties*") from and against any and all damages asserted against, suffered, sustained, accrued or incurred by such OPKO Indemnified Party as a result of or relating to:

(a) the breach of, or any inaccuracy in, any representation or warranty of the Company or the Merger Subs in the Merger Agreement or certain certificates delivered in connection with the Closing; or

(b) any breach of or failure to perform any covenant or obligation of the Company or the Merger Subs under this Agreement.

Limitations on Liability

In the case of General Claims (as such term is defined in the Merger Agreement): (a) the Indemnifying Party shall not be liable for, and no Indemnified Party shall have a right to deliver a claim notice in respect of, any such individual General Claim or series of such related General Claims arising out of the same or related facts and circumstances where the Damages are less than $25,000 ("*De Minimis Claims*"), and no De Minimis Claims shall be included in the calculation used to determine whether the Deductible shall have been satisfied; and (b) the Indemnifying Party shall not be liable for any such General Claims (or series of related General Claims) unless and until the aggregate of all indemnifiable Damages that may be recovered from such Indemnifying Party for General Claims exceeds $5,565,000 (the "*Deductible*") and then such Indemnifying Party shall be liable only for those amount in excess of the Deductible; and (c) the maximum aggregate Liability of an Indemnifying Party with respect to General Claims shall not exceed an amount equal to the Escrow Amount.

Except in the case of (i) Fundamental Claims (as such term is defined in the Merger Agreement) involving Third Party Claims and (ii) fraud, no Indemnifying Party shall be liable under the Merger Agreement for an aggregate amount in excess of the actual amount of the Merger Consideration, exclusive of any Milestone Payments, paid to OPKO (it being agreed that, for purposes of calculating such amount, the shares of our Class A common stock received by OPKO shall be deemed to have a value equal to the Share Value); provided that, with respect to the Repayment Obligations Indemnity, OPKO's maximum liability shall not exceed an amount equal to $35,000,000.

In the case of (i) Fundamental Claims (other than the Repayment Obligations Indemnity, which shall be limited as set forth above) involving Third Party Claims or (ii) fraud, no Indemnifying Party shall be liable under the Merger Agreement for an aggregate amount in excess of the actual amount of the Total Merger Consideration, inclusive of any Milestone Payments, paid to OPKO.

Additional Agreements

The Merger Agreement contains additional terms governing the process by which an Indemnified Party may bring and assert a claim for indemnification, the process by which an Indemnifying Party may dispute a claim for indemnification, the order of recovery against an Indemnifying Party and the control of the defense and settlement of any third-party claims.

Conditions to the Acquisition

Conditions to Each Party's Obligations

The respective obligations of each Party to complete the Acquisition are subject to the satisfaction of the following conditions:

- the approval of the Stock Consideration Issuance Proposal and the Charter Amendment Proposal by the Company's shareholders;

- The approval by OPKO, as sole stockholder of Holdco, of the Merger Agreement and the transactions contemplated thereby;
- All filings with and approvals of any Governmental Authority required to be made or obtained prior to the Closing in connection with the Acquisition shall have been made or obtained and in full force and effect, and the applicable waiting period(s) under the HSR Act and, if required, any other applicable antitrust law in respect of the transactions contemplated by the Merger Agreement must have expired or been terminated; and
- there must be no order issued by any court of competent jurisdiction preventing the consummation of the Acquisition in effect, and no action shall have been taken by any Governmental Authority seeking the foregoing, and no law or order shall have been enacted or entered that makes the consummation of the Acquisition illegal.

Conditions to the Company's Obligations

The obligation of the Company to complete the Acquisition is also subject to the satisfaction, or waiver by the Company, of the following conditions:

- the accuracy of the representations and warranties of the GeneDx Parties and OPKO as of the date of the Merger Agreement and as of the Closing, subject to certain materiality thresholds;
- each of OPKO and the GeneDx Parties must have performed or complied with all agreements and covenants required by the Merger Agreement to be performed or complied with by it at or prior to the Closing Date, in each case in all material respects;
- no Order issued by any court of competent jurisdiction or other legal or regulatory restraint or prohibition materially limiting or restricting the Company's ownership, conduct or operation of GeneDx's business following the Closing shall be in effect, and no proceeding seeking any of the foregoing shall be pending or threatened;
- no material adverse effect with respect to the GeneDx Group (taken as a whole) may have occurred since the date of the Merger Agreement that is continuing;
- HoldCo must have delivered the Required Financial Statements to the Company (subject to a grace period that may be available under applicable SEC rules);
- the GeneDx Parties and OPKO must have completed certain pre-closing restructuring transactions and received written confirmation from the IRS (or other evidence reasonably satisfactory to the Company) stating that GeneDx will retain its EIN following completion of the Transactions, as set out in the Merger Agreement;
- Katherine Stueland must have remained continuously employed on a full-time basis with GeneDx through the Closing, Ms. Stueland's Key Employment Agreement must continue to be in full force and effect and no action shall have been taken by Ms. Stueland to repudiate or rescind such agreement and Ms. Stueland shall, as of the Closing, be ready, willing and able to perform the duties contemplated by the Key Employment Agreement following the Closing;
- a member of the GeneDx Group and the applicable Third Parties shall have entered into the Required Closing Contracts and delivered copies thereof to the Company; and
- GeneDx must have delivered, or caused to have been delivered, or must stand ready to deliver all of the certificates, instruments, contracts and other documents specified to be delivered by it hereunder, duly executed by the applicable signatory or signatories specified therein, if any.

Conditions to OPKO and GeneDx's Obligations

The obligation of OPKO and the GeneDx Parties to complete the Acquisition is also subject to the satisfaction, or waiver by OPKO, of the following conditions:

- the accuracy of the representations and warranties of the Company as of the date of the Merger Agreement and as of the Closing, subject to certain materiality thresholds;
- the Company must have performed or complied with all agreements and covenants required by the Merger Agreement to be performed or complied with by it on or prior to the Closing Date, in each case in all material respects;
- the Company must have delivered or must stand ready to deliver all of the certificates, instruments, contracts and other documents specified to be delivered by it hereunder, including copies of the documents to be delivered by the Company pursuant to the Merger Agreement, duly executed by the Company and Merger Subs, as applicable;
- the shares of Class A common stock to be issued in connection with the Acquisition must have been approved for listing on the Nasdaq; and
- no material adverse effect must have occurred since the date of the Merger Agreement and be continuing.

Termination

Mutual Termination Rights

The Merger Agreement may be terminated and the transactions abandoned:

- by mutual written consent of the Company and OPKO;
- if the Acquisition is not completed by August 14, 2022, which date may be extended, by either party's written notice, to October 14, 2022 if, as of August 14, 2022, any one of certain conditions have not been met (the "*termination date*"), provided that the right to terminate the Merger Agreement under this provision will not be available to any party whose breach of any covenant, agreement or obligation hereunder was the principal cause of, or directly resulted in, the failure of the Closing to occur on or before the termination date; or
- by either the Company or GeneDx if a governmental entity has issued an order preventing the consummation of the Merger and such order shall have become final and non-appealable.

OPKO Termination Rights

The Merger Agreement may be terminated and the transactions contemplated thereby abandoned:

- by OPKO, by written notice to the Company, if there shall have been an inaccuracy in any representation or warranty made by, or a breach of any covenant, agreement or obligation of, the Company or any of the Merger Subs in the Merger Agreement and such inaccuracy or breach shall not have been cured within 30 days after receipt by the Company of written notice from OPKO of such inaccuracy or breach and, if not cured within such period and at or prior to the Closing, such breach would result in the failure of certain of the conditions set forth in the Merger Agreement to be satisfied (provided that no such cure period shall be available or applicable to any such inaccuracy or breach that by its nature cannot be cured).

Company Termination Rights

The Merger Agreement may be terminated and the transactions contemplated thereby abandoned by the Company, by written notice to OPKO, if there shall have been an inaccuracy in any representation or warranty made by, or a breach of any covenant, agreement or obligation of, the GeneDx Parties or OPKO in the Merger Agreement and such inaccuracy or breach shall not have been cured within 30 days after receipt by OPKO of written notice

from the Company of such inaccuracy or breach and, if not cured within such period and at or prior to the Closing, such inaccuracy or breach would result in the failure of certain of the conditions set forth in the Merger Agreement to be satisfied (provided that no such cure period shall be available or applicable to any such breach that by its nature cannot be cured).

Effect of Termination

If the Merger Agreement is validly terminated, the agreement will become void without any liability on the part of any of the parties, except in the event of any intentional misrepresentation made by, or a willful breach of any covenant, agreement or obligation of, such party in the Merger Agreement.

Amendments

The Merger Agreement may be amended by the parties at any time by execution of an instrument in writing signed on behalf of each of OPKO and the Company.

Specific Performance

Each of the parties to the Merger Agreement agreed that each such party shall be entitled to enforce specifically the terms and provisions of the Merger Agreement, without the necessity of proving the inadequacy of money damages as a remedy and without bond or other security being required, this being in addition to any other remedy to which they are entitled at law or in equity.

Fees and Expenses

Except with respect to all filing and other fees in connection with any filing under the HSR Act, 50% of which will be borne by the Company and 50% of which will be borne by GeneDx, and certain other specified fees and expenses, all costs and expenses incurred in connection with the Merger Agreement will be paid by the party incurring such cost or expense.

Background of the Acquisition

The terms of the Acquisition are the result of negotiations among the representatives of Sema4 and GeneDx. The following is a brief description of the background of these negotiations and the resulting Acquisition.

Since the consummation of its business combination with CMLS in July 2021, Sema4 has endeavored to identify opportunities to expand its capabilities through acquisitions and, to that end, the Board established a standing transaction committee (the "*Transaction Committee*") composed of Joshua Ruch, Michael Pellini and Eli Casdin to supervise Sema4's consideration of various proposed acquisitions. Believing that the addition of precision oncology, clinical genomics and rare disease testing capabilities would significantly enhance Sema4's platform, Sema4 analyzed the precision oncology, clinical genomics and rare disease market segments through the course of 2021 with respect to various companies and technologies as potential acquisition candidates.

In March 2021, the Sema4 corporate development team began evaluating the rare disease market and identifying target companies that were attractive in that space. On March 16, 2021 and through a number of mutual business connections, an introduction was made to OPKO management team, along with their financial advisors, to explore potential opportunities of strategic alignment with their subsidiary, GeneDx.

On March 24, 2021, a call was arranged through OPKO's advisors between Phillip Frost, OPKO's Chairman and CEO, and Kareem Saad, Sema4's Chief Business Officer, to share high level executive overviews and discuss the potential of a business transaction. A mutual non-disclosure agreement was signed by both parties on April 5, 2021 to facilitate each party's respective due diligence, and a confidential information memorandum that detailed the overall business summary, a product breakdown and a financial overview was shared with the Sema4 corporate development team.

OPKO spent the following six months upgrading GeneDx's executive leadership team, refocusing their business strategy and considering several strategic paths including the potential to spin the company out as a standalone entity.

In early September 2021, during a discussion between Casdin Capital and Katherine Stueland, GeneDx's President and CEO, regarding a potential private equity investment by Casdin Capital in GeneDx, Eli Casdin suggested that a meeting among Sema4 and GeneDx could be advantageous for both parties. During a subsequent call among Ms. Stueland, Mr. Casdin and Steven Rubin, it was agreed that Mr. Casdin would facilitate a broader introduction of Sema4 to OPKO.

On September 16, 2021, Ms. Stueland and representatives from GeneDx held a laboratory tour and meeting with members from Casdin Capital, including Eli Casdin, Shaun Rodriquez, and Ryan Blicker, at GeneDx's facilities in Gaithersburg, MD.

On September 21, 2021, Eric Schadt, Sema4's Founder and CEO, met in person with Ms. Stueland to continue discussions around business synergies and the potential of combining both organizations. Both agreed to convene a follow-up meeting between members of both leadership teams to dive deeper into the respective businesses to determine if there was a viable path forward.

On October 1, 2021, Mr. Casdin met with Ms. Stueland, Dr. Frost and Mr. Rubin in Miami, FL and it was agreed that there were significant potential benefits and synergies from a combination of GeneDx and Sema4 and further discussion was warranted. It was agreed that next steps would include a tour of GeneDx's facilities in Gaithersburg followed by a tour of Sema4's facilities in Stamford, CT and New York, NY.

On October 5, 2021, members of the Sema4's management team, led by Mr. Schadt, met with members of GeneDx's management team, led by Ms. Stueland, at Sema4's corporate headquarters in Stamford, CT. Both companies shared more detailed information on their respective corporate strategies, product and solution portfolios, go-to-market plans and solution portfolios, long term growth plans and financial profiles. A mutual determination was made to pursue deeper exploratory diligence to assess the feasibility of a merger of both organizations and to enter into negotiations on business terms. JP Morgan Chase, financial advisors to OPKO ("*JP Morgan*"), and Goldman Sachs, financial advisors to Sema4, were brought into the conversation to help broker and facilitate a potential transaction.

On October 6, 2021, Sema4's Transaction Committee was fully briefed on conversations and approved a plan to enter into exploratory diligence with GeneDx to explore a potential acquisition and to proceed with the development of a term sheet that outlines the business terms for the transaction.

On October 12, 2021, Sema4 then commenced a due diligence investigation of GeneDx, with the assistance of its financial, accounting, tax and legal advisors. Over the next several weeks, Sema4, with assistance from Goldman Sachs, financial advisor to Sema4, and Fenwick & West LLP, outside legal counsel to Sema4 ("*Fenwick*"), assessed various preliminary diligence materials received from GeneDx and worked on developing potential transaction strategies and structures for a potential acquisition of GeneDx. Conversely, GeneDx along with a number of their advisors entered into a series of discussions with the Sema4 management team to assess technology, product, go-to-market and human resources aspects of the Sema4 business. During the due diligence period and throughout the course of negotiations with OPKO, the Transaction Committee met regularly with members of the Sema4 management team, Goldman Sachs and Fenwick to review progress on the proposed transaction, analyze the results of due diligence and provide input on proposed transaction terms.

On October 18, 2021, representatives of OPKO and GeneDx visited Sema4 headquarters in Stamford, CT and in New York, NY. Sema4 and GeneDx made presentations to each other's management teams.

On October 21, 2021, the Transaction Committee authorized the submission to OPKO of a non-binding indication of interest (the "*Non-Binding Indication*") for an acquisition of GeneDx by Sema4 for total consideration of up to $850 million in a taxable transaction, payable in the form of (i) an upfront cash payment of $150 million, (ii) upfront stock consideration with a value of $500 million in shares of Sema4's Class A common stock (valued based on the average of the daily VWAP of the Class A common stock over the 30 trading days prior to the date that

would be two days prior to the signing of a potential purchase agreement (a 30-day VWAP), referred to as the "*Sema4 Stock Price*") and (iii) post-closing potential milestone-based consideration of up to $200 million in cash, shares of Class A common stock (based on the Sema4 Stock Price) or a mix thereof (such allocation to be determined by Sema4 in its sole discretion) to be paid upon the achievement of certain revenue targets following the closing of the transaction. The Non-Binding Indication also provided that the stock portion of the consideration to be paid in the transaction, including the milestone payments, would be subject to a two-year lock-up period and that following the lock-up period, any resale of the stock consideration would be subject to certain resale limitations.

On October 22, 2021, the Board met to discuss the potential acquisition of GeneDx, including a range of possible terms for such acquisition and financing options related to the cash consideration expected to be paid in the acquisition. Representatives of Goldman Sachs provided the Board preliminary financial analysis of Sema4 and GeneDx. Representatives of Fenwick were also present at the meeting. Representatives of Sema4 management, Goldman Sachs and Fenwick then reviewed with the Board the proposed terms of a non-binding offer for the acquisition of GeneDx.

On October 23, 2021, Goldman Sachs conveyed initial feedback received from representatives of JP Morgan, regarding the Non-Binding Indication, which included a request for additional upfront consideration and a tax deferred transaction structure as well as rejection of a lock-up. Over the course of the following days, the Sema4 management team met regularly with Goldman Sachs and Fenwick to consider a response to the initial OPKO feedback on the Non-Binding Indication.

On October 25, 2021, representatives of Sema4, Goldman Sachs and Fenwick met with the Transaction Committee to discuss revisions to the Non-Binding Indication. The Transaction Committee authorized the submission of a revised Non-Binding Indication and, on October 26, 2021, a representative of Goldman Sachs delivered the revised Non-Binding Indication to JP Morgan on behalf of OPKO.

Over the following weeks, representatives of Goldman Sachs met with representatives of JP Morgan to discuss the terms of the revised Non-Binding Indication and JP Morgan, on behalf of OPKO, proposed modifications that would, among other things, increase the total consideration, provide for a tax deferred transaction and modify other terms of the Non-Binding Indication. Goldman Sachs, Sema4 and Fenwick met regularly during the course of the negotiations and reported to the Transaction Committee on a regular basis.

On November 4, 2021, the Transaction Committee authorized Goldman Sachs to convey to JP Morgan unwillingness to do a tax-deferred transaction but willingness to (A) increase total consideration from up to $875 million to up to $900 million by adding $25 million to the up front equity consideration and (B) shorten the proposed lockup period applicable to the Sema4 equity issued in the transaction.

In response to the revised terms proposed by Goldman Sachs, JP Morgan proposed on the same day an increase in total consideration of up to $925 million, with the additional $25.0 million being paid in cash or Class A common stock, or a mix thereof, at Sema4's option and a revision to the structure of the proposed milestone-based consideration.

The Transaction Committee met with representatives of Goldman Sachs, Fenwick and Sema4 on November 5, 2021 and November 8, 2021 to discuss revised terms for the transaction. On November 8, 2021, the Transaction Committee authorized Goldman Sachs to deliver to JP Morgan on behalf of OPKO a revised Non-Binding Indication providing for a taxable transaction with total consideration of up to $925 million, with the additional $25 million payable in the form of post-closing potential milestone-based consideration, and revised lock-up terms.

On November 11, 2021, OPKO delivered a revised Non-Binding Indication to Sema4, which revised the terms of the prior draft Non-Binding Indication to provide, among other things, for a tax deferred transaction structure and an increase in total consideration to up to $950 million, with the additional $25.0 million payable in the form of post-closing milestone-based consideration to the extent revenue targets are exceeded, and a proposal that OPKO would be entitled to nominate two directors to serve on the Board following the closing of the transaction.

On November 12, 2021, the Transaction Committee met to discuss the revised Non-Binding Indication received from OPKO. Representatives of Fenwick and Goldman Sachs were present at the meeting.

On November 13, Sema4 delivered a further revised Non-Binding Indication to GeneDx proposing, among other things, a taxable transaction, one year lock-up and resale limitations on Class A common stock issued in the transaction and the addition of one mutually agreed GeneDx designee to the Board following the closing of the transaction.

On November 15, 2021, Kareem Saad, Chief Business Officer of Sema4, spoke with Steve Rubin, Executive Vice President of OPKO to discuss the revised Non-Binding Indication and potential alternatives to work toward an agreement on outstanding points. Mr. Saad and Mr. Rubin agreed to meet later that week to suggest solutions and come to an agreement on terms.

On November 17, 2021, members of OPKO and GeneDx management met with members of Sema4 management at Sema4's headquarters to negotiate the terms of the Non-Binding Indication. Representatives of OPKO and GeneDx's outside legal counsel, Greenberg Traurig, LLP ("*Greenberg Traurig*"), and Fenwick, Goldman Sachs and certain members of Sema4 management attended via videoconference.

On November 18 and 19, 2021, Mr. Saad met with Mr. Rubin regarding a revised transaction proposal, including a reduction of $25 million in potential milestone payments in exchange for agreeing to structure the transaction as a tax-free reorganization, as well as certain other modifications.

On November 20, 2021, Sema4 delivered a further revised Non-Binding Indication to OPKO providing for, among other things, a tax-free reorganization transaction structure.

The parties negotiated the terms of the revised Non-Binding Indication over the next two days and, on November 21, 2021, with the approval of the Transaction Committee, the parties executed the Non-Binding Indication.

Following November 21, 2021, GeneDx and OPKO, Sema4 with assistance from its advisors, including Goldman Sachs, Fenwick and Deloitte LLP, continued to engage in diligence activities with respect to GeneDx and a potential combination of GeneDx with Sema4. In addition to reviewing information in the data room assembled by GeneDx, such diligence activities included multiple discussions and exchanges with GeneDx and its advisors, including Fenwick and Goldman Sachs, on various diligence matters and aspects of GeneDx including commercial, scientific, operations, finance, accounting, legal, intellectual property and human resources.

On November 24, 2021, representatives from Fenwick sent a draft Merger Agreement to representatives from Greenberg Traurig.

On December 2, 2021, representatives from Fenwick and Greenberg Traurig met by telephone conference to review the draft Merger Agreement.

On December 15, 2021, representatives from Greenberg Traurig sent a revised draft Merger Agreement to representatives from Fenwick. As part of its comments to the Merger Agreement, OPKO proposed that certain stockholders of Sema4 enter into support agreements in respect of the proposed transaction.

On December 17, 2021, Fenwick delivered a draft Shareholder Agreement to representatives from Greenberg Traurig, providing for certain voting, lock-up, registration rights and standstill provisions relating to the shares of Class A common stock to be issued to OPKO in connection with the closing of the transaction.

Between December 17, 2021 and December 24, 2021, due to changes in equity market conditions and Sema4's market valuation, representatives of Sema4 and OPKO negotiated revisions to the aggregate consideration proposed to be paid in the transaction to reflect such changes.

On December 24, 2021, Sema4 and OPKO reached agreement on revised economic terms for the acquisition of GeneDx by Sema4, providing for, among other things, (i) $150 million in cash consideration to be paid at the closing of the transaction, (ii) 80 million shares of Sema4 to be paid at the closing of the transaction, and (iii) up to $150 million in potential milestone-based consideration payable in cash and/or shares based on the achievement of certain revenue targets by GeneDx following the transaction, with any shares included in such milestone consideration valued on the basis of the Sema4 Stock Price.

On December 27, 2021, representatives from Sema4 met by telephonic conference with representatives from Fenwick and Goldman Sachs to discuss the revised terms of the transaction as well as issues presented in the revised draft Merger Agreement received from Greenberg Traurig on December 15, 2021 including, among other items, the possibility of seeking support agreements from certain Sema4 stockholders.

Over the course of the following weeks, the parties and their respective legal counsels negotiated the Merger Agreement and other definitive agreements governing the transaction and completed due diligence. The parties also prepared an investor presentation for meetings with certain targeted PIPE investors and, on January 5, 2022, Goldman Sachs began wall-crossing PIPE investors and GeneDx and Sema4's management team then began information sessions with the wall-crossed investors, which continued over the following weeks. Sema4 also began to negotiate the terms of employment of Ms. Stueland, Kevin Feeley, GeneDx's Chief Financial Officer, and Jennifer Brendel, GeneDx's Chief Commercial Officer.

On January 5, 2022, representatives from Fenwick delivered a draft Support Agreement in respect of the transaction to representatives of Greenberg Traurig and representatives of certain of the supporting stockholders. Following January 5, 2022, representatives of Fenwick, along with representatives of Greenberg Traurig and each of the supporting stockholders negotiated the terms of the Support Agreement.

On January 6 and January 7, 2022, Sema4 and representatives of Goldman Sachs and Fenwick held informal information sessions for the Board to review key transaction terms and progress on negotiations for the acquisition, as well as the proposed roles of Katherine Stueland, Kevin Feeley and Jennifer Brendel following closing.

In addition, on January 6, 2022, Ms. Stueland's personal counsel delivered an initial draft employment agreement for Ms. Stueland to Fenwick. On January 8, 2022, Fenwick delivered a revised draft employment agreement for Ms. Stueland to her personal counsel. Over the following days, the parties and their legal representatives negotiated the terms of such agreement in respect of Ms. Stueland's outstanding equity awards, her GeneDx signing bonus and her anticipated Sema4 equity awards. Concurrently, the parties and their legal representatives negotiated the terms of employment agreements for Mr. Feeley and Ms. Brendel. On January 11, 2022, Fenwick delivered proposed final employment agreements for Ms. Stueland, Mr. Feeley and Ms. Brendel to their personal counsel and representatives from Greenberg Traurig.

In addition, on January 11, 2022, the Board held a meeting during which representatives of Goldman Sachs and Fenwick reviewed with the Board the terms of the proposed acquisition of GeneDx, including a review by Fenwick of the terms of the proposed definitive agreements and the results of Sema4's due diligence review, and a review by Goldman Sachs of its financial analysis of GeneDx, Sema4 and the pro forma combination of Sema4 and GeneDx. Ms. Stueland attended a portion of the meeting to discuss and present her background and vision for GeneDx and the combined business with Sema4.

The Board met again on January 14, 2022, with representatives of Goldman Sachs and Fenwick present, to review the proposed final terms of the acquisition of GeneDx by Sema4. Mr. Saad and a representative of Fenwick reviewed with the Board the terms of the proposed final Merger Agreement and other definitive agreements. Mr. Saad and a representative of Goldman Sachs then reviewed with the Board the terms of the proposed PIPE Investment for the cash consideration payable in the transaction and additional operating capital for the combined company. Representatives of Goldman Sachs next reviewed and discussed with the Board Goldman Sachs' financial analysis of the aggregate consideration to be paid in the acquisition, and following such discussion, Goldman Sachs rendered its oral opinion to the Board, which it subsequently confirmed in writing, that, as of such date and based upon and subject to the various assumptions made, procedures followed, matters considered and qualifications and limitations set forth therein, the aggregate consideration to be paid in the acquisition of GeneDx was, as of the date of the opinion, fair, from a financial point of view, to Sema4. The Board unanimously voted in favor of the approval of the proposed Merger Agreement and the transactions contemplated thereby, including the merger of GeneDx with a subsidiary of Sema4 to result in GeneDx becoming a wholly-owned subsidiary of Sema4, as well as the proposed PIPE Investment.

Following the meeting of the Board, GeneDx and Sema4 executed the Merger Agreement and other definitive agreements related to the transaction, and Sema4 entered into the Subscription Agreements for the PIPE Investment

and the Support Agreements. Also on January 14, 2022, each of Ms. Stueland, Mr. Feeley and Ms. Brendel entered into employment agreements with Sema4, to become effective upon the closing of the acquisition.

On January 17, 2022, each of GeneDx and Sema4 issued a press release regarding the execution of the Merger Agreement.

Sema4 Board of Directors' Reasons for the Acquisition

On January 14, 2022, in reaching unanimous resolution that the terms and conditions of the Merger Agreement and the Acquisition are advisable, fair to and in the best interests of the Company and its stockholders, the Board considered and evaluated a number of factors, including, but not limited to, the factors discussed below. In light of the number and wide variety of factors considered in connection with its evaluation of the Acquisition, the Board did not consider it practicable to, and did not attempt to, quantify or otherwise assign relative weights to the specific factors that it considered in reaching its determination and supporting its decision. The Board viewed its decision as being based on all of the information available and the factors presented to and considered by it. In addition, individual directors may have given different weight to different factors. This explanation of the Company's reasons for the Acquisition and all other information presented in this section is forward-looking in nature and, therefore, should be read in light of the factors discussed under the section entitled "*Cautionary Note Regarding Forward-Looking Statements*."

Before reaching its decision on January 14, 2022, the Board of Directors considered the views of Sema4 Management regarding the opportunity represented by the proposed transaction and the report from Management and the Company's legal counsel on the results of their due diligence of GeneDx. The diligence investigation included:

1. Public research on the life sciences industry and its prospects and review of GeneDx's historical financial performance and forecasts;
2. Conference call meetings with GeneDx's management and representatives regarding operations, company products and services, intellectual property, major suppliers, partners and customers, and growth prospects, both organic and through possible acquisitions, among other customary due diligence matters;
3. Review of GeneDx's material business contracts and certain other legal and intellectual property due diligence; and
4. Financial and accounting due diligence.

The Board considered a number of factors pertaining to the Acquisition as generally supporting its decision to enter into the Merger Agreement and the Acquisition, including but not limited to, the above and following material factors:

- ***Leading Industry Position in Rare Diseases and Competitive Advantage of Data Asset***. The Board considered that GeneDx has an industry leading rare disorder franchise, based on strong customer relationships with major hospitals and health systems around the world calling on medical geneticists and selling into the pediatric and rare disease channels. Further, the Board considered GeneDx's approximately 300,000 clinical exomes and 2.1 million annotated phenotypes collected over the company's nine year history. The Board estimated GeneDx's clinical exome data asset to be the most extensive by any U.S. diagnostics company. Furthermore, the Board considered GeneDx's estimated 70% market share among clinicians ordering exomes as evidence of superior positioning in the market.
- ***Strong Revenue Growth Profile***. The Board considered that GeneDx had estimated 2021 revenue of $116 million, representing 22% growth over the prior year, and estimated 2021 test volume of 145,000, representing 29% over the prior year, as well as the anticipated growth reflected in the projections prepared by GeneDx management.
- ***Experienced Management, Commercial and Laboratory Operations Team With Deep Genetics Expertise***. The Board considered that GeneDx has an experienced management and engineering team,

comprising over 100 MDs and PhDs and approximately 70 professionals in sales, marketing, product and business development. Katherine Stueland, Chief Executive Officer, has more than two decades of experience in the healthcare sector where she has overseen commercial organizations and corporate brand transformations, and helped bring the first cancer immunotherapy to market.

- ***Relationships with Health Systems***. The Board considered that GeneDx has entrenched relationships with leading hospitals, based on its over 100 contracts with children's hospitals in the United States.

- ***Growth and Business Opportunities of the Acquisition***. The Board believed the Acquisition would create a market-leading, AI-driven genomic and clinical data platform with differentiated products across all phases of life, allowing Sema4 to generate increased data from increased testing, grow its patient base, increase its scale, and deliver more clinically actionable insights. Additionally, the Board believed that GeneDx would enable Sema4 to enhance its reach into health systems and biopharma companies. In particular, the Board considered the following opportunities presented by the Acquisition:

    - *Health Systems*. Opportunities for Sema4 to accelerate the uptake of GeneDx's clinical exome sequencing into Sema4's core channels, and for Sema4 to accelerate the adoption of its Oncology solutions through GeneDx's relationships.

    - *Data*. An opportunity for Sema4 to leverage GeneDx's exome database with Sema4's Centrellis platform to drive increased biopharma partnership opportunities.

    - *Scale*. An opportunity Sema4 to be the market leader in both Women's Health and rare disease diagnostics.

    - *Growth and Synergy*. An opportunity for Sema4 to increase its revenues and accelerate its path to profitability.

- ***Benefit of Combining Management and Board Members of both the Company and GeneDx***. The Board considered that GeneDx's management and key employees becoming management and key employees of the Company as part of the Acquisition would provide the necessary experience and knowledge of GeneDx's business and operations, and facilitate the post-Acquisition transition and integration. The Board also considered that the addition of a member of GeneDx's management and board of directors, and an affiliate of OPKO, to the Board as part of the Acquisition would provide Sema4 with additional board members experienced in the life sciences industry generally and with GeneDx's business in particular. For more information about our decision-making process, please see the section entitled "*The Acquisition —Sema4's Board of Directors' Reasons for the Acquisition*."

- ***Due Diligence.*** The Board considered the thoroughness of Sema4's due diligence examinations of GeneDx and discussions with GeneDx's management and financial and legal advisors.

- ***Receipt of Fairness Opinion from its Financial Advisor in connection with the Acquisition***. The Board considered that on January 14, 2022, at a meeting of the Board, Goldman Sachs & Co. LLC ("*Goldman Sachs*") rendered its oral opinion, subsequently confirmed in writing, that, as of January 14, 2022, and based upon and subject to the factors and assumptions set forth therein, the $150 million in cash, the 80 million shares of the Company's Class A common stock, and up to $150 million of contingent payments payable in cash and/or shares of Company's Class A common Stock, based upon achievement of 2022 and 2023 revenue milestones, to be paid to acquire all of the issued and outstanding shares of capital stock of GeneDx pursuant to the Merger Agreement, was fair from a financial point of view to the Company. The full text of the written opinion of Goldman Sachs, dated January 14, 2022, which sets forth assumptions made, procedures followed, matters considered and limitations on the review undertaken in connection with the opinion, is attached as Annex C to this proxy statement. The opinion of Goldman Sachs is more fully described in the section of this proxy statement entitled "*The Acquisition—Opinion of Sema4's Financial Advisor*."

- ***Other Alternatives***. The Board believed that the proposed Acquisition represents an excellent opportunity for Sema4 and its stockholders based upon its view of the growth prospects and risks associated with GeneDx and its business, and at the time it approved the transaction had not identified another target that it determined would represent a preferred transaction opportunity.

- ***Terms of the Merger Agreement***. The Board believed that the financial and other terms and conditions of the Merger Agreement, including the parties' representations, warranties and covenants, and the conditions to their respective obligations to consummate the Acquisition, are reasonable and were the product of arms' length negotiations between the Company and its advisors and OPKO and its advisors and compare favorably with those in similar acquisition transactions considering GeneDx's business, results of operations, financial condition and prospects.

- ***PIPE Equity Commitment***. A group of growth and life sciences investors, including Pfizer, have committed approximately $200 million in PIPE subscriptions. This was viewed as support from growth and life sciences investors for the opportunities represented by the Transactions, and provides committed capital to fund the Cash Consideration and transaction costs and to fuel the Company's growth.

- ***Stockholder Support***. The Board also considered that the holders of approximately 61% of the outstanding Class A common stock were willing to enter into the Support Agreements originally proposed by OPKO, committing such holders to vote to approve the Stock Consideration Proposal, the PIPE Investment Proposal, the Special Designee Director Election Proposal, the Charter Amendment Proposal and the Adjournment Proposal, which significantly reduces deal uncertainty.

The Board also considered a variety of uncertainties and risks and other potentially negative factors concerning the Acquisition, including, but not limited to, the following:

- ***Benefits Not Achieved***. The risk that the potential benefits of the Acquisition may not be fully achieved, or may not be achieved within the expected timeframe.

- ***Dependence on Key Personnel***. The fact that the business and growth of GeneDx is significantly dependent on its senior executives, including in particular its Chief Executive Officer.

- ***Stockholder Vote***. The risk that the Company's stockholders may fail to provide the votes necessary to effect the Acquisition.

- ***Closing Conditions***. The fact that completion of the Acquisition is conditioned on the satisfaction of certain closing conditions.

- ***Litigation***. The possibility of litigation challenging the Acquisition or that an adverse judgment granting permanent injunctive relief could indefinitely enjoin consummation of the Acquisition.

- ***Fees and Expenses***. The fees and expenses associated with completing the Acquisition.

- ***Other Risks***. Various other risks associated with the Acquisition, the business of the Company and the business of GeneDx described under the section entitled "*Risk Factors*."

In addition to considering the factors described above, the Board also considered that certain of the directors (including the members of the Transaction Committee) and the officers of the Company may have interests in the Acquisition (including in connection with the PIPE Investment) as individuals that are in addition to, and that may be different from, the interests of the Company's stockholders (see *"—The Acquisition—Interests of Certain Persons in the Transactions"*). The Company's independent directors reviewed and considered these interests during the negotiation of the Acquisition and in evaluating and approving, as members of the Company Board, the Merger Agreement and the transactions contemplated therein, including the Acquisition.

The Board concluded that the potential benefits that it expected the Company and its stockholders to achieve as a result of the Acquisition outweighed the potentially negative factors associated with the Acquisition. Accordingly,

the Board unanimously determined that the Merger Agreement and the Acquisition were advisable, fair to, and in the best interests of, the Company and its stockholders.

Certain Projected Financial Information

GeneDx Prospective Financial Information

In connection with the evaluation of the Acquisition, the Company's management reviewed certain unaudited prospective financial information for GeneDx for fiscal years 2021 through 2025 prepared by GeneDx management. Following the Company's diligence of GeneDx, the Company's management made certain adjustments to the unaudited prospective financial information prepared by GeneDx management. The adjustments made by the Company's management included a more conservative estimate on average selling prices (ASPs) for GeneDx's diagnostic products, extending the timing required to drive adoption of GeneDx's whole exome and genome sequencing solution into new markets, and lowering the productivity assumptions of GeneDx's planned salesforce expansion. The adjustments made by the Company's management were intended to reflect inherent uncertainties and risks in this type of unaudited prospective financial information. The Company's management also provided growth and margin guidance for extending the unaudited prospective financial information through 2040 for purposes of Goldman Sachs's financial analysis, as adjusted by the Company's management. The unaudited prospective financial information for GeneDx, reflecting adjustments made by the Company's management, is referred to in this proxy statement as the Adjusted GeneDx Projections. The Company is electing to provide the Adjusted GeneDx Projections in this section of the proxy statement to provide the Company's stockholders access to certain non-public unaudited prospective financial information about GeneDx that was provided to the Board in connection with its evaluation of the proposed transaction and to Goldman Sachs for its use and reliance in connection with its financial analyses and opinion as described in "*The Acquisition—Opinion of Sema4's Financial Advisor*."

The Adjusted GeneDx Projections were developed from historical financial statements and reflect numerous assumptions and estimates that GeneDx's and the Company's management made in good faith at the time the Adjusted GeneDx Projections were prepared, including, without limitation, as to industry performance, general business, economic, regulatory, market and financial conditions and other future events. In particular, the Adjusted GeneDx Projections reflect the adjustments made by the Company's management discussed above. These assumptions and estimates are inherently uncertain, may be beyond the control of GeneDx or any other person, were made as of the date the Adjusted GeneDx Projections was prepared, and may not be reflective of actual results, either since the date such information was prepared, now or in the future, in light of changed circumstances, economic conditions, or other developments.

Adjusted GeneDx Projections

	For the Forecast Year Ended December 31,				
(in millions, except percentages)	**2021E**	**2022E**	**2023E**	**2024E**	**2025E**
			(unaudited)		
Revenue	$ 116	$ 130	$ 174	$ 253	$ 337
Adjusted Gross Profit[(1)]	23	42	69	220	151
Adjusted Gross Margin (%)[(2)]	20	32	40	43	45
EBITDA[(3)]	(22)	(64)	(49)	4	40
Adjusted Free Cash Flow[(4)]	(28)	(80)	(66)	(28)	17

(1) Non-GAAP financial measure calculated as revenue less cost of services excluding certain one-time non-recurring items, including a one-time tax refund in 2021, and stock-based compensation expense in 2022–2025. The most directly comparable GAAP measure to Adjusted Gross Profit is gross profit. GeneDx's and the Company's management did not provide a reconciliation of the projected Adjusted Gross Profit to projected gross profit estimates because it was not possible to estimate, without unreasonable efforts, the impact of stock-based compensation expense on projected gross profit, which could be material.

(2) Non-GAAP financial measure calculated as adjusted gross profit divided by revenue. The most directly comparable GAAP measure to Adjusted Gross Margin is gross margin. GeneDx's and the Company's management did not provide a reconciliation of the projected Adjusted Gross Margin to projected gross margin estimates because it was not possible to estimate, without unreasonable efforts, the impact of stock-based compensation expense on projected gross margin, which could be material.

(3) Non-GAAP financial measure calculated as net loss adjusted for interest expense, depreciation and amortization and stock-based compensation expense. The most directly comparable GAAP measure to EBITDA is net loss. GeneDx's and the Company's management did not provide a reconciliation of the projected EBITDA to projected net loss estimates because it was not possible to estimate, without unreasonable efforts, the impact of interest expense, depreciation and amortization and stock-based compensation expense on projected net loss, which could be material.

(4) Non-GAAP financial measure calculated as net loss plus depreciation and amortization, less capital expenditures, less stock-based compensation expense, and less (plus) changes in net working capital. The most directly comparable GAAP measure to Adjusted Free Cash Flow is net loss. GeneDx's and the Company's management did not provide a reconciliation of the projected Adjusted Free Cash Flow to projected net loss estimates because it was not possible to estimate, without unreasonable efforts, the impact of depreciation and amortization, capital expenditures, stock-based compensation expense and changes in net working capital on projected net loss, which could be material.

Company Prospective Financial Information

The Company does not generally publish its business plan and strategy or make external disclosure of its anticipated financial position or results of operations, other than providing, from time to time, estimated ranges of certain expected financial results and operational metrics for the current year in its regular earnings press releases. The Company does not as a matter of course publish detailed or long-term public forecasts or projections as to its future financial performance due to the unpredictability of the underlying assumptions and estimates and uncertainty inherent in the Company's business.

In connection with the evaluation of the Acquisition, the Company's management directed the preparation of, and approved, near, medium, and long term projections for fiscal years 2021 through 2025 which are referred to collectively in this proxy statement as the Company Projections. The Company Projections reflected the Company's management's estimates as to the Company's future performance and were prepared on a stand-alone basis assuming the Company would continue as an independent company without giving effect to the Acquisition. The Company is electing to provide the Company Projections in this section of the proxy statement to provide the Company's stockholders access to certain non-public unaudited prospective financial information about the Company that was provided to the Board in connection with its evaluation of the proposed transaction and to Goldman Sachs for its use and reliance in connection with its financial analyses and opinion as described in "*The Acquisition —Opinion of Sema4's Financial Advisor*."

The Company Projections were developed from historical financial statements and reflect numerous assumptions and estimates that the Company's management made in good faith at the time the Company Projections were prepared, including, without limitation, as to industry performance, general business, economic, regulatory, market and financial conditions and other future events. In particular, the Company Projections assume: continued volume growth of the Company's Women's Health and Oncology diagnostic testing solutions; improvement in ASPs for the Company's Oncology diagnostic testing solutions through molecular diagnostic services ("*MolDx*") reimbursement initiatives; and that growth in the Company's Other Revenue will outpace the Company's Diagnostic Revenue growth, primarily driven by continued uptake of the Company's offerings by the biopharmaceutical industry.

These assumptions and estimates are inherently uncertain, may be beyond the control of the Company or any other person, were made as of the date the Company Projections were prepared, and may not be reflective of actual results, either since the date such information was prepared, now or in the future, in light of changed circumstances, economic conditions, or other developments.

Company Projections

(in millions, except percentages)	As of and For the Forecast Year Ended December 31, 2021E	2022E	2023E	2024E	2025E
			(unaudited)		
Revenue	$ 205	$ 220	$ 290	$ 361	$ 452
Adjusted Gross Profit[(1)]	(12)	11	64	144	238
Adjusted Gross Margin (%)[(2)]	6	5	22	40	53
Adjusted EBITDA[(3)]	(189)	(213)	(172)	(103)	(15)
Adjusted Free Cash Flow[(4)]	(198)	(214)	(175)	(123)	(37)
Year End Cash	400	186	10	(112)	(149)

(1) Non-GAAP financial measure calculated as revenue less cost of services, excluding stock-based compensation expense, and COVID-19 costs.The most directly comparable GAAP measure to Adjusted Gross Profit is gross profit. The Company's management did not provide a reconciliation of the projected Adjusted Gross Profit to projected gross profit estimates because it was not possible to estimate, without unreasonable efforts, the impact of stock-based compensation expense on projected gross profit, which could be material.

(2) Non-GAAP financial measure calculated as adjusted gross profit divided by revenue. The most directly comparable GAAP measure to Adjusted Gross Margin is gross margin. The Company's management did not provide a reconciliation of the projected Adjusted Gross Margin to projected gross margin estimates because it was not possible to estimate, without unreasonable efforts, the impact of stock-based compensation expense on projected gross margin, which could be material.

(3) Non-GAAP financial measure calculated as net loss adjusted for interest expense, net, depreciation and amortization, stock-based compensation expenses, transaction costs associated with the Company's business combination, other income (expense), net, change in fair market value of warrant and earn-out contingent liabilities and COVID-19 costs. The most directly comparable GAAP measure to Adjusted EBITDA is net loss. The Company's management did not provide a reconciliation of the projected Adjusted EBITDA to projected net loss estimates because it was not possible to estimate, without unreasonable efforts, the impact of interest expense, depreciation and amortization, stock-based compensation expense, other income (expense) and change in fair market value of warrant and earn-out contingent liabilities on projected net loss, which could be material.

(4) Non-GAAP financial measure calculated as net loss plus depreciation and amortization, less capital expenditures, less stock-based compensation, and less (plus) change in net working capital. The most directly comparable GAAP measure to Adjusted Free Cash Flow is net loss. The Company's management did not provide a reconciliation of the projected Adjusted Free Cash Flow to projected net loss estimates because it was not possible to estimate, without unreasonable efforts, the impact of depreciation and amortization, capital expenditures, stock-based compensation expense and changes in net working capital on projected net loss, which could be material.

Pro Forma Prospective Financial Information

In connection with the evaluation of the Acquisition, the Company's management directed the preparation of, and approved, pro forma projections for the combined company after giving effect to the Acquisition, which are referred to in this proxy statement as the "*Pro Forma Projections*." The Pro Forma Projections were based on a summation of the Adjusted GeneDx Projections and the Company Projections, as adjusted to reflect the Company's management's expectations as to certain future synergies. The Company is electing to provide the Pro Forma Projections in this section of the proxy statement to provide the Company's stockholders access to certain non-public unaudited prospective financial information about the combined company that was provided to the Board in connection with its evaluation of the proposed transaction and to Goldman Sachs for its use and reliance in connection with its financial analyses and opinion as described in "*The Acquisition —Opinion of Sema4's Financial Advisor*."

The Pro Forma Projections reflect numerous assumptions and estimates that the Company's management made in good faith at the time such unaudited prospective financial information was prepared, including, without limitation, as to industry performance, general business, economic, regulatory, market and financial conditions and other future events. In particular, the Pro Forma Projections (i) assume approximately $11 million, $22 million and $28 million of revenue synergies in 2023, 2024 and 2025, respectively, (ii) assume approximately $15 million, $30 million, $29 million and $25 million of cost synergies in 2022, 2023, 2024 and 2025, respectively, and (iii) exclude one-time transaction expenses and integration expenses. These assumptions and estimates are inherently uncertain, may be beyond the control of the combined company or any other person, were made as of the date the Pro Forma Projections were prepared, and may not be reflective of actual results, either since the date such information was prepared, now or in the future, in light of changed circumstances, economic conditions, or other developments.

Pro Forma Projections

(in millions, except percentages)	For the Forecast Year Ended December 31,				
	2021E	2022E	2023E	2024E	2025E
	(unaudited)				
Revenue	$ 321	$ 350	$ 475	$ 636	$ 817
Adjusted Gross Profit[(1)]	11	58	155	275	408
Adjusted Gross Margin (%)[(2)]	3	16	33	43	50
Adjusted EBITDA[(3)]	(211)	(262)	(186)	(61)	(63)
Adjusted Free Cash Flow[(4)]	(226)	(271)	(199)	(99)	(33)

(1) Non-GAAP financial measure calculated as revenue less cost of services, excluding stock-based compensation expense, COVID-19 costs and a one-time tax refund. The most directly comparable GAAP measure to Adjusted Gross Profit is gross profit. The Company's management did not provide a reconciliation of the pro forma projected Adjusted Gross Profit to pro forma projected gross profit estimates because it was not possible to estimate, without unreasonable efforts, the impact of stock-based compensation expense on pro forma projected gross profit, which could be material.

(2) Non-GAAP financial measure calculated as adjusted gross profit divided by revenue. The most directly comparable GAAP measure to Adjusted Gross Margin is gross margin. The Company's management did not provide a reconciliation of the pro forma projected Adjusted Gross Margin to pro forma projected gross margin estimates because it was not possible to estimate, without unreasonable efforts, the impact of stock-based compensation expense on pro forma projected gross margin, which could be material.

(3) Non-GAAP financial measure calculated as net loss adjusted for interest expense, net, depreciation and amortization, stock-based compensation expenses, transaction costs associated with Company's business combination, other income (expense), net, change in fair market value of warrant and earn-out contingent liabilities and COVID-19 costs. In addition, one-time transaction expenses and integration expenses related to the Acquisition are excluded. The most directly comparable GAAP measure to Adjusted EBITDA is net loss. The Company's management did not provide a reconciliation of the pro forma projected Adjusted EBITDA to pro forma projected net loss estimates because it was not possible to estimate, without unreasonable efforts, the impact of interest expense, depreciation and amortization, stock-based compensation expense, other income (expense) and change in fair market value of warrant and earn-out contingent liabilities on pro forma projected net loss, which could be material.

(4) Non-GAAP financial measure calculated as net loss plus depreciation and amortization, less capital expenditures, less stock-based compensation expense, and less (plus) change in net working capital. In addition, one-time transaction expenses and integration expenses related to the Acquisition are excluded. The most directly comparable GAAP measure to Adjusted Free Cash Flow is net loss. The Company's management did not provide a reconciliation of the pro forma projected Adjusted Free Cash Flow to pro forma projected net loss estimates because it was not possible to estimate, without unreasonable efforts, the impact of depreciation and amortization, capital expenditures, stock-based compensation expense and changes in net working capital on pro forma projected net loss, which could be material.

Important Information About Unaudited Prospective Financial Information

The unaudited prospective financial information presented above was not prepared with a view toward public disclosure and the inclusion of the unaudited prospective financial information above should not be regarded as an indication that the Company, GeneDx, their respective affiliates, representatives or advisors or any other recipient of this information considered, or now considers, such information to be material or to be predictive of actual future results. None of the Company, GeneDx, or their respective affiliates, representatives or advisors assume any responsibility to stockholders of the Company if GeneDx's, the Company's or the combined company's actual financial performance differs from the information presented above.

The unaudited prospective financial information summarized above was not prepared for purposes of public disclosure, nor was it prepared on a basis designed to comply with published guidelines of the SEC or the guidelines established by the American Institute of Certified Public Accountants for preparation and presentation of projections. Neither the Company's nor GeneDx's independent registered public accounting firms, Ernst & Young LLP and Ernst & Young LLP, respectively, nor any other independent accountants, compiled, examined or performed any procedures with respect to the prospective financial information summarized above, and has not expressed any opinion or any other form of assurance on this information or its achievability, and assume no responsibility for, and disclaims any association with, the unaudited prospective financial information. The reports of the independent registered public accounting firms included in this proxy statement relate to historical financial statements. They do not extend to any prospective financial information and should not be seen to do so.

The unaudited prospective financial information constitutes forward-looking information. Although presented with numerical specificity, the unaudited prospective financial information was prepared using variables, estimates,

and assumptions that are inherently uncertain and may be beyond the control of GeneDx, the Company or the combined company, and which may not be realized. The unaudited prospective financial information is subject to many risks and uncertainties. Important factors that may affect actual results and cause actual results to differ materially from the unaudited prospective financial information include risks and uncertainties relating to the Company's and GeneDx's businesses, industry performance, the regulatory environment, general business and economic conditions, market and financial conditions and various risks and other factors described in "*Risk Factors*" and "*Cautionary Note Regarding Forward-Looking Statements*."

The unaudited prospective financial information also reflects assumptions that are subject to change and are susceptible to multiple interpretations and to conditions, transactions or events that may occur and were not anticipated at the time the unaudited prospective financial information was prepared. In addition, the unaudited prospective financial information does not take into account any circumstances, transactions or events occurring after the date the unaudited prospective financial information was prepared. Accordingly, actual results will likely differ, and may differ materially, from those contained in the unaudited prospective financial information. Neither the Company nor GeneDx can assure you that the financial results in the unaudited prospective financial information will be realized or that future financial results of GeneDx, the Company or the combined company will not materially vary from those in the unaudited prospective financial information.

No one has made or makes any representation to any stockholder of the Company or anyone else regarding the achievability of the unaudited prospective financial information set forth above. You are cautioned not to rely on the unaudited prospective financial information.

The unaudited prospective financial information included above covers multiple years, and this information by its nature becomes subject to greater uncertainty with each successive year. The unaudited prospective financial information should be evaluated, if at all, in conjunction with the Company's and GeneDx's historical financial statements included in this proxy statement and other information contained in the Company's public filings with the SEC.

As described in more detail in the footnotes to the tables set forth above, given the forward-looking nature of the unaudited prospective financial information, specific quantifications of the amounts that would be required to reconcile it to GAAP measures are not available. The Company and GeneDx believe that there is a high degree of volatility with respect to certain GAAP measures and certain adjustments made to arrive at the relevant non-GAAP measures, which preclude the Company and GeneDx from providing accurate forecasted non-GAAP to GAAP reconciliations.

The inclusion of the unaudited prospective financial information in this proxy statement should not be regarded as an indication that the Company, GeneDx or any of their respective affiliates, advisors or representatives considered the unaudited prospective financial information to be predictive of actual future events, and the unaudited prospective financial information should not be relied on as such. None of the Company, GeneDx or any of their respective affiliates, advisors, officers, employees, directors or representatives can give you any assurance that actual results will not differ from the unaudited prospective financial information, and none of those persons undertakes any obligation to update or otherwise revise or reconcile the unaudited prospective financial information to reflect circumstances existing after the date such information was prepared or to reflect the occurrence of future events even in the event that any or all of the assumptions underlying such unaudited prospective financial information are shown to be in error. The Company does not intend to publicly update or make any other revision to the unaudited prospective financial information. None of the Company, GeneDx or any of their respective affiliates, advisors, officers, employees, directors or representatives makes any representation to any stockholder of the Company or any other person regarding actual performance compared to the unaudited prospective financial information or that the results reflected therein will be achieved. For the reasons described above, readers of this proxy statement are cautioned not to place undue, if any, reliance on the unaudited prospective financial information.

Interests of Certain Persons in the Transactions

Our directors and executive officers have no substantial interests, directly or indirectly, in the matters set forth in the Acquisition (A) except to the extent of: (i) their ownership of shares of our Class A common stock (or rights to acquire shares), and (ii) that each officer and director are expected to be employed by and will continue to serve on Sema4's Board following the Acquisition (assuming, in the case of Mr. Casdin, Mr. Ruch and Mr. Pellini, that each are re-elected pursuant to Proposal No. 5), for which they each receive cash and equity compensation, and (B) in connection with the PIPE Investment.

In connection with the Acquisition, the Company has entered into the Subscription Agreements with the PIPE Investors. The PIPE Investors include certain existing equity holders of the Company, some of whom are affiliated with certain directors of the Company. In particular, these PIPE Investors include: Casdin Partners Master Fund, L.P, which has subscribed for 11,437,500 shares of Class A common stock and is affiliated with Mr. Casdin; entities affiliated with Rho Partners, which have subscribed for an aggregate of 2,124,000 shares of Class A common stock and are affiliated with Mr. Ruch; and Section 32 Fund, L.P., which has subscribed for 1,250,000 shares of Class A common stock and is affiliated with Mr. Pellini. Each of Messrs. Casdin, Ruch and Pellini are members our the Transaction Committee, which supervised Sema4's consideration of the Acquisition. In addition, each of Casdin Partners Master Fund, L.P and Section 32 Fund 2, L.P. have entered into Support Agreements with Sema4. For more information, see "*Certain Relationships and Related Party Transactions*".

Subscription Agreements and PIPE Investment

On January 14, 2022, concurrently with the execution of the Merger Agreement, Sema4 entered into the Subscription Agreement with the PIPE Investors. The PIPE Investors include certain existing equity holders of Sema4, some of whom own more than 5% of the outstanding shares of Class A common stock and some of whom are affiliated with Sema4's directors. Pursuant to, and on the terms and subject to the conditions of, the Subscription Agreements, Sema4 agreed to issue and sell to the PIPE Investors, in private placements to close substantially concurrently with the Closing, an aggregate of 50 million shares of Class A common stock at $4.00 per share, for an aggregate gross purchase price of $200 million, before fees and expenses. The Subscription Agreements provide for certain customary registration rights for the PIPE Investors. The Subscription Agreements will terminate with no further force and effect upon the earliest to occur of: (a) such date and time as the Merger Agreement is terminated in accordance with its terms; (b) upon the mutual written agreement of the parties to such Subscription Agreement; (c) if any of the conditions to closing of the PIPE Investment set forth in Section 2 of the Subscription Agreement are not satisfied (or waived, to the extent waivable) on or prior to the earlier of the Closing Date or October 14, 2022 (the "*Outside Date*"), or become incapable of being satisfied on or prior to the earlier of the Closing Date or the Outside Date, and, as a result thereof, the transactions contemplated by the Subscription Agreements are not consummated at the closing of the PIPE Investment, and (d) the Outside Date. Each Subscriber may, by written notice to Sema4, extend the Outside Date beyond October 14, 2022.

In addition, certain existing equity holders of Sema4 have agreed in their Subscription Agreements to certain covenants that are substantially similar to the covenants set forth in the Support Agreements.

The foregoing description of the Subscription Agreements is subject to and qualified in its entirety by reference to the full text of the form of Subscription Agreement, a copy of which is attached as Annex D.

Total Company Shares to be Issued in the Acquisition and the PIPE Investment

It is anticipated that, upon completion of the Transactions, at the Closing, the Company expects that: (i) the Company's stockholders (including any shares owned by PIPE Investors prior to the Transactions) will own approximately 65.1% of the outstanding shares of Class A common stock; (ii) the PIPE Investors (excluding any shares owned by the PIPE Investors prior to the Transactions) will own approximately 13.4% of the outstanding shares of Class A common stock; and (iii) OPKO will own approximately 21.5% of the outstanding shares of Class A common stock.

Sources and Uses for the Acquisition

The following tables summarize the estimated sources and uses for funding the Acquisition (all numbers in millions):

	Sources		Uses	
	$	%	$	%
PIPE Investment	$ 200.0	%	$ —	%
Stock Consideration[(1)]	$ 323.2	%	$ 323.2	%
Cash Consideration	$ —	%	$ 150.0	%
Estimated Transaction Costs	$ —	%	$ 17.6	%
SMFR Balance Sheet Cash	$ —	%	$ 32.4	%
Total Upfront	$ 523.2	%	$ 523.2	%
Milestone Payments[(2)]	$ 150.0	%	$ 150.0	%
Total Upfront & Milestone Payments	$ 673.2	%	$ 673.2	%

(1) The Stock Consideration is valued at a price of $4.04 per share, which is the closing price of our Class A common stock on January 14, 2022, which is the date of execution of the Merger Agreement.
(2) Assumes revenue target is met for each Milestone Payment and each Milestone Payment is satisfied through the issuance of shares of Class A common stock.

New Employment Arrangements

In connection with the execution of the Merger Agreement we entered into new employment agreements with Katherine Stueland, the Chief Executive Officer of GeneDx, Jennifer Brendel, the Chief Commercial Officer of GeneDx, and Kevin Feeley, the Chief Financial Officer of GeneDx. Each of the employment agreements will become effective as of the Closing, at which time Ms. Stueland will become our co-Chief Executive Officer, Ms. Brendel will become our Chief Growth Officer, and Mr. Feeley will become a Senior Vice President, Operations and the Head of GeneDx. The employment agreements provide for at-will employment and include a base salary of $675,000 for Ms. Stueland, $425,000 for Ms. Brendel and $400,000 for Mr. Feeley, a discretionary incentive bonus opportunity with a target amount of 100% of annual base salary for Ms. Stueland, 65% of annual base salary for Ms. Brendel and 40% of annual base salary for Mr. Feeley, an initial grant of stock options and restricted stock units with an aggregate grant-date value of $9,000,000 for Ms. Stueland, $1,750,000 for Ms. Brendel and $1,750,000 for Mr. Feeley, and standard employee benefit plan participation.

Pursuant to her employment agreement, if Ms. Stueland is terminated without “cause” or resigns for “good reason” (as such terms are defined in her employment agreement) other than in connection with a change in control, she will be entitled to receive 24 months of base salary continuation, 12 months of continued coverage under our group health plans, and accelerated vesting of a portion of her initial stock option grant, subject to her execution of a release of claims. If instead such termination occurs within the period commencing three months prior to (or the date on which we have commenced engagement with a change in control counterparty, if later) and ending 12 months following a change in control, Ms. Stueland will be entitled to receive 24 months of base salary continuation, a lump sum payment equal to two times her target annual bonus, 24 months of continued coverage under our group health plans, and accelerated vesting of her outstanding equity-based compensation awards, subject to her execution of a release of claims. Ms. Stueland’s employment agreement also includes restrictive covenants that would prohibit Ms. Stueland from soliciting our employees and exclusive consultants or competing with us during the 12-month period following her termination of employment.

Pursuant to their employment agreements, if either of Ms. Brendel or Mr. Feely is terminated without “cause” or resigns for “good reason” (as such terms are defined in their employment agreements) other than in connection with a change in control, they will be entitled to receive 9 months of base salary continuation and 12 months of continued coverage under our group health benefit plans, subject to his or her execution of a release of claims. If instead such termination occurs within the period commencing three months prior to and ending 12 months following a change in control, Ms. Brendel and Mr. Feeley would be entitled to receive 12 months of base salary

continuation, a lump sum payment equal to one times his or her target annual bonus, 12 months of continued coverage under our group health benefit plans, and accelerated vesting of his or her outstanding equity-based compensation awards, subject to his or her execution of a release of claims. Ms. Brendel's and Mr. Feeley's employment agreements also include restrictive covenants that would prohibit Ms. Brendel or Mr. Feeley from soliciting our employees and exclusive consultants or competing with us during the 9-month period following their termination of employment.

In addition, pursuant to their employment agreements, each of Ms. Stueland, Ms. Brendel and Mr. Feely agreed that, during the nine-month period following the Closing, they will not: (i) sell, offer to sell, contract or agree to sell, hypothecate, pledge, grant any option to purchase or otherwise dispose of or agree to dispose of, directly or indirectly, or establish or increase a put equivalent position or liquidate or decrease a call equivalent position within the meaning of Section 16 of the Exchange Act, with respect to any shares of our Class A common stock, (ii) enter into any swap or other arrangement that transfers to another, in whole or in part, any of the economic consequences of ownership of any of such shares, in cash or otherwise, or (iii) publicly announce any intention to effect any transaction specified in clause (i) or (ii).

Board of Directors of the Company Following the Acquisition

The following individuals will serve on the Company's board of directors following the Closing:

- Dennis Charney;
- Eli D. Casdin;
- Emily Leproust;
- Eric Schadt;
- Jason Ryan;
- Joshua Ruch;
- Katherine Stueland;
- Keith Meister;
- Michael Pellini;
- Nat Turner;
- Rachel Sherman; and
- Richard C. Pfenniger, Jr.

See the section entitled "*Management After the Acquisition*" for more information.

Support Agreements

On January 14, 2022, we entered into the Support Agreements with OPKO and certain of our stockholders (including certain stockholders that own more than 5% of the outstanding shares of our Class A common stock and certain entities affiliated with our directors), whereby such stockholders have agreed to, among other things, (a) vote at any meeting of our stockholders all of their shares of Class A common stock held of record or beneficially: (i) to approve the issuance of the Stock Consideration pursuant to Merger Agreement and the issuance of the Class A common stock pursuant to the Subscription Agreements; (ii) to approve the appointment of the Specified Designees to the Board for terms that expire no earlier than the end of the Second Milestone Period; (iii) to approve an amendment to our current Third Amended and Restated Certificate of Incorporation to increase the authorized shares of Class A common stock from 380,000,000 to 1,000,000,000; (iv) to approve any other proposal included in the proxy statement that is recommended by the Board as necessary to consummate the Transactions; (v) to approve

any proposal that is recommended by the Board to adjourn the meeting to a later date, if there are not sufficient affirmative votes (in person or by proxy) to obtain the requested approvals on the date on which such meeting is held; and (vi) against any and all other proposals that could reasonably be expected to delay or impair our ability to consummate the Transactions; (b) provide a proxy to us to vote such shares accordingly (subject to the condition that a proxy statement has been filed with the SEC and provided to our stockholders); (c) be bound by certain other covenants and agreements related to the Transactions; and (d) be bound by certain transfer restrictions with respect to all or a percentage of their shares of Class A common stock, prior to the meeting, in each case, on the terms and subject to the conditions set forth in the Support Agreements.

The foregoing description of the Support Agreements is subject to and qualified in its entirety by reference to the full text of the form of Support Agreement, a copy of which is attached as Exhibit B to the Merger Agreement in Annex A hereto, and the terms of which are incorporated herein by reference.

Shareholder Agreements

In connection with the execution of the Merger Agreement, OPKO and certain individual stockholders of OPKO who hold 5% or more of OPKO's common stock (each a "*Lock-Up Holder*") entered into the Shareholder Agreements, whereby each agreed to certain transfer restrictions with respect to shares of Class A common stock included in the Merger Consideration or Milestone Payments that were distributed or otherwise transferred to it (such shares of Class A common stock, the "*Lock-up Shares*") that will remain in place until, (a) with respect to the Stock Consideration, the date that is one year from the Closing Date (as defined in the Merger Agreement), (b) with respect to the stock portion of the first Milestone Payment, if any, the date that is one year from the date of issuance for such payment and (c) with respect to the stock portion of the second Milestone Payment, if any, the date that is six months from the date of issuance for such payment (the period described in (a), (b) and (c) are referred to as the "*Lock-Up Period*").

Each Lock-Up Holder has also agreed in the Shareholders Agreements that, following the Lock-Up Period and for so long as such Lock-Up Holder is the record or beneficial owner of at least 5% of the issued and outstanding Class A common stock, such Lock-Up Holder shall not, without the Company's consent, sell more than 25% of the shares of the Company's Class A common stock it received in connection with the Acquisition in any 90-day period, except as part of a marketed sale process for which one lead bookrunner has been selected by Company in its sole discretion.

Each Lock-Up Holder has also agreed to vote all of his, her or its Lock-Up Shares in whatever manner is recommended by the Board for so long as such Lock-Up Holder is the record or beneficial owner of at least 5% of the issued and outstanding Class A common stock.

The Shareholder Agreements also provide that, for a period of twelve months from the Closing, the Lock-Up Holders shall not, without the consent of the Company's Board or chief executive officer (a) acquire shares or voting securities in the Company, (b) make any solicitation of votes, or seek to advise on any vote of the Company's securities, (c) form a "group" (with the meaning of Section 13(d)(3) of the Exchange Act) with respect to any voting securities of the Company, (e) propose any merger, business combination, tender offer, or similar transaction with respect to the Company, (f) solicit or provide information to any person with respect of a business combination or tender offer involving the Company, (g) advise, assist or knowingly encourage any other person with respect to the actions described in (a)-(g) above, (h) enter into any discussions or negotiations with respect to the foregoing, (i) take any action that could reasonably be expected to require disclosure on the part of the Company with respect to any of the foregoing, or (j) disclose any intention inconsistent with the foregoing.

The Company has agreed in the Shareholder Agreements to file a registration statement in respect of the Registrable Securities (as defined therein) within 30 days following the closing of the Acquisition and granted to the Lock-Up Holders certain customary shelf, piggyback and demand registration rights. The foregoing description of the Shareholder Agreements is subject to and qualified in its entirety by reference to the full text of the form of Shareholder Agreement, the form of which is attached as Exhibit A to the Merger Agreement in Annex A hereto, and the terms of which are incorporated herein by reference.

Charter Amendment

The approval of the Charter Amendment Proposal is also a condition to the Closing under the Merger Agreement. Upon stockholder approval, we will file the Amendment and thereby amend our Charter to increase the number of authorized shares of our Class A common stock from 380,000,000 to 1,000,000,000. See "*Proposal No. 4 – The Charter Amendment Proposal*."

Name; Headquarters

The name of the Company after the Acquisition will continue to be Sema4 Holdings Corp. and our headquarters will continue to be located at 333 Ludlow Street, North Tower, 8th Floor, Stamford, Connecticut 06902.

Appraisal Rights

Appraisal rights are not available to our stockholders in connection with the Acquisition.

Accounting Treatment

The Acquisition will be accounted for using the acquisition method of accounting in accordance with Accounting Standards Codification ("*ASC*") 805 - Business Combinations. Under the acquisition method of accounting, the total purchase price is allocated to the tangible and identifiable intangible assets and liabilities assumed based on their relative fair values.

Material U.S. Federal Income Tax Consequences of the Acquisition

The following summary discusses the material U.S. federal income tax consequences of the merger together with the subsequent merger, to Sema4 stockholders who are U.S. persons (as defined below). The following discussion is based on existing provisions of the Code, existing treasury regulations and current administrative rulings and court decisions, all of which are subject to change and to differing interpretations, possibly with retroactive effect. Any such change could affect the continuing validity of this discussion.

This summary does not discuss all U.S. federal income tax considerations that may be relevant to a particular stockholder in light of his or her personal circumstances or to stockholders subject to special treatment under U.S. federal income tax laws, including:

- dealers in securities or foreign currencies;
- traders in securities or foreign currencies who elect the mark-to-market method of accounting
- Sema4 stockholders who are not U.S. persons (as defined below);
- tax-exempt organizations;
- certain expatriates or stockholders who have a functional currency other than the U.S. dollar;
- financial institutions or insurance companies;
- stockholders who acquired Sema4 common stock in connection with stock option or stock purchase plans or in other compensatory transactions;
- stockholders exercising appraisal or dissenters' rights;
- stockholders that purchased or sold their shares of Sema4 common stock as part of a wash sale; or
- stockholders who hold Sema4 common stock as part of an integrated investment, including a "straddle," comprised of shares of Sema4 common stock and one or more other positions.

If a partnership (including any entity or arrangement, domestic or foreign, treated as a partnership for U.S. federal income tax purposes) holds Sema4 common stock, the tax treatment of a partner will generally depend on the

status of the partner and the activities of the partnership. If a holder is a partner in a partnership holding Sema4 common stock, the holder should consult its tax advisors.

This discussion assumes that Sema4 stockholders hold their shares of Sema4 common stock as capital assets within the meaning of Section 1221 of the Code (generally, as property held as an investment). This summary is limited to U.S. federal income tax aspects and does not address the tax consequences of the merger and the subsequent merger under non-U.S., state or local tax laws or any non-income tax laws (such as estate and gift tax laws). It also does not consider the impact of the alternative minimum tax or the Medicare contribution tax on net investment income. Accordingly, Sema4 stockholders should consult their tax advisors as to the specific tax consequences of the merger and the subsequent merger, including any applicable federal, state, local, non-U.S., and non-income tax consequences.

As used in this discussion, the term "U.S. person" means a beneficial owner of Sema4 common stock who, for U.S. federal income tax purposes, is:

- an individual who is a citizen or resident of the United States;
- a corporation (including an entity treated as a corporation for U.S. federal income tax purposes) created or organized in or under the laws of the United States or of any state of the United States or the District of Columbia;
- an estate, the income of which is subject to U.S. federal income taxation regardless of its source; or
- a trust if a court within the United States is able to exercise primary supervision over the administration of the trust and one or more U.S. persons have the authority to control all substantial decisions of the trust; or a trust that has a valid election in effect under applicable Treasury regulations to be treated as a U.S. person.

Treatment of the Mergers as a "Reorganization"

The Parties intend to report and, except to the extent otherwise required by Law, shall report, for U.S. federal income tax purposes, the merger and the subsequent merger, taken together, as a "reorganization" within the meaning of Section 368(a) of the Code.

Treatment of GeneDx Stockholders in the Proposed Merger

A GeneDx stockholder will recognize gain, but not loss, upon the exchange of GeneDx common stock for Sema4 Class A common stock and cash in the merger and the subsequent merger that is equal to the lesser of (i) the amount of cash received by the GeneDx stockholder (excluding any cash received in lieu of fractional shares) and (ii) the excess of the "amount realized" by the GeneDx stockholder over the GeneDx stockholder's tax basis in the GeneDx common stock exchanged. The "amount realized" by the GeneDx stockholder will equal the sum of the fair market value of the Sema4 Class A common stock and the amount of cash (including any cash received in lieu of fractional shares) received by the GeneDx stockholder. The aggregate tax basis of Sema4 Class A common stock received by a GeneDx stockholder in the merger and the subsequent merger (including the basis in any fractional share for which cash is received) will be the same as the stockholder's aggregate tax basis in GeneDx common stock surrendered in the merger and the subsequent merger, reduced by the amount of cash the GeneDx stockholder received (excluding any cash received in lieu of fractional shares), and increased by the amount of gain that the GeneDx stockholder recognizes (excluding any gain or loss from the deemed receipt and redemption of fractional shares described below). A GeneDx stockholder receiving cash in the merger and the subsequent merger in lieu of a fractional share of Sema4 Class A common stock will be treated as if such fractional share were issued in the merger and the subsequent merger and then redeemed by Sema4 for cash, resulting in a recognition of gain or loss that is equal to the difference, if any, between the stockholder's basis allocable to the fractional share and the amount of cash received therefor. The holding period of Sema4 Class A common stock received by a GeneDx stockholder in the merger and the subsequent merger will include the holding period of the GeneDx common stock held by such GeneDx stockholder.

Any gain or loss recognized by a GeneDx stockholder will generally be long-term capital gain or loss if the stockholder's holding period for the GeneDx common stock is more than a year at the time of the merger and the subsequent merger. Individuals are eligible for reduced rates of taxation with respect to long-term capital gains. In some cases, if a holder actually or constructively owns Sema4 Class A common stock other than Sema4 Class A common stock received pursuant to the merger and the subsequent merger, the recognized gain could be treated as having the effect of a distribution of a dividend under the tests set forth in Section 302 of the Internal Revenue Code, in which case such gain would be treated as dividend income. Because the possibility of dividend treatment depends upon each holder's particular circumstances, including the application of constructive ownership rules, holders of GeneDx common stock should consult their tax advisors regarding the application of the foregoing rules to their particular circumstances.

For a GeneDx stockholder who acquired different blocks of GeneDx common stock at different times and at different prices, realized gain or loss generally must be calculated separately for each identifiable block of shares exchanged in the merger and the subsequent merger, and a loss realized on the exchange of one block of shares cannot be used to offset a gain realized on the exchange of another block of shares. In addition, holders' basis and holding period in their shares of Sema4 Class A common stock may be determined with reference to each block of GeneDx common stock. Any such holders should consult their tax advisors regarding the manner in which cash and Sema4 common stock received in the exchange should be allocated among different blocks of GeneDx common stock and with respect to identifying the bases or holding periods of the particular shares of Sema4 common stock received in the merger and the subsequent merger.

Neither Sema4 nor GeneDx will recognize any gain or loss as a result of the merger and the subsequent merger. It is the intention of Sema4 and GeneDx that the merger and the subsequent merger, taken together, will be treated as a reorganization within the meaning of Section 368(a) of the Code. If GeneDx is unable to obtain an opinion in this regard after the registration statement of which this joint proxy statement/prospectus is a part is declared effective by the SEC, and the change in expected tax consequences is material, Sema4 and GeneDx will undertake to recirculate and re-solicit stockholders of GeneDx. If the merger and the subsequent merger, taken together, are not treated as a reorganization within the meaning of Section 368(a) of the Code, the merger and the subsequent merger, taken together, will be treated as a fully taxable transaction to GeneDx stockholders for U.S. federal income tax purposes.

Reporting and Backup Withholding

GeneDx stockholders who owned at least five percent (by vote or value) of the total outstanding stock of GeneDx or GeneDx stock with a tax basis of $1 million or more are required to attach a statement to their tax returns for the year in which the merger and the subsequent merger are completed that contains the information listed in Treasury Regulations Section 1.368-3(b). Such statement must include the stockholder's tax basis in the stockholder's GeneDx common stock and the fair market value of such stock.

Certain stockholders may be subject to information reporting and backup withholding with respect to cash received in the merger and the subsequent merger unless the stockholder comes within certain exempt categories and, when required, demonstrates this fact, or provides a correct taxpayer identification number (typically by completing and signing an IRS Form W-9), certifies as to no loss of exemption from backup withholding and that such holder is a U.S. person (including a U.S. resident alien) and otherwise complies with applicable requirements of the backup withholding rules. Any amount withheld as backup withholding is not an additional tax and may be refunded or credited against such stockholder's U.S. federal income tax liability, provided that the required information is properly furnished in a timely manner to the IRS.

The foregoing discussion of U.S. federal income tax consequences is not intended to constitute a complete description of all tax consequences relating to the merger and the subsequent merger. The tax consequences of the merger and the subsequent merger to a GeneDx stockholder will depend upon the facts of the stockholder's particular situation. Because individual circumstances may differ, GeneDx stockholders are urged to consult with their own tax advisor regarding the applicability of the rules discussed above and the particular tax effects of the merger and the subsequent merger, including the application of state, local, non-U.S. and non-income tax laws.

Regulatory Matters

Under the HSR Act and the rules that have been promulgated thereunder by the FTC, certain transactions may not be consummated unless information has been furnished to the Antitrust Division and the FTC and certain waiting period requirements have been satisfied. The Acquisition is subject to these requirements and may not be completed until the expiration of a 30-day waiting period following the filing of the required Notification and Report Forms with the Antitrust Division and the FTC or until early termination is granted. If the FTC or the Antitrust Division makes a Second Request, the waiting period with respect to the Acquisition will be extended for an additional period of 30 calendar days, which will begin on the date on which the Company and GeneDx each certify compliance with the Second Request. Complying with a Second Request can take a significant period of time. On January 28, the Company and GeneDx filed the required forms under the HSR Act with the Antitrust Division and the FTC. The waiting period under the HSR Act with respect to the Acquisition expired on February 28, 2022.

At any time before or after consummation of the Acquisition, notwithstanding termination of the waiting period under the HSR Act, the applicable competition authorities could take such action under applicable antitrust laws as each deems necessary or desirable in the public interest, including seeking to enjoin the consummation of the Acquisition. Private parties may also seek to take legal action under the antitrust laws under certain circumstances. We cannot assure you that the Antitrust Division, the FTC, any state attorney general, or any other government authority will not attempt to challenge the Acquisition on antitrust grounds, and, if such a challenge is made, we cannot assure you as to its result. Neither the Company nor GeneDx is aware of any material regulatory approvals or actions that are required for completion of the Acquisition other than the expiration or early termination of the waiting period under the HSR Act. It is presently contemplated that if any such additional regulatory approvals or actions are required, those approvals or actions will be sought. There can be no assurance, however, that any additional approvals or actions will be obtained.

Opinion of Sema4's Financial Advisor

Goldman Sachs rendered its opinion to the Board that, as of January 14, 2022, and based upon and subject to the factors and assumptions set forth therein, the (i) $150 million in cash, subject to closing adjustments pursuant to the Merger Agreement (the "*Adjustments*"), (ii) 80 million shares of Class A common stock of Sema4 and (iii) up to $150 million of contingent payments, payable in cash or shares of Class A common stock of Sema4, based upon achievement of 2022 and 2023 revenue milestones (collectively, the "*Total Acquisition Consideration*"), to be paid to acquire all of the issued at outstanding shares of capital stock of GeneDx pursuant to the Merger Agreement, was fair from a financial point of view to Sema4.

The full text of the written opinion of Goldman Sachs, dated January 14, 2022, which sets forth assumptions made, procedures followed, matters considered and limitations on the review undertaken in connection with the opinion, is attached as Annex C. Sema4's stockholders are encouraged to read the opinion carefully in its entirety. The following is a summary of Goldman Sachs' opinion and the methodology that Goldman Sachs used to render its opinion. The summary is qualified in its entirety by reference to the full text of the opinion.

Goldman Sachs provided advisory services and its opinion for the information and assistance of the Board in connection with its consideration of the Acquisition. The Goldman Sachs opinion is not a recommendation as to how any holder of shares of Sema4's Class A common stock should vote with respect to the Acquisition or any other matter.

In connection with rendering the opinion described above and performing its related financial analyses, Goldman Sachs reviewed, among other things:

- Sema4's Registration Statement on Form S-1, including the prospectus contained therein dated August 12, 2021;
- certain Quarterly Reports on Form 10-Q of Sema4;
- certain other communications from Sema4 and OPKO to their respective stockholders;

- certain publicly available research analyst reports for Sema4 and OPKO;
- audited financial statements for GeneDx for the two fiscal years ended December 31, 2020;
- unaudited financial statements for GeneDx for the twelve month period ended December 31, 2021;
- certain internal financial analyses and forecasts for GeneDx as prepared by OPKO;
- certain internal financial analyses and forecasts for Sema4 and certain internal financial analyses and forecasts for GeneDx, in each case, as prepared by the management of Sema4 and approved for Goldman Sachs' use by Sema4 (the "*Forecasts*"), including operating synergies projected to result from the transaction, as prepared by the management of Sema4 and approved for Goldman Sachs' use by Sema4 (the "*Synergies*") (for more information, see "—*Certain Projected Financial Information*"); and
- certain estimates as to the amount of the Adjustments and the contingent payments, in each case, as prepared by the management of Sema4 and approved for Goldman Sachs' use by Sema4 (the "*Estimates*").

Goldman Sachs also held discussions with members of the senior managements of Sema4, GeneDx and OPKO regarding their assessment of the strategic rationale for, and the potential benefits of, the Acquisition and the past and current business operations, financial condition and future prospects of GeneDx and Sema4; reviewed the reported price and trading activity for Sema4's Class A common stock; compared certain financial information for GeneDx and certain financial and stock market information for Sema4 with similar financial and stock market information for certain other companies the securities of which were publicly traded; and performed such other studies and analyses, and considered such other factors, as Goldman Sachs deemed appropriate.

For purposes of rendering their opinion, Goldman Sachs, with Sema4's consent, relied upon and assumed the accuracy and completeness of all of the financial, legal, regulatory, tax, accounting and other information provided to, discussed with or reviewed by, Goldman Sachs, without assuming any responsibility for independent verification thereof. In that regard, Goldman Sachs assumed, with Sema4's consent, that the Forecasts, including the Synergies, and the Estimates were reasonably prepared on a basis reflecting the best currently available estimates and judgments of the management of Sema4. Goldman Sachs did not make an independent evaluation or appraisal of the assets and liabilities (including any contingent, derivative or other off-balance-sheet assets and liabilities) of Sema4 or OPKO or any of their respective subsidiaries, including GeneDx, and Goldman Sachs was not furnished with any such evaluation or appraisal. Goldman Sachs has assumed that all governmental, regulatory or other consents and approvals necessary for the consummation of the Acquisition will be obtained without any adverse effect on Sema4 or GeneDx or on the expected benefits of the Acquisition in any way meaningful to Goldman Sachs' analysis. Goldman Sachs also assumed that the Acquisition will be consummated on the terms set forth in the Merger Agreement, without the waiver or modification of any term or condition the effect of which would be in any way meaningful to Goldman Sachs' analysis.

Goldman Sachs' opinion does not address the underlying business decision of Sema4 to engage in the Acquisition or the relative merits of the Acquisition as compared to any strategic alternatives that may be available to Sema4; nor does it address any legal, regulatory, tax or accounting matters. Goldman Sachs' opinion addresses only the fairness from a financial point of view to Sema4, as of the date of the opinion, of the Total Acquisition Consideration to be paid by Sema4 to acquire all of the issued and outstanding shares of capital stock of GeneDx pursuant to the Merger Agreement. Goldman Sachs does not express any view on, and Goldman Sachs' opinion does not address, any other term or aspect of the Merger Agreement or the Acquisition or any term or aspect of any other agreement or instrument contemplated by the Merger Agreement or entered into or amended in connection with the Acquisition, including any allocation of the Total Acquisition Consideration, any ongoing obligations of Sema4 or OPKO, any private placement of Sema4's Class A common stock, the Pre-Closing Restructuring (as defined in the Merger Agreement), the fairness of the Acquisition to, or any consideration received in connection therewith by, the holders of any class of securities, creditors or other constituencies of Sema4, nor as to the fairness of the amount or nature of any compensation to be paid or payable to any of the officers, directors or employees of Sema4, GeneDx or OPKO, or any class of such persons in connection with the Acquisition, whether relative to the Total Acquisition Consideration to be paid by Sema4 for all of the issued and outstanding shares of capital stock of GeneDx pursuant to the Merger Agreement or otherwise. Goldman Sachs is not expressing any opinion as to the

prices at which shares of Sema4's Class A common stock will trade at any time, as to the potential effects of volatility in the credit, financial and stock markets on Sema4, GeneDx or OPKO or the Acquisition or as to the impact of the Acquisition on the solvency or viability of Sema4, GeneDx or OPKO or the ability of Sema4, GeneDx or OPKO to pay their respective obligations when they come due. Goldman Sachs' opinion is necessarily based on economic, monetary, market and other conditions as in effect on, and the information made available to Goldman Sachs as of, the date of its opinion, and Goldman Sachs assumes no responsibility for updating, revising or reaffirming its opinion based on circumstances, developments or events occurring after the date of its opinion. Goldman Sachs' opinion was approved by a fairness committee of Goldman Sachs.

Summary of Material Financial Analyses

The following is a summary of the material financial analyses delivered by Goldman Sachs to the Board in connection with rendering the opinion described above. The following summary, however, does not purport to be a complete description of the financial analyses performed by Goldman Sachs, nor does the order of analyses described represent relative importance or weight given to those analyses by Goldman Sachs. Some of the summaries of the financial analyses include information presented in tabular format. The tables must be read together with the full text of each summary and are alone not a complete description of Goldman Sachs' financial analyses. Except as otherwise noted, the following quantitative information, to the extent that it is based on market data, is based on market data as it existed on or before January 14, 2022, the last trading day before the announcement of the Acquisition, and is not necessarily indicative of current market conditions.

For purposes of its analyses, Goldman Sachs calculated $488 million as the implied market value of the Total Acquisition Consideration, derived using the January 14, 2022 closing price per share of $4.04 for the portion of the Total Acquisition Consideration consisting of Sema4's Class A common stock and, based on the Estimates provided by the management of Sema4 and approved for Goldman Sachs' use, assumed the Adjustments net to a $15 million outflow of funds and no contingent payments were made because the revenue milestones were not achieved in the Forecasts.

Illustrative Discounted Cash Flow Analysis—GeneDx Standalone

Using discount rates ranging from 8.5% to 10.5%, Goldman Sachs discounted to present value estimates of unlevered free cash using projections for fiscal years 2022 through 2040 included in the Forecasts for standalone GeneDx (excluding Synergies) and applied perpetuity growth rates ranging from 2.5% to 3.5% for the terminal year. Goldman Sachs derived the discount rates using estimates of GeneDx's weighted average cost of capital calculated by application of the capital asset pricing model, which requires certain company-specific inputs, including the company's target capital structure weightings, the cost of long-term debt, after-tax yield on permanent excess cash, if any, future applicable marginal cash tax rate and a beta for the company, as well as certain financial metrics for the United States financial markets generally. The range of perpetuity growth rates was derived by Goldman Sachs utilizing its professional judgment and experience, taking into account, among other things, the Forecasts and market expectations regarding long-term economic growth of gross domestic product and inflation. The discounted unlevered cash flow analysis implied standalone intrinsic GeneDx enterprise values of between $1,048 million and $1,869 million.

Illustrative Enterprise Value Analysis—GeneDx Standalone

Goldman Sachs calculated ranges of illustrative GeneDx standalone enterprise values based on reference multiples of enterprise value to revenue.

Goldman Sachs also derived a range of illustrative enterprise values for GeneDx by multiplying (x) GeneDx projected 2021 revenue set forth in the Forecasts by (y) an enterprise value to revenue multiple range of 3.5x to 10.0x, and Goldman Sachs multiplied (x) GeneDx projected 2022 revenue set forth in the Forecasts by (y) an enterprise value to revenue multiple range of 4.0x to 7.5x. The enterprise value to revenue multiple ranges were derived by Goldman Sachs based on its professional judgment and experience, taking into account the enterprise value to revenue multiples for the GeneDx Selected Companies (as defined below). Goldman Sachs chose the GeneDx Selected Companies because they are publicly traded companies with operations that for purposes of analysis may be considered similar to certain operations of GeneDx. Estimates of 2021 and 2022 revenues for the

GeneDx Selected Companies were based on Wall Street research. Please see the subsection entitled "*Selected Public Company Comparables Analysis—GeneDx*" below, for a list of the GeneDx Selected Companies and the enterprise value to revenue multiples for the GeneDx Selected Companies for 2021 and 2022. This analysis implied an enterprise value range of $405 million to $1,157 million based on 2021 figures and an enterprise value range of $521 million to $977 million based on 2022 figures.

Selected Public Company Comparables Analysis—GeneDx

Goldman Sachs reviewed and compared certain financial information for GeneDx to corresponding financial information, ratios and public market multiples for the following publicly traded corporations in the life sciences and diagnostics industry (the "*GeneDx Selected Companies*"):

- Natera, Inc.;
- Veracyte, Inc.;
- Invitae Corporation;
- Exact Sciences;
- Castle Biosciences, Inc.;
- NeoGenomics, Inc.;
- Personalis, Inc.; and
- Myriad Genetics, Inc.

Although none of the GeneDx Selected Companies is directly comparable to GeneDx, the companies included were chosen because they are publicly traded companies with operations that for purposes of analysis may be considered similar to certain operations of GeneDx.

Estimates of 2021 and 2022 revenues for the GeneDx Selected Companies were based on Wall Street research. The enterprise value to revenue multiples for these companies appear in the table below:

Comparable Company	EV/2021E Revenue	EV/2022E Revenue
Natera, Inc.	10.4x	8.5x
Veracyte, Inc.	9.9x	7.5x
Invitae Corporation	9.3x	6.9x
Exact Sciences	8.1x	7.1x
Castle Biosciences, Inc.	6.8x	5.5x
NeoGenomics, Inc.	6.4x	5.5x
Personalis, Inc.	3.3x	4.2x
Myriad Genetics, Inc.	2.8x	2.9x

Illustrative Present Value of Future Share Price—Sema4 Standalone

Goldman Sachs performed an illustrative analysis of the implied present values of illustrative future values per share of Sema4's Class A common stock. This analysis was designed to provide indications of the present values of theoretical future intrinsic values of Sema4's Class A common stock. For this analysis, Goldman Sachs used the Sema4 standalone projections in the Forecasts for each of the fiscal years 2023 through 2025. Goldman Sachs calculated implied enterprise values for standalone Sema4 as of December 31, for each of the fiscal years 2022 through 2024, by applying enterprise value to revenue multiples of 6.0x to 8.0x against the next twelve months revenue projections for standalone Sema4 in the Forecasts. The illustrative enterprise value to revenue multiple range was derived by Goldman Sachs using its professional judgment and experience, taking into account current

and historical multiples for Sema4, the range of Sema4 enterprise value to revenue multiples implied in Wall Street analyst forecasts, and enterprise value to revenue multiples for the Sema4 Selected Companies (as defined below). Goldman Sachs chose the Sema4 Selected Companies because they are publicly traded companies with operations that for purposes of analysis may be considered similar to certain operations of Sema4. Estimates of 2021 and 2022 revenues for the Sema4 Selected Companies were based on Wall Street research. Please see the subsection entitled "*Selected Public Company Comparables Analysis—Sema4*" below, for a list of the Sema4 Selected Companies and the enterprise value to revenue multiples for the Sema4 Selected Companies for 2021 and 2022. Goldman Sachs added the amount of net cash in the Forecasts for standalone Sema4 in order to derive a range of illustrative equity values. Goldman Sachs divided the results by the number of fully diluted outstanding shares of Sema4 Class A common stock provided by the management of Sema4 for standalone Sema4, to derive a range of implied future values per share of Class A common stock. Goldman Sachs discounted the implied per share future Class A common stock values back to January 14, 2022, using an illustrative discount rate of 9%, reflecting an estimate of Sema4's cost of equity. Goldman Sachs derived this discount rate by application of the capital asset pricing model (the "*Capital Asset Pricing Model*"), which requires certain company-specific inputs, including a beta for the company, as well as certain financial metrics for the United States financial markets generally.

This analysis resulted in a range of implied present values per share of Sema4's Class A common stock of $6.60 to $9.86. Goldman Sachs then adjusted the analysis to give effect to the PIPE Investment (but not the Acquisition), which resulted in a range of implied present values per share of Sema4's Class A common stock of $6.14 to $8.93.

Selected Public Company Comparables Analysis—Sema4

Goldman Sachs reviewed and compared certain financial information for Sema4 to corresponding financial information, ratios and public market multiples for the following publicly traded corporations in the life sciences and diagnostics industry (the "*Sema4 Selected Companies*"):

- Guardant Health;
- Natera, Inc.;
- Veracyte, Inc.;
- Invitae Corporation;
- Exact Sciences;
- Castle Biosciences, Inc.;
- NeoGenomics, Inc.;
- Personalis, Inc.;
- Myriad Genetics, Inc.;
- Centogene; and
- Progenity.

Although none of the Sema4 Selected Companies is directly comparable to Sema4, the companies included were chosen because they are publicly traded companies with operations that for purposes of analysis may be considered similar to certain operations of Sema4.

Estimates of 2021 and 2022 revenues for the Sema4 Selected Companies were based on Wall Street research. The enterprise value to revenue multiples for these companies appear in the table below:

Comparable Company	EV/2021E Revenue	EV/2022E Revenue
Guardant Health	23.1x	18.1
Natera, Inc.	10.4x	8.5x
Veracyte, Inc.	9.9x	7.5x
Invitae Corporation	9.3x	6.9x
Exact Sciences	8.1x	7.1x
Castle Biosciences, Inc.	6.8x	5.5x
NeoGenomics, Inc.	6.4x	5.5x
Personalis, Inc.	3.3x	4.2x
Myriad Genetics, Inc.	2.8x	2.9x
Centogene	0.4x	1.3x
Progenity	NM	NM

Illustrative Present Value of Future Share Price—Combined Company

Goldman Sachs performed an illustrative analysis of the implied present values of illustrative future values per share of Sema4's Class A common stock on a pro forma basis, after giving effect to the Acquisition. This analysis was designed to provide indications of the present values of theoretical future intrinsic values of Sema4's Class A common stock with a combined company. For this analysis, Goldman Sachs used the Sema4 combined company projections in the Forecasts for each of the fiscal years 2023 through 2025 including the Synergies. Goldman Sachs calculated implied enterprise values of the combined company as of December 31, for each of the fiscal years 2022 through 2024, by applying enterprise value to revenue multiples of 6.0x to 8.0x against the next twelve months revenue projections for the combined company in the Forecasts. The illustrative enterprise value to revenue multiple range was derived by Goldman Sachs using its professional judgment and experience, taking into account current and historical multiples for Sema4, the range of Sema4 enterprise value to revenue multiples implied in Wall Street analyst forecasts, and the multiples referenced above for Sema4 Selected Companies. Goldman Sachs chose the Sema4 Selected Companies because they are publicly traded companies with operations that for purposes of analysis may be considered similar to certain operations of Sema4. Estimates of 2021 and 2022 revenues for the Sema4 Selected Companies were based on Wall Street research. Please see the subsection entitled "*Selected Public Company Comparables Analysis—Sema4*" above, for a list of the Sema4 Selected Companies and the enterprise value to revenue multiples for the Sema4 Selected Companies for 2021 and 2022. Goldman Sachs added the projected amount of the net cash in the Forecasts for the combined company in order to derive a range of illustrative equity values for the combined company. Goldman Sachs divided the results by the number of fully diluted outstanding shares of Sema4's Class A common stock provided by the management of Sema4 for the combined company, to derive a range of implied future values per share of Class A common stock. Goldman Sachs discounted the implied per share future Class A common stock values back to January 14, 2022, using an illustrative discount rate of 9%, reflecting an estimate of Sema4's cost of equity. Goldman Sachs derived this discount rate by application of the Capital Asset Pricing Model, which requires certain company-specific inputs, including a beta for the company, as well as certain financial metrics for the United States financial markets generally. This analysis resulted in a range of implied present values per share of Class A common stock of the combined company of $6.92 to $11.58.

General

The preparation of a fairness opinion is a complex process and is not necessarily susceptible to partial analysis or summary description. Selecting portions of the analyses or of the summary set forth above, without considering the analyses as a whole, could create an incomplete view of the processes underlying Goldman Sachs' opinion. In arriving at its fairness determination, Goldman Sachs considered the results of all of its analyses and did not attribute any particular weight to any factor or analysis considered by it. Rather, Goldman Sachs made its determination as to

fairness on the basis of its experience and professional judgment after considering the results of all of its analyses. No company used in the above analyses as a comparison is directly comparable to Sema4 or OPKO.

Goldman Sachs prepared these analyses for purposes of providing its opinion to the Board as to the fairness from a financial point of view, as of the date of the opinion, to Sema4 of the Acquisition Consideration to be paid to OPKO to acquire all of the issued and outstanding shares of capital stock of GeneDx pursuant to the Merger Agreement. These analyses do not purport to be appraisals nor do they necessarily reflect the prices at which businesses or securities actually may be sold. Analyses based upon forecasts of future results are not necessarily indicative of actual future results, which may be significantly more or less favorable than suggested by these analyses. Because these analyses are inherently subject to uncertainty, being based upon numerous factors or events beyond the control of the parties or their respective advisors, none of Sema4, OPKO, Goldman Sachs or any other person assumes responsibility if future results are materially different from those forecasts.

The Total Acquisition Consideration was determined through arm's-length negotiations between Sema4 and OPKO and was approved by the Board. Goldman Sachs provided advice to Sema4 during these negotiations. Goldman Sachs did not, however, recommend any specific form or amount of consideration to Sema4 or the Board or that any specific form or amount of consideration constituted the only appropriate consideration for the Acquisition.

As described above, Goldman Sachs' opinion to the Board was one of many factors taken into consideration by the Board in making its determination to approve the Merger Agreement. The foregoing summary does not purport to be a complete description of the analyses performed by Goldman Sachs in connection with the fairness opinion and is qualified in its entirety by reference to the written opinion of Goldman Sachs attached as Annex C.

Goldman Sachs and its affiliates are engaged in advisory, underwriting and financing, principal investing, sales and trading, research, investment management and other financial and non-financial activities and services for various persons and entities. Goldman Sachs and its affiliates and employees, and funds or other entities they manage or in which they invest or have other economic interests or with which they co-invest, may at any time purchase, sell, hold or vote long or short positions and investments in securities, derivatives, loans, commodities, currencies, credit default swaps and other financial instruments of Sema4, OPKO, any of their respective affiliates and third parties, including the Icahn School of Medicine at Mount Sinai ("*ISMMS*"), a significant stockholder of Sema4, and affiliates of Phillip Frost, a significant stockholder of OKPO, or any currency or commodity that may be involved in the Acquisition. Goldman Sachs acted as financial advisor to Sema4 in connection with, and participated in certain of the negotiations leading to, the Acquisition. Goldman Sachs expects to receive fees for its services in connection with the Acquisition, contingent upon consummation of the Acquisition, and Sema4 has agreed to reimburse certain of Goldman Sachs' expenses arising, and indemnify Goldman Sachs against certain liabilities that may arise, out of Goldman Sachs' engagement. In addition, Goldman Sachs acted as placement agent to Sema4 on the PIPE Investment. Goldman Sachs expects to receive a fee for its role as placement agent for the PIPE Investment, contingent upon consummation of the PIPE Investment, and Sema4 has agreed to reimburse certain of Goldman Sachs' expenses arising, and indemnify Goldman Sachs against certain liabilities that may arise, out of Goldman Sachs' engagement as placement agent for the PIPE Investment. Goldman Sachs has provided certain financial advisory and/or underwriting services to Sema4 and/or its affiliates from time to time for which Goldman Sachs' Investment Banking Division has received, and may receive, compensation, including having acted in 2021 as financial advisor to Legacy Sema4 in its de-SPAC transaction with CM Life Sciences, Inc. and as placement agent in its July 2020 Series C private placement. During the two year period ended January 14, 2022, Goldman Sachs has recognized compensation for financial advisory and/or underwriting services provided by its Investment Banking Division to Sema4 and/or its affiliates of approximately $11.6 million. Goldman Sachs also has provided certain advisory and/or underwriting services to ISMMS and/or its affiliates (collectively, "*Mount Sinai*") from time to time for which Goldman Sachs' Investment Banking Division has received, and may receive, compensation, including having acted as co-manager in a 2020 $400 million fixed rate debt offering by Mount Sinai Health System, an affiliate of ISMMS. During the two year period ended January 14, 2022, Goldman Sachs has recognized compensation for financial advisory and/or underwriting services provided by its Investment Banking Division to Mount Sinai and/or its affiliates of approximately $400,000. During the two year period ended January 14, 2022, Goldman Sachs did not recognize any compensation for financial advisory and/or underwriting services provided by its Investment Banking Division to OPKO and/or its affiliates. Goldman Sachs may also in the future provide

financial advisory and/or underwriting services to Sema4, OPKO, Mount Sinai or Phillip Frost and their respective affiliates for which Goldman Sachs' Investment Banking Division may receive compensation.

The Board selected Goldman Sachs as its financial advisor because it is an internationally recognized investment banking firm that has substantial experience in transactions similar to the Acquisition. Pursuant to a letter agreement, dated January 10, 2022, Sema4 engaged Goldman Sachs to act as its financial advisor in connection with the Acquisition. The engagement letter between Sema4 and Goldman Sachs provides for a transaction fee that is estimated, based on the information available as of the date of announcement of the Acquisition, at approximately $8.5 million, all of which is contingent upon consummation of the Acquisition. In addition, Sema4 has agreed to reimburse Goldman Sachs for certain of its expenses, including attorneys' fees and disbursements, and to indemnify Goldman Sachs and related persons against various liabilities, including certain liabilities under the federal securities laws.

PROPOSAL NO. 1 - THE STOCK CONSIDERATION ISSUANCE APPROVAL

We are asking our stockholders to approve, for purposes of complying with applicable Nasdaq Listing Rules, the issuance of more than 20% of the Company's outstanding Class A common stock in connection with the Acquisition, including the issuances pursuant to the Merger Agreement described below.

Why the Company Needs Stockholder Approval

Pursuant to Nasdaq Listing Rule 5635(a), stockholder approval is required prior to the Company's issuance of Class A common stock or other securities convertible into or exercisable for Class A common stock, in connection with the acquisition of the stock or assets of another company, if such securities are not issued in a public offering and (i) the Class A common stock has, or will have upon issuance, voting power equal to or in excess of 20% of the voting power outstanding before the issuance of such securities, or (ii) the number of shares of Class A common stock to be issued is or will be equal to or in excess of 20% of the number of shares of Class A common stock outstanding before the issuance of such securities.

In connection with the Acquisition, we expect to issue (i) 80 million shares of Class A common stock in connection with the payment of the Stock Consideration, and (ii) 50 million shares of Class A common stock in the PIPE Investment. We may also issue, in our sole discretion, a maximum of up to approximately 30.9 million shares of Class A common stock in connection with the potential Milestone Payments. Because we may issue 20% or more of our outstanding Class A common stock when considering together the Stock Consideration, the PIPE Investment and the potential Milestone Payments, we are required to obtain stockholder approval of such issuance pursuant to Nasdaq Listing Rule 5635(a). For this reason, we are seeking the approval of our stockholders for the issuance of shares of our Class A common stock pursuant to the Merger Agreement.

In addition, the approval of the Stock Consideration Issuance Proposal is also a condition to the Closing under the Merger Agreement.

In the event that this proposal is not approved by Company stockholders, the Acquisition cannot be consummated. In the event that this proposal is approved by Company stockholders, but the Merger Agreement is terminated (without the Acquisition being consummated) prior to the issuance of shares of our Class A common stock pursuant to the Merger Agreement, such shares of Class A common stock will not be issued.

Vote Required for Approval

The Acquisition is conditioned on the approval of the Stock Consideration Issuance Proposal and the Charter Amendment Proposal. The PIPE Investment Proposal and the Special Designee Director Election Proposal are conditioned upon stockholders' approval of the Stock Consideration Issuance Proposal and the Charter Amendment Proposal. This Stock Consideration Issuance Proposal will be adopted and approved only if at least a majority of the votes cast at the Special Meeting vote "**FOR**" the Stock Consideration Issuance Proposal. A stockholder's failure to vote, as well as an abstention and broker non-vote, will have no effect on the Stock Consideration Issuance Proposal. Abstentions and broker non-votes will be counted in connection with the determination of whether a valid quorum is established.

Recommendation of the Board of Directors

OUR BOARD OF DIRECTORS RECOMMENDS
THAT OUR STOCKHOLDERS VOTE "FOR"
THE STOCK CONSIDERATION ISSUANCE PROPOSAL.

The existence of financial and personal interests of one or more of the Company's directors or officers may result in a conflict of interest on the part of such director(s) or officer(s) between what he, she or they may believe is in the best interests of the Company and its stockholders and what he, she or they may believe is best for himself, herself or themselves in determining to recommend that stockholders vote for the proposals. See the section above entitled "*The Acquisition—Interests of Certain Persons in the Transactions*" for a further discussion.

PROPOSAL NO. 2 - THE PIPE INVESTMENT PROPOSAL

Assuming the Stock Consideration Issuance Proposal and the Charter Amendment Proposal are approved and adopted, we are asking our stockholders to approve, for purposes of complying with applicable Nasdaq Listing Rules, the issuance of more than 20% of the Company's outstanding Class A common stock in connection with the Acquisition, including the issuances pursuant to the Subscription Agreements described below.

Why the Company Needs Stockholder Approval

Pursuant to Nasdaq Listing Rule 5635(a), stockholder approval is required prior to the Company's issuance of Class A common stock or other securities convertible into or exercisable for Class A common stock, in connection with the acquisition of the stock or assets of another company, if such securities are not issued in a public offering and (i) the Class A common stock has, or will have upon issuance, voting power equal to or in excess of 20% of the voting power outstanding before the issuance of such securities, or (ii) the number of shares of Class A common stock to be issued is or will be equal to or in excess of 20% of the number of shares of Class A common stock outstanding before the issuance of such securities.

In connection with the Acquisition, we expect to issue (i) 80 million shares of Class A common stock in connection with the payment of the Stock Consideration, and (ii) 50 million shares of Class A common stock in the PIPE Investment. We may also issue, in our sole discretion, a maximum of up to approximately 30.9 million shares of Class A common stock in connection with the potential Milestone Payments. Because we may issue 20% or more of our outstanding Class A common stock when considering together the Stock Consideration, the PIPE Investment and the potential Milestone Payments, we are required to obtain stockholder approval of such issuance pursuant to Nasdaq Listing Rule 5635(a). For this reason, we are seeking the approval of our stockholders for the issuance of the PIPE Shares pursuant to the Subscription Agreements, as the issuance of the PIPE Share is occurring in connection with the Acquisition.

In the event that this proposal is not approved by Company stockholders, the PIPE Investment cannot be consummated. In the event that this proposal is approved by Company stockholders, but the Merger Agreement is terminated (without the Acquisition being consummated) prior to the issuance of shares of the PIPE Shares pursuant to the Subscription Agreement, such shares of Class A common stock will not be issued.

Vote Required for Approval

The approval of the PIPE Investment Proposal requires the affirmative vote of a majority of the votes cast by the stockholders present in person or represented by proxy and entitled to vote at the Special Meeting. Accordingly, under Delaware law, a Company stockholder's failure to vote, as well as an abstention and broker non-vote, will have no effect on the PIPE Investment Proposal. Abstentions and broker non-votes will be counted in connection with the determination of whether a valid quorum is established.

This Proposal No. 2 is conditioned upon the approval of the Stock Consideration Issuance Proposal and the Charter Amendment Proposal. If the Stock Consideration Issuance Proposal or the Charter Amendment Proposal is not approved, this Proposal No. 2 will have no effect, even if approved by our stockholders.

Recommendation of the Board of Directors

OUR BOARD OF DIRECTORS RECOMMENDS
THAT OUR STOCKHOLDERS VOTE "FOR"
THE PIPE INVESTMENT PROPOSAL.

The existence of financial and personal interests of one or more of the Company's directors or officers may result in a conflict of interest on the part of such director(s) or officer(s) between what he, she or they may believe is in the best interests of the Company and its stockholders and what he, she or they may believe is best for himself, herself or themselves in determining to recommend that stockholders vote for the proposals. See the section above entitled "*The Acquisition—Interests of Certain Persons in the Transactions*" for a further discussion.

PROPOSAL NO. 3 - THE SPECIAL DESIGNEE DIRECTOR ELECTION PROPOSAL

Assuming the Stock Consideration Issuance Proposal and the Charter Amendment Proposal are approved and adopted and the Acquisition is consummated, we are asking our stockholders to consider and vote upon a proposal to approve by resolution of the Class A common stock, the election, effective immediately in connection with the Closing of the Acquisition, of two directors, Katherine Stueland and Richard C. Pfenniger, Jr., to serve until the 2024 annual meeting of stockholders, each until such director's respective successor is duly elected and qualified, subject to such director's earlier death, resignation, disqualification or removal. The Company believes it is in the best interests of stockholders to allow stockholders to vote upon the election of newly appointed directors. In addition, the inclusion of this proposal is a requirement under the Merger Agreement.

Sema4's board of directors currently consists of ten (10) directors, and is divided into three classes. Each class serves for three years, with the terms of office of the respective classes expiring in successive years.

Following approval of the Special Designee Director Election Approval by the stockholders, and following the Closing of the Acquisition, Sema4's board of directors will take appropriate actions to effect the stockholders resolution to approve the Special Designee Director Election Approval.

Following the Closing of the Acquisition, it is expected that Sema4's board of directors will consist of twelve (12) directors, divided into three classes (Class I, II and III) with Class I consisting of three (3) directors, Class II consisting of four (4) directors and Class III consisting of five (5) directors. It is contemplated that Eli D. Casdin, Joshua Ruch and Michael Pellini will serve as Class I Directors, Rachel Sherman, Eric Schadt, Nat Turner and Dennis Charney will serve as Class II Directors, and Emily Leproust, Jason Ryan, Keith Meister, Katherine Stueland and Richard C. Pfenniger, Jr. will serve as Class III Directors. Information regarding Ms. Stueland and Mr. Pfenniger, as well as the other members of the Board, is set forth in the section entitled "*Management After the Acquisition*."

Vote Required for Approval

The approval of the Special Designee Director Proposal requires the affirmative vote of a majority of the votes cast by the stockholders present in person or represented by proxy and entitled to vote at the Special Meeting. Accordingly, under Delaware law, a Company stockholder's failure to vote, as well as an abstention and broker non-vote, will have no effect on the Special Designee Director Proposal. Abstentions and broker non-votes will be counted in connection with the determination of whether a valid quorum is established.

This Proposal No. 3 is conditioned upon the approval of the Stock Consideration Issuance Proposal and the Charter Amendment Proposal. If the Stock Consideration Issuance Proposal or the Charter Amendment Proposal is not approved, this Proposal No. 3 will have no effect, even if approved by our stockholders.

Recommendation of the Board of Directors

OUR BOARD OF DIRECTORS RECOMMENDS
THAT OUR STOCKHOLDERS VOTE "FOR"
THE SPECIAL DESIGNEE ELECTION PROPOSAL.

The existence of financial and personal interests of one or more of the Company's directors or officers may result in a conflict of interest on the part of such director(s) or officer(s) between what he, she or they may believe is in the best interests of the Company and its stockholders and what he, she or they may believe is best for himself, herself or themselves in determining to recommend that stockholders vote for the proposals. See the section above entitled "*The Acquisition—Interests of Certain Persons in the Transactions*" for a further discussion.

PROPOSAL NO. 4 - THE CHARTER AMENDMENT PROPOSAL

Our stockholders are also being asked to adopt the Amendment to the Charter in the form attached hereto as Annex B, which, in the judgment of our Board, is necessary and advisable in connection with the consummation of the Acquisition and the PIPE Investment. In addition, the approval of the Charter Amendment Proposal is also a condition to the Closing under the Merger Agreement.

The following is a summary of the key changes effected by the Amendment, but this summary is qualified in its entirety by reference to the full text of the Amendment, a copy of which is included as Annex B.

Our Charter currently provides for 380,000,000 shares of authorized Class A common stock. Our Board of Directors has adopted a resolution to amend our Charter to increase the authorized number of shares of Class A common stock to 1,000,000,000, subject to stockholder approval of the Amendment. No changes will be made to the number of authorized shares of our Preferred Stock.

Upon stockholder approval, we will file the Amendment and thereby amend our Charter.

Purpose of Amendment

The proposed increase in the number of shares of Class A common stock available for issuance under our Charter is required for the issuance of the Stock Consideration under the Merger Agreement and the issuance of the PIPE Shares under the Subscription Agreements. The approval of the Charter Amendment Proposal is also a condition to the Closing under the Merger Agreement. The proposed increase will also facilitate the Company's ability to satisfy the potential Milestone Payments under the Merger Agreement through the issuance of shares of Class A common stock.

Our Board of Directors further believes that the proposed increase in the number of shares of Class A common stock available for issuance under our Charter is required for the continued growth and development of our business. In particular, when practical, we may attempt to fund our future merger and acquisition transactions and/or strategic collaborations and partnerships and other corporate development objectives through the issuance of shares, which we believe may be less dilutive to stockholders than funding these activities from the proceeds of typical equity financings. The Company currently is limited to 380,000,000 shares of Class A common stock available; the details from which this number is derived are provided below.

As of the Record Date, we had 245,016,425 shares of Class A common stock outstanding. In addition, as of such date:

- 21,994,972 shares of our Class A common stock were reserved for issuance upon exercise of our outstanding warrants, including (a) 14,758,305 shares issuable by us upon the exercise of 14,758,305 public warrants, and (b) 7,236,667 shares issuable by us upon the exercise of 7,236,667 private placement warrants;
- 27,145,816 shares of our Class A common stock were reserved for issuance upon exercise of outstanding options under the Mount Sinai Genomics, Inc. 2017 Equity Incentive Plan (the "*2017 Plan*");
- 16,402,807 shares of our Class A common stock were reserved for issuance upon exercise or vesting of outstanding options and restricted stock units ("*RSUs*") granted under the Sema4 Holdings Corp. 2021 Equity Incentive Plan (the "*2021 EIP*");
- 16,331,812 shares of Class A common stock (the "*Earn-Out Shares*") were initially reserved for issuance to certain former stockholders of Mount Sinai Genomics, Inc. d/b/a Sema4 ("*Legacy Sema4*") pursuant to that certain Agreement and Plan of Merger, dated as of February 9, 2021 (as amended, the "*Prior Merger Agreement*"), by and among CM Life Sciences, Inc. ("*CMLS*"), S-IV Sub, Inc. ("*Merger Sub*") and Legacy Sema4; and
- 2,689,764 shares of Class A common stock (the "*Earn-Out RSU Shares*") were initially reserved for issuance upon the vesting of certain RSU awards ("*Earn-Out RSUs*") that were granted to certain former

equity award holders of Legacy Sema4 and certain employees of the Company pursuant to the Prior Merger Agreement.

Based upon the foregoing number of outstanding and reserved shares of Class A common stock, we have 50,418,404 shares of Class A common stock remaining available for other purposes, including 27,017,323 shares of Class A common stock available for future equity grants under the 2021 EIP and 7,229,799 shares of Class A common stock available for future grants under the Sema4 Holdings Corp. 2021 Employee Stock Purchase Plan (the "ESPP").

The proposed increase in the number of shares available for issuance under our Charter is intended to allow the Company to consummate the issuances of shares of Class A common stock contemplated by the Acquisition and the PIPE Investment, as well as to provide the Board of Directors with authority, without further action of the stockholders, to issue additional shares of Class A common stock from time to time in such amounts as the Board of Directors deems necessary. Without limitation of the foregoing, following the Closing, additional shares may be issued in connection with (1) the satisfaction of the potential Milestone Payments under the Merger Agreement, (2) future merger and acquisition transactions, strategic collaborations and partnerships and/or licensing arrangements involving the issuance of our securities, (3) future capital raising transactions through the sale of Class A common stock and/or securities convertible into or exercisable for Class A common stock in the private and/or public equity markets; (4) the provision of equity incentives to employees, officers, directors or consultants; and (5) other corporate purposes.

In the absence of a proportionate increase in our earnings and book value, an increase in the aggregate number of outstanding shares of Class A common stock caused by the issuance of the additional shares, pursuant to the Merger Agreement, the Subscription Agreements or otherwise, would dilute the earnings per share (including projected future earnings per share) and book value per share of all outstanding shares of our Class A common stock. If such factors were reflected in the price per share of the Class A common stock, the potential realizable value of a stockholder's investment could be adversely affected. An issuance of additional shares of Class A common stock could therefore have an adverse effect on the potential realizable value of a stockholder's investment.

Rights of Additional Authorized Shares

All newly authorized shares of Class A common stock will be identical to the shares of Class A common stock now authorized and outstanding. The Amendment will not affect the rights of current holders of our Class A common stock, none of whom have preemptive or similar rights to acquire the newly authorized shares pursuant to our Charter.

Effects of the Proposal

The issuance of the Stock Consideration under the Merger Agreement and the PIPE Shares under the Subscription Agreements will have an immediate dilutive effect on the proportionate voting power or other rights of the Company's existing stockholders at the Closing, and future issuances of additional could have a similar dilutive effect. The proposed increase in the authorized number of shares of Class A common stock could have other effects on our stockholders. The increase could deter takeovers, in that additional shares could be issued (within the limits imposed by applicable law) in one or more transactions that could make a change in control or takeover of us more difficult. For example, additional shares could be issued by us so as to dilute the stock ownership or voting rights of persons seeking to obtain control. Similarly, the issuance of additional shares to certain persons allied with our management could have the effect of making it more difficult to remove our current management by diluting the stock ownership or voting rights of persons seeking to cause such removal. Our Board of Directors, however, does not intend or view the Charter Amendment Proposal as an anti-takeover measure, nor does it contemplate its use in this manner at any time in the foreseeable future.

Vote Required for Approval

The approval of the Charter Amendment Proposal requires the affirmative vote of holders of a majority of our outstanding shares of Class A common stock entitled to vote at the Special Meeting. Accordingly, a Company

stockholder's failure to vote, as well as an abstention from voting and a broker non-vote, will have the same effect as a vote "**AGAINST**" such Charter Amendment Proposal.

Recommendation of the Board of Directors

OUR BOARD OF DIRECTORS RECOMMENDS
THAT OUR STOCKHOLDERS VOTE "FOR"
THE CHARTER AMENDMENT PROPOSAL.

The existence of financial and personal interests of one or more of the Company's directors or officers may result in a conflict of interest on the part of such director(s) or officer(s) between what he, she or they may believe is in the best interests of the Company and its stockholders and what he, she or they may believe is best for himself, herself or themselves in determining to recommend that stockholders vote for the proposals. See the section above entitled "*The Acquisition—Interests of Certain Persons in the Transactions*" for a further discussion.

PROPOSAL NO. 5 - THE CLASS I DIRECTOR ELECTION PROPOSAL

Sema4's board of directors is divided into three classes. Each class serves for three years, with the terms of office of the respective classes expiring in successive years. Directors and director nominees in Class I will stand for election at this meeting. The terms of office of directors in Class II and Class III do not expire until the annual meetings of stockholders to be held in 2023 and 2024, respectively. Our Nominating and Corporate Governance Committee recommended to our Board of Directors, and our Board of Directors nominated Eli D. Casdin, Joshua Ruch and Michael Pellini, each of whom is currently serving as a Class I director, for election as Class I directors at the Special Meeting. At the recommendation of our Nominating and Corporate Governance Committee, our Board of Directors proposes that each of the Class I nominees be elected as a Class I director for a three-year term expiring at the annual meeting of stockholders to be held in 2025 and until such director's successor is duly elected and qualified or until such director's earlier death, resignation, disqualification or removal.

Each director will be elected by a plurality of the votes present online at the virtual Special Meeting or represented by proxy at the Special Meeting and entitled to vote on the election of directors. This means that the three individuals nominated for election to the Board of Directors at the Special Meeting receiving the highest number of "FOR" votes will be elected. You may either vote "FOR" any of the nominees or "WITHHOLD" your vote with respect to any of the nominees. Shares represented by proxies will be voted "FOR" the election of each of the Class I nominees, unless the proxy is marked to withhold authority to so vote. You may not cumulate votes in the election of directors. If any nominee for any reason is unable to serve, the proxies may be voted for such substitute nominee as the proxy holders, who are officers of our company, might determine. Each nominee has consented to being named in this proxy statement and to serve if elected. Proxies may not be voted for more than three directors.

Nominees to the Board of Directors

The nominees and their ages as of December 31, 2021 are provided in the table below. Additional biographical information for each nominee is set forth in the text below the table.

Name	Age	Class
Eli D. Casdin[(1)(2)]	48	Class I
Joshua Ruch[(1)(2)]	72	Class I
Michael Pellini	56	Class I

(1) Member of our Nominating and Corporate Governance Committee
(2) Member of our Compensation Committee

Eli D. Casdin has served as a member of our Board since July 2020, and previously served as the Chief Executive Officer of CMLS from July 2020 to July 2021. Mr. Casdin founded Casdin Capital, LLC, an investment firm focused on the life sciences and healthcare industry, in November 2011 and currently serves as its Chief Investment Officer. Mr. Casdin also serves on the boards of directors of SomaLogic, Inc., a protein biomarker discovery and clinical diagnostics company (formerly, CM Life Sciences II Inc., a special purpose acquisition company ("*CMLS II*")), since September 2021 (having previously served as the Chief Executive Officer of CMLS II from February 2021 to September 2021), and EQRx, Inc., a pharmaceutical company (formerly, CM Life Sciences III Inc., a special purpose acquisition company ("*CMLS III*")), since December 2021 (having previously served as the Chief Executive Officer of CMLS III from February 2021 to December 2021). In addition, Mr. Casdin serves on the boards of directors of Century Therapeutics, Inc., a biotechnology company, since February 2021, Absci Corp, a drug and target discovery company, since December 2020, and Tenaya Therapeutics, Inc., a biotechnology company, since August 2019, and previously served on the board of directors of Exact Sciences Corp., a molecular diagnostics company focused on early cancer detection, treatment and monitoring, from October 2017 to September 2020. Mr. Casdin holds an M.B.A. from Columbia Business School and a B.S. degree from Columbia University School of General Studies. Mr. Casdin's qualifications to serve on our Board include his extensive leadership experience as an executive officer of an investment firm, his extensive public and private company directorship experience in the life sciences and healthcare sectors, and his expertise in finance, capital markets, and the biotechnology industry.

Michael Pellini, M.D., has served as a member of our Board since July 2021, and previously served as a member of Legacy Sema4's board of directors from August 2019 to July 2020. Since December 2017, Dr. Pellini has served as a Managing Partner of Section 32, LLC, a technology and life sciences-based venture capital fund. Dr. Pellini held roles of increasing responsibility at Foundation Medicine, Inc., a molecular information company, which was acquired by F. Hoffmann-La Roche Ltd. in 2018, from May 2011 until its acquisition, including as Chairman of the board of directors, Chief Executive Officer and President. From April 2008 to April 2011, Dr. Pellini held the position of President and Chief Operating Officer at Clarient, Inc., a medical diagnostic services company, which was acquired by General Electric Healthcare Company in 2010, and also served on Clarient's board of directors from May 2007 to April 2009. Dr. Pellini also previously served as Vice President, Life Sciences at Safeguard Scientifics, Inc., a private equity and venture capital firm from March 2007 to April 2008. Dr. Pellini currently serves as a member of the board of directors of Adaptive Biotechnologies Corporation, the GO2 Foundation, the Personalized Medicine Coalition, Singular Genomics Systems, Inc., the Mission Hospital Foundation and several private companies. Dr. Pellini earned an M.D. from Jefferson Medical College (now the Sidney Kimmel Medical College of Thomas Jefferson University), an M.B.A. from Drexel University, and a B.A. in Economics from Boston College. Dr. Pellini's broad experience in the technology, health care and life sciences industries as an investor, and his years of senior management experience at public biotechnology companies, provides him with the qualifications and skills to serve as a director on our Board.

Joshua Ruch has served as a member of our Board since July 2021, and previously served as the Chairman of our Board from July 2021 to January 2022 and as a member of Legacy Sema4's board of directors from November 2017 to July 2021. Mr. Ruch is also a managing partner and co-founder of Rho Capital Partners, an investment and venture capital management company focused on innovative technology, and has held such positions since the founding of Rho Capital Partners in 1981. Prior to co-founding Rho Capital Partners and Rho Ventures in 1981, Mr. Ruch worked as an investment banker at Salomon Brothers in New York, a multinational investment bank. In addition to Sema4, Mr. Ruch is also a trustee of the Mount Sinai Health System, Carnegie Hall and the National Humanities Center, and is a member of the Board of Governors of the Technion – Israel Institute of Technology and the Steering Committee of the Jacobs Institute. Mr. Ruch received an M.B.A. from the Harvard Business School and a B.S. in electrical engineering from the Technion – Israel Institute of Technology in Haifa, Israel. Mr. Ruch's broad experience as an investor and serving on the boards of emerging technology companies, including health care and biotechnology companies, qualifies him to serve on our Board.

Continuing Directors

The directors who are serving for terms that end after the Special Meeting and their ages as of February 22, 2022 are provided in the table below. Additional biographical information for each continuing director is set forth in the text below the table.

Name	Age	Class
Eric Schadt	57	Class II
Rachel Sherman[(1)(2)]	64	Class II
Nat Turner	36	Class II
Dennis Charney[(3)]	70	Class II
Emily Leproust[(3)]	49	Class III
Jason Ryan	47	Class III
Keith Meister[(3)]	48	Class III

(1) Member of our Nominating and Corporate Governance Committee
(2) Member of our Compensation Committee
(3) Member of our Audit Committee

Family Relationships

There are no familial relationships among any of our directors and executive officers.

Director Compensation

Please see the section entitled "*Executive Compensation—Director Compensation of Sema4*" for a summary of payments made to our directors.

Recommendation of the Board of Directors

OUR BOARD OF DIRECTORS RECOMMENDS
THAT OUR STOCKHOLDERS VOTE "FOR"
THE CLASS I DIRECTOR ELECTION PROPOSAL.

The existence of financial and personal interests of one or more of the Company's directors or officers may result in a conflict of interest on the part of such director(s) or officer(s) between what he, she or they may believe is in the best interests of the Company and its stockholders and what he, she or they may believe is best for himself, herself or themselves in determining to recommend that stockholders vote for the proposals. See the section above entitled "*The Acquisition—Interests of Certain Persons in the Transactions*" for a further discussion.

PROPOSAL NO. 6 - THE AUDITOR RATIFICATION PROPOSAL

Our audit committee has selected Ernst & Young LLP as our principal independent registered public accounting firm to perform the audit of our consolidated financial statements for the fiscal year ending December 31, 2022. Ernst & Young LLP has served as the Company's independent registered public accounting firm since firm since the closing of the business combination and the independent registered public accounting firm of Legacy Sema4 prior to the closing of the business combination. We expect that representatives of Ernst & Young LLP will be present at the Special Meeting, will be able to make a statement if they so desire and will be available to respond to appropriate questions.

At the Special Meeting, the stockholders are being asked to ratify the appointment of Ernst & Young LLP as the Company's independent registered public accounting firm for the fiscal year ending December 31, 2022. Although ratification by stockholders is not required by law, our audit committee is submitting the selection of Ernst & Young LLP to our stockholders because we value our stockholders' views on our independent registered public accounting firm and as a matter of good corporate governance. If this proposal does not receive the affirmative approval of a majority of the votes cast on the proposal, the audit committee would reconsider the appointment. Notwithstanding its selection and even if our stockholders ratify the selection, our audit committee, in its discretion, may appoint another independent registered public accounting firm at any time during the year if the audit committee believes that such a change would be in our best interests and the interests of our stockholders.

Change of Independent Registered Public Accounting Firm

In 2021, Sema4 chose not to renew the engagement of WithumSmith+Brown, PC, or Withum, which was then serving as CMLS's independent registered public accounting firm prior to the closing of the business combination. During 2021, Ernst & Young LLP was engaged to perform professional services in conjunction with the transaction between Legacy Sema4, and CMLS, which included financial statement audits of 2020, 2019 and 2018 and auditor assistance with merger activities and associated regulatory filings. Ernst & Young LLP was the independent registered public accounting firm of Legacy Sema4 and performed these financial statement audits in that capacity. The engagement of Ernst & Young LLP was approved by the Audit Committee of the Board as of August 13, 2021. Fee amounts for all services performed during 2021, including the audit fees and auditor assistance with merger activities and associated regulatory filings, are reflected in the table below.

Withum's reports on the Company's consolidated financial statements as of December 31, 2020, did not contain any adverse opinion or a disclaimer of opinion, nor were they qualified or modified as to uncertainty, audit scope, or accounting principles.

During the period from July 10, 2020 (inception) through December 31, 2020 and the subsequent period through July 22, 2021, there were no disagreements, within the meaning of Item 304(a)(1)(iv) of Regulation S-K promulgated under the Exchange Act, or Regulation S-K, and the related instructions thereto, with Withum on any matter of accounting principles or practices, financial statement disclosure, or auditing scope or procedure, which disagreements, if not resolved to the satisfaction of Withum, would have caused it to make reference to the subject matter of the disagreements in connection with its reports. Also during this same period, there were no reportable events within the meaning of Item 304(a)(1)(v) of Regulation S-K and the related instructions thereto.

The Audit Committee approved the appointment of Ernst & Young LLP as Sema4's new independent registered public accounting firm, effective as of August 13, 2021. During the fiscal year ended December 31, 2020 and the interim periods through June 30, 2021, neither Sema4 nor anyone acting on its behalf consulted with Ernst & Young LLP regarding any of the matters described in Items 304(a)(2)(i) and (ii) of Regulation S-K.

Independent Registered Public Accounting Firm Fees and Services

The following table presents fees for professional audit services rendered by Ernst & Young LLP for the audit of our annual consolidated financial statements for the years ended December 31, 2021 and 2020.

Principal Accountant Fees and Services

Fees Billed to Sema4	Fiscal Year 2021	Fiscal Year 2020
Audit fees[(1)]	$ 1,400,000	$ 2,766,250
Audit-related fees[(2)]	300,000	—
Tax fees[(3)]	—	—
All other fees[(4)]	1,778	2,601
Total fees	$ 1,701,778	$ 2,768,851

(1) "*Audit fees*" include fees for audit services primarily related to the audit of our annual consolidated financial statements; the review of our quarterly consolidated financial statements; consents, and assistance with and review of documents filed with the SEC; and other accounting and financial reporting consultation and research work billed as audit fees or necessary to comply with the standards of the Public Company Accounting Oversight Board (United States) and the SPAC merger transaction and subsequent SEC filings including registration statements.

(2) "*Audit-related fees*" include fees related to performing Sema4's internal control environment assessment.

(3) "*Tax fees*" include fees for tax compliance and advice. Tax advice fees encompass a variety of permissible services, including technical tax advice related to federal and state income tax matters; assistance with sales tax; assistance with tax matters related to acquisitions and assistance with tax audits.

(4) "All other fees" include fees for services other than the services described in the above three categories, principally comprised of support services.

Policy on Audit Committee Pre-Approval of Audit and Permissible Non-Audit Services of Independent Registered Public Accounting Firm

The audit committee's policy is to pre-approve all audit and permissible non-audit services rendered by Ernst & Young LLP, our independent registered public accounting firm. The audit committee pre-approves specified services in defined categories of audit services, audit-related services and tax services up to specified amounts, as part of the audit committee's approval of the scope of the engagement of Ernst & Young LLP or on an individual case-by-case basis before Ernst & Young LLP is engaged to provide a service. The audit committee has determined that the rendering of the services other than audit services by Ernst & Young LLP is compatible with maintaining the principal accountant's independence.

Recommendation of the Board of Directors

OUR BOARD OF DIRECTORS RECOMMENDS
THAT OUR STOCKHOLDERS VOTE "FOR"
THE AUDITOR RATIFICATION PROPOSAL.

The existence of financial and personal interests of one or more of the Company's directors or officers may result in a conflict of interest on the part of such director(s) or officer(s) between what he, she or they may believe is in the best interests of the Company and its stockholders and what he, she or they may believe is best for himself, herself or themselves in determining to recommend that stockholders vote for the proposals. See the section above entitled "*The Acquisition—Interests of Certain Persons in the Transactions*" for a further discussion.

PROPOSAL NO. 7 - THE ADJOURNMENT PROPOSAL

The Adjournment Proposal, if adopted, will allow our Board to adjourn the Special Meeting to a later date or dates to permit further solicitation of proxies. The Adjournment Proposal will only be presented to our stockholders in the event that there are insufficient votes for, or otherwise in connection with the approval of any of the proposals presented at the Special Meeting.

Consequences if the Adjournment Proposal is Not Approved

If the Adjournment Proposal is not approved by our stockholders, our Board may not be able to adjourn the Special Meeting to a later date in the event that there are insufficient votes for, or otherwise in connection with, the approval of any of the proposals presented at the Special Meeting.

Vote Required for Approval

The approval of the Adjournment Proposal requires the affirmative vote of a majority of the votes cast by the stockholders present in person or represented by proxy and entitled to vote at the Special Meeting. Accordingly, a Company stockholder's failure to vote, as well as an abstention from voting and a broker non-vote, will have no effect on the Adjournment Proposal. Abstentions and broker non-votes will be counted in connection with the determination of whether a valid quorum is established.

Recommendation of the Board of Directors

OUR BOARD OF DIRECTORS RECOMMENDS
THAT OUR STOCKHOLDERS VOTE "FOR"
THE ADJOURNMENT PROPOSAL.

The existence of financial and personal interests of one or more of the Company's directors or officers may result in a conflict of interest on the part of such director(s) or officer(s) between what he, she or they may believe is in the best interests of the Company and its stockholders and what he, she or they may believe is best for himself, herself or themselves in determining to recommend that stockholders vote for the proposals. See the section above entitled "*The Acquisition —Interests of Certain Persons in the Transactions*" for a further discussion.

SEMA4'S BUSINESS

Overview

Who We Are

We are a patient-centered, health intelligence company with a mission to use artificial intelligence, or AI, and machine learning to enable personalized medicine for all. Our integrated information platform leverages longitudinal patient data, AI-driven predictive modeling, and genomics in combination with other molecular and high-dimensional data in our efforts both to deliver better outcomes for patients and to transform the practice of medicine, including how disease is diagnosed, treated, and prevented.

We have established one of the largest, most comprehensive, and fastest growing integrated health information platforms, collecting and leveraging genomic and clinical data in partnership with patients, healthcare providers and an extensive ecosystem of life science industry contributors. We are now generating and processing over 47 petabytes of data per month, growing by more than 1 petabyte per month, and maintaining a database that includes approximately 12 million de-identified clinical records, including more than 500,000 with genomic profiles, integrated in a way that enables physicians to proactively diagnose and manage disease. This expanding database is a virtuous cycle of data: new data enables us to further develop, train, and refine predictive models and drive differentiated insights, which models and insights we deploy through our next generation diagnostic and research solutions and portals to support clinicians and researchers and engage patients, all of which interactions generate more data to continue the cycle.

Today, by providing differentiated insights through diagnostic testing solutions to physicians and patients across the United States, or U.S., in areas such as reproductive health, or Women's Health, population health, and oncology, or Oncology, we are reimbursed by payors, providers, and patients for providing these services. In collaboration with pharmaceutical and biotech, or Biopharma, companies, we receive payments for a broad range of services relating to the aggregated data on our information platform, such as consenting and recontacting patients, the development and implementation of a wide range of predictive models, including drug discovery programs, conducting real-world evidence studies, and aiding in the identification and recruitment of patients into clinical trials. Over the next several years, we expect to focus on expanding the revenue from our health system and Biopharma partners, while also working to continue to grow the volumes and revenues from our diagnostics test solutions.

While there are many companies seeking to harness the potential of "big data" to address the challenges within the healthcare ecosystem, we believe that few have the scale of our company combined with our revenue-generating diagnostics testing business and origins as a company conceived and nurtured within a world-class health system. These characteristics have enabled us to build a significant and highly differentiated technological and informational asset positioned to drive precision medicine solutions into the standard of care in an unparalleled way.

Our World Class Team and Unique Origins

Sema4 was founded by Eric Schadt, Ph.D. as part of Icahn School of Medicine at Mount Sinai's Department of Genetics and Genomic Sciences and the Icahn Institute for Genomics and Multiscale Biology. Dr. Schadt is a world-renowned expert on constructing predictive models of disease that link molecular data to physiology to enable clinical medicine. He has published more than 450 peer-reviewed papers in leading scientific journals, with a public citation or h-index of 137, and contributed to discoveries relating to the genetic basis of common human diseases such as cancer, diabetes, obesity, and Alzheimer's disease. As of December 31, 2021, we have approximately 1200 employees, including over 160 Ph.D.-level data scientists whose collective work has been recognized in areas such as data science, network modeling, multiscale biotechnology and genomics.

Sema4 was established out of the Mount Sinai Health System (which we refer to together with our related entities as Mount Sinai) and commenced operations in June 2017 as a commercial entity that could effectively engage diverse patient populations and health care institutions at scale, founded on the idea that more information, deeper AI-driven learning, and increased engagement of patients and their providers will improve diagnosis, treatment, and prevention of disease. We have since established and deployed our comprehensive and integrated

genomics and information platforms, and intend to continue to expand our scale and reach through organic and inorganic growth.

Our Purpose-Built, Flexible Platforms Address Immediate and Untapped Market Opportunities

With the rapid decline in next generation sequencing costs and the increased accessibility of large scale, commoditized computer hardware and storage information products through the cloud, we expect that our core information platform, Centrellis®, supported and fueled by our genomic analysis platform, Traversa™, will be well-positioned to drive improved clinical outcomes competitively in the healthcare market.

Our information platform was built to be highly adaptable to different data types and different diseases and health conditions, with the aim to deliver precision medicine and improved health outcomes across a patient's entire life cycle. Accordingly, we expect our platforms to capitalize on a wide range of growth opportunities, and we intend to apply capital over time to make targeted acquisitions to accelerate our ability to reach a wider range of patients, integrate more deeply into clinical workflows, and address the significant, unaddressed white space for health intelligence in the healthcare ecosystem. These include a broad range of therapeutic segments, beyond our existing focus of our diagnostics solutions for Women's Health, and Oncology, where we believe there is an immediate need for precision medicine solutions such as in autoimmune disorders, where medical care represented over $100 billion of spend in the U.S. in 2011, rare diseases, which is estimated to cost the U.S. healthcare system over $400 billion annually, and cardiovascular disease, where direct medical spend represents approximately $200 billion annually.

By combining our data-driven approach and our deep understanding of health system workflows, we have developed a holistic health information platform, Centrellis, to transform the disease diagnosis and treatment paradigm for the entire healthcare ecosystem: patients, physicians, health systems, payers, and Biopharma companies. The Centrellis platform is comprised of a data management backend that supports a wide array of databases, data warehouses, and knowledge bases, a data analytics layer to mine the data and construct predictive models that provide differentiated insights, and a series of application programmable interfaces to enable tool and software applications to access the data and models. Centrellis serves as the underlying foundation of our precision medicine solution and comprises a sophisticated data management and analytics engine. In the data management layer, our platform processes and stores data in a highly structured and accessible way, which is then analyzed by an advanced insights engine in the analytics layer that deploys state-of-the-art AI, probabilistic causal reasoning and machine learning approaches, and complementary analytics capabilities to deliver increasingly accurate insights to patients, providers, and researchers across a broad range of applications. Centrellis is designed to transform treatment decisions across multiple therapeutic areas by engaging large-scale, high-dimensional data and querying the predictive models of disease and wellness using patient-specific data to derive highly personalized, clinically actionable insights. Centrellis supports various applications, such as delivery of personalized and actionable treatment insights into clinical reports, clinical trial matching, real-world evidence trials and clinical decision support, through an advanced programmable interface, or API, layer.

We have also developed a comprehensive genomic platform, Traversa™, to serve as the backbone of our screening and diagnostic products and with the capacity to deliver molecular data that can be re-accessed, analyzed and delivered throughout a patient's lifetime. Traversa is designed to simultaneously assay at clinical-grade coverage all known medically relevant regions of the genome, as well as survey the entirety of the human genome, to surface signals that might be medically relevant to a patient in the future. Traversa is integrated with the Centrellis information platform and is designed to adapt at the rate of learning and to match the significant pace of information and knowledge growth, especially in the genomics arena, to allow us to provide actionable, accurate, and cutting-edge insights from complex and comprehensive data assets. We also expect this platform to enable us to scale our operations and to improve our margins in generating secondary insights for patients and providers.

We Are Building Richer Longitudinal Data Through Deeper Patient and Provider Engagement

We engage with patients, physicians, and health systems as partners and based on principles of transparency, choice, and consent. Driven by our direct engagement with patients and strategic relationships with multiple health systems, the database we have built contains extensive electronic medical record, or EMR, data, totaling

approximately 12 million de-identified clinical records, many with genomic profiles, and has been designed to enable Centrellis to draw from our extensive data assets in a way that enables physicians to proactively diagnose and manage disease. We expect our current and targeted strategic relationships will provide us with access to additional active patient cohorts and datasets to fuel this growth and perpetuate our iterative, data-driven business model, including by rapidly scaling our diagnostic test solutions franchise with physicians and patients through direct engagement with multiple health system partners.

In addition to providing a majority of our current revenue and generating hundreds of thousands of genomic profiles, our established diagnostic test solutions also allow us to engage patients directly as partners, both as part of their clinical care and also acting on their behalf, with appropriate informed consent, to acquire, organize and manage any health data generated on them through the course of their care, all of which contributes to the further development of our genomics and information platforms. Further, we have demonstrated patients' willingness to partner with us. For example, over 80% of diagnostics solutions patients and users who engaged with our patient portal have given us their informed consent to retrieve, organize, and manage their health records and data, and to facilitate their access to and sharing of that data, as well as additional data that patients share and create through their use of our expanding suite of digital experience products.

Our Established Diagnostic Solutions Are Scaling Rapidly

We currently operate a mature diagnostic business that generates revenue and engages with patients through our varied and sophisticated diagnostics and screening offerings. Our population health offerings are designed to run through our Traversa platform and give us the ability to inform on thousands of diseases and conditions, from rare disorders, to drug safety, to risk profiles across a broad range of common human diseases of significant public health concern. We have developed an array of diagnostic and screening solutions to inform across a patient's life course, ranging from reproductive health and newborn screening to drug safety and oncology. Our Women's Health solutions sequence and analyze an industry-leading number of genes, and use Centrellis' interpretive information tools to translate raw sequencing and clinical data efficiently and accurately into digestible clinical reports that guide decision making by patients and physicians. Our Oncology diagnostic solutions feature both somatic tumor profiling and hereditary cancer screenings, along with a foundational whole exome and whole transcriptome sequencing approach.

Centrellis enables the complex interpretations of these data to identify key driver genes, activated and suppressed pathways, molecular subtypes, therapeutic interventions and matching to clinical trials. We believe our array of diverse diagnostic solutions, built on our differentiated grounding in scientific excellence and coupled with an end-to-end full-service model, have led to our rapidly growing customer bases in Women's Health and Oncology and increasing traction with health systems, as well as deep, trusting engagement with patients.

We Are Embedding Our Solutions Through Innovative, Deep Relationships

Our origins in and subsequent work with Mount Sinai have provided us with an extensive understanding of health systems, patient, and physician workflows as well as the complex interconnectivities that define patient-physician relationships. We have used this knowledge to develop our integrated health system collaboration model, where we have the capabilities necessary to integrate across health system workflows as a holistic health intelligence partner in order to deploy our comprehensive genomics and information platforms, our data curation and harmonization capabilities, and our patient and provider engagement software applications. Our solutions support our health system partners across their operations, helping them integrate a new standard of care and creating a deep relationship with us that helps both partners realize the potential of the relationship. In addition to creating diagnostic revenue and a clinical relationship with our health system partners and their patients, this engagement provides us with access to insights informed by analyzed and processed EMRs from the health system, as well as the expansive molecular information we generate from our genomics platform as the health system's precision medicine partner. Learning from our long-standing relationship with Mount Sinai, we have refined a health system engagement model that is both operational and economic and designed to maximize both our and our health system partner's value from the relationship.

We are currently activating and expanding our relationships with several leading health systems that will expand our access to data and that we expect will position our platforms for rapid growth and broad commercial opportunities, and have recently signed contracts with three new health systems in support of this strategy. These systems include: AdventHealth, Avera Health, and Northshore University HealthSystem.

Our AdventHealth partnership builds upon the current AdventHealth Genomics and Personalized Health Program to offer genomic solutions to patients across a number of services and specialties. Together, we will conduct data structuring and curation of the combined genomic and clinical data to enable clinicians and scientists to advance research and discovery to improve patient care. We are initially focused on accelerating research in the central Florida division, which includes 18 hospitals and emergency departments, and accounts for more than two million patient visits annually. Nationally, AdventHealth has 51 hospitals and over 100 care sites across 9 states.

Our Avera Health partnership initially focuses on advancing oncology care, enabling Avera Health's providers and patients to benefit from data-driven insights that inform targeted cancer treatments. Avera Health's providers will be able to leverage Centrellis, to curate, structure and integrate clinical and genomic data to support both cancer research and clinical care at Avera Health. We will deliver predictive disease network models and clinically actionable insights, empowering Avera Health's providers to further improve the prevention, detection, and treatment of cancer for their patients. We are also offering digital tools, which give Avera Health's providers the ability to readily search for cohorts of patients based on clinical criteria, view a patient's treatment history that is contained in the curated data as an interactive timeline, and more systematically match patients to clinical trials.

At NorthShore University HealthSystem, we are enabling a data-driven genomics program to help clinicians and patients detect, and treat diseases at an early stage, when they are most treatable. As part of the program, NorthShore University HealthSystem's clinicians and patients will have access to our information-rich genomic solutions for hereditary cancer, population health, pharmacogenomics, and rare expanded carrier screening. Importantly, by combining clinical information with genomic analysis, physicians will be better positioned to administer more personalized, holistic care plans by both drawing insights on how genetic variants will impact patients' chances of developing disease and determining the most appropriate treatment options. In addition to guiding clinicians, the program is expected to make it easier for NorthShore University HealthSystem patients to understand the implications of genomic findings.

Centered on Centrellis and Traversa, we have also established and continue to seek strategic relationships with Biopharma companies to enable innovation across the entire drug lifecycle, from next generation drug discovery and development, to post-market efficacy surveillance, to informing on bioavailability, toxicity, tolerability, and other features critical to drug development. We have demonstrated the ability to integrate across all aspects of the next generation therapeutic and drug development process, including: biomarker identification as part of early stage drug discovery; identification, validation and prioritization of drug targets; clinical trial patient recruitment; real-world evidence studies; and identifying new markets and indications for existing assets. We believe our solutions allow our Biopharma partners to harness the potential of big data to enable the development of next generation precision medicine therapeutics.

Centrellis: Our Health Information Platform Solution

By combining our data-driven approach and our deep understanding of health system workflows, we have developed a holistic health information platform, Centrellis, to transform the disease diagnosis and treatment paradigm for the entire healthcare ecosystem: patients, physicians, health systems, payers, and Biopharma companies. Centrellis is the culmination of our critical competencies and goals as a company:

- technologies aimed at patient and provider engagement,
- the generation, aggregation and standardization of multi-dimensional data, and
- the modeling and generation of differentiated, domain-specific insights

Driven by the virtuous cycle and interconnection of our clinical diagnostics products, rich data assets, database engineering and data science applications, we continue to evolve and deploy our platform to facilitate a better

understanding of disease and wellness and improve the standard of care through information driven knowledge and understanding.

Provider Engagement Technologies: Our Next Generation Tools

We have built comprehensive solutions in Centrellis that enable clinicians, researchers, and patients to engage with the relevant structured health data and to leverage our predictive models of disease and wellness and produce clinically actionable insights.

For clinicians and researchers, we have designed Centrellis's adaptive learning capabilities and tools to enable health systems and clinicians to manage their patient care, research, and health data in one place and to adapt to rapidly changing scientific and clinical norms through an advanced programmable interface, or API, layer, including:

- Integration and on-boarding for health systems and practices that connects data from EMRs and disparate and varied databases,
- Searching and analyzing cohorts of patients, allowing an assessment of their patient populations and quality of care in real-time,
- Enabling clinical decision support and personalized and actionable treatment insights into clinical reports,
- Identifying patients who are candidates for certain clinical genomic analyses,
- Managing the clinical analysis ordered for their patients, from ordering, tracking, resulting, and reanalyzing based on new findings,
- Supporting clinical care and research by matching patients to available clinical trials based on highly personalized inclusion and exclusion metrics, and
- Informing on administrative decisions including as they relate to patient growth, total cost of care, and risk identification and mitigation.

Patient Engagement Technologies: Building Trust and Providing Value Through Clinical Partnership

We are dedicated to giving patients control of their own health data, and in support of this goal, we have designed patient access to Centrellis through our patient portal. Patients have demonstrated their trust by engaging with us and providing consent for us to collect and store their EMR data. After creating an account, patients are able to manage and track the clinical analysis that we are performing for them, including by being able to track, receive, and understand the initial insights into their clinical tests and data (including expanded carrier screening, or ECS, tests, and hereditary cancer tests), and to access our supporting clinical services, such as genetic counseling. Our patient portal also provides patients with the opportunity to partner with us to collect, manage, and regularly update their health data from their disparate healthcare providers, and help participants engage with their data through user-friendly applications, such as their genomic ancestry, personalized residual risk calculations, and other clinical and educational insights and information through important health events, like their pregnancy journey. For patients who have indicated their willingness to participate in research studies, our platform also provides integrated digital informed consenting and research program participation, through transparent, institutional review board approved processes, including targeted clinical trials offerings that provide relevant alternatives and access to the latest scientific trials.

Activating Data Through Generation, Curation and Engineering

We designed Centrellis to create an accessible and usable database that can support interpretation consistently across patient populations represented within the broad healthcare ecosystem. Centrellis aggregates large-scale and diverse data, abstract and structure informative unstructured data, and finally integrate the data into an accessible, web-scalable data warehouse that employs a common data model across a broad series of databases. Unstructured data derived from EMR and associated data are run through multiple pipelines leveraging machine learning-enabled

natural language processing, augmented as needed by human annotators, to extract information and knowledge from that data and then structure and implement extensive quality assurance processes for the resulting annotations. Our multiscale, integrative strategy allows us to connect the processed EMR data with complex biological data from many sources, such as the genome, proteome, transcriptome, epigenome, and microbiome. Our standardization of the genomic and EMR data also allows us to pursue strategic relationships in the Biopharma industry, connecting Biopharma companies with clinicians and researchers to create computational models of disease, discover and validate targets and biomarkers, help design clinical trials and recruit patients, and support the collection of real-world data and evidence.

We not only collect data from external sources, but also generate clinical-grade genomic datasets in our clinical and research processes, which further fuels the richness of the data from which Centrellis draws. Our genomic infrastructure enables us to convert bio-samples into datasets that span a range of genomic modalities, from DNA and RNA sequencing to epigenomic profiling, as well as different next generation sequencing technologies, including long-read, single molecule sequencing, low pass whole genome sequencing, and additional transformative technologies. Together with our diagnostic solutions, we use this multi-technology approach to ensure we generate data to comprehensively cover clinically actionable insights from and common variation in the genome, enabling the diagnosis of rare conditions and diseases or risk of passing on mutations to offspring that may cause severe disease, predicting risks of developing diseases such as cancer, predicting tolerability of various therapeutics, and creating broad genomic health profiles through the use of polygenic risk scores.

Our Advanced Domain-Specific AI Informatics for Insight Generation

Finally, we believe our informatics and analysis capabilities form a meaningful connection between the web of databases that we have created in our data warehouse and the utility of Centrellis to our users. Based on our informatics engine, Centrellis generates deep interpretive insights derived from large-scale, multi-omic data, taking advantage of our deeper data generation capabilities, and provides actionable treatment recommendations and innovative research findings. These insights are provided to patients, clinicians, researchers, and partners through the tools described above.

We are also continuing to develop these models and insights. Our researchers have developed a methodology to integrate diverse multi-omics data, including genomic, transcriptomic, and proteomic data, into causal probabilistic networks that help us to understand disease processes and identify key biomarkers through advanced network analysis. Our scientists have pioneered the use of DNA variation information to statistically infer causal relationships among any number of traits that have common genetic variance components. These approaches allow our teams to infer directed causal relationships among a pair of traits with shared genetic variance components, which then can be more systematically applied to traits to infer probabilistic causal network structures that can be mined for a broad range of discoveries. We also designed Centrellis with a high degree of flexibility to allow the platform to adjust to the rapidly changing and advancing health information landscape, highlighted by our Traversa genomic analysis platform, which we believe will lead to improved cost profiles over time as assays transition to whole genome sequencing at increasing resolutions.

As we collect and analyze additional datasets, our platform enables the virtuous cycle of data, and we are able to further refine our products and hone our capabilities to provide enhanced analysis of these data. More data and more insights generate further data and insights to support our models. We have constructed automated pipelines to continuously search the literature and research repositories to expand and distill our knowledge graphs, which are in turn queried to provide the interpretations and insights delivered to users of our systems. To support our interpretations and insights, we utilize internal experts as needed to help resolve conflicting findings to improve upon the actionable insights we deliver to physicians and patients.

Traversa: Our Genomics Platform for Optimizing Screening and Diagnostic Genomics Products and Population Health Initiatives

Traversa is our comprehensive genomics platform that has been designed to serve as the backbone of our genomic analysis products, and we are in the process of transitioning all of our genomic analyses to this platform. For products on the Traversa platform, we generate data on all known medically relevant regions of the genome at

clinical-grade coverage, as well as low-pass whole genome data to span all common variation in the genome. We also ask for the patient's consent to biobank the corresponding samples for future clinical testing. While we report on the specific genes analyzed at the request of the clinician and patient, these baseline data and bio-banked samples allow us to respond to requests for additional analysis quickly by generating "in silico" interpretations on genomic data already existing on a patient and to surface signals that might be medically relevant across a patient's life course.

When deployed at across an entire health system, as we intend with our health system partners, Traversa will enable data driven collaborations and initiatives with health systems by establishing comprehensive clinical and genomic data profiles with patient consent. Particularly where integrated with EMR data, Traversa provides health systems with a unique opportunity to deploy population health management programs because of the robust data from which those programs will draw and because of the efficiencies it will create across the health ecosystem by eliminating the repetition of the most time-consuming and costly aspects of genomic analysis, including sample collection and preparation and the generation of sequence data. Using Traversa, clinicians and health systems will have the freedom to advance patient care by allowing clinicians to establish clinical utility and drive adoption of new analysis products, which we believe will consequently expedite improved reimbursements against lower total production costs for those offerings.

We Collect and Manage Rich, Longitudinal Data Built from Diverse Sources

The health information database that we have created draws from many complementary sources, which we manage in accordance with patient consent and preferences, our regulatory obligations, and our transparent privacy policy and practices. These data are housed in a complex, cloud-based data lake that allows us to manage the various rights and obligations for each dataset at a granular level, including patient-specific requests with regard to their data.

This database includes data generated in the performance of our clinical services to patients and clinicians, including Women's Health and Oncology testing, as well as additional data that patients provide to us through their engagement with our patient portal and research programs. In addition, we participate in health information exchanges and public database programs, including through the National Institutes of Health. We also generate and collect data by collaborating with our research partners and provide sequencing and analysis services in connection with research programs. We further leverage the data rights provided by patients and secured through our strategic relationships, such as our oncology information partnership with VieCure that by the end of 2022 is expected to provide us with access to multiple cancer centers and data from all of their active cancer patients, with the number of newly diagnosed active cancer patients growing substantially each year. Additionally, we support health systems and other clinical service providers by applying our Centrellis tools to their clinical workflows and medical record databases, and we receive certain rights to work with anonymized datasets and to partner with the health systems in their ongoing clinical and research programs. We have provided such services extensively for Mount Sinai and are in the process of expanding this program with additional health systems, including Advent Health, Avera and NorthShore. For more information regarding our data arrangements with Mount Sinai, see "*Certain Relationships and Related Party Transactions—Sema4*".

Our Established Diagnostics Solutions

Our existing diagnostics solutions business centers around Women's Health and Oncology and our industry-leading diagnostic solutions are powered by Centrellis and delivered through a full-service model that efficiently integrates into provider workflows. Currently, we derive the majority of our revenue from these established diagnostic test solutions.

Our Elements Women's Health Solutions

Our deep foundation in Women's Health began before Sema4's formation within Mount Sinai, where our lab—then called the "Mount Sinai Genetics Testing Lab"—pursued the goal of providing compassionate patient care to a highly diverse population while advancing science through education, research, and outreach. We pioneered accurate and precise pre-conception genetic screening, and we have continued to build upon that work, expanding our focus into a multi-generational and pan-ethnic view of the health of individual women and their families. Sema4

Elements™, our portfolio of data-science driven products and services to support reproductive and generational health, highlights our continued focused effort to accelerate the expansion of genomic diagnostic solutions, secondary insights, platform solutions and enriching health system value to drive continued growth in our Women's Health business, including by leveraging our state-of-the-art genomic infrastructure and Centrellis platform.

Carrier Screening: Deriving population-health insights from genomic data to differentiate our industry-leading tests

Our Expanded Carrier Screen, or ECS, test is one of the most comprehensive and accurate carrier screening tests available in the market, covering up to 502 genes. We provide a comprehensive solution to physician practices to enable them not only to deliver sophisticated differential insights and care management guidance in support of the clinician's care plan for the patient, but to also do so with minimal impact on the practice's operation, helping to ensure physician offices are not overwhelmed by the amount of information and follow up that can be necessitated by carrier screening.

Our ECS solution uses proprietary technology to identify a patient's molecular ancestry on a genome-wide level for personalized residual risk assessments by analyzing patient-specific genealogical information that is critical to better understand a patient's chance for passing on inherited disease. This technology has been designed to increase the accuracy of the residual risks reported to patients, in comparison to competing products that determine residual risk based on using self-reported ancestry information that does not reflect the population groups represented in the patient's genome. Our solution also provides patients with personalized residual risk education, along with the option to view their molecular ancestry report in the Sema4 patient portal.

Our Non-invasive Prenatal Testing Solutions

Our Noninvasive Prenatal Testing is a comprehensive noninvasive prenatal test, that screens for autosomal and sex chromosome aneuploidies. Our advanced sequencing technology has been designed to provide reliable results down to approximately 2% fetal fraction, the amount of fetal cell-free DNA in the maternal blood sample, and has been designed to have a low failure rate, which helps reduce the need for redraws, limits unnecessary invasive procedures, and improves time to results.

Expansive development in prenatal screening allows our team to advance scientific efforts to deliver Genome Wide Screening and includes the ability to detect additional whole chromosome aneuploidies and copy number variations, or CNVs. We believe an updated bioinformatics pipeline will help to further reduce false positives. We expect to release new versions of our code in 2022, which we believe will help improve the positive predictive value for CNV calling through fetal fraction enrichment and CNV normalization through nucleosome positioning and fragment characteristics.

We are developing these future test versions to enable the detection of single gene disorders, such as cystic fibrosis and sickle cell disease. This testing may be used for at risk couples to screen a pregnancy for genomic analysis of a specific disorder or as a general screening tool with a panel of diseases. We believe these code enhancements will also facilitate validation of polyploidy, fetal zygosity and molar pregnancy detection, all of which are important aspects of screening pregnancies for chromosomal abnormalities and are not widely available through non-invasive testing.

Our Natalis Newborn Screening Solutions

Our Natalis test is an extension of our screening portfolio allowing for detection of heritable conditions from pre-conception, pregnancy and childhood. Newborn Screening, or NBS, detects heritable conditions that are amenable to medical management in newborns and young children. Natalis screens for 193 conditions where knowledge of the condition by the pediatrician may result in prescribing treatment with medications, dietary modifications, or other therapies to improve the baby's health. All positives are confirmed using biochemical and molecular analysis. Natalis screens for up to five times as many conditions as the newborn screening programs run by certain state governments.

Our Signal Precision Oncology Solutions

We believe that our Centrellis platform, combined with our comprehensive whole exome and whole transcriptome tumor profiling and hereditary cancer and pharmacogenomics genomic testing solutions, will make a meaningful difference in transforming cancer care. We have developed the "Sema4 Signal®" portfolio to be leveraged individually or as part of a holistic solution for precision oncology care. The Sema4 Signal portfolio features the integration of our germline and somatic tests with our informatics and data science tools, enabled by customized services to meet patient and provider needs to help drive more personalized care. The Sema4 Signal products include our oncology genomic test solutions, our molecular and clinical data curation and annotation capabilities to inform on the genomic information in the context of the patient's previous and current medical records, and various software applications to enable engagement of these data and complex results to facilitate clinical decisions, research discoveries and drug development.

The Sema4 Signal Hereditary Cancer Solution

Our Sema4 Signal Hereditary Cancer solution determines if a patient carries an inherited genetic change that increases the risk of cancer or informs on cancer treatment. It is used to inform personalized medical management decisions to aid early detection and prevention of cancer, as well as to determine the most appropriate treatment approaches if cancer occurs, and strategies to reduce risk of additional cancers.

We offer one of the most comprehensive sets of panels on the U.S. market, and deliver this solution supported by the Traversa platform to enable us to adapt our panels as new discoveries on clinically actionable variants are made, so we can adapt at the rate of learning. Our solution includes tools to enable testing at the point of care or outside the office, including a digital family screening questionnaire to identify individuals who would benefit from testing, digital ordering via an EMR portal, video-based education, saliva procurement in the patient's home, proactive billing investigation, pre-and post-test genetic counselling and family outreach to enable cascade testing.

Our Hereditary Cancer Solution is a unique product in our portfolio in that it is sold in connection with our Oncology, Women's Health and population health solutions. For affected cancer patients, integrating hereditary cancer with our Sema4 Signal Whole Exome and Transcriptome and our informatics offerings, which incorporating real world evidence, integrates available data needed to better personalized clinical care decisions. For unaffected patients, our Sema4 Signal Hereditary Cancer solution is incorporated into both our Women's Health and Population Health products and services to support early identification and treatment of cancer risk.

Our Signal Whole Exome and Transcriptome Solution

We believe our Sema4 Signal Whole Exome and Transcriptome solution is one of the most comprehensive molecular profiling solutions from a commercial entity to receive New York State approval. Our profiling platform integrates tumor-normal matched whole exome sequencing, or "WES", with whole transcriptome sequencing, or WTS, to deliver clinically actionable information about somatic and germline alterations in solid tumors and hematologic malignancies. This solution provides for access to a holistic view of a patient's genome and insights into novel fusions, splice variants, and molecular pathways. It also provides for germline findings for cancer and non-cancer genes, as per American College of Medical Genetics guidelines, with relevance to comorbidities, such as familial hypercholesterolemia, and certain drug interactions.

We deliver the WES/WTS solution using a number of proprietary tools housed in Centrellis, including our cancer knowledge-base, which contains comprehensive structured data and learnings on clinically relevant variants, including curated maps that link relevant clinical trials to variants that serve as eligibility biomarkers for the trials, as annotated by Ph.D. oncology experts. Our variant interpretation station for oncology automates clinical reporting by managing the variant curation process and recommending suitable therapies. This AI-driven genomic platform is updated regularly with recent medical literature and prioritizes clinically-significant variants, enabling providers to quickly review and leverage actionable insights.

Sema4 Signal Informatics Solutions

To complement the genomics diagnostic solutions, the Sema4 Signal products leverage Centrellis's provider engagement technologies, described above, including to automatically abstract, annotate, and combine oncology specific datasets, including clinical medical record data, imaging, and genomics. This clinical-genomic data set is provided back to health systems and providers and is powered by our digital applications to drive better personalized care for patients, including clinical trial recruitment, improved system-wide quality of care and increased financial and research activity.

Regulatory and Payer Relations Strategy

We have developed and are advancing our strategy to drive increased reimbursement and higher average selling prices, or ASPs, for our Sema4 Signal Oncology solutions. As part of this strategy, we will take advantage of a Medicare Administrative Contractor (MAC), National Government Services (NGS), update to a Local Coverage Decision (LCD) titled Genomic Sequence Analysis Panels in the Treatment of Solid Organ Neoplasms under which qualifying CGP tests are covered for patients insured by Medicare, who are living with advanced cancer and meet other clinical criteria.

In addition, we are expanding our presence in select markets where Palmetto GBA is the MAC and the MolDx program they administer provides opportunities to apply for coverage under existing or future LCDs. Specifically, we have, or intend to, submit Technical Assessments for coverage and reimbursement of WES/WTS and other tumor profiling solutions based on existing MolDx LCDs.

Beyond the testing, we are exploring the regulatory and market access landscape as it relates to the governance and reimbursement of real-world evidence and AI driven clinical decision-making tools. As we demonstrate the clinical utility of information driven solutions, these emerging areas will become relevant.

Our COVID-19 Testing Initiative

In response to the outbreak of the worldwide COVID-19 pandemic, in the first quarter of 2020, we rapidly leveraged our existing technologies and infrastructure capabilities, supplemented by a requisite set of technologies and services, to offer a comprehensive COVID-19 diagnostic testing service for our customers. However, on December 15, 2021, we announced that we decided to discontinue COVID-19 testing services by March 31, 2022 and began notifying our COVID-19 testing solutions customers of this decision. Nationwide and regional lab capacity for COVID-19 testing has increased since we entered the market for COVID-19 testing in the first half of 2020. Management believes it is the appropriate time to discontinue this line of services and dedicate all of our efforts and resources to our core mission to transform healthcare by using artificial intelligence to enable the delivery of precision medicine as the standard of care.

Our Solution for Health Systems and Providers

Our origins within a large academic medical center helped us establish our integrated health system collaboration model, where we seek to integrate our platform across numerous health system workflows to enable precision medicine solutions using Centrellis, from Women's Health, to Oncology, to patient wellness. Our provider and health system engagement offerings include patient and provider portals, facilitating scheduling of patient appointments, patient consenting, pre-test and post-test genetic counseling, results delivery and patient record management, among other tools and applications that are designed to allow physicians to better engage contextualized information around their patients to improve decision making.

Our Health System Engagement Model

We believe we have developed a compelling value proposition for our initial health system partners, with distinguishing features including our focus on serving local community populations, our track-record of delivering digital or technology-enabled standards of care, and our investment in precision medicine and adoption of genomic diagnostic solutions, with our desire to have predictive insights permeate all service lines and the general patient

experience in their system. In addition to our deep relationship with Mount Sinai, we have contracted to deploy Centrellis in additional health systems, which we expect will expand our impact and reach.

We have refined a health system engagement model designed to maximize both our and our partner health system's value from the relationship. We balance clinical-grade and research-based projects in order to deliver value in an economically sustainable manner and establish health and economic performance metrics that form the basis of quarterly steering committee reviews with the program's executive sponsors. Our model focuses on:

- Embedding our genomic analyses as a standard of care for Women's Health, Oncology and/or specific diseases, which includes our full-service model including patient and provider education, patient engagement, genetic counseling and integration with the health systems' clinical workflow and EMR,
- Enhancing existing health system data sets by leveraging our data curation capabilities for both structured and unstructured data to identify clinical utility that can be used by health system providers, researchers and administration,
- Developing software applications to facilitate deeper engagement of the enhanced health system data we produce, such as reconstructing and visualizing patient health journeys, identifying patient cohorts based on any number of filter criteria, and characterizing outcomes of patients in response to different treatments prescribed,
- Establishing population health programs where health system patients are invited to broad population genetic screening, and
- Developing mutually beneficial research collaboration programs that leverage the strengths of our and our health system partners.

Our Solutions Create Mutually Beneficially Value for Us and Our Health System Partners

We pursue strategic relationships with health systems that evaluate financial returns on a holistic basis. We evaluate success on a long-term basis and recognize that the primary aim of every health system is to provide superior patient care with improved health economics. As such, we continue to use the proceeds from our July 2021 business combination and related private placement financing (which we refer to as the "Prior PIPE Investment") to accelerate growth in our health system relationships by further investing in research-oriented projects, as well as data curation, platform integrations, and building standards of care to operationalize our testing programs. Starting with Mount Sinai and extending throughout our network, we intend to cross-validate and scale our technologies across health systems, as we seek to enable patients by leveraging data and tools across systems and patient populations in a network model so each partner can benefit from what is being learned across the healthcare ecosystem.

We Act as a Broker and Catalyst for Commercial Engagement Between Health System and Biopharma Companies

While health systems and Biopharma companies have an established ability to collaborate effectively and will continue to partner directly, we believe that our network in both segments of the healthcare ecosystem and ability to add value to these relationships through data engineering makes us well-positioned as a valued collaborator for both types of organizations. Biopharma collaborations are often not the focus for health systems, as they have high start-up costs to develop relationships that extend to patient care. We can support our health system partners by working more collaboratively with them to understand their capabilities and how those capabilities are complemented by our enhancement of a health systems' data assets and clinical-genomic data generation capabilities, and by facilitating solutions that can be provided jointly to Biopharma companies.

Our Biopharma Solutions Engage and Enable Our Partners

We have established and continue to seek strategic relationships with Biopharma companies to enable drug discovery, development, and commercialization. We have demonstrated the ability to integrate across the pharmaceutical life cycle as a result of the unique data and patient and provider engagements developed in our

health system relationships and information-driven diagnostics solutions, combined with our powerful analytics capabilities and software solutions.

The Biopharma industry has become increasingly competitive as it moves toward the more precise targeting of patients in crowded disease segments, and we believe this trend positions us as a key partner for Biopharma companies to build a competitive advantage by unlocking the power of big data and enabling next generation precision medicine.

We Strive for Interconnected Strategic Relationships

We serve our Biopharma customers through a unique combination of clinical testing services, clinical and research study design and execution, and advanced data and analytics capabilities.

Our competitive advantage in this space comes from leveraging comprehensive data generated via testing, integrating these deep molecular profiles with clinical patient information, and representing this comprehensive patient data in the Centrellis platform. This enables us to create direct and real time integration of clinical and genetic data with providers connected to drug discovery research, real world evidence studies, and other therapy development opportunities. We are also able to utilize our solutions and unique data assets to enroll patients into clinical trials and to connect Biopharma partners to patient populations matching eligibility criteria for their trials, to facilitate patients receiving novel therapies still under development, and to perform broad genomic and transcriptomic sequencing on health system partner sample banks in collaboration with Biopharma partners.

In our engagement with Biopharma customers, we are focused on a range of disease conditions, including oncology, autoimmune and inflammatory disorders, and rare diseases. Our disease-agnostic approach provides us with the flexibility to support our Biopharma partners across varied therapeutic areas. We continue to work with our Biopharma partners to identify their specific needs and broaden the scope of our disease coverage accordingly.

We believe that, because of our core capabilities and differentiated approach, we are well-positioned to support next-generation drug discovery, development, and commercialization. We further believe our ability to generate deep, clinical-grade multi-omic datasets renders us a valuable genomic testing solution provider for precision medicine Biopharma products. Through direct engagement of providers and patients, we assist Biopharma partners in a patient-centric approach to research and clinical development. By obtaining and curating high-dimensional data in our Centrellis platform, we deliver novel insights that help to de-risk the development of next generation therapeutics, provide for pharmacologic proof of concept via the integration of genomic and clinical data support, reduce development costs, enhance the patient experience, and increase speed to market.

Sema4's Solutions for BioPharma Customers

We engage with our Biopharma customers to develop and deliver unique goods and services for the particular issues that each customer faces. We believe that our Biopharma partners can realize significant value when collaborating with our team to utilize a more integrated, end-to-end solution that leverages our core set of capabilities, including longitudinal patient data, AI-driven predictive modeling, and genomics. We have demonstrated the ability to develop these deep, integrated strategic relationships with Biopharma companies. For example, our five-year collaborative study with Sanofi S.A., or Sanofi, is centered on discovery of new insights into the biological mechanisms and other factors implicated in asthma to help drive Sanofi's next generation of asthma targets as well as to enhance Sanofi's understanding of the relevant populations for both its current and in-development therapies and the therapies marketed by others. This asthma study is currently recruiting nearly 1,200 patients, and involves comprehensive clinical characterization of patients and controls, longitudinal monitoring of patient conditions through various applications and devices, collection of biological samples for molecular profiling and generation and integration of DNA and RNA sequencing data with clinical and device acquired data. The study is also leveraging the integrated, longitudinal data to construct models of asthma to stratify patients into subtypes, and seeking to better understand treatments relevant to different subtypes or where there is unmet need for further drug discovery efforts. Along with Sanofi, we will collect traditional clinical data, genomics, immunological, environmental, and sensor data from mobile devices to enable sophisticated analyses and to include advanced causal network modeling.

In general, our Biopharma strategy focuses on three main offering areas:

- Genomic Testing and Analysis Solutions: We serve as a comprehensive clinical testing lab, offering a broad menu of molecular, cytogenic and biochemical testing services for our Biopharma partners. Our technology development group enables us to apply innovative profiling technologies such as long-read, single-cell and spatial molecular profiling approaches to help address our Biopharma partners' challenges. The data generated by these capabilities, when combined with our analytics services, can produce insights that inform on disease biology, improve and accelerate the drug development process, and help ensure that patients can be made aware of relevant treatment options.

- Data and Analytics Solutions: Centrellis enables us to provide our Biopharma partners with unique, data-driven insights that can help to accelerate the development of precision medicines, utilizing HIPAA-compliant, de-identified datasets. Using advanced analytics and causal network modeling, we work with partners to organize high-dimensional data in ways that facilitate the identification of statistically-inferred causal relationships that enable the identification, validation and prioritization of biomarkers and targets; identify molecular subtypes of disease; and predict patient disease progression, prognosis, drug response, adverse events, and other clinical outcomes. We believe that one of our particular strengths is our data science team, which is comprised of experts published in leading scientific journals. We work with collaborators, researchers, and key opinion leaders to build new models of disease and deliver insights to Biopharma partners that can further optimize their operations.

- Clinical Trial Enablement Solutions: We believe that Centrellis, combined with our active, direct engagement of patients and providers in our Women's Health and, by extension, rare disorders, Oncology, and population health solutions, positions us well to assist Biopharma partners in their clinical development activities. We have developed a number of software as a service, or SaaS, products to enable Biopharma clinical development, including a clinical trial patient matching product and a clinical trial design product that work with our longitudinal clinic-genomic dataset. Given our patient consent structure, we have the ability to re-contact patients who may benefit from a Biopharma sponsor's trial. We have developed novel, technology-enabled workflows and solutions that allow us to search for and identify relevant patients in a manner that fully maintains patient confidentiality, and work with providers to assess and enroll these patients in clinical trials. The breadth of search and precision of this method of patient recruitment can substantially improve trial timelines versus traditional recruitment methods. We also assist prominent Biopharma partners seeking to use high-quality genomic analysis to assess patient eligibility for clinical trials. We believe our clinical testing services and data solutions make us a key partner for supporting efficient clinical trials.

Research and Development

We have invested a substantial amount of time and expense into research and development for our technology and test offerings, which requires the continuous improvement of software capabilities to analyze data and process customer orders. Our research and development efforts focus on several key areas, including multiscale biotechnology, assay development across sequencing technologies, data science and engineering, and the development of network-based models. We expect our research and development activities to increase as we innovate and expand the application of our current and future platforms including Traversa and Centrellis.

Our internationally recognized research team includes leaders in data science, network modeling, multiscale biotechnology and genomics. As noted above, our CEO, Eric Schadt, is a world-renowned expert on constructing predictive models of disease that link molecular biology to physiology to enable clinical medicine. He has published more than 450 peer-reviewed papers in leading scientific journals, with a public citation or "h-" index of 137, and has contributed to discoveries relating to the genetic basis of common human diseases such as cancer, diabetes, obesity, and Alzheimer's disease. Under the leadership of our CEO, our research team comprises more than 160 Ph.D.-level scientists, complemented by additional physician scientists and certified technicians as of December 31, 2021. Ongoing collaborations with scientists and clinicians at the Mount Sinai and other healthcare systems allows our research to remain patient-centered and clinically relevant.

Intellectual Property

We have intellectual property rights pertaining to all elements of our platforms and solutions. Our success and ability to compete depend in part on securing and preserving enforceable patent, trade secret, trademark and other intellectual property rights; operating without having competitors infringe, misappropriate or otherwise circumvent these rights; operating without infringing the proprietary rights of others; and obtaining and maintaining licenses for technology development or product commercialization.

Patents

The fields of genomic and health information analysis present limited opportunities for patent protection, based on well-known legal precedents. As result, our patent protection strategy is to protect our non-gene specific technology and our specific biomarkers. In this regard, as of December 31, 2021, we have four pending utility patent applications and one provisional patent application. The pending utility patent applications include a U.S. patent application related to a genome annotation software platform for annotating genomic intervals that are clinically relevant for analysis, a U.S. patent application related to a genetic carrier screening process, and U.S. and European patent applications related to therapeutic treatment for subjects having certain polymorphic markers associated with specific human leukocyte antigen alleles. If patents are issued from the currently pending applications, the earliest patents will begin expiring in 2040, subject to potential extensions of the patent term that will be calculated based on the length of the patent examination process.

Trade Secrets

We have a trade secrecy program to prevent disclosure of our trade secrets to others, except under stringent conditions of confidentiality when disclosure is critical to our business. We protect trade secrets and know-how by establishing confidentiality agreements and invention assignment agreements with our employees, consultants, scientific advisors, contractors, and collaborators. These agreements provide that all confidential information developed or made known during the course of an individual or entities' relationship with us must be kept confidential during and after the relationship. These agreements also provide that all inventions resulting from work performed for us or relating to our business and conceived or completed during the period of employment or assignment, as applicable, will be our exclusive property. In addition, we take other appropriate precautions, such as physical and technological security measures, to guard against misappropriation of our proprietary information by third parties.

Although we take steps to protect our proprietary information and trade secrets, including through contractual means with our employees and consultants, third parties may independently develop substantially equivalent proprietary information and techniques or otherwise gain access to our trade secrets or disclose our technology. Accordingly, we may not be able to meaningfully protect our trade secrets. For more information regarding the risks related to our intellectual property, see the section entitled "*Risk Factors—Risks Related to Our Intellectual Property and Trade Secrets*."

Trademarks

We own various trademarks, applications and unregistered trademarks in the U.S and other commercially important markets, including our company name, product and service names and other trade or service marks. Our trademark portfolio is designed to protect the brands for our products and services, both current and in the pipeline.

Regulation

Reimbursement

Patients who have diagnostic tests ordered or are prescribed treatments by providers performing the prescribed services, generally rely on third-party payors to reimburse all or part of the associated healthcare costs. Sales of our products and services will therefore depend substantially on the extent to which the costs of our products and services will be paid by third-party payors, including health maintenance, managed care and similar healthcare

management organizations, or reimbursed by government health administration authorities, such as Medicare and Medicaid and private health insurers.

In the United States, our ability to commercialize and the commercial success of our product and service offerings will depend in part on the extent to which governmental payor programs at the federal and state levels, including Medicare and Medicaid, private health insurers and other third-party payors provide coverage for and establish adequate reimbursement levels for these offerings. Government authorities, private health insurers and other organizations generally decide which devices they will pay for and establish reimbursement levels for healthcare. Medicare is a federally funded program for the elderly and disabled managed by Centers for Medicare & Medicaid Services, or CMS, through local contractors that administer coverage and reimbursement for certain healthcare items and services. Medicaid is an insurance program for certain categories of patients whose income and assets fall below state defined levels, and is funded jointly by federal and state governments and managed by each state. Similarly, the federal government manages other healthcare programs, including the Veterans Health Administration, the Indian Health Service, and Tricare, the healthcare program for military personnel, retirees, and related beneficiaries. Many states have also created pharmacy assistance programs for individuals who do not qualify for federal programs. In the U.S., private health insurers and other third-party payors often provide reimbursement for products and services based in part on the coverage and payment rates set by the Medicare or Medicaid programs.

Federal programs in the U.S. also sometimes impose price controls through mandatory ceiling prices on purchases by federal agencies and federally funded hospitals and clinics and mandatory rebates on retail pharmacy prescriptions paid by Medicaid and Tricare. These restrictions and limitations influence the purchase of healthcare services and products. Legislative proposals to reform healthcare or reduce costs under government programs may result in lower reimbursement for our products and services or exclusion of our products and services from coverage. In addition, government programs like Medicaid include what are in effect substantial penalties for increasing commercial prices of certain products over the rate of inflation which can affect realization and return on investment.

Increasing efforts by governmental and third-party payors to cap or reduce healthcare costs may cause such organizations to limit both coverage and level of reimbursement for newly approved healthcare products. At the state level, legislatures are increasingly passing legislation and implementing regulations designed to control pharmaceutical and biological program pricing, including price or patient reimbursement constraints, discounts, restrictions on certain product access and marketing cost disclosure and transparency measures, and, in some cases, designed to encourage importation from other countries and bulk purchasing.

As a result of the above trends, we may need to conduct expensive studies in order to demonstrate the medical necessity and cost effectiveness of our products and services, in addition to the costs required to obtain FDA approvals. Our products and services may not be considered medically necessary or cost effective, or the discount percentages required to secure coverage may not yield an adequate margin over cost.

Many hospitals implement a controlled and defined process for covering and approving diagnostic tests and medical devices. Any marketing efforts that are determined to have violated such policies could result in the denial or removal of our products from that hospital’s list of approved products.

Moreover, a payor’s decision to provide coverage for a diagnostic product does not imply that an adequate reimbursement rate will be approved. Adequate third-party reimbursement may not be available to enable us to maintain price levels sufficient to realize an appropriate return on our investment in device development. Legislative proposals to reform healthcare or reduce costs under government insurance programs may result in lower reimbursement for our products and services or exclusion of our products and services from coverage. The cost containment measures that healthcare payor and providers are instituting and any healthcare reform could significantly reduce our revenue from the sale of any approved products and services. We cannot provide any assurances that we will be able to obtain and maintain third-party coverage or adequate reimbursement for our products and services in whole or in part.

In addition, amendments to the False Claims Act impose severe penalties for the knowing and improper retention of overpayments collected from governmental payors. Within 60 days of identifying and quantifying an overpayment, a provider is required to notify CMS or the Medicare contractor of the overpayment and the reason for it and return the overpayment. These amendments could subject our procedures for identifying and processing payments to greater scrutiny. Overpayments may occur from time to time in the healthcare industry without any fraudulent intent. For example, overpayments may result from mistakes in reimbursement claim forms or from improper processing by governmental payor. We maintain protocols intended to identify any overpayments. From time to time, we may identify overpayments and be required to refund those amounts to governmental payors.

Clinical Laboratory Improvement Act

Our clinical reference laboratories in Connecticut are required to hold certain federal certificates to conduct our business. Under the Clinical Laboratory Improvement Act of 1988, or CLIA, we are required to hold a certificate applicable to the type of laboratory examinations we perform and to comply with standards covering personnel, facilities administration, inspections, quality control, quality assurance and proficiency testing.

As of December 31, 2021, we have a current certificate under CLIA to perform testing at our laboratory locations in Stamford and Branford, Connecticut. To renew this CLIA certificate, we are subject to survey and inspection every two years to assess compliance with program standards. Moreover, CLIA inspectors may make random inspections of our clinical reference laboratories. The regulatory and compliance standards applicable to the testing we perform may change over time, and any such changes could have a material effect on our business.

If our clinical reference laboratory is out of compliance with CLIA requirements, we may be subject to sanctions such as suspension, limitation or revocation of our CLIA certificate, as well as directed plan of correction, state on-site monitoring, civil money penalties, civil injunctive suit or criminal penalties. We must maintain CLIA compliance and certification to be eligible to bill for diagnostic services provided to Medicare and Medicaid beneficiaries. If we were to be found out of compliance with CLIA requirements and subjected to sanction, our business could be harmed.

State Laboratory Testing

We are is required to maintain a license to conduct testing in Connecticut. Connecticut laws establish standards for day-to-day operations of our laboratories in Stamford and Branford, Connecticut. If our clinical reference laboratories are out of compliance with Connecticut standards, the Connecticut Department of Health Services, or CDHS, may suspend, restrict or revoke our license to operate our clinical reference laboratories, assess substantial civil money penalties, or impose specific corrective action plans. Any such actions could materially affect our business. As of December 31, 2021, we maintain a current license in good standing with CDHS. However, we cannot provide assurance that CDHS will at all times in the future find us to be in compliance with all such laws.

Several states require the licensure of out-of-state laboratories that accept specimens from those states. For example, New York requires a laboratory to hold a permit which is issued after an on-site inspection and approval of testing methodology and has various requirements over and above CLIA and the College of American Pathologists, or CAP, Laboratory Accreditation Program, including those for personnel qualifications, proficiency testing, physical facility, equipment, and quality control standards. Our laboratory holds the required licenses for California, New York, Maryland, Pennsylvania, and Rhode Island.

Each of our clinical reference laboratories in Connecticut is required to be licensed on a test-specific basis by New York State as an out of state laboratory and our products, as laboratory-developed tests, or LDTs, must be approved by the New York State Department of Health, or NYDOH, before they are performed on samples from New York. Each Sema4 laboratory is licensed by New York, and we are currently approved for testing samples from New York. We are subject to periodic inspection by the NYDOH and we are required to demonstrate ongoing compliance with NYDOH regulations and standards.

Other states may adopt similar licensure requirements in the future, which may require us to modify, delay or stop our operations in such jurisdictions. Complying with licensure requirements in new jurisdictions may be expensive, time-consuming, and subject us to significant and unanticipated delays. If we identify any other state

with such requirements, or if we are contacted by any other state advising us of such requirements, we intend to follow instructions from the state regulators as to how we should comply with such requirements.

Food and Drug Administration

Laboratory Developed Tests

We provide our tests as LDTs. CMS and certain state agencies regulate the performance of LDTs (as authorized by CLIA and state law, respectively). Historically, the FDA, has exercised enforcement discretion with respect to most LDTs and has not required laboratories that furnish LDTs to comply with the agency's requirements for medical devices (e.g., establishment registration, device listing, quality systems regulations, premarket clearance or premarket approval, and post-market controls). Nevertheless, the FDA may decide to regulate certain LDTs on a case-by-case basis at any time.

Legislative proposals addressing the FDA's oversight of LDTs have been introduced in previous Congresses, and we expect that new legislative proposals will be introduced from time-to-time. The likelihood that Congress will pass such legislation and the extent to which such legislation may affect the FDA's plans to regulate certain LDTs as medical devices is difficult to predict at this time.

If the FDA ultimately regulates certain LDTs as medical devices, whether via final guidance, final regulation, or as instructed by Congress, our tests may be subject to certain additional regulatory requirements. Complying with the FDA's requirements for medical devices can be expensive, time-consuming, and subject us to significant or unanticipated delays. Insofar as we may be required to obtain premarket clearance or approval to perform or continue performing an LDT, we cannot assure you that we will be able to obtain such authorization. Even if we obtain regulatory clearance or approval where required, such authorization may not be for the intended uses that we believe are commercially attractive or are critical to the commercial success of our tests. As a result, the application of the FDA's medical device requirements to our tests could materially and adversely affect our business, financial condition, and results of operations.

Failure to comply with applicable FDA regulatory requirements may trigger a range of enforcement actions by the FDA including warning letters, civil monetary penalties, injunctions, criminal prosecution, recall or seizure, operating restrictions, partial suspension or total shutdown of operations, and denial of or challenges to applications for clearance or approval, as well as significant adverse publicity.

Pre-Market Approval

We may obtain FDA premarket approval, or PMA, for some of our tests including its matched whole exome sequencing, or WES, and whole transcriptome sequencing, or WTS, tests. Devices subject to FDA regulation must undergo premarket review prior to commercialization unless the device is exempt from such review, and we expect that we will be required to perform non-inferiority studies showing comparable results between the Sema4 Signal WES/WTS LDT and third party, FDA-approved tests with regard to certain therapeutic drugs prescribed to ovarian cancer patients, colorectal cancer patients, and non-small cell lung cancer patients. We are currently evaluating an updated pre-submission letter to the FDA with regard to the studies necessary for ovarian cancer and is working to secure access to the subjects necessary to perform this study. With regard to the studies necessary for colorectal cancer patients and non-small cell lung cancer patients, we submitted our pre-submission package and held a pre-submission meeting with the FDA in 2020, and are working to secure access to the subjects necessary to perform this study. Further, the regulations governing the approvals place substantial restrictions on how the tests will be marketed and sold, specifically, by prescription only. In addition, as a condition of Sema4’s FDA approval, we may be required to conduct post-approval studies.

Additionally, manufacturers of medical devices must comply with various regulatory requirements under the Food, Drug, and Cosmetic Act, or FDCA, and regulations thereunder, including, but not limited to, quality system regulations, unless they are exempt, facility registration, product listing, labeling requirements, and certain post-market surveillance requirements. Entities that fail to comply with FDA requirements can be liable for criminal or civil penalties, such as recalls, detentions, orders to cease manufacturing, and restrictions on labeling and promotion, among other potential sanctions.

We may develop new diagnostic products and services that are regulated by the FDA as medical devices. The regulatory review and approval process for medical devices can be costly, timely, and uncertain. This process may involve, among other things, successfully completing additional clinical trials and submitting a premarket clearance notice or filing a premarket approval application with the FDA. If premarket review is required by the FDA, there can be no assurance that our tests will be cleared or approved on a timely basis, if at all. In addition, there can be no assurance that the labeling claims cleared or approved by the FDA will be consistent with our current claims or adequate to support continued adoption of and reimbursement for our products. Ongoing compliance with FDA regulations could increase the cost of conducting our business, subject us to FDA inspections and other regulatory actions, and potentially subject us to penalties in the event we fail to comply with such requirements.

HIPAA and HITECH

Under the administrative simplification provisions of the Health Insurance Portability and Accountability Act of 1996, or HIPAA, as amended by the Health Information Technology for Economic and Clinical Health Act, or HITECH, the U.S. Department of Health and Human Services issued regulations that establish uniform standards governing the conduct of certain electronic healthcare transactions and protecting the privacy and security of protected health information used or disclosed by most healthcare providers and other covered entities and their business associates, including the business associates' subcontractors. We perform activities that may implicate HIPAA, such as providing clinical laboratory testing services and entering into specific kinds of relationships with covered entities and business associates of covered entities. As a covered entity and as a business associate of other covered entities (with whom we have entered into business associate agreements), we are required to comply with the four principal regulations with which have been issued in final form under HIPAA and HITECH: privacy regulations, security regulations, the breach notification rule, and standards for electronic transactions, which establish standards for common healthcare transactions.

The HITRUST CSF was developed to address the multitude of security, privacy, and regulatory challenges facing organizations. By including federal and state regulations, standards, frameworks, and incorporating a risk-based approach, the HITRUST CSF helps organizations address these challenges through a comprehensive and flexible framework of prescriptive and scalable security and privacy controls. The HITRUST CSF Includes, harmonizes, and cross-references existing, globally recognized standards, regulations, and business requirements, including ISO, EU GDPR, NIST, and PCI. On December 10, 2021, we met the HITRUST Assurance Program requirements for the CSF v9.4 Risk-based, 2-year (r2) certification criteria for our Centrellis Platform, for hosting and curating Patient data.

The privacy regulations cover the use and disclosure of protected health information by covered entities as well as business associates, which are defined to include subcontractors that create, receive, maintain, or transmit protected health information on behalf of a business associate. They also set forth certain rights that an individual has with respect to his or her protected health information maintained by a covered entity, including the right to access or amend certain records containing protected health information, or to request restrictions on the use or disclosure of protected health information. The security regulations establish requirements for safeguarding the confidentiality, integrity, and availability of protected health information that is electronically transmitted or electronically stored. HITECH, among other things, established certain health information security breach notification requirements. A covered entity must notify any individual whose protected health information is breached according to the specifications set forth in the breach notification rule. The HIPAA privacy and security regulations establish a uniform federal "floor" and do not supersede state laws that are more stringent or provide individuals with greater rights with respect to the privacy or security of, and access to, their records containing protected health information or insofar as such state laws apply to personal information that is broader in scope than protected health information as defined under HIPAA. Massachusetts, for example, has a state law that protects the privacy and security of personal information of Massachusetts residents.

There are significant civil and criminal fines and other penalties that may be imposed for violating HIPAA. A covered entity or business associate is also liable for civil money penalties for a violation that is based on an act or omission of any of its agents, including a downstream business associate, as determined according to the federal common law of agency. Additionally, to the extent that we submit electronic healthcare claims and payment

transactions that do not comply with the electronic data transmission standards established under HIPAA and HITECH, payments to us may be delayed or denied.

Federal and State Fraud and Abuse Laws

In the U.S., there are various fraud and abuse laws with which we must comply, and we are potentially subject to regulation by various federal, state and local authorities, including CMS, other divisions of the U.S. Department of Health and Human Services including the Office of Inspector General, the U.S. Department of Justice, and individual U.S. Attorney offices within the Department of Justice, and state and local governments.

In the U.S., the federal Anti-Kickback Statute prohibits, among other things, knowingly and willfully offering, paying, soliciting or receiving remuneration, directly or indirectly, overtly, covertly, in cash or in kind to induce or in return for the furnishing, arranging for the furnishing of, purchasing, leasing, ordering or arranging for or recommending purchasing, leasing or ordering of any good, facility, service or item for which payment may be made in whole or in part by a federal healthcare program. Courts have stated that a financial arrangement may violate the Anti-Kickback Statute if any one purpose of the arrangement is to encourage patient referrals or other federal healthcare program business, regardless of whether there are other legitimate purposes for the arrangement. The definition of "remuneration" has been broadly interpreted to include anything of value, including gifts, discounts, credit arrangements, payments of cash, consulting fees, waivers of co-payments, ownership interests, and providing anything at less than its fair market value.

Although the Anti-Kickback Statute contains several exceptions, it is broad and may technically prohibit many innocuous or beneficial arrangements within the healthcare industry. Further, the U.S. Department of Health and Human Services issued a series of regulatory "safe harbors." These safe harbor regulations set forth certain provisions, which, if met, will assure healthcare providers and other parties that they will not be prosecuted under the federal Anti-Kickback Statute. Although full compliance with the statutory exceptions or regulatory safe harbors ensures against prosecution under the federal Anti-Kickback Statute, the failure of a transaction or arrangement to fit within a specific statutory exception or regulatory safe harbor does not necessarily mean that the transaction or arrangement is illegal or that prosecution under the federal Anti-Kickback Statute will be pursued. Penalties for federal anti-kickback violations are severe, and include imprisonment, criminal fines, civil money penalties, and exclusion from participation in federal healthcare programs. Many states also have anti-kickback statutes, some of which may apply to items or services reimbursed by any third-party payor, including commercial insurers.

There are also federal laws related to healthcare fraud and false statements, among others, relating to healthcare matters. The healthcare fraud statute prohibits knowingly and willfully executing a scheme to defraud any healthcare benefit program, including private payors. A violation of this statute is a felony and may result in fines, imprisonment, or exclusion from governmental payor programs such as the Medicare and Medicaid programs. The false statements statute prohibits knowingly and willfully falsifying, concealing, or covering up a material fact, or making any materially false, fictitious, or fraudulent statement in connection with the delivery of or payment for healthcare benefits, items, or services. A violation of this statute is a felony and may result in fines, imprisonment, or exclusion from governmental payor programs.

Another development affecting the healthcare industry is the increased enforcement of the federal False Claims Act and, in particular, actions brought pursuant to the False Claims Act's "whistleblower" or "qui tam" provisions. The False Claims Act imposes liability on any person or entity that, among other things, knowingly presents, or causes to be presented, a false or fraudulent claim for payment by a federal governmental payor program. The qui tam provisions of the False Claims Act allow a private individual to bring actions on behalf of the federal government alleging that the defendant has defrauded the federal government by submitting a false claim to the federal government and permit such individuals to share in any amounts paid by the entity to the government in fines or settlement. When an entity is determined to have violated the False Claims Act, it may be required to pay up to three times the actual damages sustained by the government, plus civil penalties ranging from $5,500 to $11,000 for each false claim.

In addition, various states have enacted false claim laws analogous to the federal False Claims Act, although many of these state laws apply where a claim is submitted to any third-party payor and not merely a governmental payor program.

Additionally, the civil monetary penalties statute imposes penalties against any person or entity that, among other things, is determined to have presented or caused to be presented a claim to a federal health program that the person knows or should know is for an item or service that was not provided as claimed or for a claim that is false or fraudulent. This law also prohibits the offering or transfer of remuneration to a Medicare or state healthcare program beneficiary if the person knows or should know it is likely to influence the beneficiary's selection of a particular provider, practitioner, or supplier of services reimbursable by Medicare or a state healthcare program, unless an exception applies.

On October 25, 2018, the Substance Use-Disorder Prevention that Promoted Opioid Recovery and Treatment for Patients and Communities Act of 2018, or the SUPPORT Act, was enacted. The SUPPORT Act included the Eliminating Kickbacks in Recovery Act of 2018, or EKRA, which establishes an all-payor anti-kickback prohibition that extends to arrangements with recovery homes, clinical laboratories and clinical treatment facilities. EKRA includes a number of statutory exceptions, and directs agencies to develop further exceptions. Current exceptions in some cases reference and in others differ from the Anti-Kickback Statute safe harbors. Significantly, the prohibitions apply with respect to the soliciting or receipt of remuneration for any referrals to recovery homes, clinical treatment facilities, or clinical laboratories, whether or not related to treating substance use disorders. Further, the prohibitions cover the payment or offer of remuneration to induce a referral to, or in exchange for, an individual using the services of, such providers. This law creates additional risk that relationships with referral sources could be problematic.

Physician Referral Prohibitions

Under a federal law directed at "self-referral," commonly known as the "Stark Law," there are prohibitions, with certain exceptions, on referrals for certain designated health services, including laboratory services, that are covered by the Medicare program by physicians who personally, or through an immediate family member, have a financial relationship with the entity to which the referrals for designated health services are made. The prohibition also extends to payment for any testing referred in violation of the Stark Law. A person who engages in a scheme to circumvent the Stark Law's referral prohibition may be fined up to $100,000 for each such arrangement or scheme. In addition, any person who presents or causes to be presented a claim to the Medicare program in violation of the Stark Law is subject to civil monetary penalties of up to $15,000 per service, an assessment of up to three times the amount claimed and possible exclusion from participation in federal healthcare programs. In addition, any person who presents or causes to be presented a claim to the Medicare program in violation of the Stark Law is subject to civil monetary penalties of up to $15,000 per service, an assessment of up to three times the amount claimed, and possible exclusion from participation in federal or state health care programs. Bills submitted in violation of the Stark Law may not be paid by Medicare, and any person collecting any amounts with respect to any such prohibited bill is obligated to refund such amounts. Many states have comparable laws that are not limited to Medicare referrals. The Stark Law also prohibits state receipt of Federal Medicaid matching funds for prohibited referrals, but this provision of the Stark Law has not been implemented by regulations. In addition, some courts have held that the submission of claims to Medicaid that would be prohibited as self-referrals under the Stark Law for Medicare could implicate the False Claims Act.

Corporate Practice of Medicine

Numerous states have enacted laws prohibiting business corporations, such as Sema4, from practicing medicine and employing or engaging physicians to practice medicine, generally referred to as the prohibition against the corporate practice of medicine. These laws are designed to prevent interference in the medical decision-making process by anyone who is not a licensed physician. For example, California's Medical Board has indicated that determining what diagnostic tests are appropriate for a particular condition and taking responsibility for the ultimate overall care of the patient, including providing treatment options available to the patient, would constitute the unlicensed practice of medicine if performed by an unlicensed person. Violation of these corporate practice of medicine laws may result in civil or criminal fines, as well as sanctions imposed against us and/or the professional

through licensure proceedings. Typically, such laws are only applicable to entities that have a physical presence in the state.

Genetic Privacy and Testing Laws

We are subject to myriad laws designed to establish safeguards regarding the conduct of genomic testing and analysis and to protect against the misuse of genetic information and human biological specimens, collectively, "samples", from which genetic information can be derived. These laws vary in their scope and in the nature of their requirements and restrictions. For example, certain genetic privacy laws prohibit the retention of samples after performing a genomic analysis in addition to prohibiting the use or disclosure of genetic information for certain purposes, such as research, without appropriate informed consent from the individual or without sufficient anonymization. The applicability of such informed consent requirements may also depend on the identifiability of the genetic information or sample and the purposes of which it is used. Other laws may impose additional requirements, including requirements regarding institutional review board review and approval for certain research uses of genetic information or samples requirements to implement certain security controls in connection with the transfer of genetic information. We must comply with such genetic privacy and testing laws in our collection, use, disclosure, and retention of genetic information and samples.

Other Health and Medical Regulations

The federal physician payment transparency requirements, or Physician Payments Sunshine Act, and its implementing regulations, which requires applicable manufacturers of covered drugs, devices, biologics and medical supplies for which payment is available under Medicare, Medicaid or the State Children's Health Insurance Program, with certain exceptions, to annually report to HHS information related to certain payments or other transfers of value made or distributed to physicians, defined to include doctors, dentists, optometrists, podiatrists and chiropractors, and teaching hospitals, or to entities or individuals at the request of, or designated on behalf of, the physicians and teaching hospitals, as well as ownership and investment interests held by physicians and their immediate family members. The SUPPORT Act, under a provision entitled "Fighting the Opioid Epidemic with Sunshine," extends the Physician Payments Sunshine Act to payments and transfers of value to physician assistants, nurse practitioners and other mid-level healthcare providers, with reporting requirements going into effect in 2022 for payments and transfers of value made to these practitioners in 2021.

In addition to its comprehensive regulation of health and safety in the workplace in general, the Occupational Safety and Health Administration has established extensive requirements aimed specifically at laboratories and other healthcare-related facilities. In addition, because our operations require employees to use certain hazardous chemicals, we also must comply with regulations on hazard communication and hazardous chemicals in laboratories. These regulations require us, among other things, to develop written programs and plans, which must address methods for preventing and mitigating employee exposure, the use of personal protective equipment, and training.

Our commercialization activities subject us to regulations of the Department of Transportation, the U.S. Postal Service, and the Centers for Disease Control and Prevention that apply to the surface and air transportation of clinical laboratory specimens.

We are also subject to applicable state billing laws. Some states require that payment be made only to the person or entity who performed or supervised the service, while other states have passed anti-mark up and disclosure laws, an alternative but less enforceable approach to direct billing. Under these laws the non-performing person or entity is allowed to bill the client, but is prohibited from marking up the service, and required to disclose each charge to the patient, or patient's insurer. Additionally, some states have strictly passed disclosure laws that require the non-performing person or entity to disclose to patients or the patient's insurer the actual charges for all laboratory services.

Privacy and Data Protection Laws

There are a growing number of jurisdictions all over the world that have privacy and data protection laws. These laws are typically triggered by a company's establishment or physical location in the jurisdiction, data processing activities that take place in the jurisdiction, and/or the processing of personal information about individuals located

in that jurisdiction. Certain international privacy and data protection laws, such as those in the European Union, can be more restrictive and prescriptive than those in the U.S., while other jurisdictions can have laws less restrictive or prescriptive than those in the U.S. Enforcement of these laws vary from jurisdiction to jurisdiction, with a variety of civil or criminal penalties, or private rights of action.

The European Union's General Data Protection Regulation, or GDPR, took effect on May 25, 2018. The GDPR extraterritorially applies to a business outside the European Union that offers goods or services to, or monitors the behavior of individuals who are located in the European Union. The GDPR imposes strict requirements on controllers and processors of personal data, including enhanced protections for "special categories" of personal data, which includes sensitive information such as health and genetic information of data subjects in the European Union. The GDPR also grants individuals various rights in relation to their personal data including the rights of access, rectification, objection to certain processing and deletion. The GDPR provides an individual with an express right to seek legal remedies if the individual believes his or her rights have been violated. Failure to comply with the requirements of the GDPR or the related national data protection laws of the member states of the European Union, which may deviate from or be more restrictive than the GDPR, may result in significant administrative fines issued by European Union regulators.

As of December 31, 2020, The United Kingdom of Great Britain and Northern Ireland, or UK, are no longer subject to EU law. Therefore, the GDPR will be brought into UK law as the 'UK GDPR' via a statutory instrument which will make technical amendments to the GDPR so that it works in a UK-only context. In Europe, there are also national laws that provide additional controls around the processing of health data.

The Payment Card Industry Data Security Standard, or PCI DSS, was issued by the Payment Card Industry Security Standards Council and establishes industry standards for the processing of payment card information. While the PCI DSS requirements do not have the force of law, the penalties for noncompliance could include exclusion from payment card systems. To the extent that we collect payment card information when receiving payments of insurance premiums or payments for our products or services, we comply with PCI DSS as applicable to our payment environment and PCI DSS merchant level, which is determined by our volume of payment card transactions per year.

FTC Act

As an entity regulated by the Federal Trade Commission, or FTC, we are subject to the FTC's enforcement power under Section 5 of the Federal Trade Commission Act, or FTC Act. The FTC has policed privacy and data security through its broad power under Section 5 of the FTC Act. Under Section 5, "unfair or deceptive acts or practices in or affecting commerce, are hereby declared unlawful." Deceptive trade practices are defined by the FTC as material representations, omissions or practices that are likely to mislead a consumer acting reasonably in the circumstances to the consumer's detriment. The FTC defines an "unfair" trade practice as one that "causes or is likely to cause substantial injury to consumers which is not reasonably avoidable by consumers themselves and is not outweighed by countervailing benefits to consumers or competition."

The FTC has refrained from providing a checklist of uniformly acceptable data security practices or focusing on one single practice as actionable. Instead, the FTC has taken a holistic approach and relied on industry standards and other norms to identify a particular set of practices that, taken together, constitute adequate security practices for companies collecting personal information. In evaluating whether a data security practice is unfair, the FTC focuses largely on "substantial injury to consumers." The harm need not be monetary or physical, though such injuries are commonly considered "substantial." Further, the harm can consist of a risk rather than an actual loss.

CAN-SPAM Act

The Controlling the Assault of Non-Solicited Pornography and Marketing Act of 2003, or CAN-SPAM Act, establishes rules for commercial electronic mail messages, gives recipients the right to opt out of certain messages, and establishes penalties for violations. We comply with the CAN-SPAM Act in connection with our transmittal of commercial electronic mail messages, or Commercial Email Messages. Commercial Email Messages do not include emails that are informational or are transactional or relationship messages.

TCPA

The Telephone Consumer Protection Act of 1991, or TCPA, restricts the making of telemarketing calls and the use of automatic telephone dialing systems, artificial or prerecorded voice messages, SMS text messages, and facsimile transmissions. It also specifies several technical requirements for fax machines, autodialers, and voice messaging systems, principally with provisions requiring identification and contact information of the entity using the device to be contained in the message. We comply with TCPA in connection with our transmittal of automated, artificial, or prerecorded phone calls, SMS text messages, facsimile transmissions, and push notifications.

California Consumer Privacy Act

The California Consumer Privacy Act, or CCPA, is a comprehensive consumer privacy law that took effect on January 1, 2020, and regulates how certain for-profit businesses that do business in California collect, use, and disclose the personal information of consumers who reside in California. Among other things, the CCPA confers to California consumers the right to receive notice of the categories of personal information to be collected by a business, how the business will use and share the personal information, and the third parties who will receive the personal information; the rights to access, delete, or transfer personal information; and the right to receive equal service and pricing from a business after exercising a consumer right granted by the CCPA. In addition, the CCPA allows California consumers the right to opt out of the "sale" of their personal information, which the CCPA defines broadly as any disclosure of personal information to a third party in exchange for monetary or other valuable consideration. The CCPA also requires a business to implement reasonable security procedures to safeguard personal information against unauthorized access, use, or disclosure.

The CCPA does not apply to personal information that is Protected Health Information under HIPAA. The CCPA also does not apply to a HIPAA Covered Entity to the extent that the Covered Entity maintains patient information in the same manner as Protected Health Information. We are subject to the CCPA with respect to personal information we collect from California consumers that is neither PHI under HIPAA nor patient information that we maintain in the same manner as Protected Health Information.

The California Attorney General has authority to enforce the CCPA and its implementing regulations against covered businesses beginning on July 1, 2020. The CCPA provides for civil penalties for violations, as well as private right of action for data breaches that result from a business' failure to implement reasonable security procedures.

Competition

Our competitors include companies that offer molecular genetic testing and other clinical diagnostic, life science research, drug discovery services, data services and healthcare analytics, and consumer genetics products. Principal competitors include companies such as Myriad Genetics, Inc., Ambry Genetics Corporation, Color Genomics, Inc., Invitae Corporation, Natera, Inc., Tempus Labs, Inc., Quest Diagnostics, Inc., Laboratory Corporation of America Holdings (or LabCorp), Exact Sciences Corp., 10x Genomics, Inc., Guardant Health, Inc., and Adaptive Biotechnologies, Twist Biosciences Corp., and Schrödinger, Inc., as well as other commercial and academic diagnostic and analytic service providers. In addition to the companies that currently offer traditional genetic testing services and research centers, other established and emerging healthcare, information technology and service companies may commercialize competitive products including informatics, analysis, integrated genetic tools and services for health and wellness.

We believe the principal competitive factors in our market are:

- Patient-centric approach;
- Breadth, depth, and quality of data assets;
- Price and quality of tests;
- Turnaround time of testing results;

- Coverage and reimbursement arrangements with third-party payors;
- Depth and clinical applicability of interpretive insights;
- Degree of utility of patient and provider facing applications;
- Breadth of interpretive insights beyond just one episode of care;
- Convenience of testing;
- Brand recognition of test provider;
- Additional value-added services and informatics tools;
- Accessibility of results;
- Client service;
- Quality of website content; and
- Reliability

We believe that we compare favorably with our competitors on the basis of these factors. However, many of our competitors and potential competitors have longer operating histories, larger customer bases, greater brand recognition and market penetration, substantially greater financial, technological and research and development resources and selling and marketing capabilities, more experience dealing with third-party payors. As a result, they may be able to respond more quickly to changes in customer requirements, devote greater resources to the development, promotion and sale of their tests than Sema4 does, or sell their tests at prices designed to win significant levels of market share. We may not be able to compete effectively against these organizations.

Environmental Matters

Sema4's operations require the use of hazardous materials (including biological materials) that subject it to a variety of federal, state, and local environmental and safety laws and regulations. Some of these regulations provide for strict liability, holding a party potentially liable without regard to fault or negligence. We could be held liable for damages and fines as a result of our, or our partners', business operations should contamination of the environment or individual exposure to hazardous substances occur. We cannot predict how changes in laws or new regulations will affect our business operations or the cost of compliance.

Raw Materials and Suppliers

We rely on a limited number of suppliers, or, in some cases, sole suppliers, including Agilent Technologies, Inc., Illumina, Inc., Life Technologies Corporation, Agena Biosciences, Inc., MRC-Holland, Asuragen Inc., PerkinElmer Health Sciences, Inc., Fisher Scientific, Integra Biosciences Corporation, Thomas Scientific, Qiagen Inc., USA Scientific, Inc., Promega Corporation, Integrated DNA Technologies Incorporated, and Kapa Biosystems Inc., for certain laboratory reagents, as well as sequencers and other equipment and materials which we use in our laboratory operations. Our laboratory operations could be interrupted if we encounter delays or difficulties in securing these reagents, sequencers or other equipment or materials, and if we cannot obtain an acceptable substitute. Any such interruption could significantly affect our business, financial condition, results of operations and reputation. We believe that there are only a few other manufacturers that are currently capable of supplying and servicing the equipment necessary for our laboratory operations, including sequencers and various associated reagents. The use of equipment or materials provided by these replacement suppliers would require us to alter our laboratory operations. Transitioning to a new supplier would be time consuming and expensive, may result in interruptions in our laboratory operations, could affect the performance specifications of its laboratory operations or could require that we revalidate our tests. We cannot assure you that we would be able to secure alternative equipment, reagents, and other materials, or bring such equipment, reagents, and materials online and revalidate them without experiencing interruptions in our workflow. If we encounter delays or difficulties in securing,

reconfiguring, or revalidating the equipment and reagents we require for our tests, our business and reputation could be adversely affected.

Customers

We provide our health information products and services to a broad range of customers, including health plans (including managed care organizations and other health insurance providers); clinicians; hospitals; employers; patients; federally qualified health centers; and Biopharma companies. In addition, during 2020 and 2021, the customers for our COVID-19 tests included state governments.

Depending on the billing arrangement and applicable law, the clinician or healthcare entity that orders our products or services may not be responsible for paying for the products or services ordered for their patients. In certain circumstances, the patient may be responsible for payment, and in others we seek payment from third party payers, such as a commercial health insurance company, Medicare or a Medicaid program, pursuant to contracts established between us and such third parties.

During 2021, reimbursement from health plans represented 79% and 76% of our diagnostic test revenue and total revenue, respectively. In 2021, two health plans each represented 10% or more of our consolidated total revenue, and no other health plans or other customers represented 10% or more of our consolidated total revenue.

Human Capital

Sema4 is mission driven. Our employees are passionate about changing healthcare and impacting lives. We attract entrepreneurs who are comfortable with ambiguity and thrive on innovation and thoughtful discourse. We empower our employees to iterate and rapidly execute on ideas.

It is our People Team's mission to connect people to purpose. We achieve this through enablement of excellence across the employment journey, through stewardship of an engaged and inclusive culture, by growing individual, team and organizational capability, in delivering simplification and innovation, and by sharing data-driven people insights that transform our organization. All of this is in service of driving our business forward and optimizing patient health outcomes.

We are delivering a competitive package of compensation and benefits that aims to attract and retain strong talent, in a very competitive talent marketplace. As of December 31, 2021, we had approximately 1,200 employees, of which 54% are women and 46% are men. Our headcount grew by approximately 33% in 2021, and we hired approximately 500 employees in that timeframe, as a part of scaling our operations in connection with our transition to a public company and meeting our strategic priorities.

Our Diversity and Inclusion Council seeks to improve diversity, inclusion, equality, and global understanding by promoting dialogue, encouraging respectful understanding, providing information, participating in policy development, overseeing diversity education and training, and helping to foster respect for all employees. In 2022, we will be hosting our inaugural BIPOC Initiative Genomics Symposium, inviting select Ph.D. students and post doctorates for a two-day research symposium to strengthen our diverse hiring practices. Each attendee will present their original research, and will learn about science and career opportunities at Sema4.

We believe that our corporate culture fosters innovation, creativity, and teamwork. In this past year, we launched several programs and processes, which intend to help build a driven culture of alignment, development, compliance, and respect. We are in our second year of formal performance management processes, which are used to drive organizational alignment and includes tracking top-down business priorities and people development goals. The launch of two promotion cycles focus and enable employee career growth and mobility. We also implemented formal people manager learning, in order to build stronger people management skills for our leaders. We have optimized processes and transformed our people management solution in order to have greater systems capability, access to robust reporting, and to strengthen our analytical horsepower.

We have implemented a comprehensive compliance infrastructure, which advises Sema4 individuals and business affiliates on how to prevent, detect, report, and resolve matters of fraud, waste, threats, and abuse related to

institutional policies and federal, state, and local laws and regulations. We have implemented various committees, councils and boards such as the Diversity & Inclusion Council, Data Governance Board, and IRB Review Board. These groups provide guidance for our employees, to empower them to perform according to our legal and ethical standards. We observe legal, regulatory, and industry trends and comprehensively adapt internal policies and practices as needed. We educate our Board members, executives, and other key employees about conflicts of interest and advise how to prevent and detect potential or actual conflicts of interest to safeguard from inappropriate external influence or impropriety.

We look to further strengthen our people infrastructure in 2022 through enhanced engagement surveys, values and behaviors programming, and formal talent reviews, with development planning.

SEMA4'S MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

The following discussion and analysis should be read in conjunction with the financial statements and related notes of the Company, included elsewhere in this proxy statement. This discussion contains forward-looking statements reflecting our current expectations, estimates and assumptions concerning events and financial trends that may affect our future operating results or financial position. Actual results and the timing of events may differ materially from those contained in these forward-looking statements due to a number of factors, including those discussed in the sections entitled "Risk Factors" and "Cautionary Note Regarding Forward-Looking Statements" appearing elsewhere in this proxy statement.

Overview

We are a patient-centered, health intelligence company with a mission to use artificial intelligence, or AI, and machine learning to enable personalized medicine for all. By leveraging leading data scientists and technology, our platform powers remarkable and unique insights that transform the practice of medicine including how disease is diagnosed, treated, and prevented.

We were established out of Icahn School of Medicine at Mount Sinai or ISMMS, and commenced operations in June 2017 as a commercial entity that could effectively engage diverse patient populations and health care institutions at scale. We have since established and deployed our comprehensive and integrated genomic and clinical data platform and established a mature diagnostic testing business. We now maintain a database that includes more than 12 million de-identified individual clinical records, many with genomic profiles. We also manage a data asset over 47 petabytes in size, that has been expanding at more than 1 petabyte per month with an accelerating growth rate.

Currently, we derive the majority of our revenue from our diagnostic test solutions. Our diagnostic business generates revenue and engages with healthcare professionals working with patients primarily through our Women's Health and Oncology solutions.

Our Women's Health solutions sequence and analyze an industry-leading number of genes and use interpretive information tools to translate raw sequencing and clinical data efficiently and accurately into digestible clinical reports that guide decision-making by patients and physicians. Our Oncology diagnostic solutions feature both somatic tumor profiling and hereditary cancer screenings, along with a foundational whole exome and whole transcriptome sequencing approach. Our Sema4 Signal Hereditary Cancer solution determines if a patient carries an inherited genetic change that increases the risk of cancer or informs on cancer treatment. We believe our Signal Whole Exome and Transcriptome solution is one of the most comprehensive molecular profiling solutions from a commercial entity to receive New York State approval. Beginning in May of 2020, we also expanded our diagnostic testing services to include testing for the presence of COVID-19, which we intend to discontinue by March 31, 2022.

We have also expanded beyond diagnostic testing to enter into service agreements with third parties to provide diagnostic testing, research, and related data aggregation reporting services. We have established and continue to seek strategic relationships with pharmaceutical and biotech, or Biopharma, companies to enable innovation across the entire drug lifecycle, from next-generation drug discovery and development, to post-market efficacy surveillance, to informing on bioavailability, toxicity, tolerability, and other features critical to drug development.

Factors Affecting Our Performance

We believe several important factors have impacted, and will continue to impact, our performance and results of operations. While each of these areas presents significant opportunities for us, they also pose significant risks and challenges that we must address. See the section titled *"Risk Factors"* for more information.

Number of resulted tests

We historically reported both accessioned and resulted tests as important factors impacting our performance. A test is resulted once the appropriate workflow is completed and details are provided to the ordered patients or healthcare professional for reviews, which corresponds to the timing of our revenue recognition. We believe the number of resulted tests in any period is more important and useful to our investors because it directly correlates with long-term patient relationships and the size of our genomic database. Therefore, we do not plan to report the number of accessioned tests.

Success obtaining and maintaining reimbursement

Our ability to increase the number of billable tests and our revenue therefrom will depend on our success in achieving reimbursement for our tests from third-party payors. Reimbursement by a payor may depend on several factors, including a payor's determination that a test is appropriate, medically necessary, cost-effective, and has received prior authorization. Since each payor makes its own decision as to whether to establish a policy or enter into a contract to provide coverage for our tests, as well as the amount it will reimburse us for a test, seeking these approvals is a time-consuming and costly process.

In cases where we or our partners have established reimbursement rates with third-party payors, we face additional challenges in complying with their procedural requirements for reimbursement. These requirements often vary from payor to payor and are reassessed by third-party payors regularly. As a result, in the past we have needed additional time and resources to comply with the requirements.

We expect to continue to focus our resources on increasing the adoption of, and expanding coverage and reimbursement for, our current and any future tests we may develop or acquire. If we fail to expand and maintain broad adoption of, and coverage and reimbursement for, our tests, our ability to generate revenue and our future business prospects may be adversely affected.

Ability to lower the costs associated with performing our tests

Reducing the costs associated with performing our diagnostic tests is both our focus and a strategic objective. We source, and will continue to source, components of our diagnostic testing workflows from third parties. We also rely upon third-party service providers for data storage and workflow management.

Increasing adoption of our services by existing and new customers

Our performance depends on our ability to retain and broaden the adoption of our services with existing customers as well as our ability to attract new customers. Our success in retaining and gaining new customers is dependent on the market's confidence in our services and the willingness of customers to continue to seek more comprehensive and integrated genomic and clinical data insights.

Investment in platform innovation to support commercial growth

We are seeking to leverage and deploy our Centrellis and Traversa platforms to develop a pipeline of future disease-specific research and diagnostic and therapeutic products and services. We have limited experience in the development or commercialization of clinical or research products in connection with our database and our Centrellis platform.

We operate in a rapidly evolving and highly competitive industry. Our business faces changing technologies, shifting provider and patient needs, and frequent introductions of rival products and services. To compete successfully, we must accurately anticipate technology developments and deliver innovative, relevant, and useful products, services, and technologies on time. As our business evolves, the competitive pressure to innovate will encompass a wider range of products and services. We must continue to invest significant resources in research and development, including investments through acquisitions and partnerships. These investments are critical to the enhancement of our current diagnostics and health information and data science technologies from which existing and new service offerings are derived.

We expect to incur significant expenses to advance these development efforts, but they may not be successful. New potential services may fail at any stage of development and, if we determine that any of our current or future services are unlikely to succeed, we may abandon them without any return on our investment. If we are unsuccessful in developing additional services, our growth potential may be impaired.

Key Performance Indicators

We use the following key financial and operating metrics to evaluate our business and operations, measure our performance, identify trends affecting our business, project our future performance, and make strategic decisions. These key financial and operating metrics should be read in conjunction with the following discussion of our results of operations and financial condition together with our consolidated financial statements and the related notes and other financial information included elsewhere in this proxy statement.

The principal focus of our commercial operations is to offer our diagnostic tests through both our direct sales force and laboratory distribution partners. Test volume correlates with genomic database size and long-term patient relationships. Thus, test volumes drive database diversity and enable potential identification of variants of unknown significance and population-specific insights. The number of tests resulted is a key indicator that we use to assess the operational efficiency of our business. Once the appropriate workflow is completed, the test is resulted and details are provided to ordered patients or healthcare professionals for reviews.

During the year ended December 31, 2021, we resulted 709,942 tests in our laboratories, 418,053 tests of which were for COVID-19, compared to the period ended December 31, 2020, in which we resulted approximately 540,407 tests in our laboratories, 332,764 of which were for COVID-19. This 31% increase in resulted volume from 2020 to 2021 largely resulted from newly entered service agreements for COVID-19 testing as well as an increase in non-COVID-19 institutional testing. During the year ended December 31, 2019, we resulted approximately 155,497 tests in our laboratories, none of which were for COVID-19. The 248% increase in resulted volume from 2019 to 2020 largely resulted from newly entered service agreements for COVID-19 testing, offset by a slowdown in the base diagnostic business during the beginning of the COVID-19 pandemic given that many of our customers, including hospitals and clinics, had suspended non-emergency appointments and services.

As discussed above, we no longer report the number of accessioned tests as a key performance indicator because the number of resulted tests more directly correlates with long-term patient relationships and the size of our genomic database.

COVID-19 Impact

The ongoing COVID-19 pandemic has had, and continues to have, an extensive impact on the global health and economic environments since the initial outbreak in March 2020.

Beginning in April 2020, our diagnostic test volumes decreased significantly as compared to the prior year as a result of the COVID-19 pandemic and the related limitations and priorities across the healthcare system. In response, beginning in May 2020, we entered into several service agreements with state governments and healthcare institutions to provide testing for the presence of COVID-19 infection. COVID-19 test volumes grew significantly from the introduction of the service offering through the remainder of 2020 and further increased in 2021. To support the rapid expansion of COVID-19 test volumes, we increased our workforce through both temporary contractors and employees. In addition, while most of our revenues from genetic testing rely upon reimbursements from third party payors, healthcare institutions, and individuals, the majority of our COVID-19 test revenues rely upon reimbursements from state governments and healthcare institutions. In addition, COVID-19 testing yields lower revenues per tests and incurs lower costs to perform each test. We have also experienced a slowdown in receivable collections since the onset of the pandemic, but do not expect those collection trends to continue.

As part of our response to the ongoing COVID-19 pandemic, we have implemented various strategies to mitigate operating risks, reduce costs and improve cash collections. We have made significant advance purchases of test-related inventory in order to reduce the risk of potential business interruptions related to supply chain disruption. We also contracted with third-party vendors to collect and test COVID-19 samples to reduce operating risks related to employee health. Temporary COVID-19 austerity measures included cancellation of the 2020 annual merit

compensation increase, temporary salary reductions from May through July 2020 and deferral of the 401(k) employer match from May through December 2020. The employer match was reinstated in January 2021, and the deferred portion was funded on March 9, 2021. To support our sales employees with commission-based compensation structure, we implemented temporary minimum commissions during the second quarter of 2020. No such minimums were in place in any quarter after the second quarter nor are any such minimums expected to be implemented again in the near term. No employee layoffs were implemented as part of these austerity measures.

As conditions improve, we are focused on overhauling our revenue cycle, and as part of transformational activities hired a Chief Revenue Officer and established a revenue cycle Center of Excellence. As part of our efforts to improve our collection efficiency and overall financial health, we are also undergoing various process transformations within the Order-to-Cash and Procure-to-Pay cycles.

While test volumes have since improved, we continue to experience changes in the mix of tests due to the impact of the COVID-19 and its variants. We anticipate that demand for COVID-19 tests will decrease as vaccines continue to be developed and deployed to the general population. For this reason, we announced in December 2021 that we had decided to discontinue COVID-19 testing services by March 31, 2022 and began notifying our COVID-19 testing solutions customers of this decision. We intend to dedicate all of our efforts and resources to our core mission to transform healthcare by using artificial intelligence to enable the delivery of precision medicine as the standard of care, and do not expect declines for our other revenue streams during 2022. The full extent to which the COVID-19 pandemic will directly or indirectly impact our business, results of operations and financial condition will depend on future developments that are highly uncertain and cannot be accurately predicted, including new information that may emerge concerning COVID-19 or its variants, the actions taken to contain it or treat it and the economic impact on local, regional, national and international markets and supply chains. Therefore, the COVID-19 pandemic could continue to have a material impact on our results of operations, cash flows and financial condition for the foreseeable future.

In March 2020, the Coronavirus Aid, Relief and Economic Security Act, or the CARES Act, was signed into law which was a stimulus bill that, among other things, provided assistance to qualifying businesses and individuals and included funding for the healthcare system. We received $5.4 million in 2020 as part of the stimulus, comprised of $2.6 million received under the Provider Relief Fund, or PRF, distribution and $2.8 million received under the Employee Retention Credit, or ERC, distribution. During 2021, we received an additional $5.6 million under the PRF distribution.

PRF distributions to healthcare providers are not loans and will not be required to be repaid; however, as a condition to receiving these payments, providers must agree to certain terms and conditions and submit sufficient documentation demonstrating that the funds are being used for healthcare-related expenses or lost revenue attributable to the COVID-19 pandemic. We have concluded it is probable that all terms and conditions associated with the PRF distribution have been met. As a result, we recorded the PRF distributions in other income (expense), net in the statements of operations and comprehensive loss during the periods in which we received the distributions.

ERC distributions are refundable tax credits for 50% of qualified wages paid to employees during the pandemic. A company is eligible for the ERC if it has not received a Paycheck Protection Program loan under the Cares Act and (1) its operations have been fully or partially suspended because of COVID-19 or (2) its gross receipts in a calendar quarter in 2020 declined by more than 50% from the same period in 2019. At the time of applying for the ERC, we concluded that it was reasonably possible the eligibility requirements would be met; however, due to a change in circumstances, we are re-evaluating our position. As such, we deferred the recognition of the ERC distribution and recorded the proceeds in other liabilities on the consolidated balance sheets as of December 31, 2021 and 2020.

At this time, we are not certain of the availability, extent or impact of any future relief provided under the CARES Act or other stimulus initiatives.

Recent Developments

In January 2022, we and our wholly-owned subsidiaries, Orion Merger Sub I, Inc., or Merger Sub I, and Orion Merger Sub II, LLC, or Merger Sub II, entered into an Agreement and Plan of Merger and Reorganization, or the

Merger Agreement, with GeneDx, Inc., a New Jersey corporation, or GeneDx, and a wholly-owned subsidiary of OPKO Health, Inc., or OPKO, GeneDx Holding 2, Inc., or Holdco, and OPKO to acquire 100% of GeneDx. Subject to the terms and conditions of the Merger Agreement, we will pay consideration to OPKO for the Acquisition of (i) $150 million in cash at the closing of the Acquisition, subject to certain adjustments as provided in the Merger Agreement, (ii) 80 million shares of our Class A common stock to be issued at the closing of the Acquisition and (iii) up to $150 million payable following the closing of the Acquisition, if certain revenue-based milestones are achieved for each of the fiscal years ending December 31, 2022 and December 31, 2023. These milestone payments, if and to the extent earned under the terms of the Merger Agreement, will be satisfied through the payment and/or issuance of a combination of cash and shares of our Class A common stock (valued at $4.86 per share), with such mix to be determined in our sole discretion.

The completion of the Acquisition is subject to a number of closing conditions (which, as of the date of this proxy statement, have not been met), including certain regulatory and other third party approvals, the consummation of a pre-closing restructuring and certain approvals of our stockholders related to the Acquisition). The Acquisition is expected to close in the first half of 2022. If this pending Acquisition is consummated, consistent with our business model, we expect to leverage the combined health information database of Sema4 and GeneDx to partner with additional health systems and biopharma companies to transform patient care and therapeutic development and enable precision medicine for all.

Concurrently with the execution of the Merger Agreement, we entered into the Subscription Agreements with the PIPE Investors. The PIPE Investment will be consummated substantially concurrently with the closing of the Acquisition.

Components of Results of Operations

Revenue

We derive the majority of our revenue from diagnostic testing services, which primarily relate to Women's Health, Oncology and COVID-19. We also recognize revenue from collaboration service agreements with Biopharma companies and other third parties pursuant to which we provide diagnostic testing and related data aggregation reporting services. As discussed above, in December 2021, we announced that we decided to discontinue COVID-19 testing services by March 31, 2022 and begun notifying its COVID-19 testing solutions customers of this decision.

We recognize revenue when control of the promised goods or services is transferred to the customer in an amount that reflects the consideration which we expect to be entitled to in exchange for those goods or services.

Diagnostic Test Revenue

We primarily generate revenue from performing diagnostic testing services for three groups of customers: healthcare professionals working with patients with third-party insurance coverage or without third-party insurance coverage or those who elect to self-pay; and institutional clients, such as hospitals, clinics, state governments and reference laboratories. Customers are billed upon delivery of test results. The amount of revenue recognized for diagnostic testing services depends on a number of factors, such as contracted rates with our customers and third-party insurance providers, insurance reimbursement policies, payor mix, historical collection experience, price concessions and other business and economic conditions and trends. To date, the majority of our diagnostic test revenue has been earned from orders received for patients with third-party insurance coverage.

Our ability to increase our diagnostic test revenue will depend on our ability to increase our market penetration, obtain contracted reimbursement coverage from third-party payers, enter into contracts with institutions, and increase our reimbursement rate for tests performed.

Other Revenue

We generate revenue from providing diagnostic testing and related data aggregation reporting services under both short-term and long-term project-based collaboration service agreements with third parties. The terms of these

contracts generally include non-refundable upfront payments, which we record as contract liabilities, and variable payments based upon the achievement of certain milestones during the contract term.

With respect to existing collaboration service agreements, our revenue may fluctuate period to period due to the pattern in which we may deliver our services, our ability to achieve milestones, the timing of costs incurred, changes in estimates of total anticipated costs that we expect to incur during the contract period, and other events that may not be within our control. Our ability to increase our revenue will depend on our ability to enter into contracts with third-party partners.

Cost of Services

The cost of services reflect the aggregate costs incurred in performing services. These costs include expenses for reagents and laboratory supplies, personnel-related expenses (comprising salaries and benefits) and stock-based compensation for employees directly involved in revenue generating activities, shipping and handling fees, costs of third-party reference lab testing and phlebotomy services and allocated genetic counseling, facility and IT costs associated with delivery services. Allocated costs include depreciation of laboratory equipment, facility occupancy, and information technology costs. The cost of services are recorded as the services are performed.

We expect the cost of services to generally increase in line with the anticipated growth in diagnostic testing volume and services we provide under our collaboration service agreements. However, we expect the cost per test to decrease over the long term due to the efficiencies we may gain from improved utilization of our laboratory capacity, automation, and other value engineering initiatives. These expected reductions may be offset by new tests which often have a higher cost per test during the introductory phases before we can gain efficiencies. The cost per test may fluctuate from period to period.

Research and Development Expenses

Research and development expenses represent costs incurred to develop our technology and future test offerings. These costs are principally associated with our efforts to develop the software we use to analyze data and process customer orders. These costs primarily consist of personnel-related expenses (comprising salaries and benefits), stock-based compensation for employees performing research and development, innovation and product development activities, costs of reagents and laboratory supplies, costs of consultants and third-party services, equipment and related depreciation expenses, non-capitalizable software development costs, research funding to our research partners as part of research and development agreements and allocated facility and information technology costs associated with genomics medical research. Research and development costs are generally expensed as incurred and certain non-refundable advanced payments provided to our research partners are expensed as the related activities are performed.

We generally expect our research and development expenses to continue to increase as we innovate and expand the application of our platforms. However, we expect research and development expenses to decrease as a percentage of revenue in the long term, although the percentage may fluctuate from period to period due to the timing and extent of our development and commercialization efforts and fluctuations in our compensation-related charges.

Selling and Marketing Expenses

Selling and marketing expenses primarily consist of personnel-related expenses (comprising salaries, and benefits) and stock-based compensation for employees performing commercial sales, account management, marketing, and allocation of genetic counseling services related to medical education. Selling and marketing costs are expensed as incurred.

We generally expect our selling and marketing expenses will continue to increase in absolute dollars as we expand our commercial sales and marketing and counseling teams and increase marketing activities. However, we expect selling and marketing expenses to decrease as a percentage of revenue in the long term, subject to fluctuations from period to period due to the timing and magnitude of these expenses.

General and Administrative Expenses

General and administrative expenses primarily consist of personnel-related expenses (comprising salaries and benefits) and stock-based compensation for employees in executive leadership, legal, finance and accounting, human resources, information technology, strategy and other administrative functions. In addition, these expenses include office occupancy and information technology costs. General and administrative costs are expensed as incurred.

We generally expect our general and administrative expenses to continue to increase in absolute dollars as we increase headcount and incur costs associated with operating as a public company, including expenses related to legal, accounting, and regulatory matters; maintaining compliance with requirements of the Nasdaq and of the SEC; director and officer insurance premiums and investor relations. We expect these expenses to decrease as a percentage of revenue in the long term as revenue increases, although the percentage may fluctuate from period to period due to fluctuations in our compensation-related charges.

Related Party Expenses

Related party expenses primarily consist of amounts incurred in connection with transactions occurred with ISMMS for expenses under our transition services agreement, or TSA, with ISMMS which expired at the end of the first quarter of 2021, and other service agreements. Additional information can be found in our consolidated financial statements in Note 7, *"Related Party Transactions"* included elsewhere in this proxy statement.

We generally expect related party expenses to decrease as we establish our own internal and external resources to fulfill the administrative and other services we have historically procured from ISMMS.

Interest Income

Interest income primarily consists of interest earned on money market funds.

Interest Expense

Interest expense consists of interest costs related to our capital leases and our long-term debt arrangements, including unused line fee and the amortization of deferred transaction costs related to the loan and security agreement entered into with Silicon Valley Bank to provide a $125 million revolving credit facility described elsewhere in this proxy statement.

Other Income, Net

Other income, net primarily consists of funding received under the CARES Act. We recognized $2.6 million of the $5.4 million of funding received under the CARES Act as other income, net on the statements of operations and comprehensive loss during the year ended December 31, 2020. We recognized $5.6 million of additional funding received under the CARES Act during the year ended December 31, 2021 and the amount is included in other income, net for the year ended December 31, 2021. In addition, the loss incurred due to early payment penalties recognized upon extinguishment of debt of $0.3 million is included in other income, net.

Results of Operations

A discussion regarding our financial condition and results of consolidated operations for the year ended December 31, 2021 compared to the year ended December 31, 2020 and for the year ended December 31, 2020 compared to the year ended December 31, 2019 is presented below.

Certain expenses were previously misclassified as cost of services and they are now reported as selling and marketing. The adjustment is reflected in the amounts reported below for years ended December 31, 2021, 2020 and 2019. Refer to Note 2, "*Summary of Significant Accounting Policies*" to our consolidated financial statements for further information included elsewhere in this proxy statement.

Comparison of the Years Ended December 31, 2021 and 2020

The following table sets forth our results of operations for the periods presented:

	Year Ended December 31,	
	2021	2020 (Restated)
	(in thousands)	
Revenue		
Diagnostic test revenue	$ 205,100	$ 175,351
Other revenue	7,095	3,971
Total revenue	212,195	179,322
Cost of services	228,797	175,296
Gross (loss) profit	(16,602)	4,026
Research and development	105,162	72,700
Selling and marketing	112,738	63,183
General and administrative	205,988	100,742
Related party expenses	5,659	9,395
Loss from operations	(446,149)	(241,994)
Other income (expense):		
Change in fair market value of warrant and earn-out contingent liabilities	198,401	—
Interest income	79	506
Interest expense	(2,835)	(2,474)
Other income, net	5,114	2,622
Total other income (expense), net	200,759	654
Loss before income taxes	(245,390)	(241,340)
Income tax provision	—	—
Net loss and comprehensive loss	(245,390)	(241,340)
Redeemable convertible preferred stock dividends	—	—
Net loss attributable to common stockholders	$ (245,390)	$ (241,340)

Revenue

	Year Ended December 31,		Change 2020 to 2021	
	2021	2020	$	%
	(dollars in thousands)			
Diagnostic test revenue	$ 205,100	$ 175,351	$ 29,749	17 %
Other revenue	7,095	3,971	3,124	79 %
Total revenue	$ 212,195	$ 179,322	$ 32,873	18 %

Total revenue increased by $32.9 million, or 18%, to $212.2 million for the year ended December 31, 2021, from $179.3 million for the year ended December 31, 2020.

Diagnostic test revenue increased by $29.7 million, or 17%, to $205.1 million for the year ended December 31, 2021, from $175.4 million for the year ended December 31, 2020. The increase was primarily attributable to a 135% increase in oncology test volumes, a 38% increase in women's health test volumes and an overall increase in volumes of 31%, partially offset by the change in the mix of tests performed and reduced reimbursement rates. COVID-19 testing was introduced in May of 2020, which had a lower impact on total test

volume during the year ended December 31, 2020, compared to the year ended December 31, 2021 (with COVID-19 test volumes growing 26% year over year) .

Other revenue increased by $3.1 million, or 79%, to $7.1 million for the year ended December 31, 2021, from $4.0 million for the year ended December 31, 2020. The increase was primarily attributable to growth in collaboration service activities due to the execution of third-party contracts which generated $3.7 million more in revenues in 2021 compared to 2020. This was partially offset by reduced revenues recognized related to an existing third-party contract by $0.8 million.

Cost of Services (2020 amount restated)

	Year Ended December 31,		Change 2020 to 2021	
	2021	2020	$	%
	(dollars in thousands)			
Cost of services	$ 228,797	$ 175,296	$ 53,501	31 %

Cost of services increased by $53.5 million, or 31%, to $228.8 million for the year ended December 31, 2021, from $175.3 million for the year ended December 31, 2020. The increase was primarily driven by the following cost components: a $9.7 million increase in stock-based compensation expense primarily driven by the increase in fair value of the liability-classified awards until July 22, 2021, the closing date of our business combination and an increase in the number of stock-based compensation awards granted; a $7.9 million increase in personnel-related expenses driven by an increase in average headcount; a $8.2 million increase in consulting and outside service costs driven by temporary hires contracted to perform COVID-19 testing activities; a $5.0 million increase in logistical expenses and other lab services as a result of an increase in operations; a $9.6 million increase in reagents and laboratory supplies expense due primarily to the 32% increase in volumes; a $2.4 million increase in software expenses due to increased cloud storage and expanded computing capacity requirements from New York City to Stamford, Connecticut for testing data; a $2.1 million increase in the inventory obsolescence reserve for expiring COVID-19 and certain carrier screening testing kits; a $2.2 million increase in occupancy expenses; a $5.1 million increase in depreciation expenses in connection with our laboratory move at the end of 2020, with production activities commencing at the Stamford facility in the first quarter of 2021 and a $1.3 million increase in equipment maintenance and general office expenses.

Research and Development

	Year Ended December 31,		Change 2020 to 2021	
	2021	2020	$	%
	(dollars in thousands)			
Research and development	$ 105,162	$ 72,700	$ 32,462	45 %

Research and development expenses increased by $32.5 million, or 45%, to $105.2 million for the year ended December 31, 2021, from $72.7 million for the year ended December 31, 2020. The increase was primarily attributable to the following cost components: a $20.5 million increase in stock-based compensation expense driven by the increase in fair value of the liability-classified awards until the closing date of the business combination and an increase in the number of stock-based compensation awards granted; a $0.9 million increase in software expenses due to increased cloud storage; a $0.3 million increase in personnel-related expenses driven by an increase in average headcount a $4.8 million increase in depreciation expenses; a $3.6 million increase in expenses for reagents, laboratory supplies and laboratory software for research and development; and a $2.2 million increase in consulting fees.

Selling and Marketing (2020 amount restated)

	Year Ended December 31,		Change 2020 to 2021	
	2021	2020	$	%
	(dollars in thousands)			
Selling and marketing	$ 112,738	$ 63,183	$ 49,555	78 %

Selling and marketing expenses increased by $49.6 million, or 78%, to $112.7 million for the year ended December 31, 2021, from $63.2 million for the year ended December 31, 2020. The increase was primarily attributable to the following cost components: an $17.3 million increase in stock-based compensation expense driven by the increase in fair value of the liability-classified awards until the closing date of the business combination and an increase in the number of stock-based compensation awards granted; a $19.6 million increase in personnel-related expenses driven by increased headcount; a $4.1 million increase in consulting service expenses mainly to support revenue cycle transformation initiatives; a $3.2 million increase in information technology-related expenses; a $1.8 million increase in other administrative and office expenses; a $2.0 million increase in travel and business expenses due to the lifting of COVID-19 travel restrictions and a $1.5 million increase in counseling services.

General and Administrative

	Year Ended December 31,		Change 2020 to 2021	
	2021	2020	$	%
	(dollars in thousands)			
General and administrative	$ 205,988	$ 100,742	$ 105,246	104 %

General and administrative expenses increased by $105.3 million, or 104%, to $206.0 million for the year ended December 31, 2021, from $100.7 million for the year ended December 31, 2020. The increase was primarily attributable to the following cost components: an $51.7 million increase in stock-based compensation expense driven by the increase in fair value of the liability-classified awards until the closing date of the business combination and an increase in the number of stock-based compensation awards granted; a $21.1 million increase in professional services incurred mainly in connection with the business combination transaction; a $20.0 million increase in personnel-related expenses driven by an increase in average headcount including executive headcount; a $5.0 million increase in software expenses due to increased cloud storage requirements; a $7.0 million increase in insurance expenses driven by the commencement of director's insurance policy; and a $0.8 million increase in capital taxes as a result of the business combination transaction. These increases were partially offset by a $0.4 million decrease in occupancy and depreciation expenses in connection with our laboratory move from New York City to Stamford, Connecticut.

Related Party Expenses

	Year Ended December 31,		Change 2020 to 2021	
	2021	2020	$	%
	(dollars in thousands)			
Related party expenses	$ 5,659	$ 9,395	$ (3,736)	(40)%

Related party expenses decreased by $3.7 million, or 40%, to $5.7 million for the year ended December 31, 2021, from $9.4 million for the year ended December 31, 2020. The decrease was primarily attributable to the following cost components: a $3.2 million decrease in rent and facility expenses driven by a reduction of office and lab space leased from ISMMS pursuant to the TSA which ended in the first quarter of 2021; and a $0.5 million decrease in fees associated with information technology support pursuant to the TSA with ISMMS.

Interest Income

	Year Ended December 31,		Change 2020 to 2021	
	2021	2020	$	%
	(dollars in thousands)			
Interest income	$ 79	$ 506	$ (427)	(84)%

Interest income decreased by $0.4 million, or 84%, to $0.1 million for the year ended December 31, 2021, from $0.5 million for the year ended December 31, 2020. The decrease was due to declines in interest rates on money market fund accounts.

Interest Expense

	Year Ended December 31,		Change 2020 to 2021	
	2021	2020	$	%
	(dollars in thousands)			
Interest expense	$ 2,835	$ 2,474	$ 361	15 %

Interest expense increased by $0.4 million, or 15%, to $2.8 million for the year ended December 31, 2021, from $2.5 million for the year ended December 31, 2020. The increase was driven by new capital lease obligations for our Stamford laboratory facility which commenced operations in 2021 as well as the unused line fee and the amortization of deferred transaction costs related to the loan and security agreement entered into with Silicon Valley Bank at the end of 2021.

Other Income, Net

	Year Ended December 31,		Change 2020 to 2021	
	2021	2020	$	%
	(dollars in thousands)			
Other income, net	$ 5,114	$ 2,622	$ 2,492	95 %

Other income, net increased by $2.5 million or 95% to $5.1 million for the year ended December 31, 2021, from $2.6 million for the year ended December 31, 2020. The increase in other income, net was primarily attributable to the $5.6 million in funding that we received and recognized as other income under the CARES Act in the first quarter of 2021, partially offset by $0.3 million in penalties related to an early repayment of debt. This is compared to $2.6 million in funding received in 2020.

Comparison of the Years Ended December 31, 2020 and 2019

The following table sets forth our results of operations for the periods presented:

	Year Ended December 31,	
	2020 (Restated)	2019 (Restated)
	(in thousands)	
Revenue		
Diagnostic test revenue	$ 175,351	$ 191,667
Other revenue	3,971	4,507
Total revenue	179,322	196,174
Cost of services	175,296	113,389
Gross profit	4,026	82,785
Research and development	72,700	34,910
Selling and marketing	63,183	39,352
General and administrative	100,742	29,484
Related party expenses	9,395	9,452
Loss from operations	(241,994)	(30,413)
Other income (expense):		
Interest income	506	988
Interest expense	(2,474)	(783)
Other income, net	2,622	504
Total other income, net	654	709
Loss before income taxes	(241,340)	(29,704)
Income tax provision	—	—
Net loss and comprehensive loss	(241,340)	(29,704)
Redeemable convertible preferred stock dividends	—	3,039
Net loss attributable to common stockholders	$ (241,340)	$ (32,743)

Revenue

			Change 2019 to 2020	
	2020	2019	$	%
Diagnostic test revenue	$ 175,351	$ 191,667	$ (16,316)	(9)%
Other revenue	3,971	4,507	(536)	(12)%
Total revenue	$ 179,322	$ 196,174	$ (16,852)	(9)%

Total revenue decreased by $16.9 million, or 9%, to $179.3 million for the year ended December 31, 2020, from $196.2 million for the year ended December 31, 2019.

Diagnostic test revenue decreased by $16.3 million, or 9%, to $175.4 million for the year ended December 31, 2020, from $191.7 million for the year ended December 31, 2019. The decrease was primarily attributable to a change in the mix of tests performed coupled with reduced reimbursement rates. The Company experienced an increase in volumes of 248%, primarily driven by the introduction of COVID-19 testing in May 2020. Despite these increased volumes, diagnostic test revenue decreased due to lower pricing on COVID-19 testing relative to other diagnostic tests and an overall decrease in average pricing on Women's Health and Oncology testing.

Other revenue decreased by $0.5 million, or 12%, to $4.0 million for the year ended December 31, 2020, from $4.5 million for the year ended December 31, 2019. The decrease was primarily attributable to the completion of one significant third-party contract in 2019 and the completion of one significant contract with ISMMS in early 2020. This decrease was partially offset by growth in collaboration service activities due to the execution of two new third-party contracts in 2020. Other revenues are expected to continue to be driven predominately by services performed pursuant to contracts with third parties.

Cost of Services (2020 and 2019 amounts restated)

			Change	
			2019 to 2020	
	2020	2019	$	%
Cost of services	$ 175,296	$ 113,389	$ 61,907	55 %

Cost of services increased by $61.9 million, or 55%, to $175.3 million for the year ended December 31, 2020, from $113.4 million for the year ended December 31, 2019. The increase was primarily attributable to the following cost components: a $17.5 million increase in reagents and laboratory supplies expense due primarily to the 248% increase in resulted volumes coupled with the lower per test cost of performing COVID-19 tests relative to our other tests; a $12.2 million increase in stock-based compensation expenses primarily driven by the increase in fair value of the liability-classified awards; an $11.1 million increase in personnel-related expenses driven by an increase in average headcount, partially offset by COVID-19 austerity measures; a $6.4 million increase in third party reference laboratory expenses due to an increase in tests performed by such third parties; a $4.6 million increase in expenses for other services such as genetic counseling, shipping and phlebotomy services; a $4.4 million increase in depreciation and amortization expenses driven by laboratory sequencing equipment acquired in 2020 and an increase in capitalized software as compared to the prior year; a $3.6 million increase in outside labor costs driven by temporary hires contracted in 2020 to perform COVID-19 testing activities as well as an increase in consultants supporting collaboration services; a $0.2 million increase in software expenses due to increased cloud storage and expanded computing capacity requirements for testing data; a $1.3 million increase in equipment-related expenses, including maintenance expenses on existing equipment and purchases of minor equipment in 2020; and a $0.5 million increase in occupancy costs.

Research and Development

			2019 to 2020	
	2020	2019	$	%
Research and development	$ 72,700	$ 34,910	$ 37,790	108 %

Research and development expense increased by $37.8 million, or 108%, to $72.7 million for the year ended December 31, 2020, from $34.9 million for the year ended December 31, 2019. The increase was primarily attributable to the following cost components: a $25.4 million increase in stock-based compensation expenses primarily due to an increase in fair value of the liability-classified awards and an increase in the number of stock-based compensation awards granted; a $9.3 million increase in personnel-related expenses driven by increased average headcount and retention bonuses offered to employees impacted by the relocation of our New York laboratory in December of 2020, partially offset by COVID-19 austerity measures; a $1.7 million increase in expenses for reagents, laboratory supplies and laboratory software for research and development use; and a $1.1 million increase in consulting and outside services, primarily due to an increase in the number of, and required investment in, research and development studies.

Selling and Marketing (2020 and 2019 amounts restated)

			Change 2019 to 2020	
	2020	2019	$	%
Selling and marketing	$ 63,183	$ 39,352	$ 23,831	61 %

Selling and marketing expense increased by $23.8 million, or 61%, to $63.2 million for the year ended December 31, 2020, from $39.4 million for the year ended December 31, 2019. The increase was primarily attributable to the following cost components: a $11.4 million increase in personnel-related expenses driven by an increase in average headcount, partially offset by COVID-19 austerity measures; a $11.1 million increase in stock-based compensation expenses primarily due to an increase in the fair value of the liability-classified awards and an increase in the number of outstanding awards due to increase in the number of stock-based compensation awards granted; a $1.5 million increase in commissions due to an increase in sales employee headcount and the implementation of temporary minimum commissions offered to sales employees in response to the COVID-19 pandemic; a $1.0 million increase in other lab service; and a $0.6 million increase in software expenses due to increased cloud storage requirements. These increases were partially offset by a $1.8 million decrease in travel and business expenses due to reduced business travel during the COVID-19 pandemic.

General and Administrative

			Change 2019 to 2020	
	2020	2019	$	%
General and administrative	$ 100,742	$ 29,484	$ 71,258	242 %

General and administrative expense increased by $71.3 million, or 242%, to $100.7 million for the year ended December 31, 2020, from $29.5 million for the year ended December 31, 2019. The increase was primarily attributable to the following cost components: a $66.0 million increase in stock-based compensation expenses due to an increase in the fair value of the liability-classified awards and an increase in the number of outstanding awards due to increase in the number of stock-based compensation awards granted; a $1.4 million increase in occupancy expenses due to the execution of additional third party leases; and a $1.3 million increase in personnel-related expenses due to an increase in general and administrative headcount, partially offset by COVID-19 austerity measures.

Related Party Expenses

			Change 2019 to 2020	
	2020	2019	$	%
Related party expenses	$ 9,395	$ 9,452	$ (57)	(1)%

Related party expenses decreased by $0.1 million, or 0.6%, to $9.4 million for the year ended December 31, 2020, from $9.5 million for the year ended December 31, 2019. The decrease was primarily attributable to a $1.7 million decrease in service fees associated with a reduction of leased ISMMS employees, a $1.0 million decrease in fees associated with information technology support pursuant to the TSA with ISMMS and decreases in other various services provided by ISMMS pursuant to the TSA and service agreements. These decreases were partially offset by a $2.0 million increase in rent and facility expenses driven by additional office and lab space leased from ISMMS pursuant to the transition services agreement and a $0.5 million increase in consultant costs driven by an increase in research and development efforts performed by ISMMS under consulting agreements.

Interest Income

	2020	2019	Change 2019 to 2020 $	Change 2019 to 2020 %
Interest income	$ 506	$ 988	$ (482)	(49)%

Interest income decreased by $0.5 million, or 49%, to $0.5 million for the year ended December 31, 2020, from $1.0 million for the year ended December 31, 2019. The decrease was due to declines in interest rates on money market deposit accounts and reductions in the average cash balances held throughout the year in these interest-bearing accounts.

Interest Expense

	2020	2019	Change 2019 to 2020 $	Change 2019 to 2020 %
Interest expense	$ 2,474	$ 783	$ 1,691	216 %

Interest expense increased by $1.7 million, or 216%, to $2.5 million for the year ended December 31, 2020, from $0.8 million for the year ended December 31, 2019. The increase was driven by an increase in capital lease obligations, an increase in our interest-bearing loan balance with the Connecticut Department of Economic and Community Development, or the DECD, and a new interest-bearing bank loan executed in 2020.

Other Income, Net

	2020	2019	Change 2019 to 2020 $	Change 2019 to 2020 %
Other income, net	$ 2,622	$ 504	$ 2,118	420 %

Other income, net increased by $2.1 million or 420% to $2.6 million for the year ended December 31, 2020, from $0.5 million for the year ended December 31, 2019. The increase in other income, net was primarily attributable to $2.6 million in funding that we received under the CARES Act.

Reconciliation of Non-GAAP Financial Measures

In addition to our results determined in accordance with GAAP, we believe the following non-GAAP measures are useful in evaluating our operating performance. We use the following non-GAAP financial information to evaluate our ongoing operations, as a component in determining employee bonus compensation, and for internal planning and forecasting purposes. We believe that non-GAAP financial information, when taken collectively, may be helpful to investors because it provides consistency and comparability with past financial performance. However, non-GAAP financial information is presented for supplemental informational purposes only and should not be considered in isolation or as a substitute for financial information presented in accordance with GAAP. In addition, other companies, including companies in our industry, may calculate similarly-titled non-GAAP measures differently or may use other measures to evaluate their performance, all of which could reduce the usefulness of our non-GAAP financial measures as tools for comparison. A reconciliation is provided below for each non-GAAP financial measure to the most directly comparable financial measure stated in accordance with GAAP. Investors are encouraged to review the related GAAP financial measures and the reconciliation of these non-GAAP financial

measures to their most directly comparable GAAP financial measures, and not to rely on any single financial measure to evaluate our business.

Non-GAAP financial measures have limitations as analytical tools and you should not consider them in isolation, or as substitutes for analysis of our results as reported under GAAP. We may in the future incur expenses similar to the adjustments in the presentation of Non-GAAP financial measures. Other limitations include that Non-GAAP financial measures do not reflect:

- all expenditures or future requirements for capital expenditures or contractual commitments;
- changes in our working capital needs;
- provision for income taxes, which may be a necessary element of our costs and ability to operate;
- the costs of replacing the assets being depreciated, which will often have to be replaced in the future;
- the non-cash component of employee compensation expense; and
- the impact of earnings or charges resulting from matters we consider not to be reflective, on a recurring basis, of our ongoing operations

Adjusted Gross Profit and Adjusted Gross Margin

Adjusted Gross Profit is a non-GAAP financial measure that we define as revenue less cost of services, excluding stock-based compensation expense, labor costs due to our move, and COVID-19 costs. We define Adjusted Gross Margin as our Adjusted Gross Profit divided by our revenue. We believe these non-GAAP financial measures are useful in evaluating our operating performance compared to that of other companies in our industry, as these metrics generally eliminate the effects of certain items that may vary from company to company for reasons unrelated to overall operating performance.

The following is a reconciliation of revenue to our Adjusted Gross Profit and Adjusted Gross Margin for the years ended December 31, 2021, 2020 and 2019 (in thousands):

	Year Ended December 31,		
	2021	2020 (Restated)	2019 (Restated)
Revenue	$ 212,195	$ 179,322	$ 196,174
Cost of services	228,797	175,296	113,389
Gross (Loss) Profit	**(16,602)**	**4,026**	**82,785**
	(8)%	2 %	42 %
Add:			
Stock-based compensation expense	$ 22,567	12,942	710
Labor costs due to laboratory move [(1)]	—	16,391	—
COVID-19 costs [(2)]	—	3,179	—
Adjusted Gross Profit	**$ 5,965**	**$ 36,538**	**$ 83,495**
Adjusted Gross Margin	3 %	20 %	43 %

(1) Represents labor costs in respect of laboratory employees' time spent to support our laboratory move from New York City to Stamford, Connecticut in 2020. During the move, our laboratory employees dedicated their time to re-validating and re-establishing instruments and equipment, rebuilding interface, obtaining a CLIA license, and other tasks to make sure the move was done correctly. For GAAP purposes we included these activities in Cost of Services. However, as the laboratory move and effort spent by our employees are one-time activities, we adjusted our Gross Profit to reflect management's view of our normal operations.

(2) Represents labor costs in respect laboratory employees' downtime. During the second quarter of 2020, we did not reduce the workforce in our laboratory due to the COVID-19 pandemic. However, we suffered significantly due to the decrease in volume in Women's Health and other products. Accordingly, we have adjusted our Gross Profit to reflect the management-assessed impact from the decrease in productivity of existing laboratory employees due to the COVID-19 pandemic in the second quarter of 2020.

Adjusted EBITDA

Adjusted EBITDA is a non-GAAP financial measure that we define as net loss adjusted for interest expense (income), net, depreciation and amortization, stock-based compensation expenses, transaction costs, other (income) expense, net, COVID-19 costs and change in fair market value of warrant and earn-out contingent liabilities and. We believe Adjusted EBITDA is useful in evaluating our operating performance compared to that of other companies in our industry, as this metric generally eliminates the effects of certain factors that may vary from company to company for reasons unrelated to overall operating performance.

The following is a reconciliation of our net loss to Adjusted EBITDA for the years ended December 31, 2021, 2020, and 2019 (in thousands):

	Year Ended December 31,		
	2021	2020	2019
Net loss	$ (245,390)	$ (241,340)	$ (29,704)
Interest expense (income), net [1]	2,756	1,968	(205)
Depreciation and amortization	21,807	11,734	6,407
Stock-based compensation expense	219,421	120,231	5,482
Transaction costs [2]	5,496	—	—
Other (income) expense, net [3]	(5,291)	(2,622)	(504)
COVID-19 costs [4]	—	3,179	—
Change in fair market value of warrant and earn-out contingent liabilities [5]	(198,401)	—	—
Adjusted EBITDA	$ (199,602)	$ (106,850)	$ (18,524)

(1) Represents the total of interest expense related to our capital leases and interest-bearing loans and interest income on money market funds.
(2) Represents professional service costs incurred in connection with pursuing the business combination transaction that did not meet the requirement for capitalization.
(3) For fiscal year 2020 and 2021, primarily consists of funding received under the CARES Act Provider Relief Fund.
(4) Represents labor costs in respect laboratory employees' downtime. During the second quarter of 2020, we did not reduce the workforce in our laboratory due to the COVID-19 pandemic. However, we suffered significantly due to the decrease in volume in Women's Health and other products. Accordingly, we have adjusted our Gross Profit to reflect the management-assessed impact from the decrease in productivity of existing laboratory employees due to the COVID-19 pandemic in the second quarter of 2020.
(5) For the year ended December 31, 2021, represents the change in fair market value of the liabilities associated with our public warrants, private placement warrants and the earn-out shares issuable under the terms of the merger agreement for our business combination.

Liquidity and Capital Resources

On July 22, 2021, we completed the business combination with CMLS, consummated the Prior PIPE Investment and received net cash proceeds of $510 million. Management determined that the cash proceeds received from the business combination provides us with sufficient liquidity to meet our obligations for at least twelve months from the date of the filing of our Annual Report on Form 10-K for the year ended December 31, 2021.

Furthermore, on November 15, 2021, we entered into a loan and security agreement, or the SVB Agreement, with Silicon Valley Bank, or SVB, whereby SVB agreed to provide a $125 million revolving credit facility with a maturity date of November 15, 2024. No amounts were drawn as of December 31, 2021. Advances under the SVB Agreement will bear interest at a floating rate per annum equal to the greater of (1) 4.00% and (2) the prime rate plus an applicable margin

Accordingly, the consolidated financial statements included elsewhere in this proxy statement have been prepared on a basis that assumes we will continue as a going concern and which contemplates the realization of assets and satisfaction of liabilities and commitments in the ordinary course of business. Nevertheless, we may also seek additional funding in the future through the sale of common or preferred equity or convertible debt securities, the entry into other credit facilities or another form of third-party funding or by seeking other debt financing. In particular, if the Acquisition is consummated, we expect to issue 50 million shares of our Class A common stock for an aggregate purchase price equal to $200 million pursuant to the PIPE Investment.

Material Cash Requirements for Known Contractual Obligations and Commitments

The following is a description of commitments for known and reasonably likely cash requirements as of December 31, 2021 and December 31, 2020. We anticipate fulfilling such commitments with our existing cash and cash equivalents, which amounted to $400.6 million and $108.1 million as of December 31, 2021 and December 31, 2020, respectively, or through additional capital raised to finance our operations.

Our future minimum payments under non-cancellable operating lease and capital lease agreements were $68.3 and $65.6 million, respectively as of December 31, 2021. The timing of these future payments, by year, can be found in our consolidated financial statements in Note 9, *"Commitments and Contingencies,"* included elsewhere within this proxy statement.

Our future contractual purchase commitments were $23.1 million as of December 31, 2021. The timing of these future payments, by year, can be found in our consolidated financial statements in Note 9, *"Commitments and Contingencies,"* included elsewhere within this proxy statement.

Cash Flows

	Year Ended December 31,		
	2021	2020	2019
		(in thousands)	
Net cash used in operating activities	$ (190,434)	$ (93,128)	$ (18,728)
Net cash used in investing activities	(20,786)	(31,974)	(15,456)
Net cash provided by financing activities	493,729	129,056	148,012

Operating Activities

Net cash used in operating activities during the year ended December 31, 2021 was $190.4 million, which was primarily attributable to a net loss of $245.4 million and a change in fair value of the warrant and earn-out contingent liabilities of $198.4 million, partially offset by non-cash depreciation and amortization of $21.8 million, non-cash stock-based compensation expense of $219.4 million, and a reserve against obsolete inventory of $2.1 million. The net change in our operating assets and liabilities primarily reflected a $5.5 million decrease in accounts receivable due to a decrease in institutional customer receivables which is in line with the respective revenue stream, a $10.6 million increase in inventories driven by a higher volume of purchases to support increasing testing volumes, a $14.3 million increase in prepaid expenses and other current assets mainly driven by new insurance policy premiums paid during the year, a $25.9 million increase in accounts payable and accrued expenses due to additional volume in the fourth quarter related to COVID-19 testing, resulting in increased related accruals and extended payment terms for large vendors, and a $3.2 million increase in other current liabilities mainly driven increased bonus accruals.

Net cash used in operating activities during the year ended December 31, 2020 was $93.1 million, which was primarily attributable to a net loss of $241.3 million, partially offset by non-cash depreciation and amortization of $11.7 million, non-cash stock-based compensation expense of $120.2 million and a net change in our operating assets and liabilities of $13.8 million. The net change in our operating assets and liabilities primarily reflected an increase in accounts receivable of $10.6 million driven by a slowdown in collections due to the COVID-19 pandemic, a $9.0 million increase in inventories in preparation for the move of certain laboratory operations to a new location in December 2020, an increase in accounts payable and accrued expenses of $14.8 million due to timing of vendor payments and increased spending during the year related to COVID-19 diagnostic testing and a $16.0 million increase in other current liabilities driven by higher personnel-related accruals due to increased headcount at 2020 year-end as compared to 2019 year-end, as well as an increase in accrued payroll taxes due to the deferral of U.S. payroll taxes as part of the CARES Act.

Net cash used in operating activities during the year ended December 31, 2019 was $18.7 million, which was primarily attributable to a net loss of $29.7 million and a net change in our operating assets and liabilities of

$0.7 million, partially offset by non-cash depreciation and amortization of $6.4 million and non-cash stock-based compensation expense of $5.5 million. The net change in our operating assets and liabilities primarily reflected an increase in accounts receivable of $4.6 million driven by increase in testing volumes and billings, an $8.0 million increase in inventories driven by anticipated future growth due to a year-over-year increase in testing volumes for the year ended December 31, 2019 as compared to the year ended December 31, 2018, a $4.4 million increase in other assets due to security deposits on certain office and laboratory locations, an increase in accounts payable and accrued expenses of $12.8 million due to increased operating expenditures in line with the growth of the business and a $4.5 million increase in other current liabilities driven by higher personnel-related accruals due to increased headcount at 2019 year-end as compared to 2018 year-end.

Investing Activities

Net cash used in investing activities during the year ended December 31, 2021 was $20.8 million, which was attributable to $9.4 million in purchases of property and equipment and $11.4 million of costs related to development of internal-use software assets.

Net cash used in investing activities during the year ended December 31, 2020 was $32.0 million, which was attributable to $24.1 million in purchases of property and equipment and $7.9 million of costs related to development of internal-use software assets.

Net cash used in investing activities during the year ended December 31, 2019 was $15.4 million, which was attributable to $11.9 million in purchases of property and equipment and $3.5 million of costs related to development of internal-use software assets.

Financing Activities

Net cash provided by financing activities during the year ended December 31, 2021 was $493.7 million, which was attributable to the consummation of our business combination including: $350.0 million from the Prior PIPE Investment proceeds; $442.7 million from an equity infusion from the business combination, net of redemptions; offset by $230.7 million in the cash payments to certain Legacy Sema4 stockholders; payment of transaction costs of $51.8 million; and $3.8 million of stock appreciate rights pay-outs. These amounts were further offset by an $8.7 million repayment of long-term debt and $3.7 million of capital lease principal payments.

Net cash provided by financing activities during the year ended December 31, 2020 was $129.0 million, which was primarily attributable to $117.3 million in net cash proceeds from the issuance of our Series C redeemable convertible preferred stock and $15.9 million in net cash proceeds from the issuance of long-term debt. These increases were partially offset by $4.0 million in principal payments on our capital lease obligations and $0.2 million in principal payments on our long-term debt obligations.

Net cash provided by financing activities during the year ended December 31, 2019 was $148.0 million, which was attributable to $118.8 million in net cash proceeds from the issuance of our Series B redeemable convertible preferred stock and $30.9 million in capital contributions from ISMMS, partially offset by $1.7 million in principal payments on our capital lease obligations.

Critical Accounting Policies and Estimates

We have prepared our consolidated financial statements in accordance with GAAP. Our preparation of these consolidated financial statements requires us to make estimates, assumptions and judgments that affect the reported amounts of assets, liabilities and related disclosures at the date of the financial statements, as well as revenue and expense recorded during the reporting periods. We evaluate our estimates and judgments on an ongoing basis. We base our estimates on historical experience and or other relevant assumptions that we believe to be reasonable under the circumstances. Actual results may differ from these estimates under different assumptions or conditions.

See Note 2, "*Summary of Significant Accounting Policies*" to our consolidated financial statements for further discussion on our accounting policies. We have identified below our accounting policies that we believe could

potentially generate materially different results if we were to change underlying assumptions, estimates and/or judgments. Although actual results may differ from those estimates, we believe the estimates are reasonable and appropriate.

Revenue Recognition

We recognize revenue when, or as, performance obligations under the terms of a contract are satisfied, which occurs when control of the promised products or services are transferred to a customer. Revenue is measured as the amount of consideration we expect to receive in exchange for transferring products or services to a customer. Our contracts require significant judgments in determining the transaction price and satisfying performance obligations.

Diagnostic test revenue

We estimate a transaction price in arrangements with third-party insurance payors based on historical collection experience, contractual provisions and insurance reimbursement policies, payor mix, and other relevant information for applicable payor portfolios. The portfolio approach is used as a practical expedient to account for categories of diagnostic test contracts as collective groups rather than on an individual contract basis. Management believes that revenue recognized by utilizing the portfolio approach approximates the revenue that would have been recognized if an individual contract approach was used. For orders received for self-pay patients, we determine a transaction price associated with services rendered in consideration of implicit price concessions that are granted to such orders. The estimates for implicit price concessions require significant judgment and are based upon management's assessment of expected net collections, business and economic conditions, historical trends, trends in federal, state and private employer health care coverage and other collection indicators. For institutional clients, the customer is the institution. We determine a transaction price associated with services rendered in accordance with the contractual rates established with each customer.

We monitor these estimates at each reporting period based on actual cash collections in order to assess whether a revision to the estimate is required. Both the initial estimate and any subsequent revision to the estimate contain uncertainty and require the use of judgment in the estimation of the transaction price and application of the constraint for variable consideration. If actual results in the future vary from our estimates, we will adjust these estimates, which could affect revenue and earnings in the period such variances become known. A 1% decrease or increase in our collection rate from third-party insurance payors, which we believe could be a reasonably likely change, would result in an unfavorable or favorable adjustment to diagnostic test revenue of approximately $16.2 million.

Other revenue

We also recognize revenue from service agreements and collaboration agreements with Biopharma companies and other third parties pursuant to which we provide diagnostic testing and related data aggregation reporting services. Certain of these contracts provide non-refundable upfront payments, which we record as contract liabilities, and variable payments based upon the achievement of certain milestones during the contract term. Milestone payments are a form of variable consideration that are included in the transaction price only when it is probable that doing so will not result in a significant reversal of cumulative revenue recognized when the uncertainty associated with the milestone is subsequently resolved.

For certain service or collaboration contracts that require us to transfer control of the service over time, we recognize revenue over time using an input measure based on costs incurred on the basis that this measure best reflects the pattern of transfer of control of the services to the customer. The measure of progress is developed using our best estimate of the performance period and the anticipated costs to be incurred to perform such services, including any subcontracted service costs.

Capitalized Internal-Use Software Costs

We capitalize certain costs related to the development of our software applications for internal use. Capitalization begins during the application development stage, once the preliminary project stage has been completed. If a project constitutes an enhancement to existing software, we assess whether the enhancement creates

additional functionality to the software, thus qualifying the work incurred for capitalization. Costs incurred prior to meeting these criteria together with costs incurred for training and maintenance are expensed as incurred. Once the project is available for general release, capitalization ceases and we estimate the useful life of the asset and begin amortization. We exercise judgment in determining the point at which various projects may be capitalized, in assessing the ongoing value of the capitalized costs and in determining the estimated useful lives over which the costs are amortized. We periodically assess whether triggering events are present which would indicate that the internal-use software is impaired. To the extent that we change our estimates related to internal-use software, the amount of internal-use software development costs we capitalize and amortize could change in future periods.

Earn-out Contingent Liability

We estimate the fair value of the total earn-out shares based on a Monte Carlo simulation valuation model. The fair value of the earn-out contingent liability is sensitive to expected volatility estimated based on selected guideline public companies and the Company's common stock price which is sensitive to changes in the forecasts of earnings and/or the relevant operating metrics. The model used requires the use of assumptions regarding variables that are complex, subjective and generally require judgment to determine.

Stock-Based Compensation

Stock-based compensation for all employee and non-employee stock-based awards, including restricted stock units, is measured at fair value on the date of grant and recognized over the service period. The fair value of restricted stock units are calculated based on the fair value of our common stock on the date of grant, while the fair value of stock options are calculated using a Black-Scholes option-pricing model. The Black-Scholes option-pricing model requires the use of assumptions regarding a number of variables that are complex, subjective and generally require significant judgment to determine. Changes in the assumptions can materially affect the fair value and ultimately how much stock-based compensation expense is recognized. Key assumptions include expected volatility, expected term, risk-free interest rate and dividend yield. The volatility is estimated based on the average volatility for comparable publicly traded companies over a period equal to the expected term of stock option grants. When selecting these comparable companies, we considered the enterprise value, risk profiles, position within the industry, and whether there was sufficient historical share price information to meet the expected life of the stock-based awards. The expected term of the Company's options has been determined utilizing the "simplified" method as the awards granted are qualified as "plain-vanilla" options. The risk-free interest rate is based on the U.S. Treasury yield curve in effect at the time of grant for bonds with maturities consistent with the expected holding periods corresponding with the expected term of the option. We estimate zero dividend yield as we have not historically paid dividends on common stock and do not anticipate paying dividends in the foreseeable future.

Income Taxes

We account for income taxes in accordance with ASC Topic 740, "Income Taxes," under which deferred income taxes are provided for temporary differences between the financial reporting and tax basis of our assets and liabilities. We reduce deferred tax assets, if necessary, by a valuation allowance if it is more likely than not that we will not realize some or all of our deferred tax assets. In making such a determination, we consider all available positive and negative evidence, including future reversals of existing taxable temporary differences, projected future taxable income, tax-planning strategies, and results of recent operations.

We recognize the tax benefit from an uncertain tax position only if it is more likely than not that the tax position will be sustained on examination by taxing authorities, based on the technical merits of the position.

JOBS Act Accounting Election

We are an "emerging growth company" within the meaning of the JOBS Act. The JOBS Act allows an emerging growth company to delay the adoption of new or revised accounting standards that have different effective dates for public and private companies until those standards apply to private companies. We have elected to use this extended transition period and, as a result, our financial statements may not be comparable to companies that comply with public company effective dates. We also intend to rely on other exemptions provided by the JOBS Act,

including not being required to comply with the auditor attestation requirements of Section 404(b) of the Sarbanes-Oxley Act.

We will remain an emerging growth company until the earliest of (1) September 1, 2025, (2) the last day of the fiscal year in which we have total annual gross revenue of at least $1.07 billion, (3) the last day of the fiscal year in which we are deemed to be a "large accelerated filer" as defined in Rule 12b-2 under the Exchange Act, which would occur if the market value of our Class A common stock held by non-affiliates exceeded $700.0 million as of the last business day of the second fiscal quarter of such year or (4) the date on which we have issued more than $1.0 billion in non-convertible debt securities during the prior three-year period.

Recent Accounting Pronouncements

Information on recent accounting pronouncements can be found in Sema4's audited consolidated financial statements in Note 2, "*Summary of Significant Accounting Policies*" included elsewhere in this proxy statement.

Internal Controls

Material Weaknesses

A material weakness is a deficiency, or a combination of deficiencies, in internal control over financial reporting, such that there is a reasonable possibility that a material misstatement of a company's annual or interim financial statements will not be prevented or detected on a timely basis.

In connection with the preparation of Legacy Sema4's audited financial statements for the years ended December 31, 2020, 2019 and 2018, we identified material weaknesses in our internal controls over financial reporting, as of December 31, 2020. These material weaknesses had not been fully remediated as of December 31, 2021. In addition, during 2021, management identified a misclassification of certain costs included within cost of services for the years ended December 31, 2021, 2020 and 2019. The material weaknesses identified related to the fact that we did not design and maintain accounting policies, procedures and controls to ensure complete, accurate and timely financial reporting in accordance with U.S. GAAP. Specifically, the material weaknesses identified included the following:

- We did not design and maintain accounting policies, processes and controls to analyze, account for and report our revenue arrangements in accordance with ASC 606, Revenue from Contracts with Customers, and ASC 605, Revenue Recognition.
- We did not design and maintain formal accounting policies, procedures and controls to achieve complete, accurate and timely financial accounting, reporting and disclosures, including controls over the preparation and review of account reconciliations, journal entries and classification of certain costs; the accounting for cost capitalization policies in accordance with ASC 330, Inventory, and ASC 350-40, Intangibles – Goodwill and Other – Internal-Use Software; and the application of ASC 840, Leases, ASC 340-40, Contracts with Customers and SEC Regulation S-X Article 5.
- We had not developed and effectively communicated to our employees our accounting policies and procedures, which resulted in inconsistent practices. Since these entity level programs have a pervasive effect across the organization, management has determined that these circumstances constitute a material weakness.
- Our accounting and operating systems lacked controls over access, and program change management that are needed to ensure access to financial data is adequately restricted to appropriate personnel.
- We do not have sufficient, qualified finance and accounting staff with the appropriate U.S. GAAP technical accounting expertise to identify, evaluate and account for accounting and financial reporting, and effectively design and implement systems and processes that allow for the timely production of accurate financial information in accordance with internal financial reporting timelines, commensurate with our size and the nature and complexity of our operations. As a result, we did not design and maintain formal

accounting policies, processes and controls related to complex transactions necessary for an effective financial reporting process.

Remediation Plan

Our management is actively engaged and committed to taking the steps necessary to remediate the control deficiencies that constituted the material weaknesses. During 2021, we made the following enhancements to our control environment:

- In May 2021, we hired a permanent Chief Accounting Officer with substantial technical accounting and internal controls experience, whose responsibilities include working with our Chief Financial Officer, existing employees and third-party consultants to improve the design, implementation, execution and supervision of our controls.

- We added accounting and information technology employees with appropriate experience, certification, education and training to the organization to strengthen our internal accounting team, to provide oversight, structure and reporting lines, and to provide additional review over our disclosures. This includes hiring a Corporate Controller, whose primary responsibilities include working with third-party consultants to improve the design, implementation, execution, and supervision of our controls. We expect to continue evaluating our needs for additional personnel. We expect to provide enhanced training to existing and new employees in order to enhance the level of communication and understanding of controls with personnel that provide key information and perform key roles within our financial accounting and reporting group.

- We engaged outside consultants to assist in the design, implementation, and documentation of internal controls that address the relevant risks, are properly designed, and provide for appropriate evidence of performance of the internal controls; and

- We engaged outside consultants to assist us in the evaluation of our Enterprise Resource Planning ("*ERP*") system in order to mitigate the internal control gaps and limitations with the current configuration, and to enhance the information technology general controls environment.

- Our remediation activities are continuing during 2022. In addition to the above actions, we expect to engage in additional activities, including, but not limited to:

- Hiring more technical accounting resources to enhance our control environment;

- Engaging external consultants to provide support and to assist us in our evaluation of more complex applications of GAAP, and to assist us with documenting and assessing our accounting policies and procedures until we have sufficient technical accounting resources;

- Implementing business process-level controls across all significant accounts and information technology general controls across all relevant systems. This includes providing training for control owners that will present expectations as it relates to the control design, execution and monitoring of such controls, including enhancements to the documentation to evidence the execution of the controls; and

- Implementing improvements to our ERP system to enhance the accuracy of our financial records, enable the enforcement of systematic segregation of duties, and to improve our information technology general controls environment.

We continue to enhance corporate oversight over process-level controls and structures to ensure that there is appropriate assignment of authority, responsibility, and accountability to enable remediation of our material weaknesses. We believe that our remediation plan will be sufficient to remediate the identified material weaknesses and strengthen our controls. As we continue to evaluate, and work to improve our controls, management may determine that additional measures to address control deficiencies or modifications to the remediation plan are necessary.

While we have performed certain remediation activities to strengthen our controls to address the identified material weaknesses, control weaknesses are not considered remediated until new internal controls have been operational for a period of time, are tested, and management concludes that these controls are operating effectively. We will continue to monitor the effectiveness of our remediation measures in connection with our future assessments of the effectiveness of internal control over financial reporting and disclosure controls and procedures, and we will make any changes to the design of our plan and take such other actions that we deem appropriate given the circumstances.

GENEDX'S BUSINESS

In this section, "GeneDx" or "we", "us" and "our" refer to GeneDx, Inc. unless specifically stated otherwise.

Overview

GeneDx is a patient-centric health information company and leader in delivering clinical genomic answers to an ever-increasing community of patients, families and healthcare providers. With more than 20 years of experience in diagnosing rare disorders and diseases, we have pioneered panels, exome and whole genome sequencing and have developed a proprietary genomic interpretation and information services platform in support of healthcare partners and patients globally. We create, follow, and are informed by cutting-edge science and technology. With one of the most sophisticated datasets of genomic information, we are able to identify new disease-causing genes, advancing the field of medicine through the detection, discovery, and diagnosis of genetic diseases.

Purpose

We operate with the conviction that what is best for our customers (patients, their families and the clinicians, payers and partners who serve them) must be embedded in every aspect of our work. We believe that:

- genomic information has broad utility, and every person should have access to their genome—delivered expertly, ethically and responsibly—to guide health decisions throughout life;
- the transition from hypothesis-based to genome-guided healthcare will improve outcomes for patients and the healthcare system;
- genomics will radically transform therapeutic development, bringing better therapies to patients, faster; and
- patients should control and have the ability to direct the use of their genomic information to benefit both themselves and advance scientific understanding that helps others.

In support of these beliefs, we value:

- **Equity:** the right of all to have access to information that may improve their health;
- **Simplicity:** healthcare is complicated. Genetic information is complex. Our job is to make it as simple as possible to access an answer that improves health outcomes. We value the understanding simplicity creates; and
- **Transparency:** transparency and accountability for ourselves and our partners to safeguard the confidence and trust of patients, customers and partners.

Through this value system, we aim to revolutionize healthcare and change lives by unlocking the answers from within, applying genomics to bring better health to patients around the world.

GeneDx's Genomic Testing

When patients present with complex issues, a genetic diagnosis may be possible, but a traditional genetic panel test may be too narrow to identify the cause. The human genome is composed of three billion "letters", or base pairs, of DNA. The exome is the portion of the genome that encodes for proteins, the molecular machines that allow cells to function. Changes in the genome and exome can cause many different diseases.

Some genetic disorders present with very specific symptoms; therefore, tests that read the "letters" of a single gene or a small panel of genes, may be appropriate. However, for many other genetic diseases, patients can present with overlapping symptoms. Finding the correct diagnosis is not always straight-forward and may require multiple tests, costly evaluations, invasive procedures, and long hospital stays. Exome and genome sequencing may find answers that more targeted genetic tests miss and are especially useful when the timing is critical and test results may direct or alter medical management.

Founded by scientists from the U.S. National Institutes of Health ("*NIH*") in 2000, GeneDx has a proven track record of expertise in genetic testing, having launched next generation sequencing panels in 2008, pioneered exome sequencing in 2012 and has now sequenced more than 300,000 exomes to date. We have performed more than one-million genetic tests and have developed the following:

- a curated database of disease-associated genomic variants;
- proprietary bioinformatics and variant interpretation pipelines; and
- rapid exome and whole genome sequencing testing options.

The current status quo of genetic testing generally requires repeated and fragmented testing, which in many cases, is conducted too late. Additionally, targeted genetic tests and panels have been largely commoditized and may leave physicians, healthcare partners and patients searching for deeper answers and enhanced utility. We believe that the scalable exome and whole genome interpretation that we can deliver at speed, no longer requiring a long, complex, expensive, expert-guided search, has the potential to make most other genetic tests obsolete.

Advanced technology with a human touch

With approximately 250 genetic counselors, M.D./Ph.D. scientists, and clinical and molecular genomics specialists, we believe that GeneDx is the industry's leading genetic testing expert.

Our years of exome sequencing experience provides an enormous phenotyped clinical genomic dataset, including more than 2.1 million structured phenotypes with 60% as parent-child trios. Of particular importance, we have invested resources over time to annotate the phenotypes and sequence the parents, because they improve the diagnostic outcome of each case but also because that data improves the interpretation of future cases. We now have nearly twice as many expertly annotated disease-causing variants as the largest public resource, ClinVar, across more genes, which we have built over the course of a decade of clinical work.

Internally developed with over one-million sequenced specimens, we believe that our database leads to more and more reliable diagnostic test results. Combined with our proprietary, state-of-the-art variant identification software, we believe that our ability to deliver highly accurate test results makes finding definitive diagnoses, even in complex cases, possible. As the number of new patients we test increases, so does our database and as new data increases, so does the potential for greater insights. By comparing new cases against the data from previous cases, we may eventually confirm whether a genetic variant is significant. Once new findings are identified, we aim to proactively reach out to healthcare providers and offer to reanalyze their patients' previous results. Over time, we expect to fully automate this reanalysis process in a convenient, easy to understand, frictionless method. Implemented with expert oversight, our advanced interpretation methods incorporate automation, bioinformatics, and machine learning, enabling efficient discovery of genetic differences at previously undetectable levels.

GeneDx's Strategy to Lead

Leveraging these capabilities, we aim to be the global market leader in the development and delivery of reliable, actionable, scalable exome and genome sequencing, and related interpretation and information services. GeneDx's strategy focuses on the following initiatives:

- expanding the utilization of exome and genome sequencing as the first- or second-tier test over most other germline tests among genetics experts;
- expanding the utilization of industry-leading exome and genome sequencing beyond the experts into the non-expert space globally, creating a new standard of care that enables faster diagnoses, reduces suffering, and helps healthcare systems save money. In the near term, we expect that our principal target markets will be settings with the most vulnerable patients who can benefit the most including, but not limited to, NICU and Pediatric Developmental Disorders; and
- opening new markets and geographies and unlocking the value of our dataset with independently scalable cloud-base interpretation and information service offerings.

Industry Background and Market Opportunity

Targeted genetic tests and panel testing currently make up the overwhelming majority of medical diagnostics tests ordered today, and GeneDx offers such targeted genetics tests and panel testing. They require that clinicians know what they are looking for and how to find the test that could identify it. The foregoing is hypothesis-based medicine. We firmly believe that affordable, scalable and actionable genomic testing is the future of medicine, in which we sequence once, query often. The barrier to that affordable genome is very high—and not just due to sequencing costs—which are coming down. The less-discussed barrier lies in the ability to process a genome's wealth of information—quickly, scalably—and deliver a result on which a clinician can easily act to help a patient.

While panel testing can be valuable, it has an inherent limitation as we move toward genetic-based care. Panels can lead to incomprehensive results and an inefficient process. Exome and whole genome testing provide the broadest view into the genome, as such testing can examine all 20,000 genes, whereas panels look at anywhere from two to a few hundred genes. While many of our competitors have grown through a focus on panels, we have focused on exome and whole genome sequencing, developing structured gene-disease knowledge curated by a group of experts to power automated interpretation and reporting.

From a business perspective, the genetic testing industry is highly fragmented: there are dozens of market participants, most of which are tackling the same problem test-by-test with thousands of panels across dozens of clinical areas. It is highly inefficient. But what we are all striving for is the consolidation of the space—who can provide all the answers, and create one test that obviates the need for most others.

In addition to its panel testing business, GeneDx intends to grow primarily by expanding its current market-leading exome position through commercial expansion of its current offerings in the NICU and PP/ID setting, as well as introducing interpretation and information services to clinicians, researchers and biopharmaceutical partners.

Over the long term, GeneDx intends to transform its industry-leading exome into whole genome testing, supported with the launch of a new customer experience platform for non-geneticists, patients and caregivers and evidence generation to establish the clinical and economic benefits of screening.

Customers and Seasonality

GeneDx receives payment for its products and services from business-to-business clients, third-party payers, patients and from other healthcare partners. Substantially all of its revenue for the year ended December 31, 2021 was primarily derived from diagnostic test reports. We expect over time to achieve a mix of diagnostic test revenue, revenue from screening products and information and interpretation services.

Less than five percent of GeneDx's revenues for the year ended December 31, 2021 were derived from referral sources outside of the United States; however, we expect that, over time, the mix of U.S. vs. rest of world revenue will draw closer to parity.

GeneDx has historically experienced higher revenue in its fourth quarter compared to the first three quarters of the calendar year due in part to seasonal demand for its tests from patients who have met their annual insurance deductibles.

Competition

GeneDx's competitors include companies that offer molecular genetic testing and consulting services, including specialty and reference laboratories that offer traditional single- and multi-gene tests, as well as biopharmaceutical companies. In addition, there are a large number of new entrants into the market for genetic information, ranging from informatics and analysis pipeline developers, to focused, integrated providers of genetic tools and services for health and wellness, including Illumina, Inc. which is also one of GeneDx's suppliers. In addition to the companies that currently offer traditional genetic testing services and research centers, other established and emerging healthcare, information technology and service companies may commercialize competitive products including informatics, analysis, integrated genetic tools and services for health and wellness. Principal competitors include

companies such as Exact Sciences, Invitae, Guardant Health, Myriad, Natera, Neogenomics, Personalis, and Prevention Genetics, as well as other commercial and academic labs.

GeneDx Corporate Office

GeneDx's corporate office and the location of its 90,000 square-foot laboratory is 207 Perry Parkway, Gaithersburg, Maryland 20877, which is a leased space.

Market Information, Holders and Dividends.

GeneDx is currently an indirect, wholly-owned subsidiary of OPKO Health, Inc., and there is no established public trading market for any of GeneDx's securities. Following the consummation of the Acquisition, GeneDx will become an indirect, wholly-owned subsidiary of Sema4. GeneDx has never paid cash dividends on its outstanding equity.

GENEDX'S MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

Factors Affecting Our Performance

We believe several important factors have impacted, and will continue to impact, our performance and results of operations. While each of these areas presents significant opportunities for us, they also pose significant risks and challenges that we must address. See the section titled "*Risk Factors*" for more information.

Comparison for The Years Ended December 31, 2021 and December 31, 2020

(In thousands)	2021	2020	Change	% Change
Revenues				
Revenue from services	$ 116,595	$ 94,712	$ 21,883	23 %
Other	—	308	(308)	(100)%
Total revenues	116,595	95,020	21,575	23 %
Costs and expenses:				
Cost of revenue	84,361	74,367	9,994	13 %
Selling, general and administrative	52,439	41,583	10,856	26 %
Research and development	12,377	9,110	3,267	36 %
Amortization of intangible assets	16,813	16,813	—	— %
Total costs and expenses	165,990	141,873	24,117	17 %
Operating loss	$ (49,395)	$ (46,853)	$ (2,542)	(5)%
Other income (expense)	(44)	(87)	43	49 %
Income tax benefit	12,547	12,037	510	4 %
Net loss and comprehensive loss	$ (36,892)	$ (34,903)	$ (1,989)	(6)%

Revenue. Revenue from services increased $21.9 million, or 23%, to $116.6 million for the year ended December 31, 2021, from $94.7 million for the year ended December 31, 2020. The increase was primarily attributable to the following components:

- resulted test volumes of 146,982 increased 33% from 110,478 in 2020;
- exome and whole genome sequencing (WGS) revenue increased $22.5 million, resulting from a 45% increase in resulted test volumes partially offset by a decrease of $11.2 million from reduced test reimbursement resulting from a shift in overall payor mix towards third party and government payers;
- non-exome, non-WGS revenue increased $14.0 million from a 30% increase in test resulted volumes, which was partially offset by a decrease of $4.6 million from reduced test reimbursement resulting from increased commoditization and increased denial rates;
- biopharma and data services revenue increased $0.6 million; and
- estimated collection amounts are subject to the complexities and ambiguities of billing, reimbursement regulations and claims processing, as well as considerations unique to Medicare and Medicaid programs, and require us to consider the potential for retroactive adjustments when estimating variable consideration in the recognition of revenue in the period the related services are rendered. For the years ended December 31, 2021 and 2020, we recognized revenue reductions due to changes in estimates of implicit price concessions for performance obligations satisfied in prior periods of $4.2 million and $4.8 million, respectively.

Other revenue consisted of $0.3 million for the year ended December 31, 2020 from funds distributed to healthcare providers for related expenses or lost revenues that are attributable to the COVID-19 pandemic. No such amounts were received in 2021.

Cost of revenue. Cost of revenue increased $10.0 million, or 13%, to $84.4 million for the year ended December 31, 2021, from $74.4 million for the year ended December 31, 2020. The increase was primarily attributable to the following components: increased reagent, supply and specimen collection costs of $8.4 million; an increase of $5.5 million in personnel-related expenses driven by increased testing volumes; increased depreciation and amortization of $0.9 million; and an increase in shared-based compensation of $0.2 million, partially offset by a discrete benefit of $5.5 million upon receipt of a multi-year sales & use tax refund from the State of Maryland. Our cost per patient encounter (on the basis of laboratory accessions in the period), inclusive of all volumes, improved 9% in 2021 compared to the year ended December 31, 2020.

Selling, general and administrative expenses. Selling, general and administrative expenses increased $10.9 million, or 26%, to $52.4 million for the year ended December 31, 2021, from $41.6 million for the year ended December 31, 2020. Selling, general and administrative expenses increased primarily due to the following components: increased information-technology related and other third party professional fees and license costs of $4.2 million to support the implementation of our expansion of various enterprise systems and other enablement technologies; increased sales and marketing personnel cost of $2.2 million; higher human resource, talent acquisition and onboarding costs of $1.7 to support expansions in our workforce; an increase of $1.2 million in non-cash share-based expense; $0.7 million related to professional fees in connection with the potential separation of GeneDx from OPKO; and $0.4 million increased facility costs, partially offset by $0.5 million lower billing cost.

Research and development expenses. The following table summarizes the components of our research and development expenses:

Research and Development Expenses	**For the years ended December 31,**	
	2021	**2020**
Research and development employee-related expenses	$ 10,042	$ 6,844
Other internal research and development expenses	2,335	2,266
Total research and development expenses	$ 12,377	$ 9,110

Research and development increased $3.3 million, or 36%, to $12.4 million for the year ended December 31, 2021 from $9.1 million for the year ended December 31, 2020 primarily due to increase personnel-related costs due to increased headcount across laboratory automation and robotics, bioinformatics and data research & development activities, as well as an increase of $0.2 million in share-based compensation expense.

Amortization of intangible assets. Amortization of intangible assets was $16.8 million for both the years ended December 31, 2021 and 2020. Amortization expense reflects the amortization of acquired intangible assets with defined useful lives.

Income tax benefit. Our income tax benefit for the years ended December 31, 2021 and 2020 was $12.5 million and $12.0 million, respectively, and reflects results using our expected effective tax rate. For the year ended December 31, 2020, the tax rate differed from the U.S. federal statutory rate of 21% primarily due to the impact of certain discrete tax events and the difference in state taxes.

LIQUIDITY AND CAPITAL RESOURCES

As of December 31, 2021, we had cash and cash equivalents of approximately $144 thousand.

Net cash used in operations for the year ended December 31, 2021 was $22.9 million primarily attributable to our net loss of $36.9 million and the net change in deferred income taxes of $12.6 million partially offset by non-cash depreciation and amortization expense of $21.9 million. Net cash used in operations for the year ended December 31, 2020 was $11.9 million primarily attributable to our net loss of $34.9 million and the net change in

deferred income taxes of $12.2 million partially offset by non-cash depreciation and amortization expense of $20.9 million.

Net cash used in investing activities for the years ended December 31, 2021 and December 31, 2020 primarily reflects capital expenditures of $13.0 million and $9.8 million, respectively, predominantly related to the expansion and improvement to our newly outfitted 90,000 square-foot laboratory and to purchases of additional next generation sequencing equipment.

Net cash provided by financing activities for the year ended December 31, 2021 and December 31, 2020 includes equity contributions from BioReference Laboratories, Inc. ("*BioReference"*), our direct party company, of $35.9 million and $21.3 million, respectively, to fund operations. We have not generated sustained positive cash flow sufficient to offset our operating and other expenses.

In November 2015, BioReference and certain of its subsidiaries, including GeneDx, entered into a credit agreement with JPMorgan Chase Bank, N.A. ("*CB*"), as lender and administrative agent which was amended and restated on August 30, 2021 (the "A&R Credit Agreement"). The A&R Credit Agreement provides for a $75.0 million secured revolving credit facility and includes a $20.0 million sub-facility for swingline loans and a $20.0 million sub-facility for the issuance of letters of credit. The A&R Credit Agreement matures on August 30, 2024 and is guaranteed by all of BioReference's domestic subsidiaries. The A&R Credit Agreement is also secured by substantially all assets of BioReference and its domestic subsidiaries, as well as a non-recourse pledge by BioReference's partent company of its equity interest in BioReference. Availability under the A&R Credit Agreement is based on a borrowing base composed of BioReference's eligible accounts receivables, which includes GeneDx, as specified therein. As of December 31, 2021, $64.8 million remained available for borrowing under the A&A Credit Agreement.

At BioReference's option, borrowings under the A&R Credit Agreement (other than swingline loans) bear interest at (i) the CB floating rate (defined as the higher of (a) the prime rate and (b) the LIBOR rate (adjusted for statutory reserve requirements for Eurocurrency liabilities) for an interest period of one month plus 2.50%) plus an applicable margin of 0.75% or (ii) the LIBOR rate (adjusted for statutory reserve requirements for Eurocurrency liabilities) plus an applicable margin of 1.75%. Swingline loans will bear interest at the CB floating rate plus the applicable margin. The A&R Credit Agreement also calls for other customary fees and charges, including an unused commitment fee of 0.375% if the average quarterly availability is 50% or more of the revolving commitment, or 0.25% if the average quarterly availability is less than or equal to 50% of the revolving commitments

We believe that the cash and cash equivalents on hand as of December 31, 2021, cash from operations and the amounts available to be borrowed under the A&R Credit Agreement are sufficient to meet our anticipated cash requirements for operations and debt service beyond the next 12 months. We based this estimate on assumptions that may prove to be wrong or are subject to change, and we may be required to use our available cash resources sooner than we currently expect. If we acquire additional assets or companies, we will need additional funds. Our future cash requirements, and the timing of those requirements, will depend on a number of factors, including the potential for funds to be available upon closing of the acquisition of GeneDx by Sema4 Holdings Corp., which announced in January 2022 that it executed an Agreement and Plan of Merger and Reorganization with GeneDx, and its parent company, the availability of financing, payor claims, and legal proceedings that may arise, including, without limitation class action and derivative litigation to which we are subject, and our ability to obtain insurance coverage for such claims. We have not generated sustained positive cash flow and if we are not able to secure additional funding when needed, we may have to reduce our marketing or sales efforts or cease operations.

The following table provides information as of December 31, 2021, with respect to the amounts and timing of our known contractual obligation payments due by period.

Contractual obligations (in thousands)	2022	2023	2024	2025	2026	Thereafter	Total
Open purchase orders	14,492	—	—	—	—	—	14,492
Operating Leases	(396)	1,048	1,659	1,715	1,773	9,116	14,915
Total	14,096	1,048	1,659	1,715	1,773	9,116	29,407

Quantitative and Qualitative Disclosures about Market Risk

We are subject to general economic and political conditions such as recessions, wage and input cost inflation, governmental COVID-19 shut down mandates as a result of the pandemic and, potential acts of war or terrorism. We are not exposed to material market or interest rate risk in the ordinary course of our business given our limited cash position and no outstanding debt as of the periods presented.

EXECUTIVE COMPENSATION OF SEMA4

Executive Compensation Overview

Objectives of our Executive Compensation Program

The main objectives of our executive compensation program are to create a competitive total rewards package to attract, retain and incent qualified executive officers who will lead us to long-term success and enhance stockholder value based on the balanced attainment of short-term performance objectives and long-term strategic goals. Each element of our compensation program supports these objectives.

Compensation of our Named Executive Officers

The following tables and accompanying narrative disclosure set forth information about the compensation earned by our named executive officers for the year ended December 31, 2021, who were:

- Eric Schadt, Ph.D., our Chief Executive Officer,
- Isaac Ro, our Chief Financial Officer, and
- James Coffin, Ph.D., our former President and Chief Operating Officer.

The named executive officers' compensation primarily consists of (1) base salary, (2) annual discretionary cash bonus and (3) equity incentive awards. Our named executive officers, during their employment with us, are also eligible to participate in the same retirement and health and welfare benefit plans as its other full-time employees.

2021 Summary Compensation Table

The following table presents summary information regarding the total compensation for services rendered in all capacities that was awarded to and earned by our named executive officers during the year ended December 31, 2021.

Name and Principal Position	Year	Salary ($)	Bonus ($)[1]	Stock Awards ($)[2]	Option Awards ($)[2]	All Other Compensation ($)[3]	Total ($)
Eric Schadt, Ph.D. *Chief Executive Officer and Director*	2021	650,000	513,000	10,699,239	3,867,064	41,533	15,770,836
	2020	643,846	540,000	—	1,770,474	13,756	2,968,076
Isaac Ro *Chief Financial Officer*	2021	353,846	139,333	7,897,167	2,633,103	16,615	11,040,064
James Coffin, Ph.D. *Former President and Chief Operating Officer*[4]	2021	530,397	180,370	3,155,535	1,104,874	17,400	4,988,576
	2020	524,615	363,000	623,189	—	11,169	1,521,973

(1) The amounts reported reflect the annual performance-based cash bonus amounts awarded to our named executive officers for their service in 2021. For additional information regarding the bonus compensation, see "*Narrative Disclosure to the Summary Compensation Table—2021 Bonuses*."

(2) Amounts represent the grant date fair value of the restricted stock units and stock options awarded to the named executive officer during 2021 in accordance with FASB Accounting Standards Codification Topic 718. The assumptions used in determining the grant date fair value of the restricted stock units and stock options are set forth in Note 10 of the notes to our audited consolidated financial statements included in this proxy statement. In determining the total value of the equity awards, we have considered all grants issued during the year as earned by the respective executive officers.

(3) The amounts reported in this column represent our matching contributions made on behalf of our named executive officers under our 401(k) plan and other personal benefits including reimbursement for travel costs in the amount of $24,133.

(4) Dr. Coffin left the Company in February 2022. Amounts reported include payments in respect of his 2021 bonus pursuant to our separation agreement with Dr. Coffin.

Narrative Disclosure to the Summary Compensation Table

2021 Bonuses

Under their employment agreements, Dr. Eric Schadt and Mr. Ro are entitled to receive annual bonuses based on the achievement of certain corporate and individual performance objectives. Prior to his leaving the Company, Dr. Coffin was also entitled to receive annual bonuses based on the achievement of corporate performance objectives. For the 2021 bonuses, the target annual bonuses for Dr. Schadt and Mr. Ro were equal to 100% and 50%, respectively, of their respective annual base salaries. In February 2022, based on the achievement of corporate and individual performance objectives, the Compensation Committee determined to award bonuses for 2021 to Dr. Schadt, and to Mr. Ro on a pro rata basis based on his hire date, as set forth in the table above. Further, pursuant to a separation agreement we entered into with Dr. Coffin in January 2022, we agreed to pay Dr. Coffin a 2021 bonus in the amount reflected in the table above.

2021 Equity Awards

Our company offers stock options as well as service-based RSUs to our named executive officers as the long-term incentive component of our compensation program. Stock options allow employees to purchase shares of our Class A common stock at a price per share at least equal to the fair market value of our Class A common stock on the date of grant and may or may not be intended to qualify as "incentive stock options" for U.S. federal income tax purposes. All of our named executive officers received RSU awards in recognition of their service to us and to further incentivize continued performance. Generally, our equity-based awards vest over four years, subject to the employee's continued employment with us on each vesting date. In connection with the Prior Merger Agreement and following the closing of the business combination, we also granted RSUs in the form of "Earnout RSUs" to our named executive officers that vest subject to certain market-based and service-based vesting conditions. In December 2021, we also issued stock bonuses to our employees who were hired on or before June 30, 2021, including our named executive officers, in connection with the termination of our sabbatical leave program. The stock bonuses were fully vested as of the date of issuance.

Outstanding Equity Awards at 2021 Fiscal Year-End

The following table sets forth information concerning outstanding equity awards held by each of our named executive officers as of December 31, 2021.

		Option Awards[1]				Stock Awards[1]	
Name	Grant Date	Number of Securities Underlying Unexercised Options Exercisable (#)	Number of Securities Underlying Unexercised Options Unexercisable (#)	Option Exercise Price ($)	Option Expiration Date	Number of Shares or Units of Stock That Have Not Vested (#)	Market Value of Shares or Units of Stock That Have Not Vested ($)[*]
Eric Schadt	6/1/2017[2]	4,829,521	—	$0.1529	5/31/2027	—	—
	10/17/2019[3]	851,357	510,815	$0.7659	10/16/2029	—	—
	2/18/2020[4]	1,300,203	1,011,285	$0.7659	2/17/2030	—	—
	10/1/2021[5]	52,541	788,125	$7.62	9/30/2031	—	—
	10/1/2021[5]					1,182,187	$ 5,272,552
	12/9/2021[6]	—	—	—	—	223,830	$ 309,334
	12/9/2021[7]	—	—	—	—	35,054	$ 48,444
	12/9/2021[8]	—	—	—	—	197,635	$ 273,133
	12/9/2021[8]	—	—	—	—	83,818	$ 115,836
	12/9/2021[9]	—	—	—	—	201,720	$ 278,778
Isaac Ro	10/1/2021[10]	108,507	470,197	$7.62	9/30/2031	—	—
	10/1/2021[10]	—	—	—	—	812,500	$ 3,623,750
	12/9/2021[11]	—	—	—	—	197,848	$ 273,428
James Coffin	8/31/2017[12]	2,167,093	—	$0.1529	8/30/2027	—	—
	2/18/2020[4]	457,659	355,961	$0.7659	2/17/2030	—	—
	10/1/2021[5]	15,011	225,179	$7.62	9/30/2031	—	—
	10/1/2021[5]	—	—	—	—	337,767	$ 1,506,442
	12/9/2021[6]	—	—	—	—	189,119	$ 261,363
	12/9/2021[13]	—	—	—	—	29,056	$ 40,155
	12/9/2021[14]	—	—	—	—	41,946	$ 57,968

(*) The closing market price of our Class A common stock on December 31, 2021 was $4.46 per share.

(1) The outstanding stock options were granted under our 2021 Equity Incentive Plan and Legacy Sema4's 2017 Equity Incentive Plan, as applicable. The outstanding RSUs were granted under our 2021 Equity Incentive Plan and pursuant to the Prior Merger Agreement, as applicable.

(2) The shares underlying the stock option are fully vested.

(3) The stock option vests at in quarterly installments over a four-year period. 100% of the shares underlying the stock option will vest (a) in the event that the service provider's option is not assumed or replaced by the buyer in connection with a change of control transaction or (b) upon termination of the service provider's employment by us without cause or by the service provider for good reason in connection with a change in control transaction.

(4) The stock option vests in quarterly installments over a four-year period. 100% of the shares underlying the stock option will vest (a) in the event that the service provider's option is not assumed or replaced by the buyer in connection with a change of control transaction or (b) upon termination of the service provider's employment by us without cause or by the service provider for good reason in connection with a change in control transaction.

(5) The stock options and RSU vest in quarterly installments over a four-year period. 100% of the shares underlying the stock options and RSUs will vest (a) in the event that the service provider's option is not assumed or replaced by the buyer in connection with a change of control transaction or (b) upon termination of the service provider's employment by us without cause or by the service provider for good reason in connection with a change in control transaction.

(6) The RSUs were granted pursuant to the Prior Merger Agreement. The vesting of the RSUs is conditioned on the satisfaction of both a service requirement and a market-based requirement. The service requirement is deemed satisfied as of the grant date.

(7) The RSUs were granted pursuant to the Prior Merger Agreement. The vesting of the RSUs is conditioned on the satisfaction of both a service requirement and a market-based requirement. The service requirement is deemed satisfied as of the grant date with respect to 12,254 of the RSUs, and will be satisfied with respect to the remainder of the RSUs over four vesting periods, subject to the officer's continued service to us on each service-based vesting date.

(8) The RSUs were granted pursuant to the Prior Merger Agreement. The vesting of the RSUs is conditioned on the satisfaction of both a service requirement and a market-based requirement. The service requirement is deemed satisfied as of the grant date with respect to 54,532

of the RSUs, and will be satisfied with respect to the remainder of the RSUs over five semi-annual periods, subject to the officer's continued service to us on each service-based vesting date.

(9) The RSUs were granted pursuant to the Prior Merger Agreement. The vesting of the RSUs is conditioned on the satisfaction of both a service requirement and a market-based requirement. The service requirement is deemed satisfied as of the grant date with respect to 100,737 of the RSUs, and will be satisfied with respect to the remainder of the RSUs over eight quarterly periods, subject to the officer's continued service to us on each service-based vesting date.

(10) 1/8th of the total shares underlying the stock options and RSUs vested on October 25, 2021, 1/16th of the total shares vested on November 8, 2021, and the RSUs thereafter vests as to 1/16th of the total shares underlying the award in quarterly installments until fully vested on February 8, 2025, subject to the officer's continued service to us on each vesting date. 100% of the shares underlying the stock options and RSUs will vest (a) in the event that the service provider's option is not assumed or replaced by the buyer in connection with a change of control transaction or (b) upon termination of the service provider's employment by us without cause or by the service provider for good reason in connection with a change in control transaction.

(11) The RSUs were granted pursuant to the Prior Merger Agreement. The vesting of the RSUs is conditioned on the satisfaction of both a service requirement and a market-based requirement. The service requirement is deemed satisfied as of the grant date with respect to 24,701 of the RSUs, and will be satisfied with respect to the remainder of the RSUs over 14 quarterly periods, subject to the officer's continued service to us on each service-based vesting date.

(12) The shares underlying the stock option are fully vested.

(13) The RSUs were granted pursuant to the Prior Merger Agreement. The vesting of the RSUs is conditioned on the satisfaction of both a service requirement and a market-based requirement. The service requirement is deemed satisfied as of the grant date with respect to 6,263 of the RSUs, and will be satisfied with respect to the remainder of the RSUs over six quarterly periods, subject to the officer's continued service to us on each service-based vesting date. Dr. Coffin left the Company in February 2022.

(14) The RSUs were granted pursuant to the Prior Merger Agreement. The vesting of the RSUs is conditioned on the satisfaction of both a service requirement and a market-based requirement. The service requirement is deemed satisfied as of the grant date with respect to 29,196 of the RSUs, and will be satisfied with respect to the remainder of the RSUs over four vesting periods, subject to the officer's continued service to us on each service-based vesting date. Dr. Coffin left the Company in February 2022.

Employment Agreements with Our Current Named Executive Officers

Each of our current named executive officers has entered into an employment agreement with us that provides for at-will employment and includes each named executive officer's base salary, a discretionary incentive bonus opportunity and standard employee benefit plan participation. The employment agreements provide for an annual base salary of $675,000 and a target annual bonus of 100% of annual base salary, in the case of Dr. Schadt, and an annual base salary of $400,000 and a target annual bonus of 50% of annual base salary, in the case of Mr. Ro. The employment agreements also provide for the potential payments and benefits upon a termination of employment or in connection with a change in control as described below in "*—Potential Payments upon Termination or Change in Control*." In addition, Dr's Schadt's and Mr. Ro's employment agreements provided for each to receive certain equity-based incentive awards following the closing of the business combination, which awards were granted under the 2021 Equity Incentive Plan (the "*2021 EIP*") and are subject to service-based vesting conditions. For more information, see"*—Outstanding Equity Awards at 2021 Fiscal Year-End*."

In addition, pursuant to their employment agreements, each of Dr. Schadt and Mr. Ro agreed that, during the nine-month period following the closing of our business combination, he will not: (i) sell, offer to sell, contract or agree to sell, hypothecate, pledge, grant any option to purchase or otherwise dispose of or agree to dispose of, directly or indirectly, or establish or increase a put equivalent position or liquidate or decrease a call equivalent position within the meaning of Section 16 of the Exchange Act, with respect to any shares of our Class A common stock, (ii) enter into any swap or other arrangement that transfers to another, in whole or in part, any of the economic consequences of ownership of any of such shares, in cash or otherwise, or (iii) publicly announce any intention to effect any transaction specified in clause (i) or (ii).

Potential Payments upon Termination or Change in Control

Pursuant to his employment agreement, if Dr. Schadt is terminated without "cause" or resigns for "good reason" (as such terms are defined in his employment agreement) other than in connection with a change in control, he will be entitled to receive 24 months of base salary continuation and continued coverage under our group health benefit plans, subject to his execution of a release of claims. If instead such termination occurs within the period commencing three months prior to and ending 12 months following a change in control, he will be entitled to receive 24 months of base salary continuation, a lump sum payment equal to two times his target annual bonus, 24 months of continued coverage under our group health benefit plans, and accelerated vesting of his outstanding equity-based compensation awards, subject to his execution of a release of claims.

Pursuant to his employment agreement, if Mr. Ro is terminated without "cause" or resigns for "good reason" (as such terms are defined in his employment agreement) other than in connection with a change in control, he will be entitled to receive 9 months of base salary continuation and 12 months of continued coverage under our group health benefit plans, subject to his execution of a release of claims. If instead such termination occurs within the 12-month period following a change in control, he will be entitled to receive 12 months of base salary continuation, a lump sum payment equal to one times his target annual bonus, 12 months of continued coverage under our group health benefit plans, and accelerated vesting of his outstanding equity-based compensation awards, subject to his execution of a release of claims.

As described above in "*—Outstanding Equity Awards at 2021 Fiscal Year-End*", a portion of the stock options held by Dr. Schadt would vest upon a change in control transaction.

Separation Agreement with Our Former Named Executive Officer

In connection with Dr. Coffin's departure from our company in February 2022, we and Dr. Coffin entered into a separation agreement (the "*Separation Agreement*"), pursuant to which Dr. Coffin received the following severance benefits in exchange for his execution of release of claims:

- a severance payment equal to 12 months of Dr. Coffin's annual base salary in the amount of $550,000;
- a discretionary 2021 annual bonus payment in the amount of $180,370;
- 12 months of reimbursement of COBRA continuation benefits;
- accelerated vesting of 25,425 stock options that were otherwise scheduled to vest on February 2, 2022 in the amount of $58,233, which is calculated based on the fair value estimated as of the effective date of his Separation Agreement; and
- an extended period to exercise certain of Dr. Coffin's vested stock options through May 30, 2022.

Equity Compensation Plans and Other Benefit Plans

2021 Equity Incentive Plan

Our 2021 Equity Incentive Plan, or the 2021 EIP, was adopted by our Board and approved by our stockholders in July 2021. The following summarizes the material terms of the 2021 EIP. This summary is qualified in its entirety to the full text of the 2021 EIP.

Shares reserved. We initially reserved 32,734,983 shares of Class A common stock for issuance pursuant to awards granted under the 2021 EIP, which includes shares of our Class A common stock previously reserved but unissued under Legacy Sema4's 2017 Equity Incentive Plan that became available for issuance under the 2021 Plan. The number of shares reserved for issuance under the 2021 EIP will increase automatically on January 1 of each of 2022 through 2031 by the number of shares equal to 5% of the aggregate number of outstanding shares of all classes of our Class A common stock as of the immediately preceding December 31, or a lesser number as may be determined by our Board. On January 25, 2022, an additional 12,128,941 shares became available for future issuance under the 2021 EIP pursuant to the plan's evergreen provision.

In addition, the shares set forth below will again be available for issuance pursuant to awards granted under our 2021 EIP:

- shares subject to options or SARs granted under our 2021 EIP that cease to be subject to the option or SAR for any reason other than exercise of the option or SAR;
- shares subject to awards granted under our 2021 EIP that are subsequently forfeited or repurchased by us at the original issue price;
- shares subject to awards granted under our 2021 EIP that otherwise terminate without such shares being issued;

- shares subject to awards granted under our 2021 EIP that are surrendered, cancelled, or exchanged for cash or a different award (or combination thereof);
- shares issuable upon the exercise of options or subject to other awards granted under the 2021 EIP that cease to be subject to such options or other awards, by forfeiture or otherwise, after the effective date of the 2021 EIP;
- shares subject to awards granted under the 2021 EIP that are forfeited or repurchased by us at the original price after the effective date of the 2021 EIP; and
- shares subject to awards under the 2021 EIP that are used to pay the exercise price of an option or withheld to satisfy the tax withholding obligations related to any award.

Administration. Our 2021 EIP will be administered by our compensation committee, or by our Board acting in place of our compensation committee. Subject to the terms and conditions of the 2021 EIP, the administrator will have the authority, among other things, to select the persons to whom awards may be granted, construe and interpret our 2021 EIP as well as to determine the terms of such awards and prescribe, amend and rescind the rules and regulations relating to the plan or any award granted thereunder. The 2021 EIP provides that the administrator may delegate its authority, including the authority to grant awards, to one or more executive officers to the extent permitted by applicable law, provided that awards granted to non-employee directors may only be determined by our Board.

Options. The 2021 EIP provides for the grant of both incentive stock options intended to qualify under Section 422 of the Code, and nonqualified stock options to purchase shares of our Class A common stock at a stated exercise price. Incentive stock options may only be granted to employees, including officers and directors who are also employees. The exercise price of stock options granted under the 2021 EIP must be at least equal to the fair market value of our Class A common stock on the date of grant. Incentive stock options granted to an individual who holds, directly or by attribution, more than ten percent of the total combined voting power of all classes of our capital stock must have an exercise price of at least 110% the fair market value of our Class A common stock on the date of grant.

Options may vest based on service or achievement of performance conditions, as determined by the administrator. The administrator may provide for options to be exercised only as they vest or to be immediately exercisable, with any shares issued on exercise being subject to our right of repurchase that lapses as the shares vest. In the event of a participant's termination of service, an option is generally exercisable, to the extent vested, for a period of three months in the case of termination without cause (except due to a participant's death or disability), for a period of 12 months in the case of termination due to the participant's death or disability, or such longer or shorter period as the administrator may provide, and for a period of 24 months in the case of termination due to the participant's retirement (consistent with our policies regarding retirement). Stock options generally terminate upon a participant's termination of employment for cause. The maximum term of options granted under our 2021 EIP is ten years from the date of grant, except that the maximum permitted term of incentive stock options granted to an individual who holds, directly or by attribution, more than ten percent of the total combined voting power of all classes of our capital stock is five years from the date of grant.

Restricted stock awards ("RSA"). An RSA is an offer by us to grant or sell shares of our Class A common stock subject to restrictions, which may lapse based on the satisfaction of service or achievement of performance conditions. The price, if any, of an RSA will be determined by the administrator. Unless otherwise determined by the administrator, vesting will cease on the date the participant no longer provides services to us and unvested shares may be forfeited to or repurchased by us.

Stock appreciation rights ("SAR"). A SAR provides for a payment, in cash or shares of our Class A common stock (up to a specified maximum number of shares, if determined by the administrator), to the participant based upon the difference between the fair market value of our Class A common stock on the date of exercise and a predetermined exercise price, multiplied by the number of shares. The exercise price of a SAR must be at least the fair market value of a share of our Class A common stock on the date of grant. SARs may vest based on service or achievement of performance conditions. No SAR may have a term that is longer than ten years from the date of grant.

Restricted stock units ("RSU"). An RSU represents the right to receive the value of shares of our Class A common stock at a specified date in the future and may be subject to vesting based on service or achievement of performance conditions. RSUs may be settled in cash, shares of our Class A common stock or a combination of both as soon as practicable following vesting or on a later date subject to the terms of the 2021 EIP. No RSU may have a term that is longer than ten years from the date of grant.

Performance awards. Performance awards granted pursuant to the 2021 EIP may be in the form of a cash bonus, or an award of performance shares or performance units denominated in shares of our Class A common stock that may be settled in cash, property or by issuance of those shares, subject to the satisfaction or achievement of specified performance conditions.

Stock bonus awards. A stock bonus award provides for payment in the form of cash, shares of our Class A common stock or a combination thereof, based on the fair market value of shares subject to such award as determined by the administrator. The awards may be granted as consideration for services already rendered, or at the discretion of the administrator, may be subject to vesting restrictions based on continued service or performance conditions.

Dividend equivalents rights. Our Board or the compensation committee thereof may permit participants holding RSUs to receive dividend equivalent payments if and when dividends are paid to stockholders. In the discretion of our board or the compensation committee thereof, such dividend equivalent payments may be paid in cash or shares of our Class A common stock and may either be paid at the same time as dividend payments are made to stockholders or delayed until shares are issued pursuant to the RSU grants and may be subject to the same vesting or performance requirements as the RSUs.

Change of control. Our 2021 EIP provides that, in the event of a corporate transaction that constitutes a change of control of our company under the terms of the plan, outstanding awards will be subject to the agreement evidencing the change of control, which need not treat all outstanding awards in an identical manner, and may include one or more of the following: (i) the continuation of the outstanding awards; (ii) the assumption of the outstanding awards by the surviving corporation or its parent; (iii) the substitution by the surviving corporation or its parent of new options or equity awards for the outstanding awards; (iv) the full or partial acceleration of exercisability or vesting or lapse of the company's right to repurchase or other terms of forfeiture and accelerated expiration of the award; or (v) the settlement of the full value of the outstanding awards (whether or not then vested or exercisable) in cash, cash equivalents, or securities of the successor entity with a fair market value equal to the required amount, as determined in accordance with the 2021 EIP, which payments may be deferred until the date or dates the award would have become exercisable or vested. Notwithstanding the foregoing, upon a change of control the vesting of all awards granted to our non-employee directors will accelerate and such awards will become exercisable, to the extent applicable, and vested in full immediately prior to the consummation of the change of control.

Adjustment. In the event of a change in the number of outstanding shares of our Class A common stock without consideration by reason of a stock dividend, extraordinary dividend or distribution, spin-off, recapitalization, stock split, reverse stock split, subdivision, combination, consolidation reclassification, spin-off or similar change in our capital structure, proportional adjustments will be made to (i) the number and class of shares reserved for issuance under our 2021 EIP; (ii) the exercise prices, number and class of shares subject to outstanding options or SARs; (iii) the number and class of shares subject to other outstanding awards; and (iv) the maximum number and class of shares that may be issued as incentive stock options, subject to any required action by the board or our stockholders and compliance with applicable laws.

Exchange, repricing and buyout of awards. The administrator may, without prior stockholder approval, (i) reduce the exercise price of outstanding options or SARs without the consent of any participant and (ii) pay cash or issue new awards in exchange for the surrender and cancellation of any, or all, outstanding awards, subject to the consent of any affected participant to the extent required by the terms of the 2021 EIP.

Director compensation limits. No non-employee director may receive awards under our 2021 EIP with a grant date value that when combined with cash compensation received for his or her service as a director, exceed

$750,000 in a calendar year, increased to $1,000,000 in the calendar year of his or her initial services as a non-employee director.

Clawback; transferability. All awards will be subject to clawback or recoupment pursuant to any compensation clawback or recoupment policy adopted by our Board or the compensation committee thereof or required by law during the term of service of the participant, to the extent set forth in such policy or applicable agreement. Except in limited circumstances, awards granted under our 2021 EIP may generally not be transferred in any manner other than by will or by the laws of descent and distribution.

Sub-plans. Subject to the terms of the 2021 EIP, the plan administrator may establish a sub-plan under the 2021 EIP and/or modify the terms of awards granted to participants outside of the United States to comply with any laws or regulations applicable to any such jurisdiction.

Amendment and termination. Our Board or compensation committee may amend our 2021 EIP at any time, subject to stockholder approval as may be required. Our 2021 EIP will terminate ten years from the date our Board adopts the plan, unless it is terminated earlier by our Board. No termination or amendment of the 2021 EIP may materially adversely affect any then-outstanding award without the consent of the affected participant, except as is necessary to comply with applicable laws or as otherwise provided by the terms of the 2021 EIP.

2017 Stock Incentive Plan

Legacy Sema4's 2017 Equity Incentive Plan (the "*2017 EIP*") was adopted by Legacy Sema4's board of directors and approved by its stockholders in April 2017. The 2017 EIP allowed for the grant of stock options, stock appreciation rights, restricted stock, and RSUs. As of December 31, 2021, we had 27,671,750 shares of our Class A common stock reserved for issuance pursuant to outstanding awards granted under the 2017 EIP. We terminated the 2017 EIP upon the effective date of the 2021 EIP, which was July 21, 2021. Any awards granted under the 2017 EIP that remained outstanding as of such date continue to be subject to the terms of the 2017 EIP and applicable award agreements until such awards are exercised or amended or until they terminate or expire by their terms.

2021 Employee Stock Purchase Plan

The 2021 Employee Stock Purchase Plan (the "*ESPP*") was adopted by our Board and approved by our stockholders in July 2021. The following summarizes the material terms of the ESPP. This summary is qualified in its entirety to the full text of the ESPP. We have not yet established an offering period under the ESPP.

Shares Reserved. We have initially reserved 4,804,011 shares of our Class A common stock equal for issuance and sale under the ESPP. The number of shares reserved for issuance and sale under our ESPP will increase automatically on January 1 of each of 2022 through 2031 by the number of shares equal to 1% of the aggregate number of outstanding shares of all classes of our Class A common stock as of the immediately preceding December 31, or a lesser number as may be determined by our compensation committee, or by our Board acting in place of our compensation committee. Subject to stock splits, recapitalizations, or similar events, no more than the number of shares of our Class A common stock equal to ten times the Initial ESPP Share Reserve may be issued over the term of the ESPP. On January 25, 2022, an additional 2,425,788 shares became available for future issuance under the ESPP pursuant to the plan's evergreen provision.

Administration. Our ESPP will be administered by our compensation committee, or by our Board acting in place of our compensation committee, subject to the terms and conditions of the ESPP. Among other things, the administrator will have the authority to determine eligibility for participation in the ESPP, designate separate offerings under the plan, and construe, interpret and apply the terms of the plan.

Eligibility. Employees eligible to participate in any offering pursuant to the ESPP generally include any employee that is employed by us or certain of our designated subsidiaries at the beginning of the offering period. However, the administrator may exclude employees who do not meet eligibility requirements that our compensation committee may choose to impose (within the limits permitted by the Code), are customarily employed for 20 hours or less per week, are customarily employed for five months or less in a calendar year or certain highly-compensated employees as determined in accordance with applicable tax laws. In addition, any employee who owns (or is deemed

to own because of attribution rules) 5% or more of the total combined voting power or value of all classes of our capital stock, or the capital stock of one of our qualifying subsidiaries, or who will own such amount because of participation in the ESPP, will not be eligible to participate in the ESPP. The administrator may impose additional restrictions on eligibility from time to time.

Offering Periods; Enrollment. Under our ESPP, eligible employees will be offered the option to purchase shares of our Class A common stock at a discount over a series of offering periods through accumulated payroll deductions over the period. The length of the offering periods under ESPP will be determined by the plan administrator and may be up to twenty-seven (27) months long. Each offering period may itself consist of one or more purchase periods. When the first offering period commences, our employees who meet the eligibility requirements for participation in that offering period will be eligible to enroll. For subsequent offering periods, new participants will be required to enroll in a timely manner. Once an employee is enrolled, participation will be automatic in subsequence offering periods. Participation in the ESPP ends automatically upon a participant's termination of employment. A participant may withdraw his or her participation from the ESPP at any time by submitting written notice to the company.

Offerings; Contributions; Limitations. The purchase price for shares purchased under the ESPP during any given purchase period will be 85% of the lesser of the fair market value of our Class A common stock on (i) the first trading day of the applicable offering period or (ii) the last trading day of the purchase period. The ESPP permits participants to purchase shares of our Class A common stock through payroll deductions of a percentage of their eligible compensation, which may not be less than one percent (1%) and may be up to a maximum of fifteen percent (15%) or such lower limit set by the plan administrator. No participant may purchase more than 2,500 shares of our Class A common stock during any one purchase period, and may not subscribe for more than $25,000 in fair market value of shares of our Class A common stock (determined as of the date the offering period commences) in any calendar year in which the offering is in effect. The administrator in its discretion, may set a lower maximum number of shares which may be purchased.

Adjustments upon recapitalization. If the number of outstanding shares of our Class A common stock is changed by stock dividend, recapitalization, stock split, reverse stock split, subdivision, combination, reclassification or similar change in our capital structure without consideration, then the administrator will proportionately adjust the number and class of common stock that is available under the ESPP, the purchase price and number of shares any participant has elected to purchase as well as the maximum number of shares which may be purchased by participants.

Corporate Transaction. If the post-combination company experiences a corporate transaction as determined under the terms of the ESPP, any offering period then in effect will be shortened and terminated on a final purchase date established by the administrator. The final purchase date will occur on or prior to the effective date of change of control transaction, and our ESPP will terminate on the closing of the change of control.

Transferability. Participants may generally not assign, transfer, pledge or otherwise dispose of payroll deductions credited to his or her account, or any rights with regard to an election to purchase shares pursuant to the ESPP other than by will or the laws of descent or distribution.

Amendment; Termination. The board or compensation committee may amend, suspend or terminate the ESPP at any time without stockholder consent, except as to the extent such amendment would increase the number of shares available for issuance under the ESPP, change the class or designation of employees eligible for participation in the plan or otherwise as required by law. If the ESPP is terminated, the administrator may elect to terminate all outstanding offering periods immediately, upon the next purchase date (which may be sooner than originally scheduled) or upon the last day of such offering period. If any offering period is terminated prior to its scheduled completion, all amounts credited to participants which have not been used to purchase shares will be returned to participants as soon as administratively practicable. Unless earlier terminated, the ESPP will terminated upon the earlier to occur of the issuance of all shares of common stock reserved for issuance under the ESPP, or the 10th anniversary of the effective date.

401(k) Plan

We sponsor a retirement savings plan established on January 1, 2018 that is intended to qualify for favorable tax treatment under Section 401(a) of the IRC, and contains a cash or deferred feature that is intended to meet the requirements of Section 401(k) of the IRC. Participants may make pre-tax and certain after-tax (Roth) salary deferral contributions to the plan from their eligible earnings up to the statutorily prescribed annual limit under the IRC. Participants who are 50 years of age or older may contribute additional amounts based on the statutory limits for catch-up contributions. Participant contributions are held in trust as required by law. No minimum benefit is provided under the plan. The plan provides for employer safe harbor matching contributions equal to 100% of an employee's salary deferrals that do not exceed 6% of the employee's compensation. An employee's interest in his or her deferrals and safe harbor matching contributions is 100% vested when contributed.

Other Benefits

Our named executive officers, while employed by us, are eligible to participate in our employee benefit plans on the same basis as our other employees, including our health and welfare plans. We generally do not provide our named executive officers with perquisites or other personal benefits. However, we do reimburse our named executive officers for their necessary and reasonable business and travel expenses incurred in connection with their services to us.

Compensation Committee Interlocks and Insider Participation

The directors who were members of our compensation committee during 2021 were Joshua Ruch, Rachel Sherman and Nat Turner. None of them at any time has been one of our officers or employees. None of our executive officers serves, or in the past has served, as a member of the Board or compensation committee of any entity that has one or more of its executive officers serving on our Board or our compensation committee.

Director Compensation

Non-Employee Director Compensation Policy

We adopted a non-employee director compensation policy that is designed to enable us to attract and retain, on a long-term basis, highly qualified non-employee directors. Our non-employee directors will receive an annual cash retainer of $40,000, payable quarterly, and a grant of stock options and RSUs with an aggregate grant-date value of $200,000, which will vest on the earlier of the first anniversary of the grant date and the next annual meeting of our stockholders. New non-employee directors will receive a grant of stock options RSUs upon joining our Board with an aggregate grant-date value of $400,000, which will vest over the three-year period following the grant date.

Members of our audit committee will receive an additional annual cash retainer of $10,000, and the chairperson of our audit committee will receive an additional cash retainer of $20,000 (in lieu of the annual retainer for membership on the audit committee). Members of our compensation committee will receive an additional annual cash retainer of $7,500, and the chairperson of our compensation committee will receive an additional cash retainer of $15,000 (in lieu of the annual retainer for membership on the compensation committee). Members of our nominating and governance committee will receive an additional annual cash retainer of $5,000, and the chairperson of our nominating and governance committee will receive an additional cash retainer of $10,000 (in lieu of the annual retainer for membership on the compensation committee).

Executive Chairman Compensation

In January 2022, our Board appointed Jason Ryan as Executive Chairman and entered into an executive chairman agreement (the "*Executive Chairman Agreement*") with Mr. Ryan. Prior to this appointment, Mr. Ryan served as a non-employee director of our Board. The Executive Chairman Agreement provides for an annual base salary of $540,000. In connection with the appointment, we issued to our Executive Chairman an option to purchase 429,730 shares of our Class A common stock, 247,525 service-based RSUs and 126,980 performance-based stock units, which awards will vest in full on the earlier of (a) December 31, 2022, and (b) a change in control of our company subject to Mr. Ryan's continued service as our Executive Chairman through such date and, in the case of

the performance-based RSUs, subject to the achievement of certain performance-based vesting conditions. The Executive Chairman Agreement will terminate on December 31, 2022 unless terminated earlier in accordance with its terms or extended by the mutual agreement of our Board and Mr. Ryan.

2021 Director Compensation Table

The following table sets forth the compensation earned by or paid to our non-employee directors for services provided during the year ended December 31, 2021, other than Keith Meister who joined the Board in January 2022. Dr. Schadt did not receive any compensation for his service as a director during fiscal year 2021, while also serving as Chief Executive Officer. Other than as described below, none of our non-employee directors received any fees or reimbursement of any expenses (other than customary expenses in connection with the attendance of meetings of our Board) or any equity or non-equity awards in the year ended December 31, 2021. Please see the section entitled "*—2021 Summary Compensation Table*" for a summary of payments made to Dr. Schadt.

Name	Fees Earned or Paid in Cash($)	Option Awards($)[1][4]	Restricted Stock and Other Securities ($)[1][4]	All Other Compensation ($)[2]	Total($)
Joshua Ruch	47,500	201,911	199,985	—	449,396
Dennis Charney, M.D.	—	—	—	—	—
Eli D. Casdin	20,000	101,401	99,992	—	221,393
Emily Leproust, Ph.D.	25,000	101,401	99,992	—	226,393
Jason Ryan[3]	30,000	201,911	199,985	—	431,896
Michael Pellini, M.D.	20,000	201,911	199,985	—	421,896
Nat Turner	23,750	101,401	99,992	—	225,143
Rachel Sherman, M.D., M.P.H., F.A.C.P.	20,000	101,401	143,797	50,000	315,198

(1) The amounts reported in this column represent the aggregate grant date fair value of the awards granted under the 2021 EIP and pursuant to the Prior Merger Agreement, as applicable, to our directors during the year ended December 31, 2021, as computed in accordance with FASB ASC Topic 718. The assumptions used in determining the grant date fair value of the awards reported in the Option Awards and Restricted Stock and Other Securities columns are set forth in Note 10 to our financial statements included elsewhere in this proxy statement. Note that the amounts reported in this column reflect the aggregate accounting cost for these awards granted during the year, and do not necessarily correspond to the actual economic value that may be received by the director from the awards.

(2) The amounts reported in this column represents payments under director legacy and other charitable award programs.

(3) Mr. Ryan served as a non-employee director until January 2022.

(4) The following table sets forth information regarding the aggregate number of shares of our Class A common stock underlying outstanding stock options held by our non-employee directors as of December 31, 2021 and the aggregate number of unvested shares of our Class A common stock underlying outstanding RSU awards held by our non-employee directors as of December 31, 2021:

ne	Shares Underlying Unexercised Stock Options	Unvested Shares of Restricted Stock Units
hua Ruch	44,572	25,672
nis Charney, M.D.	—	—
D. Casdin	22,286	12,836
ily Leproust, Ph.D.	22,286	12,836
on Ryan	44,572	25,672
chael Pellini, M.D.	44,572	25,672
Turner	22,286	12,836
hel Sherman, M.D., M.P.H., F.A.C.P.	385,509	44,533 [1]

(1) Includes 31,697 Earnout RSUs granted in connection with the Prior Merger Agreement.

EXECUTIVE COMPENSATION OF GENEDX

As discussed above, GeneDx is currently part of OPKO and not an independent company. Decisions about GeneDx's executive compensation and benefits to date have been made by the Compensation Committee of the OPKO Board of Directors (the "*OPKO Compensation Committee*") and OPKO senior management. Accordingly, this section focuses on OPKO's compensation and benefit programs and decisions for 2021. Katherine Stueland, GeneDx's Chief Executive Officer, who will be appointed Co-Chief Executive Officer of Sema4 following the Closing, is GeneDx's sole named executive officer (the "*Named Executive Officer*"). Following the Closing, Ms. Stueland's executive compensation will be determined by Sema4's Board of Directors and in accordance with the Sema4 Stueland Employment Agreement (as defined below), and accordingly Ms. Stueland's executive compensation and the benefits programs to which she will be entitled will not be the same as those discussed below.

Summary Compensation Table

The following table sets out the compensation for the Named Executive Officer for the year ended December 31, 2021:

Name and Principal Position	Year	Salary ($)[1]	Bonus ($)	Stock Awards ($)[2][3]	Option Awards ($)[2]	All Other Compensation ($)[4]	Total Compensation ($)
Katherine Stueland, *Chief Executive Officer of GeneDx*	2021	285,577	137,500	2,500,000	963,000	11,600	3,897,677

(1) Ms. Stueland became the Chief Executive Officer and President of GeneDx on June 21, 2021. Her annual base salary is $550,000.
(2) Reflects the aggregate grant date fair value computed in accordance with FASB ASC Topic 718. The assumptions used in calculating the amounts are discussed in Note 10 of OPKO's audited financial statements for the year ended December 31, 2021 included in OPKO's Annual Report on Form 10-K filed with the SEC on March 1, 2022.
(3) Consists of RSUs granted by OPKO to Ms. Stueland on June 21, 2021. See "—*Outstanding Equity Awards at 2021 Fiscal Year-End*" below.
(4) Includes contributions made by OPKO under its 401(k) Plan during fiscal year 2021 in the amount of $11,600 for Ms. Stueland.

Narrative to Summary Compensation Table

Stueland GeneDx Employment Agreement

GeneDx entered into an indefinite Employment Agreement with Ms. Stueland on June 7, 2021 (as amended, the "*GeneDx Stueland Employment Agreement*"), to serve as GeneDx's Chief Executive Officer and President commencing on June 21, 2021. The GeneDx Stueland Employment Agreement provides for (i) an annual base salary of $550,000, subject to annual review and increase (but not decrease) by GeneDx or OPKO's, as applicable, board of directors and (ii) eligibility to receive an annual bonus of up to $225,000 based upon satisfaction of performance-based goals and other individual and company metrics agreed upon between Ms. Stueland and GeneDx or OPKO's, as applicable, board of directors. The GeneDx Stueland Employment Agreement further provides for a $2,500,000 sign on bonus (the "*Sign-On Bonus*"), payable in cash, of which $1,000,000 was paid on June 21, 2021, and, subject to Ms. Stueland's continued employment, $750,000 will be payable on each of June 21, 2022 and June 21, 2023, provided that, upon the occurrence of certain events prior to June 21, 2023, including a change of control of GeneDx, Ms. Stueland shall be entitled to receive the Sign-On Bonus in full. Additionally, pursuant to the GeneDx Stueland Employment Agreement, OPKO granted Ms. Stueland restricted stock units on June 21, 2021 with respect to shares of OPKO common stock with a value of $2,500,000 as of the date of the grant (the "*OPKO RSUs*"), of which 50% vest on June 21, 2022 and the remaining 50% vest on December 21, 2022, provided that the OPKO RSUs shall become immediately vested in full upon the occurrence of certain events, including a change of control of GeneDx. Ms. Stueland also received options to purchase 450,000 shares of OPKO's common stock (the "*Initial Option*") under OPKO's equity incentive plan, with an exercise price equal to $3.78, the closing stock price of OPKO's common stock on the day of grant, which Initial Option vests annually in four equal installments over a four year period beginning on June 21, 2021, provided that, upon the occurrence of certain events prior to June 21, 2022, including a change of control of GeneDx, the vesting of the Initial Option shall be immediately accelerated in full. OPKO further agreed to grant Ms. Stueland options to purchase 450,000 shares of OPKO's

common stock on June 21, 2022 (the "*Additional Option*") under OPKO's equity incentive plan, with an exercise price equal to closing stock price of OPKO's common stock on the day of grant, and terms identical to the options described in the preceding sentence, except that the four year vesting period will begin on June 21, 2022, provided that should Ms. Stueland's employment be terminated without cause or upon resignation by her for good reason within twelve months of a change of control of GeneDx, or within three months prior to such change of control, the vesting of the Additional Option shall be immediately accelerated in full.

In connection with the execution of the Merger Agreement, GeneDx and Ms. Stueland entered into a certain amendment to the GeneDx Stueland Employment Agreement, dated as of January 14, 2022 (the "*GeneDx Stueland Employment Agreement Amendment*"), pursuant to which Ms. Stueland agreed, among other things, that (i) she shall not be permitted to exercise the Initial Option, (ii) at the Effective Time, the Initial Option shall be automatically cancelled and forfeited without any payment to her, (iii) OPKO is not required to grant her the Additional Option, provided the Closing occurs, and (iv) OPKO has no further obligations under the GeneDx Stueland Employment Agreement from and after the Closing, including no obligation to pay her the balance of the Sign-On Bonus. Pursuant to the GeneDx Stueland Employment Agreement Amendment, OPKO acknowledged and agreed that all outstanding OPKO RSUs will become immediately vested in full immediately prior to the Closing, subject to Ms. Stueland's continued employment with GeneDx.

Ms. Stueland is also entitled to participate in OPKO's employee benefit arrangements, on terms and conditions no less favorable than those available to any other similarly situated senior executive and is entitled to expense reimbursement for reasonable out-of-pocket expenses incurred in the course of her duties and in connection with her relocation from Seattle, Washington to Gaithersburg, Maryland.

The GeneDx Stueland Employment Agreement contains restrictive covenants, including confidentiality of information, assignment of certain intellectual property, non-competition, non-solicitation and non-disparagement covenants. The confidentiality covenant and non-disparagement covenants have an indefinite term, and the non-competition and non-solicitation covenants are effective both during the executive's employment with GeneDx and until the one year anniversary of her termination of employment. In addition, the GeneDx Stueland Employment Agreement further provides for severance benefits, as described below under "*—Potential Payments Upon Termination and Change in Control*."

Base Salaries

OPKO has sought to establish and maintain competitive annual base salaries for its executive officers, including the Named Executive Officer, by utilizing available resources. OPKO provided fixed salary compensation to its named executive officers and the Named Executive Officer based on their responsibilities and individual experience, taking into account competitive market compensation paid by other companies for similar positions within the diagnostics and laboratory industries. In general, OPKO historically targeted executive officer compensation and base salary to fall within the median range for equivalent or similar positions of executives at peer group companies.

Discretionary Annual Bonus.

In addition to base salaries, OPKO's Compensation Committee has had the authority to award discretionary annual bonuses to the Named Executive Officer based on corporate and individual performance. Incentives, as a percent of salary, increase with executive rank so that, as rank increases, a greater portion of total annual cash compensation is based on annual corporate and individual performance. Furthermore, as an executive's rank increases, a greater percentage of that executive's cash bonus is based on corporate performance, rather than individual performance. In 2022, Ms. Stueland was awarded a cash bonus of $137,500 for work performed in 2021.

Equity Compensation.

OPKO believes that equity compensation should be a primary component of its executive compensation program because it aligns the interests of its executive officers with the long-term performance of OPKO. Stock options are a critical element of OPKO's long-term incentive strategy. The primary purpose of stock options is to provide OPKO's employees with a personal and financial interest in its success through stock ownership, thereby aligning the interests of such persons with those of OPKO's stockholders. Under OPKO's employee stock option

program, options are granted at fair market value at the date of grant, and options granted under the program become exercisable only after a vesting period, which is subject to continued employment. Consequently, employees benefit from stock options only if the market value of OPKO's common stock increases over time. With respect to these stock options, OPKO recognizes compensation expense based on FASB ASC Topic 718.

The OPKO Compensation Committee typically grants stock options to its employees under the OPKO Health, Inc. 2016 Equity Incentive Plan (the "*2016 Equity Incentive Plan*") and previously the 2007 Equity Incentive Plan. As with base salaries and discretionary cash bonuses, there is no set formula or performance criteria, which determines the amount of the equity award for OPKO's employees, including the Named Executive Officer. Nor does the OPKO Compensation Committee assign any relative weight to any specific factors or criteria it considers when granting stock options. Rather, the OPKO Compensation Committee exercises its judgment and discretion by considering all factors it deems relevant at the time of such grants, including the internally generated peer group survey previously discussed and OPKO's performance during the most recent fiscal year. For the Named Executive Officer, the decisions by the OPKO Compensation Committee regarding grants of stock options are made based almost entirely upon the recommendation of OPKO's Chief Executive Officer, and includes his subjective determination based on his assessment of the executive officer's current position with OPKO, the executive officer's past and expected future performance and the other factors discussed in the determination of base salaries.

Restrictions on Hedging

OPKO's officers and personnel are prohibited from pledging OPKO's common stock, purchasing OPKO's securities on margin, engaging in short selling OPKO's common stock, buying or selling puts or calls in connection with OPKO's securities and engaging in derivative transactions involving OPKO's securities, without prior written consent from OPKO's acting compliance officer. In addition, OPKO's directors and executive officers, as well as certain other employees, generally may purchase or sell OPKO securities only during permitted windows, which generally begin on the first full business day following the issuance of its earnings releases and continuing until two weeks prior to the end of the fiscal quarter.

Outstanding Equity Awards at 2021 Fiscal Year-End

The following table provides information regarding outstanding equity awards made to the Named Executive Officer as of December 31, 2021.

	Option Awards					Stock Awards			
Name	Number of securities underlying unexercised options (#) exercisable	Number of securities underlying unexercised options (#) unexercisable(1)	Equity incentive plan awards: Number of securities underlying unexercised unearned options (#)	Option exercise price ($)	Option expiration date	Number of shares or units of stock that have not vested (#)	Market value of shares of units of stock that have not vested ($)(2)	Equity incentive plan awards: Number of unearned shares, units or other rights that have not vested (#)	Equity incentive plan awards: Market or payout value of unearned shares, units or other rights that have not vested shares ($)
Katherine Stueland	—	450,000	—	3.78	06/20/2031	$ —	$ 2,500,000	$ —	$ —

(1) Options vest in four equal annual tranches, commencing on June 21, 2022, and expire on June 20, 2031. In connection with the GeneDx Stueland Employment Agreement Amendment Option, Ms. Stueland and OPKO agreed that such options shall be automatically cancelled and forfeited without any payment to her at the Effective Time.

(2) Consists of RSUs granted on June 21, 2021, and 50% of such RSUs vest on June 21, 2022, with the remaining 50% scheduled to vest on December 21, 2022, provided that the OPKO RSUs shall become immediately vested in full upon the occurrence of certain events, including a change of control of GeneDx. In connection with the GeneDx Stueland Employment Agreement Amendment, OPKO acknowledged and agreed that all outstanding OPKO RSUs will become immediately vested in full immediately prior to the Closing.

Other Elements of Compensation

Severance and Change-in-Control Benefits.

The Named Executive Officer is entitled to severance or change of control benefits as described below in "*—Potential Payments Upon Termination and Change in Control—Stueland*".

401(k) Profit Sharing Plan.

OPKO has adopted a tax-qualified 401(k) Profit Sharing Plan (the "*401(k) Plan*") covering all qualified employees. The effective date of the 401(k) Plan was January 2008. Participants may elect a salary reduction of at least 1% as a contribution to the 401(k) Plan, up to the statutorily prescribed annual limit for tax-deferred contributions ($19,500 for employees under age 50 and an additional $6,500 for employees 50 and above in 2020). In 2008, OPKO adopted the Roth contribution for employee elections. The 401(k) Plan permits employer matching of up to 4% of a participant's salary up to the statutory limits. In 2010, OPKO elected a safe harbor contribution at 4% of annual compensation. All of OPKO's safe harbor contributions are immediately vested.

Other Compensation.

The Named Executive Officer has standard benefits that are offered to all full-time, exempt employees of OPKO. These standard benefits include health, dental and life insurance, and short and long-term disability.

Potential Payments Upon Termination and Change in Control

Stueland

Pursuant to the terms of the GeneDx Stueland Employment Agreement, if Ms. Stueland's employment is terminated (i) by GeneDx without "cause" (as defined in the GeneDx Stueland Employment Agreement) and not due to her death or disability or (ii) for "good reason" (as defined in the GeneDx Stueland Employment Agreement) by Ms. Stueland, Ms. Stueland will be entitled to receive the following severance payments in a lump cash payment within thirty (30) days of the date of termination, in addition to certain accrued obligations (including any earned but unpaid prior year annual bonus):

- an amount equal to 12 months' base salary;
- an amount equal to the target bonus for the year of termination of employment;
- an amount equal to twelve (12) months of the employer portion of GeneDx's or OPKO's, as applicable, group health plan premiums that such company would have paid for Ms. Stueland and her dependents if she remained an active participant during such twelve (12) months; and
- any remaining portion of the Sign-On Bonus not yet paid to Ms. Stueland

In addition, upon a "change of control" (as defined in the GeneDx Stueland Employment Agreement), Ms. Stueland's termination without cause or her resignation for good reason, the OPKO RSUs will immediately vest. Prior to June 21, 2022, upon a change of control, Ms. Stueland's termination without cause or her resignation for good reason, or after June 21, 2022, upon Ms. Stueland's termination without cause or her resignation for good reason within three months before, or 12 months after, a change of control, the Initial Option and Additional Option (as applicable) granted pursuant to the GeneDx Stueland Employment Agreement described above will immediately vest.

Ms. Stueland and OPKO agreed in the GeneDx Stueland Employment Agreement to revise certain of the terms of the GeneDx Stueland Employment Agreement, including the affect on Ms. Stueland's equity awards and OPKO's obligations to Ms. Stueland, from and after the Closing, as more fully described in "*—Narrative to Summary Compensation Table—Stueland GeneDx Employment Agreement*" above.

Upon a termination of Ms. Stueland's employment for cause or due to her death or as a result of her disability, Ms. Stueland will be entitled to certain accrued obligations (including any earned but unpaid prior year annual bonus).

GeneDx's obligation to provide the severance payments and benefits described above are contingent upon Ms. Stueland's execution and non-revocation of a release of claims against GeneDx and its parent entities and affiliates.

Director Compensation

Each of OPKO's non-employee directors is currently entitled to receive an annual retainer of $30,000, payable in quarterly installments, an option to acquire 50,000 shares of OPKO's common stock upon initial appointment to the OPKO's board of directors and an option to acquire 30,000 shares each year thereafter on the date of OPKO's annual meeting of stockholders. Richard Pfenniger is the Lead Independent Director and chairman of the Audit Committee of OPKO's Board of Directors. Accordingly, he is entitled to receive (1) an additional annual retainer of $10,000, payable in quarterly installments, and an option to acquire 15,000 shares of OPKO's common stock each year on the date of the OPKO's annual meeting of stockholders, (2) an additional annual retainer of $15,000, payable in quarterly installments, and (3) an option to acquire 15,000 shares of OPKO's common stock each year on the date of OPKO's annual meeting of stockholders.

The following table sets forth information with respect to compensation earned by Mr. Pfenniger for fiscal year 2021.

Annual Compensation

Name	Fees Earned or Paid in Cash ($)	Stock Award ($)	Option Awards ($)[4]	Non-Equity Incentive Plan Compensation ($)	Change in Nonqualified Deferred Compensation Earnings ($)	All Other Compensation ($)	Total ($)
Richard C. Pfenniger, Jr.	49,323	—	139,200	—	—	—	188,523

Actions Taken in Connection with the Closing

Stueland Sema4 Employment Agreement

In connection with the execution of the Merger Agreement, Sema4 and Ms. Stueland entered into a certain Employment Agreement, dated as of January 14, 2022 (the *"Sema4 Stueland Employment Agreement"*), pursuant to which Sema4 agreed, immediately following the Closing, to employ Ms. Stueland as the Co-Chief Executive Officer of Sema4 for a term of three years, which shall automatically renew for successive one year terms unless earlier terminated (such period from the commencement of employment under the termination thereof, the "*Term*"). The Sema4 Stueland Employment Agreement contemplates a base salary of $675,000 per year, subject to review by the Sema4's Board at least annually, and a performance bonus based on the achievement of certain goals for Sema4 and/or Ms. Stueland as mutually agreed by Ms. Stueland and the Board of Directors at the beginning of each calendar year, with a target amount equal to one hundred percent of the base salary. Ms. Stueland will receive a cash bonus equal to the lesser of (i) $1,500,000 and (ii) the amount treated as a "Transaction Expense" for purposes of the Merger Agreement on account of clause (i) of the "Stueland Employment Agreement Obligations," within the meaning of the Merger Agreement, which will be payable within the first full payroll period following the Closing. As soon as practicable after the Sema4 Stueland Employment Agreement's effective date, subject to approval of Sema4's Board, Sema4 will grant Ms. Stueland an option to purchase shares of Class A common stock with a grant-date value equal to $4,500,000, with an exercise price equal to the closing price of the Class A common stock on the date of grant, and a number of restricted stock units with a grant-date value equal to $4,500,000. Such equity awards described in the preceding sentence will be subject to the terms of the 2021 EIP, and will vest and become exercisable as follows: 25% on the first anniversary of the Closing, 25% on the second anniversary of the Closing and 6.25% on a quarterly basis thereafter through the fourth anniversary of the Closing.

Ms. Stueland will also be entitled to participate in Sema4's employee benefit arrangements provided to the Company's most senior executive officers and is entitled to expense reimbursement for out-of-pocket expenses in accordance with Company policies and up to four weeks of vacation per year.

The Sema4 Stueland Employment Agreement contains restrictive covenants, including confidentiality of information, assignment of certain intellectual property, non-competition and non-solicitation covenants. The confidentiality covenant has an indefinite term, and the non-competition and non-solicitation covenants are effective both during the Ms. Stueland's employment with Sema4 and until the one year anniversary of her termination of employment.

Pursuant to the terms of the Sema4 Stueland Employment Agreement, if Ms. Stueland's employment is terminated (i) by Sema4 without "cause" (as defined in the Sema4 Stueland Employment Agreement) and not due to her death or disability or (ii) for "good reason" (as defined in the Sema4 Stueland Employment Agreement) by Ms. Stueland, Ms. Stueland will be entitled, subject to certain conditions, to receive the following severance payments, in addition to certain accrued obligations (including any earned but unpaid prior year annual bonus):

- twenty four (24) months' of continued base salary;
- up to twenty four (24) months of reimbursement of the employer portion of COBRA health insurance coverage; and
- accelerated vesting of the unvested portion of the Sema4 Initial Option with an aggregate grant date value equal to the amount treated as a "Transaction Expense" for purposes of the Merger Agreement on account of clause (ii) of the "Stueland Employment Agreement Obligations" (as defined in the Merger Agreement).

In addition, inside the "Change in Control Period" (as defined in the Sema4 Stueland Employment Agreement), upon Ms. Stueland's termination without cause or her resignation for good reason, Sema4 will pay Ms. Stueland a lump sum in an amount equal to two hundred percent (200%) of her target performance bonus for the calendar year in which her employment terminated and the vesting of all unvested equity based compensation awards held by Ms. Stueland shall be immediately accelerated and, if applicable, exercisable.

Upon a termination of Ms. Stueland's employment for cause or due to her death or as a result of her disability, Ms. Stueland will be entitled to certain accrued obligations (including any earned but unpaid prior year annual bonus).

Sema4's obligation to provide the severance payments and benefits described above are contingent upon Ms. Stueland's execution and non-revocation of a release of claims against Sema4.

GOLDEN PARACHUTE COMPENSATION OF GENEDX

The following table sets forth the information required by Item 402(t) of Regulation S-K regarding the compensation for the Named Executive Officer that is based on or otherwise relates to the Acquisition, assuming that the Acquisition was consummated on March 15, 2022 (which is the date assumed solely for the purposes of this golden parachute disclosure), and that the Named Executive Officer's employment was terminated on the day that resulted in her receipt of the maximum amount of severance benefits under the Sema4 Stueland Employment Agreement as a result of a termination of employment following a change of control event, together with the value of the unvested equity awards that would be accelerated as a result of the Acquisition. The amounts shown in the table do not include the value of payments or benefits that would have been earned, or any amounts associated with equity awards that have vested or would vest pursuant to their terms, on or prior to the assumed effective date of the Acquisition or the value of payments or benefits that are not based on or otherwise related to the Acquisition.

For purposes of calculating the potential payments set forth in the table below, GeneDx has assumed that (a) the Acquisition will become effective on March 15, 2022, (b) unless otherwise noted, that the date of termination of employment of the Named Executive Officer is March 15, 2022; (c) the OPKO common stock price is $3.85 per share (the average closing price per share of OPKO common stock for the five trading days immediately following the date of announcement of the Acquisition); and (d) no withholding taxes are applicable to any payments set forth in the table. The amounts shown in the table are estimates only, are based on assumptions and information available to date, and do not reflect any cutback that may be applied to the payments and benefits otherwise payable to the Named Executive Officer to put her in a better after-tax position in the event of the imposition of any excise taxes under Sections 280G and 4999 of the Internal Revenue Code, as contemplated by GeneDx Stueland Employment Agreement or 2016 Equity Incentive Plan, as applicable. The actual amounts that may be paid upon an individual's termination of employment, if any, can only be determined at the actual time of such termination.

Name	Cash ($)	Equity ($)	Pension/NQDC ($)	Perquisites/Benefits ($)	Tax reimbursement ($)	Other ($)	Total Compensation ($)
Katherine Stueland	2,850,000[1]	2,577,798[2]	—	19,800[3]	—	—	5,447,597.00

(1) Cash. The estimated amount shown in this column represents 24 months of base salary continuation payable in the event of a qualifying termination of Ms. Stueland's employment and the $1,500,000 cash bonus that Ms. Stueland will receive from Sema4 within the first full payroll period following the Closing. The salary continuation payments are "double-trigger" benefits in that they will be paid to Ms. Stueland only if she experiences a qualifying termination of employment following the Closing. The $1,500,000 cash bonus is a "single-trigger" benefit in that will be paid shortly following the Closing, whether or not Ms. Stueland's employment is later terminated.

(2) Equity. The estimated amount shown in this column represents (a) $31,500, which the value of the Initial Option that would be expected to be treated as "Transaction Expense" for purposes of the Merger Agreement on account of clause (ii) of the "Stueland Employment Agreement Obligations," within the meaning of the Merger Agreement, and (b) $2,546,298, which is the value of the OPKO RSUs which will become fully vested immediately prior to the Closing, subject to Ms. Stueland's continued employment with GeneDx, in each case based on an OPKO common stock price of $3.85 per share. The amount described in clause (a) is a "double-trigger" benefit in that Ms. Stueland will receive this acceleration benefit only if she experiences a qualifying termination of employment following the Closing. The amount described in clause (b) is a "single-trigger" benefit in that Ms. Stueland will receive this acceleration benefit in connection with the Closing, whether or not Ms. Stueland's employment is later terminated.

(3) Perquisites/Benefits. The estimated amount shown in this column represents the value of the continued medical, dental, and vision benefits that Ms. Stueland would receive for a period of 24 months following a qualifying termination of employment. This is a "double-trigger" benefit in that it will be provided to Ms. Stueland only if she experiences a qualifying termination of employment following the Closing.

Indemnification of Sema4 Directors and Officers

Sema4's Charter contains provisions limiting the liability of directors, and Sema4's Bylaws provide that it will indemnify each of its directors to the fullest extent permitted under Delaware law. Sema4's Charter and Bylaws also provide Sema4's Board with discretion to indemnify officers and employees when determined appropriate by the Board.

Sema4 has entered into indemnification agreements with each of its directors and executive officers and certain other key employees. In connection with the Closing of the Acquisition, Sema4 expects to enter into indemnification agreements with each of the new directors and executive officer, as applicable. The indemnification agreements provide that Sema4 will indemnify each of its directors, executive officers, and such other key employees against any and all expenses incurred by that director, executive officer, or other key employee because of his or her status

as one of the Sema4's directors, executive officers, or other key employees, to the fullest extent permitted by Delaware law, Sema4's Charter and its Bylaws. In addition, the indemnification agreements provide that, to the fullest extent permitted by Delaware law, Sema4 will advance all expenses incurred by its directors, executive officers, and other key employees in connection with a legal proceeding involving his or her status as a director, executive officer, or key employee. For information on the indemnification of GeneDx's officers and directors following the Acquisition, see the section entitled "*The Acquisition—Covenants and Agreements—Insurance; D&O Indemnification*."

MANAGEMENT OF SEMA4

DIRECTORS AND EXECUTIVE OFFICERS

Management

The following table sets forth the names, ages as of February 22, 2022, and certain other information regarding our executive officers and directors:

Name	Age	Position
Executive Officers:		
Eric Schadt, Ph.D.	57	Chief Executive Officer and Director
Jason Ryan	47	Executive Chairman and Director
Isaac Ro	44	Chief Financial Officer
Daniel Clark, J.D.	42	Secretary and General Counsel
Anthony Prentice	49	Chief Product Officer
Kareem Saad	43	Chief Business Officer
Karen White	51	Chief People Officer
Non-Employee Directors:		
Dennis Charney, M.D.[5]	70	Director
Eli D. Casdin[4][6]	48	Director
Emily Leproust, Ph.D.[5]	49	Director
Keith A. Meister[1]	48	Director
Michael Pellini, M.D.	56	Director
Joshua Ruch[2][4]	72	Director
Rachel Sherman, M.D., M.P.H., F.A.C.P.[3][6]	64	Director
Nat Turner	36	Director

(1) Chair of the Audit Committee
(2) Chair of the Compensation Committee
(3) Chair of the Nominating and Corporate Governance Committee
(4) Member of the Nominating and Corporate Governance Committee
(5) Member of the Audit Committee
(6) Member of the Compensation Committee

Executive Officers

Eric Schadt, Ph.D., has served as our Chief Executive Officer and as a member of our Board since July 2021. Dr. Schadt was the founder of Legacy Sema4 and previously served as its Chief Executive Officer and as a member of its board of directors from June 2017 to July 2021. Dr. Schadt also serves as the Dean for Precision Medicine, and Mount Sinai Professor in Predictive Health and Computational Biology at the Icahn School of Medicine at Mount Sinai. Dr. Schadt was previously Founding Director of the Icahn Institute for Genomics and Multiscale Biology from September 2011 to June 2017, and Professor and Chair of the Department of Genetics and Genomic Sciences from August 2011 to June 2017. Dr. Schadt previously served as the Chief Scientific Officer at Pacific Biosciences of California, a biotechnology company, from May 2009 to July 2012, and as an Executive Director at Merck from July 2001 to May 2009. Dr. Schadt also currently serves on numerous boards of directors and scientific advisory boards for various private companies. Dr. Schadt earned his Ph.D. from the University of California, Los Angeles, his M.A. from the University of California, Davis, and his B.S. from California Polytechnic State University-San Luis Obispo. Dr. Schadt's expertise in computational biology, genomics, health systems operating experience, and knowledge of Sema4's business, years of senior management experience at a biotechnology company, and his service as a director of other biopharmaceutical companies provide him with the qualifications and skills to serve as a director on our Board.

Jason Ryan has served as a member of our Board since July 2021, and as our Executive Chairman since January 2022. Mr. Ryan served as Chief Operating and Financial Officer of Magenta Therapeutics, Inc., a biotechnology company, from January 2019 to November 2020. Prior to joining Magenta Therapeutics, Inc., Mr. Ryan previously served as Chief Financial Officer of Foundation Medicine, Inc., a molecular information company which became a wholly-owned subsidiary of Roche Holdings, Inc., from March 2015 to November 2018. Prior to his position as Chief Financial Officer of Foundation Medicine, Inc., Mr. Ryan served in various other finance roles at Foundation Medicine, including as Senior Vice President of Finance. Prior to joining Foundation Medicine, Inc., Mr. Ryan led the finance and strategic planning functions of various other life science companies including Taligen Therapeutics, Inc., Codon Devices Inc. and Genomics Collaborative, Inc. Mr. Ryan joined the board of directors of Singular Genomics Systems, Inc. in April 2021, and previously served on the board of directors of ArcherDX, Inc. (which was acquired by Invitae Corporation) from April 2020 to October 2020. He began his career at Deloitte & Touche LLP. Mr. Ryan holds an M.B.A. from Babson College and a B.S. in economics from Bates College, and earned a C.P.A. in Massachusetts. Mr. Ryan's extensive finance experience and his leadership experience in the life sciences and biopharmaceutical industries qualifies him to serve as a director on our Board.

Isaac Ro has served as our Chief Financial Officer since July 2021. Mr. Ro previously served as Legacy Sema4's Chief Financial Officer from February 2021 to July 2021. Mr. Ro previously served as the Chief Financial Officer of Thrive Earlier Detection Corp., a company focused on early detection cancer screening, from June 2019 to February 2021, through Thrive's sale to Exact Sciences Corporation in January 2021. From July 2010 to June 2019, Mr. Ro held roles of increasing responsibility at Goldman Sachs leading the U.S. Medical Technology team, including as Vice President. Prior to Goldman Sachs, Mr. Ro served as a Director at SVB Leerink from June 2004 to July 2010. Mr. Ro holds a B.A. in History, with honors, from Middlebury College.

Daniel Clark, J.D., has served as our General Counsel since July 2021. Mr. Clark previously served as Legacy Sema4's General Counsel from March 2016 to July 2021 and Secretary from March 2016 to July 2021. From 2015 to May 2017, Mr. Clark served as the Senior Contracts Manager – Genetics & Genomics at Mount Sinai Innovation Partners. Prior to joining Mount Sinai Innovation Partners, Mr. Clark practiced with two leading law firms in New York, clerked for Judge Frederic Block in the Eastern District of New York, and helped found a boutique startup law firm. Mr. Clark received his J.D. from the University of Michigan School of Law, cum laude, and his B.A. in Economics and Philosophy from Pomona College, cum laude. Mr. Clark also traveled as a Thomas J. Watson Fellow.

Anthony Prentice has served as our Chief Product Officer since July 2021. Mr. Prentice previously served as Legacy Sema4's Chief Product Officer from September 2016 to July 2021. Prior to joining Sema4, Mr. Prentice served in various roles of increasing responsibility at American Express from May 2005 to September 2016, including as the Vice President of Mobile Payments from August 2011 to September 2016 and as the Vice President of Gold Card Product Management from April 2010 to October 2011. Prior to joining American Express, Mr. Prentice served as the Director of Category Management at Starbucks Corp from 2002 to 2005, and as an Engagement Manager at McKinsey & Company from 1998 to 2002. Mr. Prentice earned an M.B.A. from Columbia University and his B.S. in Mechanical Engineering from Cornell University.

Kareem Saad has served as our Chief Business Officer since July 2021. Mr. Saad previously served as Legacy Sema4's Chief Business Officer from January 2021 to July 2021. Mr. Saad also previously served as the Chief Strategy Officer at Sema4 from October 2017 to January 2020. Prior to rejoining Sema4, Mr. Saad served as the President and Chief Operating Officer of Apervita, Inc., a healthcare technology company, from February 2020 to January 2021. Mr. Saad previously served as the Chief Commercial Officer and EVP of Strategy and Business Development of SourceMed, a healthcare technology company, between January 2015 and June 2017. Prior to joining SourceMed, Mr. Saad served as a National Sales Director and Manager in Dell's Healthcare and Life Sciences division between June 2009 and July 2013, and as a Business Segment Executive in IBM's Healthcare Life Sciences group from November 2001 to February 2006. Mr. Saad received an M.B.A. with a concentration in Economics and Finance from the University of Chicago and a B.S. in Biochemistry and Molecular Biology with a minor in Computer Science from the University of British Columbia.

Karen White has served as our Chief People Officer since July 2021. Ms. White previously served as Legacy Sema4's Chief People Officer from September 2020 to July 2021. Prior to joining Sema4, Ms. White was Vice

President of Human Resources for Commercial Solutions at Syneos Health, Inc., a biopharmaceutical outsource services organization, from June 2016 to September 2020. Prior to the merger of inVentiv Health, Inc. and INC Research Holdings, Inc. in August 2017, and later rebranding to Syneos Health in January 2018, Ms. White served as Managing Director of Human Capital at inVentiv Health from June 2016 to August 2017. Prior to that, Ms. White served as Director of Talent Development at Memorial Sloan Kettering Cancer Center where she was employed from October 2011 to June 2016. Before October 2011, Ms. White held various positions at large global organizations such as Goldman Sachs Group Inc., International Business Machines Corp., and PricewaterhouseCoopers. Ms. White earned her M.B.A. from The George Washington University and her B.A. from Hobart and William Smith Colleges.

Non-Employee Directors

Dennis Charney, M.D., has served as a member of our Board since July 2021, and previously served as a member of Legacy Sema4's board of directors from June 2017 to July 2021. Dr. Charney has served as the Anne and Joel Ehrenkranz Dean of the Icahn School of Medicine at Mount Sinai since March 2007, and as President for Academic Affairs for the Mount Sinai Health System since September 2013. From March 2005 to March 2007, Dr. Charney served as Dean for Academic and Scientific Affairs of the Icahn School of Medicine at Mount Sinai and Senior Vice President for Health Services of The Mount Sinai Medical Center. From 2007-2013, Dr. Charney served as the Dean of the School and Executive Vice President for Academic Affairs of the Medical Center. Dr. Charney first joined the Icahn School of Medicine at Mount Sinai in 2004 as Dean of Research. Prior to joining the Icahn School of Medicine at Mount Sinai, Dr. Charney led the Mood and Anxiety Disorder Research Program and the Experimental Therapeutics and Pathophysiology Branch at the National Institute of Mental Health, and he served as Professor of Psychiatry with tenure at Yale University from January 1990 to January 2000. Dr. Charney received his M.D. from Penn State College of Medicine and his B.A. from Rutgers University. Dr. Charney completed a residency in clinical psychiatry at Yale University School of Medicine and a fellowship in biological psychiatry at Connecticut Mental Health Center. Dr. Charney's extensive medical and clinical experience in the biotechnology industry qualifies him to serve as a director on our Board.

Eli D. Casdin has served as a member of our Board since July 2020, and previously served as the Chief Executive Officer of CMLS from July 2020 to July 2021. Mr. Casdin founded Casdin Capital, LLC, an investment firm focused on the life sciences and healthcare industry, in November 2011 and currently serves as its Chief Investment Officer. Mr. Casdin also serves on the boards of directors of SomaLogic, Inc., a protein biomarker discovery and clinical diagnostics company (formerly, CM Life Sciences II Inc., a special purpose acquisition company ("*CMLS II*")), since September 2021 (having previously served as the Chief Executive Officer of CMLS II from February 2021 to September 2021), and EQRx, Inc., a pharmaceutical company (formerly, CM Life Sciences III Inc., a special purpose acquisition company ("*CMLS III*")), since December 2021 (having previously served as the Chief Executive Officer of CMLS III from February 2021 to December 2021). In addition, Mr. Casdin serves on the boards of directors of Century Therapeutics, Inc., a biotechnology company, since February 2021, Absci Corp, a drug and target discovery company, since December 2020, and Tenaya Therapeutics, Inc., a biotechnology company, since August 2019, and previously served on the board of directors of Exact Sciences Corp., a molecular diagnostics company focused on early cancer detection, treatment and monitoring, from October 2017 to September 2020. Mr. Casdin holds an M.B.A. from Columbia Business School and a B.S. degree from Columbia University School of General Studies. Mr. Casdin's qualifications to serve on our Board include his extensive leadership experience as an executive officer of an investment firm, his extensive public and private company directorship experience in the life sciences and healthcare sectors, and his expertise in finance, capital markets, and the biotechnology industry.

Emily Leproust, Ph.D., has served as a member of our Board since September 2020. Dr. Leproust has been President and Chief Executive Officer of Twist Bioscience Corp., a biotechnology company, since co-founding Twist in 2013. Since October 2018, she has also served as Chair of the board of directors for Twist. Prior to co-founding Twist, Dr. Leproust served in various positions at Agilent Technologies, Inc., an analytical instrumentation development and manufacturing company, most recently as its Director, Applications and Chemistry R&D from February 2009 to April 2013. Dr. Leproust holds a Ph.D. in Organic Chemistry from the University of Houston and a M.Sc. in Industrial Chemistry from the Lyon School of Industrial Chemistry. Dr. Leproust's qualifications to serve on our Board include her extensive professional and educational experience in the life sciences industry.

Keith Meister has served as a member of our Board since January 2022, and previously served as the Chairman of the Board of CMLS from July 2020 to July 2021. He founded Corvex Management LP, a New York based investment manager, in December 2010 and since its inception has served as its Managing Partner and Chief Investment Officer. From 2003 to 2010, Mr. Meister served as Chief Executive Officer and then Principal Executive Officer and Vice Chairman of the board of Icahn Enterprises L.P., the primary investment vehicle for Carl Icahn. In addition, Mr. Meister previously served as Chairman of CMLS II from December 2020 to September 2021 and CMLS III from January 2021 to December 2021. Mr. Meister also serves on the Board of Directors of MGM Resorts International, a global hospitality and entertainment company, and its affiliate Roar Digital. Mr. Meister has previously served on the board of directors of numerous other public companies in his career, including Yum! Brands Inc., The Williams Companies, Inc., ADT, Inc., Ralcorp Holdings, Inc. and Motorola, Inc. (now Motorola Solutions, Inc.). He is Chairman of the board of the Harlem Children's Zone and also serves on the board of trustees of the American Museum of Natural History. Mr. Meister holds a B.A. degree in government from Harvard College where he graduated cum laude. His qualifications to serve on our board of directors include his extensive leadership experience as managing partner and executive officer of an investment firm and a diversified holding company, his extensive public company directorship experience in a variety of industries, and his expertise in finance, capital markets, strategic development, and risk management.

Michael Pellini, M.D., has served as a member of our Board since July 2021, and previously served as a member of Legacy Sema4's board of directors from August 2019 to July 2020. Since December 2017, Dr. Pellini has served as a Managing Partner of Section 32, LLC, a technology and life sciences-based venture capital fund. Dr. Pellini held roles of increasing responsibility at Foundation Medicine, Inc., a molecular information company, which was acquired by F. Hoffmann-La Roche Ltd. in 2018, from May 2011 until its acquisition, including as Chairman of the board of directors, Chief Executive Officer and President. From April 2008 to April 2011, Dr. Pellini held the position of President and Chief Operating Officer at Clarient, Inc., a medical diagnostic services company, which was acquired by General Electric Healthcare Company in 2010, and also served on Clarient's board of directors from May 2007 to April 2009. Dr. Pellini also previously served as Vice President, Life Sciences at Safeguard Scientifics, Inc., a private equity and venture capital firm from March 2007 to April 2008. Dr. Pellini currently serves as a member of the board of directors of Adaptive Biotechnologies Corporation, the GO2 Foundation, the Personalized Medicine Coalition, Singular Genomics Systems, Inc., the Mission Hospital Foundation and several private companies. Dr. Pellini earned an M.D. from Jefferson Medical College (now the Sidney Kimmel Medical College of Thomas Jefferson University), an M.B.A. from Drexel University, and a B.A. in Economics from Boston College. Dr. Pellini's broad experience in the technology, health care and life sciences industries as an investor, and his years of senior management experience at public biotechnology companies, provides him with the qualifications and skills to serve as a director on our Board.

Joshua Ruch has served as a member of our Board since July 2021, and previously served as the Chairman of our Board from July 2021 to January 2022 and as a member of Legacy Sema4's board of directors from November 2017 to July 2021. Mr. Ruch is also a managing partner and co-founder of Rho Capital Partners, an investment and venture capital management company focused on innovative technology, and has held such positions since the founding of Rho Capital Partners in 1981. Prior to co-founding Rho Capital Partners and Rho Ventures in 1981, Mr. Ruch worked as an investment banker at Salomon Brothers in New York, a multinational investment bank. In addition to Sema4, Mr. Ruch is also a trustee of the Mount Sinai Health System, Carnegie Hall and the National Humanities Center, and is a member of the Board of Governors of the Technion – Israel Institute of Technology and the Steering Committee of the Jacobs Institute. Joshua received an M.B.A. from the Harvard Business School and a B.S. in electrical engineering from the Technion – Israel Institute of Technology in Haifa, Israel. Mr. Ruch's broad experience as an investor and serving on the boards of emerging technology companies, including health care and biotechnology companies, qualifies him to serve on our Board.

Rachel Sherman, M.D., M.P.H., F.A.C.P., has served as a member of our Board since July 2021, and previously served as a member of Legacy Sema4's board of directors from March 2020 to July 2021. Dr. Sherman is currently the President of Rachel Sherman Partners LLC, a drug development, regulatory, and policy consulting firm she founded in 2019, and a clinical lecturer at Harvard Pilgrim Health Care Institute. Dr. Sherman also currently serves as a member of the Board of Directors for Aptinyx Inc., a biopharmaceutical company. From May 2017 to January 2019, Dr. Sherman served as Principal Deputy Commissioner at the U.S. Food and Drug Administration

(the "*FDA*"), where she spent nearly 30 years in medical product development and regulation. Dr. Sherman also served in additional roles at the FDA including as deputy commissioner for Medical Products and Tobacco in the Office of the Commissioner and director of the Office of Medical Policy in the Center for Drug Evaluation and Research. Dr. Sherman earned an M.D. from Mount Sinai School of Medicine, an M.P.H from The School of Hygiene and Public Health at Johns Hopkins University and an A.B. in mathematics from Washington University (St. Louis). Dr. Sherman's medical and regulatory experience across a broad range of subject matters, including biosimilars, expedited drug development, prescription drug promotion, and active post-market surveillance provides her with the qualifications and skills to serve on our Board.

Nat Turner has served as a member of our Board since July 2021. Mr. Turner is currently CEO of Collectors Universe, an authentication and grading company for collectible coins, trading cards, video games, autographs, and memorabilia. Mr. Turner is also Chairman of Flatiron Health, Inc., and Director on the Board of Directors for Clover Health Investments Corp. Previously, Mr. Turner was the Co-Founder and Chief Executive Officer of Flatiron Health, Inc., a healthcare technology company focusing on accelerating oncology research and improving patient care, from June 2012 until April 2021, and was acquired by Roche Holding AG in April 2018. Prior to that, Mr. Turner co-founded and served as Chief Executive Officer of Invite Media, Inc., an advertising technology company, from March 2007 until it was acquired by Google Inc. in June 2010, after which he remained at Google until June 2012. Mr. Turner received a B.S., cum laude, in Economics with concentrations in entrepreneurship and marketing from The Wharton School of the University of Pennsylvania. Mr. Turner's qualifications to serve on our Board include his significant experience in the life sciences industry, both as an executive and as an angel investor.

There are no familial relationships among our executive officers or directors.

MANAGEMENT AFTER THE ACQUISITION

All of our current officers and directors will continue to serve as such following the Acquisition. It is also anticipated that upon consummation of the acquisition, Ms. Stueland will become the new Co-Chief Executive Officer of the Company. Following the Acquisition, our directors and executive officers will be as follows:

Name	Age	Position
Executive Officers		
Eric Schadt, Ph.D.	57	Co-Chief Executive Officer and Director
Katherine Stueland	46	Co-Chief Executive Officer and Director
Jason Ryan	47	Executive Chairman and Director
Isaac Ro	44	Chief Financial Officer
Shawn Assad	47	Chief Accounting Officer
Daniel Clark, J.D.	42	Secretary and General Counsel
Anthony Prentice	49	Chief Product Officer
Kareem Saad	43	Chief Business Officer
Karen White	51	Chief People Officer
Non-Employee Directors		
Dennis Charney, M.D.	70	Director
Eli D. Casdin	48	Director
Emily Leproust, Ph.D.	49	Director
Keith Meister	48	Director
Michael Pellini, M.D.	56	Director
Richard C. Pfenniger, Jr.	66	Director
Joshua Ruch	72	Director
Rachel Sherman, M.D., M.P.H., F.A.C.P.	64	Director
Nat Turner	36	Director

Executive Officers

For information regarding Mr. Schadt, Mr. Ryan, Mr. Ro, Mr. Assad, Mr. Clark, Mr. Prentice, Mr. Saad and Ms. White please refer to "*Management of Sema4*" above.

Katherine Stueland has been the President and Chief Executive Officer of GeneDx since June 2021, and will serve as Sema4's Co-Chief Executive Officer following the completion of the Acquisition. Prior to joining GeneDx, Ms. Stueland served as the Chief Commercial Officer at Invitae Corporation, a biotechnology company, from October 2016 to June 2021 and as the Head of Communications and Investor Relations at Invitae Corporation from November 2013 to October 2016, during which time she helped Invitae Corporation transition from a private to a public company. Ms. Stueland previously served as the Principal at Vivo Communications, a technology company, from January 2013 to December 2013, and as the Vice President of Communications and Investor Relations at Dendreon Corporation, a biotechnology company, from September 2009 to June 2012. Ms. Stueland previously served on the board of the Rivkin Center, a non-profit organization dedicated to the treatment and prevention of cancer in women. Ms. Stueland earned a B.S. in English language and literature from Miami University of Ohio. Ms. Stueland's extensive leadership experience as an executive officer of biotechnology companies and knowledge of GeneDx's business provide her with the qualifications and skills to serve as a director on our Board.

Non-Employee Directors

For information regarding Mr. Charney, Mr. Casdin, Ms. Leproust, Mr. Meister, Mr. Pellini, Mr. Ruch, Ms. Sherman, and Mr. Turner please refer to "*Management of Sema4*" above.

Richard C. Pfenniger, Jr., is a private investor and has previously served as Interim CEO of Vein Clinics of America, Inc., a privately held company that specializes in the treatment of vein disease, from May 2014 to February 2015 and as Interim CEO of IntegraMed America, Inc., a privately held company that manages outpatient fertility medical centers, from January 2013 to June 2013. He served as Chief Executive Officer and President for Continucare Corporation, a provider of primary care physician and practice management services, from 2003 until 2011, and served as Chairman of the Board of Directors of Continucare Corporation from 2002 until 2011. Previously, Mr. Pfenniger served as the Chief Executive Officer and Vice Chairman of Whitman Education Group, Inc. from 1997 through June 2003. Prior to joining Whitman, he served as the Chief Operating Officer of IVAX from 1994 to 1997, and, from 1989 to 1994, he served as the Senior Vice President-Legal Affairs and General Counsel of IVAX Corporation. Prior thereto he was engaged in the private practice of law. Mr. Pfenniger currently serves as a director of OPKO Health, Inc., a medical test and medication company focused on diagnostics and pharmaceuticals, GP Strategies Corporation, a corporate education and training company, and Asensus Surgical, Inc., a medical device company. He also serves as the Vice Chairman of the Board of Trustees and as a member of the Executive Committee of the Phillip and Patricia Frost Museum of Science. Mr. Pfenniger previously served as a director of BioCardia, Inc., clinical-stage regenerative medicine company developing novel therapeutics for cardiovascular diseases, IntegraMed America, Inc., a private specialty healthcare services company offering products and services to patients and providers in the fertility and vein care segments of the health industry, Vein Clinics of America and Wright Investors' Services Holdings, Inc., an investment management and financial advisory firm. Mr. Pfenniger's experience as a chief executive officer, chief operating officer and general counsel, and knowledge of the healthcare business provide him with the qualifications and skills to serve as a director on our Board.

Classified Board of Directors

The board of directors of the Company are divided into three staggered classes of directors. At each annual meeting of stockholders, a class of directors are subject to re-election for a three-year term. As a result, only one class of directors will be elected at each annual meeting of our stockholders, with the other classes continuing for the remainder of their respective three-year terms. The directors are divided among the three classes as follows:

- the Class I directors will be Eli D. Casdin, Joshua Ruch and Michael Pellini and their terms will expire at the first annual meeting of stockholders held in 2022;
- the Class II directors will be Rachel Sherman, Eric Schadt, Nat Turner and Dennis Charney, and their terms will expire at the second annual meeting of stockholders held in 2023; and
- the Class III directors will be Emily Leproust, Jason Ryan and Keith Meister and their terms will expire at the third annual meeting of stockholders held in 2024.

Each director's term continues until the election and qualification of his or her successor, or his or her earlier death, resignation or removal. Our Charter and restated bylaws authorize only the board of directors to fill vacancies on the board. Any increase or decrease in the number of directors will be distributed among the three classes so that, as nearly as possible, each class will consist of one-third of the directors. This classification of the board of directors of the Company may have the effect of delaying or preventing changes in control of the Company.

CORPORATE GOVERNANCE OF SEMA4

Director Independence

The rules of Nasdaq require that a majority of the Company's board of directors be independent. An "independent director" is defined generally as a person other than an executive officer or employee the Company or any other individual having a relationship which, in the opinion of the issuer's board of directors, would interfere with the exercise of independent judgement in carrying out the responsibilities of a director. Our Board has determined that each individual currently serving on our board, other than Dr. Schadt and Mr. Ryan, qualifies as an independent director under Nasdaq listing standards.

Board of Directors

Our Board oversees our business affairs and works with our CEO and other senior management to determine our strategy and mission. In fulfilling its responsibilities, our Board is involved in strategic and operational planning, financial reporting, governance, compliance and risk oversight.

Committees of the Board of Directors

Our Board has the authority to appoint standing and special committees to perform certain management and administration functions. Our Board has established a standing audit committee, a standing compensation committee, and a standing nominating and corporate governance committee. The composition and responsibilities of each committee are described below. Members serve on these committees until their resignation or until otherwise determined by the Board. The charters for each of these committees are available on our website at *www.Sema4.com.* Information contained on or accessible through our website is not a part of this proxy statement, and the inclusion of such website address in this proxy statement is an inactive textual reference only.

Audit Committee

Our audit committee is comprised of Messrs. Meister and Charney, and Ms. Leproust, with Mr. Meister as the chairman of the Company's audit committee. The Board has determined that the composition of our audit committee meets the requirements for independence under the current Nasdaq and SEC rules and regulations, and that each member of the audit committee is financially literate. In addition, the Board has determined that Mr. Meister is an "audit committee financial expert" as defined in Item 407(d)(5)(ii) of Regulation S-K promulgated under the Securities Act. This designation does not impose on him or her any duties, obligations or liabilities that are greater than are generally imposed on members of our audit committee and our Board. Our audit committee is directly responsible for, among other things:

- reviewing and discussing with management and the independent auditors our quarterly and annual financial results and earnings releases, our annual audited and quarterly unaudited financial statements and annual and quarterly reports on Form 10-K and 10-Q and recommend to the Board whether the annual financial statements should be included in our Annual Report on Form 10-K;
- selecting and hiring the independent registered public accounting firm;
- monitoring the qualifications, independence and performance of our independent auditors;
- the preparation of the audit committee report to be included in the proxy statement for our annual meeting;
- our compliance with legal and regulatory requirements;
- overseeing our accounting and financial reporting processes, including our financial statement audits and the integrity of our financial statements;
- reviewing and approving related-person transactions; and
- overseeing our financial risks, enterprise exposures, cybersecurity risks and other risks as it deems necessary or appropriate.

Compensation Committee

Our compensation committee is comprised of Dr. Sherman, and Messrs. Ruch and Casdin, with Mr. Ruch as the chairman of our compensation committee. The Board has determined that each member of our compensation committee is a non-employee director, as defined by Rule 16b-3 promulgated under the Exchange Act, and meets the requirements for independence under the current Nasdaq listing standards and SEC rules and regulations. The company's compensation committee is responsible for, among other things:

- evaluating, recommending, approving and reviewing executive officer compensation arrangements, plans, policies and programs;
- evaluating and recommending non-employee director compensation arrangements for determination by our Board;
- administering our cash-based and equity-based compensation plans; and
- overseeing our compliance with regulatory requirements associated with the compensation of directors, officers and employees.

The compensation committee may retain compensation advisors and other compensation consultants.

Role of Compensation Consultant

The compensation committee has the authority to retain the services and obtain the advice of external advisors, including compensation consultants, legal counsel and other advisors to assist in the evaluation of executive officer compensation. The compensation committee has engaged Radford Data & Analytics of Aon, our independent compensation consultant ("*Radford*") to conduct an executive compensation market analysis and review of our short-term cash and long-term equity incentive practices to help ensure they align with market practices. Radford reviewed and advised on all principal aspects of our executive compensation program, including:

- Assisting in developing a peer group of publicly traded companies to be used to help assess the competitiveness of executive compensation;
- Assisting in ensuring a competitive compensation framework;
- Meeting regularly with the compensation committee to review all elements of executive compensation, including the competitiveness of our executive compensation program;
- Assisting in the competitive assessment of the short-term cash and long-term equity incentive plans designs; and
- Assisting in the risk assessment of our compensation program.

Outside of its services to the compensation committee, Radford provides no other services to us. The compensation committee evaluated the independence of Radford and determined that it is independent. The compensation committee also determined that Radford's work for the Company in 2021 did not raise any conflicts of interest.

Role of Compensation Committee and Executive Officers in Compensation Decisions

Our compensation committee works in close collaboration with the full Board on executive compensation matters. Following the adoption of our compensation committee charter, our compensation committee has adopted a practice of informing and consulting with the full Board concerning the establishment of performance goals and objectives for our Chief Executive Officer, evaluating our Chief Executive Officer's performance in light of the goals and objectives that were set, and determining the Chief Executive Officer's compensation based on that evaluation. Our Chief Executive Officer serves on our Board but recuses himself from any deliberations about his compensation. For fiscal year 2021, our Chief Executive Officer prepared an analysis for the compensation committee recommending each element of compensation to be paid to all other executive officers. The

compensation committee considered his recommendations, along with an analysis from Radford, in approving the compensation of our other executive officers.

Nominating and Corporate Governance Committee

Our nominating and governance committee is comprised of Messrs. Ruch and Casdin, and Dr. Sherman, with Dr. Sherman as the chairwoman of our nominating and governance committee. The Board has determined that each member of our nominating and governance committee meets the requirements for independence under the current Nasdaq listing standards. Our nominating and governance committee is responsible for, among other things:

- identifying, considering and recommending candidates for membership on our Board;
- overseeing the process of evaluating the performance of our Board; and
- advising our Board on other corporate governance matters.

Stock Ownership Guidelines

With the exception of a 9-month lockup established in the employment agreements entered into in June and July 2021 with Eric Schadt, Isaac Ro, Daniel Clark, James Coffin, Anthony Prentice, Kareem Saad and Karen White in connection with the closing of our 2021 SPAC merger transaction, we have not established any stock ownership requirements for our executives.

Board and Committee Meetings and Attendance

The Board and its committees meet throughout the year on a pre-determined schedule and also hold special meetings and act by written consent from time to time.

Typically, in conjunction with the regularly scheduled meetings of the Board, the independent directors meet in executive sessions outside the presence of management.

During 2021, the Board met six times (including telephonic meetings) and took action by unanimous written consent four times. During 2021, our audit committee met three times and took action by unanimous written consent one time, our compensation committee met three times and took action by unanimous written consent two times, and our nominating and governance committee did not meet. In addition to the official meetings, the Board also had a number of informational meetings throughout the year to update the Board on various strategic initiatives, including in connection with the Acquisition. Each director attended at least 75% of the meetings held by the Board and by each committee on which he or she served while he or she was a director during the year, except for Nat Turner.

We acknowledge the value of having directors with significant experience in other businesses and activities. Effective service requires substantial commitment, but we recognize that the demands of other business activities vary substantially; therefore, we do not consider it necessary to impose specific limits on such activities so long as directors are sufficiently attentive and available to fulfill their duties and so long as directors comply at all times with our conflict of interests policies.

Director Attendance at Annual Meetings

Although we do not have a formal policy regarding attendance by members of the Board at each annual meeting of stockholders, we encourage all of our directors to attend in person, or virtually, depending on the meeting format. In fiscal year 2021, all of the directors serving at the time of last year's special meeting, which was held as a special meeting in lieu of our annual meeting, attended that meeting.

Code of Business Conduct and Ethics

We have adopted a Code of Business Conduct and Ethics that applies to all of our employees, officers and directors, including those officers responsible for financial reporting. The Code of Business Conduct and Ethics is available on our website at *www.Sema4.com.* Information contained on or accessible through such website is not a part of this proxy statement, and the inclusion of the website address in this proxy statement is an inactive textual

reference only. We intend to disclose any amendments to the Code of Business Conduct and Ethics, or any waivers of its requirements, on its website to the extent required by the applicable rules and exchange requirements.

Corporate Governance Guidelines

Our Board has adopted Corporate Governance Guidelines that set forth expectations for directors, director independence standards, board committee structure and functions, stock ownership guidelines, and other policies for the governance of the Company. Our Corporate Governance Guidelines are available without charge on the investor relations section of our website at *www.Sema4.com.* Information contained on or accessible through such website is not a part of this proxy statement, and the inclusion of the website address in this proxy statement is an inactive textual reference only.

Stockholder Communications with the Board of Directors

Should stockholders wish to communicate with the Board or any specified individual directors, such correspondence should be sent to the attention of the Corporate Secretary, at Sema4 Holdings Corp., 333 Ludlow Street, North Tower, 8th Floor, Stamford, Connecticut 06902. The Corporate Secretary will forward the communication to the Board members.

Compensation Committee Interlocks and Insider Participation

The directors who were members of our compensation committee during 2021 were Joshua Ruch, Rachel Sherman and Nat Turner. None of them at any time has been one of our officers or employees. None of our executive officers serves, or in the past has served, as a member of the board of directors or compensation committee of any entity that has one or more of its executive officers serving on our Board or our compensation committee.

EQUITY COMPENSATION PLAN INFORMATION

The following table summarizes the number of securities underlying outstanding options, stock awards, warrants and rights granted to employees and directors, as well as the number of securities remaining available for future issuance, under the company's equity compensation awards as of December 31, 2021.

Plan category	(a) Number of securities to be issued upon exercise of outstanding options, warrants and rights[1] (#)	(b) Weighted-average exercise price of outstanding options, warrants and rights[2] ($)	(c) Number of securities remaining available for future issuance under equity compensation plans (excluding securities reflected in column (a)) (#)
Equity compensation plans approved by security holders	15,823,351	$ 7.69	20,271,849 [3]
Equity compensation plans not approved by security holders	30,341,429 [4]	$ 0.49	—
Total	46,164,780		20,271,849

(1) Consists of options to purchase shares of our Class A common stock, RSU awards representing the right to acquire shares of our Class A common stock, and performance stock unit awards representing the right to acquire shares of our Class A common stock

(2) The weighted average exercise price is calculated based solely on the outstanding stock options. It does not take into account the shares issuable upon vesting of outstanding RSU awards, which have no exercise price.

(3) Consists of 15,467,838 shares remaining available for issuance under the 2021 EIP, and 4,804,011 shares remaining available for issuance under the ESPP. On January 25, 2022, an additional 12,128,941 shares became available for future issuance under the Sema4 Holdings Corp. 2021 Equity Incentive Plan and an additional 2,425,788 became available for issuance under the Sema4 Holdings Corp. 2021 Employee Stock Purchase Plan, both pursuant to the plan's evergreen provisions.

(4) Consists of outstanding stock options that were assumed in connection with our business combination and the Earn Out RSUs granted in connection with the business combination. No additional awards may be granted under the 2017 Plan pursuant to which such awards were initially granted.

CERTAIN RELATIONSHIPS AND RELATED PARTY TRANSACTIONS

Sema4

Related Party Transactions

The following is a description of transactions since January 1, 2020 and currently proposed transactions in which:

a. we have been or is to be a participant;

b. the amount involved exceeded or will exceed the lesser of $120,000 or 1% of the average of our total assets as of year-end for the last two completed fiscal years; and

c. any of our directors, executive officers or holders of more than 5% of our capital stock, or any immediate family member of, or person sharing the household with, any of these individuals, had or will have a direct or indirect material interest.

Related Party Transactions Related to the Acquisition

Acquisition Subscription Agreements

In connection with the Acquisition, the PIPE Investors executed subscription agreements to purchase an aggregate of 50,000,000 shares of our Class A common stock at $4.00 per share, for an aggregate purchase price of $200 million in private placements that we expect to close in the first half of 2022. The funds from such private placement will be used in part or whole to fund the Acquisition of GeneDx. The following table sets forth the number of shares of our Class A common stock that we expect to issue to our directors, executive officers and 5% stockholders and their affiliates in this transaction:

	Shares of Class A Common Stock	
Purchaser	**Number of Shares**	**Aggregate Gross Consideration ($)**
Entities affiliated with Blackstone[(1)]	2,500,000	10,000,000
Entities affiliated with Casdin[(2)]	11,437,500	45,750,000
Entities affiliated with Corvex[(3)]	11,437,500	45,750,000
Mount Sinai[(4)]	6,250,000	25,000,000
Entities affiliated with Deerfield[(5)]	5,000,000	20,000,000
Entities affiliated with Rho Partners[(6)]	2,125,000	8,500,000
Entities affiliated with Section32[(7)]	1,250,000	5,000,000
Total	40,000,000	160,000,000

(1) Consists of 2,434,863 shares of Class A common stock expected to be issued to BTO Sema4 Holdings L.P., 50,402 shares of Class A common stock expected to be issued to Blackstone Tactical Opportunities Fund - FD L.P. and 14,735 shares of Class A common stock expected to be issued to Blackstone Family Tactical Opportunities Investment Partnership III ESC L.P.
(2) Consists of 11,437,500 shares of Class A common stock expected to be issued to Casdin Partners Master Fund, L.P.
(3) Consists of 3,557,000 shares of Class A common stock expected to be issued to Corvex Master Fund LP, 7,320,000 shares of Class A common stock expected to be issued to Corvex Select Equity Master Fund LP, and 560,500 shares of Class A common stock expected to be issued to Corvex Dynamic Equity Select Master Fund LP.
(4) Consists of 6,250,000 shares of Class A common stock expected to be issued to Ichan School of Medicine at Mount Sinai.
(5) Consists of 3,125,000 shares of Class A common stock expected to be issued to Deerfield Private Design Fund V, L.P. and 1,875,000 shares of Class A common stock expected to be issued to Deerfield Partners, L.P.
(6) Consists of 1,632,963 shares of Class A common stock expected to be issued to Vaal Investment Partners Q9 LP, 329,665 shares of Class A common stock expected to be issued to Rugu2 LLC, and 162,372 shares of Class A common stock expected to be issued to Kariba LLC. Rho Partners is an affiliate of Joshua Ruch, a member of our Board.
(7) Consists of 1,250,000 shares of Class A common stock expected to be issued to Section 32 Fund 2, L.P. Section32 is an affiliate of Michael Pellini, a member of our Board.

Support Agreements

In connection with the execution of the Acquisition Merger Agreement, OPKO Health, Inc. ("*OPKO*"), the parent of GeneDx, and we entered into Support Agreements (the "*Support Agreements*") with certain of our stockholders (including CMLS Holdings LLC, Casdin Partners Master Fund, L.P., Corvex Master Fund LP, Corvex Select Equity Master Fund LP, Corvex Dynamic Equity Select Master Fund LP, Icahn School of Medicine at Mount Sinai, and Section 32 Fund 2, L.P., whereby such stockholders agreed to, among other things, (a) vote at any meeting of our stockholders all of their shares of our Class A common stock held of record: (i) to approve the issuance of the stock consideration pursuant to Acquisition Merger Agreement and the issuance of our Class A common stock pursuant to the subscription agreements for the acquisitions; (ii) to approve the appointment of two specified designees to the Board for terms that expire no earlier than the end of the Second Milestone Period (as defined in the Acquisition Merger Agreement); (iii) to approve an amendment to our Charter to increase the authorized shares of our Class A common stock from 380,000,000 to 1,000,000,000; (iv) to approve any other proposal included in a proxy statement that is recommended by the Board as necessary to consummate the transactions in connection with the Acquisition Merger Agreement; (v) to approve any proposal that is recommended by the Board to adjourn the meeting to a later date, if there are not sufficient affirmative votes (in person or by proxy) to obtain the requested approvals on the date on which such meeting is held; and (vi) against any and all other proposals that could reasonably be expected to delay or impair the ability of us to consummate the transactions; (b) provide a proxy to us to vote such shares accordingly (subject to the condition that a proxy statement has been filed with the SEC and provided to our stockholders); (c) be bound by certain other covenants and agreements related to the transactions; and (d) be bound by certain transfer restrictions with respect to all or a percentage of their shares of our Class A common stock, prior to the meeting, in each case, on the terms and subject to the conditions set forth in the Support Agreements.

Sema4 Related Party Transactions

Employment Arrangements with Immediate Family Members of Our Executive Officers and Directors

Emilio Schadt, the son of Eric Schadt, our Chief Executive and a director, has been employed with us since August 2018 as a Data Science Software Engineer, where he is responsible for implementing methods to improve data reliability. During the year ended December 31, 2021, Mr. Schadt had total compensation, including base salary and bonus, of $177,543. Rick Wallsten, the brother of Eric Schadt, our Chief Executive Officer and a director, has been employed by us since November 2017 as a clinical pharmacist, where he is responsible for certain aspects of our pharmacogenomics program. During the year ended December 31, 2021, Mr. Wallsten had total cash compensation, including base salary and bonus, of $209,563. During the year ended December 31, 2020, Mr. Wallsten had total cash compensation, including base salary and bonus, of $157,620. Carol Senn, the sister-in-law of James Coffin, our former Chief Operating Officer, has been employed with us since November 2020 as an Account Manager, where she is responsible for certain aspects of growing the business. During the year ended December 31, 2021, Ms. Senn had total compensation, including base salary, of $155,706. Kelly Peterson, the sister of James Coffin, our former Chief Operating Officer, has been employed with us since February 2019 as a Sales Specialist Oncology, where she is responsible for the aspect of growing the business. During the year ended December 31, 2021, Ms. Peterson had total compensation, including base salary, of $211,152.

The salary and bonus levels, as applicable, of the aforementioned individuals were based on reference to internal pay equity when compared to the compensation paid to employees in similar positions who were not related to our executive officers and directors. They also received equity awards on the same general terms and conditions as applicable to other employees in similar positions who were not related to our executive officers and directors.

Licenses and Subleases

We were a party to several space license agreements and continue to be a party to sublease agreements with the Mount Sinai Health System (which we refer to together with its related entities as "*Mount Sinai*") pursuant to which we leased approximately 124,000 square feet of office and laboratory space in Stamford, Connecticut for its headquarters and laboratory operations, and approximately 26,000 square feet of office and laboratory space in New York, New York for additional office space and laboratory operations. Rent expense for all facilities subleased by

Icahn School of Medicine at Mount Sinai ("*ISMMS*") to us was $4.2 million for the year ended December 31, 2021 and $5.9 million for the year ended December 31, 2020. Future minimum lease payments are expected to total $4.2 million related to all facilities subleased by ISMMS to Sema4 for the year ending December 31, 2022.

Transition Services and Employee Compensation

ISMMS provided transition services, under a transition services agreement and other contractual arrangements with us for services related to finance (accounts payable & purchasing, general accounting, financial systems, and payroll), real estate management, insurance coverage, compliance, equipment subleases, and IT. The transition services agreement expired on March 28, 2021. We made direct payments to ISMMS of approximately $1.6 million pursuant to such transition services agreement in 2021.

We provide partial reimbursement to Mount Sinai for limited compensation, services, and related expenses for certain individuals employed by Mount Sinai and certain individuals employed at both Mount Sinai and our company. For the years ended December 31, 2021 and 2020, the total amount of reimbursement for employee compensation and expenses paid by us to Mount Sinai was equal to approximately $1.2 million and $1.3 million, respectively.

Commercial Relationships

We provide products and services to Mount Sinai at fair market value, including for certain oncology testing, research services and clinical data services. Mount Sinai pays for certain of these services in cash, and for other of these services in kind through performing components of collaborative research projects and/or the provision of intellectual property and data rights.

In particular, these arrangements include a data structuring and curation services agreement, dated August 1, 2019, with ISMMS and certain other Mount Sinai entities, pursuant to which we provide certain data structuring and clinical support services to Mount Sinai, including the delivery to Mount Sinai of a curated dataset and interface allowing Mount Sinai users to query the curated dataset as mutually agreed by the parties. As compensation for these services, Mount Sinai provides us certain rights to use de-identified curated data. The data structuring and curation services agreement has a five-year term and, provided we are not in default under the terms of the agreement, the agreement may be renewed at our option for up to two one-year extension periods. Following the extension periods, the agreement may be further renewed by the mutual agreement of the parties. The agreement may be terminated earlier by Mount Sinai upon certain fundamental breaches by us, by us upon a breach by Mount Sinai of its material obligations, and by either party if certain insolvency or bankruptcy events occur with respect to the other party.

We also receive products and services from Mount Sinai at fair market value, including for certain research and clinical services, development services and lab services, and licenses certain intellectual property from Mount Sinai. Pursuant to these arrangements, we made direct payments to Mount Sinai of approximately $1.4 million and $3.4 million for the years ended December 31, 2021 and 2020, respectively.

Indemnification Agreements

Our Charter contains provisions limiting the liability of directors, and our Bylaws provide that we will indemnify each of our directors to the fullest extent permitted under Delaware law. Our Charter and our Bylaws also provide the Board with discretion to indemnify officers and employees when determined appropriate by our Board.

We have entered into indemnification agreements with each of our directors and executive officers and certain other key employees. The indemnification agreements provide that we will indemnify each of its directors, executive officers, and such other key employees against any and all expenses incurred by that director, executive officer, or other key employee because of his or her status as one of the Company's directors, executive officers, or other key employees, to the fullest extent permitted by Delaware law, our Charter and our Bylaws. In addition, the indemnification agreements provide that, to the fullest extent permitted by Delaware law, the Company will advance all expenses incurred by its directors, executive officers, and other key employees in connection with a legal proceeding involving his or her status as a director, executive officer, or key employee.

Legacy Sema4 Related Party Transactions

Series C Preferred Stock Financing

In July 2020, Legacy Sema4 sold an aggregate of 197,821 shares of its Series C preferred stock at a purchase price of $613.6743 per share to accredited investors for an aggregate purchase price of approximately $121.4 million. On July 22, 2021, each share of Legacy Sema4's Series C preferred stock was cancelled and received a portion of the merger consideration in connection with the completion of the business combination, as provided in the Prior Merger Agreement.

The following table summarizes purchases of shares of Legacy Sema4's Series C preferred stock by its executive officers, directors, and holders of more than 5% of its capital stock.

	Shares of Series C Preferred Stock	
Purchaser	Number of Shares	Aggregate Gross Consideration ($)
Entities affiliated with Blackstone[(1)]	38,130	$ 23,399,401

(1) Consists of 37,138 shares of Series C preferred stock held by BTO Sema4 Holdings L.P., 768 shares of Series C preferred stock held by Blackstone Tactical Opportunities Fund - FD L.P. and 224 shares of Series C preferred stock held by Blackstone Family Tactical Opportunities Investment Partnership III ESC L.P.

Second Amended and Restated Stockholders Agreement

On July 27, 2020, Legacy Sema4 entered into a second amended and restated stockholders' agreement, as amended (the "*A&R Stockholders' Agreement*"), with certain holders of Legacy Sema4's capital stock. The A&R Stockholders' Agreement provided for certain customary rights with respect to the management of Legacy Sema4, rights of first offer and pre-emptive rights, transfer restrictions, tag-along rights and drag-along rights, which rights and restrictions terminated on July 22, 2021, upon the consummation of the business combination. In addition, the A&R Stockholders' Agreement provided for certain customary registration rights.

Related Party Transactions Entered into in Connection with the Business Combination

Business Combination Subscription Agreements

In connection with our business combination, the Merger PIPE Investors purchased an aggregate of 35,000,000 shares of our Class A common stock at $10.00 per share, for an aggregate purchase price of $350 million in private placements that closed immediately prior to the Merger Closing. The funds from such private placement were used as part of the consideration to Legacy Sema4's equity holders in connection with the business combination. The following table sets forth the number of shares of our Class A common stock that we issued to our directors, executive officers and 5% stockholders and their affiliates in this transaction:

	Shares of Class A Common Stock	
Purchaser	Number of Shares	Aggregate Gross Consideration ($)
Entities affiliated with Casdin[(1)]	5,000,000	50,000,000
Entities affiliated with Corvex[(2)]	4,000,000	40,000,000
Entities affiliated with Deerfield[(3)]	2,750,000	27,500,000
Total	16,250,000	162,500,000

(1) Consists of 5,000,000 shares of Class A common stock held by affiliates of Casdin Partners Master Fund L.P.
(2) Consists of 4,000,000 shares of Class A common stock held by affiliates of Corvex Management LP.
(3) Consists of 2,750,000 shares of Class A common stock held by affiliates of Deerfield Management Company, L.P.

Amended and Restated Registration Rights Agreement

In connection with the consummation of our business combination, we, CMLS Holdings LLC (the "*Former Sponsor*") and certain other parties thereto (collectively, the "*rights holders*") entered into an amended and restated registration rights agreement (the "*Amended and Restated Registration Rights Agreement*"). Pursuant to the terms of the Amended and Restated Registration Rights Agreement, we were required to prepare and file with the SEC, no later than 30 days after the closing date for the Merger, a shelf registration statement for an offering to be made on a continuous basis from time to time with respect to the resale of the registrable shares under the Amended and Restated Registration Rights Agreement. We were further required to use commercially reasonable efforts to cause such shelf registration statement to be declared effective as soon as possible after filing, but in no event later than the earlier of 60 days following the filing date thereof and five business days after the SEC notifies us that it will not review such registration statement, subject to extension in the event that the registration is subject comments from the SEC.

In addition, pursuant to the terms of the Amended and Restated Registration Rights Agreement and subject to certain requirements and customary conditions, including with regard to the number of demand rights that may be exercised, the rights holders may demand at any time or from time to time, that we file a registration statement on Form S-1 or Form S-3 to register certain shares of our Class A common stock held by such rights holders. The Amended and Restated Registration Rights Agreement also provides the rights holders with "piggy-back" registration rights, subject to certain requirements and customary conditions. We will bear the expenses incurred in connection with the filing of any such registration statement.

ISMMS Lock-Up Agreement

In connection with the execution of the Prior Merger Agreement, we and Icahn School of Medicine at Mount Sinai entered into the ISMMS Lock-Up Agreement whereby ISMMS agreed to certain transfer restrictions in respect of the shares of our Class A common stock issued to ISMMS pursuant to the Prior Merger Agreement. These transfer restrictions expired on January 18, 2022.

Shareholder Lock-up Agreements

In connection with the execution of the Prior Merger Agreement, each stockholder of Legacy Sema4 prior to the closing of the business combination holding more than 1% of the outstanding common stock of Legacy Sema4 as of the date thereof, entered into a Stockholder Lock-up Agreement whereby such shareholder agreed to certain transfer restrictions in respect of the shares of our Class A common stock issued to such shareholder pursuant to the Prior Merger Agreement. These transfer restrictions expired on January 18, 2022.

CMLS Related Party Transactions Entered into Prior to the Business Combination

Founder Shares

On July 16, 2020, the Former Sponsor purchased an aggregate of 10,062,500 shares of Class B common stock of CMLS (the "*Class B common stock*"), for a total purchase price of $25,000, or approximately $0.002 per share. In August 2020, the Former Sponsor transferred 25,000 of Class B common stock to each of Dr. Leproust and Mr. Turner. On September 1, 2020, CMLS effected a 1:1.1 stock split of its Class B common stock, resulting in the Former Sponsor holding an aggregate of 10,993,750 shares of Class B common stock. The shares of Class B common stock automatically converted into Class A common stock on July 22, 2021 in connection with the consummation of the business combination (such shares, the "*Founder Shares*").

Private Placement Warrants

On September 1, 2020, simultaneously with the closing of CMLS's initial public offering (the "*Initial Public Offering*"), the Former Sponsor and certain of CMLS's independent directors purchased an aggregate of 7,236,667 private placement warrants (the "*Private Placement Warrants*"), at a price of $1.50 per Private Placement Warrant, for an aggregate purchase price of $10,855,000. The Former Sponsor purchased 6,903,335 Private Placement Warrants, and Dr. Leproust (and/or one or more entities controlled by her) purchased 166,666 Private Placement

Warrants. Each Private Placement Warrant is exercisable to purchase one share of Class A common stock at a price of $11.50 per share, subject to adjustment.

Promissory Note–Related Party

On July 16, 2020, the Former Sponsor issued an unsecured promissory note to CMLS (the "*Promissory Note*"), pursuant to which CMLS could borrow up to an aggregate principal amount of $300,000. The Promissory Note was non-interest bearing and payable on the earlier of (i) December 31, 2020 or (ii) the consummation of the Initial Public Offering. The outstanding balance under the Promissory Note of $165,081 was repaid at the closing of the Initial Public Offering on September 4, 2020.

Insider Letter

On September 1, 2020, in connection with the Initial Public Offering, CMLS, the Former Sponsor and certain insiders of CMLS entered into a letter agreement (the "*Insider Letter*") providing for, among other things, a lock-up in relation to the Founder Shares until the earlier of (a) one year after the completion of the business combination and (b) subsequent to the business combination, if the closing price of the Class A common stock equals or exceeds $12.00 per share (as adjusted for stock splits, stock dividends, reorganizations, recapitalizations, and the like) for any 20 trading days within any 30-day trading day period commencing at least 150 days after the business combination or (y) the date following the completion of the business combination on which we complete a liquidation, merger, capital stock exchange, reorganization or other similar transaction that results in all of our stockholders having the right to exchange their shares of Class A common stock for cash securities or other property. The Former Sponsor and each insider also agreed not to transfer any Private Placement Warrants (or any share of Class A common stock issued or issuable upon the exercise of the Private Placement Warrants), until 30 days after the completion of the business combination.

Forward Purchase Agreement

On September 1, 2020, in connection with the Initial Public Offering, CMLS entered into separate forward purchase agreements with Casdin Capital, LLC ("Casdin") and Corvex Management LP ("Corvex"), in their capacities as investment advisors on behalf of one or more investment funds, clients or accounts managed by each of Casdin and Corvex, respectively (collectively, their "Clients"), pursuant to which, subject to the conditions provided therein, they caused the Clients to purchase from us up to an aggregate amount of 15,000,000 shares of Class A common stock the private placement that closed concurrently with the closing of the business combination.

Review, Approval or Ratification of Transactions with Related Parties

On July 22, 2021, we adopted a written related party transaction policy in connection with the completion of the business combination. The policy provides that officers, directors, holders of more than 5% of any class of our voting securities, and any member of the immediate family of and any entity affiliated with any of the foregoing persons, will not be permitted to enter into a related-party transaction with us without the prior consent of our audit committee, or other independent members of our Board in the event it is inappropriate for the audit committee to review such transaction due to a conflict of interest. Any request for us to enter into a transaction with an executive officer, director, principal stockholder, or any of their immediate family members or affiliates, in which the amount involved exceeds $120,000, must first be presented to our audit committee for review, consideration, and approval. In approving or rejecting the proposed transactions, our audit committee will take into account all of the relevant facts and circumstances available.

Director Independence

The rules of Nasdaq require that a majority of our Board be independent. An "independent director" is defined generally as a person other than an executive officer or employee of the issuer or any other individual having a relationship which, in the opinion of the issuer's board of directors, would interfere with the exercise of independent judgement in carrying out the responsibilities of a director. Each individual serving on our Board, other than Eric Schadt and Jason Ryan, qualifies as an independent director under Nasdaq listing standards. Each director who serves on our audit committee, compensation committee and nominating and corporate governance committee are

independent under Nasdaq listing standards. See the section entitled "*Corporate Governance of Sema4*" elsewhere in this proxy statement for more information.

GeneDx

GeneDx had no related party transactions for the years ended December 31, 2021 and 2020.

REPORT OF THE AUDIT COMMITTEE

The information contained in the following report of our audit committee is not considered to be "soliciting material," "filed" or incorporated by reference in any past or future filing by us under the Exchange Act or the Securities Act unless and only to the extent that we specifically incorporate it by reference.

Our audit committee has reviewed and discussed with our management and Ernst & Young LLP our audited consolidated financial statements for the year ended December 31, 2021. Our audit committee has also discussed with Ernst & Young LLP the matters required to be discussed by Auditing Standard No. 1301 adopted by the Public Company Accounting Oversight Board (United States) regarding "*Communications with Audit Committees*."

Our audit committee has received and reviewed the written disclosures and the letter from Ernst & Young LLP required by applicable requirements of the Public Company Accounting Oversight Board regarding the independent accountant's communications with our audit committee concerning independence, and has discussed with Ernst & Young LLP its independence from us.

Based on the review and discussions referred to above, our audit committee recommended to our board of directors that the audited consolidated financial statements be included in our annual report on Form 10-K for the year ended December 31, 2021 for filing with the U.S. Securities and Exchange Commission.

Submitted by the Audit Committee
Keith Meister, Chair
Dennis Charney
Emily Leproust

BENEFICIAL OWNERSHIP OF SECURITIES

Beneficial Ownership of Certain Stockholders, Directors and Executive Officers

The following table sets forth certain information with respect to the beneficial ownership of our Class A common stock as of February 22, 2022, by:

- each stockholder known by us to be the beneficial owner of more than 5% of our Class A common stock;
- each of our named executive officers;
- each of our directors and director nominees; and
- all of our current directors and executive officers as a group.

Percentage ownership of our Class A common stock is based on 244,727,239 shares of our Class A common stock outstanding on February 22, 2022. Beneficial ownership is determined according to the rules of the SEC, which generally provide that a person has beneficial ownership of a security if he, she or it possesses sole or shared voting or investment power over that security or has the right to acquire a security, such as through the exercise of warrants or stock options or the vesting of restricted stock units, within 60 days of the date above. Shares subject to warrants or options that are currently exercisable or exercisable within 60 days of the date above or subject to restricted stock units that vest within 60 days of such date are considered outstanding and beneficially owned by the person holding such warrants, options or restricted stock units for the purpose of computing the percentage ownership of that person but are not treated as outstanding for the purpose of computing the percentage ownership of any other person.

Except as described in the footnotes below and subject to applicable community property laws and similar laws, we believe that each person listed above has sole voting and investment power with respect to such shares. Unless

otherwise noted, the address of each beneficial owner is c/o Sema4 Holdings Corp., 333 Ludlow Street, North Tower, 8th Floor, Stamford, Connecticut 06902.

Name of Beneficial Owners	Number of Shares of Class A Common Stock Beneficially Owned	Percentage of Outstanding Class A Common Stock
5% Stockholders:		
Entities affiliated with Blackstone Group Inc.[(1)]	25,866,502	10.6
Entities affiliated with Deerfield Management Company, L.P.[(2)]	13,966,824	5.7
Icahn School of Medicine at Mount Sinai[(3)]	88,355,473	36.1
Directors and Named Executive Officers:		
Eric Schadt[(4)]	7,484,116	3.1
Isaac Ro[(5)]	395,294	*
James Coffin [(6)]	2,696,080	1.1
Dennis Charney	—	—
Eli D. Casdin[(7)]	22,730,419	9.3
Emily Leproust[(8)]	191,666	*
Keith Meister[(9)]	22,230,419	9.1
Michael Pellini[(10)]	3,714	*
Jason Ryan[(11)]	3,714	*
Joshua Ruch[(12)]	3,714	*
Rachel Sherman[(13)]	181,609	*
Nat Turner[(14)]	191,666	*
Katherine Stueland	—	—
Richard C. Fenniger Jr.	—	—
Directors and executive officers as a group (15 individuals)[(15)]	**39,485,253**	**16.1**

* Less than one percent

(1) Based solely on the information set forth in a Schedule 13D/A filed with the SEC on January 20, 2022 by Blackstone Holding III L.P. Consists of (i) 24,404,324 shares of Class A common stock held by BTO Sema4 Holdings L.P., (ii) 505,095 shares of Class A common stock held by Blackstone Tactical Opportunities Fund - FD L.P., (iii) 147,574 shares of Class A common stock held by Blackstone Family Tactical Opportunities Investment Partnership III ESC L.P., and (iv) (a) 100,000 shares of Class A common stock and (b) warrants to purchase 709,509 shares of Class A common stock which are exercisable within 60 days of February 22, 2022 held by Blackstone Aqua Master Sub-Fund, a sub-fund of Blackstone Global Master Fund ICAV. BTO Holdings Manager L.L.C. is the general partner of BTO Sema4 Holdings L.P. Blackstone Tactical Opportunities Associates L.L.C. is the managing member of BTO Holdings Manager L.L.C. BTOA L.L.C. is the sole member of Blackstone Tactical Opportunities Associates L.L.C. Blackstone Holdings III L.P. is the managing member of BTOA L.L.C. Blackstone Tactical Opportunities Associates III - NQ L.P. is the general partner of Blackstone Tactical Opportunities Fund - FD L.P. BTO DE GP - NQ L.L.C. is the general partner of Blackstone Tactical Opportunities Associates III - NQ L.P. Blackstone Holdings II L.P. is the managing member of BTO DE GP - NQ L.L.C. Blackstone Holdings I/II GP L.L.C. is the general partner of Blackstone Holdings II L.P. Blackstone Alternative Solutions L.L.C. is the investment manager of Blackstone Aqua Master Sub-Fund, a sub-fund of Blackstone Global Master Fund ICAV. Blackstone Holdings I L.P. is the sole member of Blackstone Alternative Solutions L.L.C. Blackstone Holdings I/II GP L.L.C. is the general partner of Blackstone Holdings I L.P. BTO Side-by-Side GP L.L.C. is the general partner of Blackstone Family Tactical Opportunities Investment Partnership III ESC L.P. Blackstone Holdings III L.P. is the sole member of BTO Side-by-Side GP L.L.C. Blackstone Holdings III GP L.P. is the general partner of Blackstone Holdings III L.P. Blackstone Holdings III GP Management L.L.C. is the general partner of Blackstone Holdings III GP L.P. The Blackstone Group Inc. is the sole member of each of Blackstone Holdings I/II GP L.L.C. and Blackstone Holdings III GP Management L.L.C. The sole holder of the Class C common stock of The Blackstone Group Inc. is Blackstone Group Management L.L.C. Blackstone Group Management L.L.C. is wholly-owned by Blackstone's senior managing directors and controlled by its founder, Stephen A. Schwarzman. Each of the Blackstone entities described in this footnote and Stephen A. Schwarzman may be deemed to beneficially own the shares directly or indirectly controlled by such Blackstone entities or him, but each disclaims beneficial ownership of such shares. The address of Mr. Schwarzman and each of the other entities listed in this footnote is c/o The Blackstone Group Inc., 345 Park Avenue, New York, New York 10154.

(2) Based solely on the information set forth in a Schedule 13G/A filed with the SEC on February 11, 2022 by James E. Flynn. Consists of (i) 7,042,580 shares of Class A common stock held by Deerfield Partners and (ii) 6,924,244 shares of Class A common stock held by DPDF. Deerfield Management Company, L.P. ("Deerfield Management") is the investment manager of Deerfield Partners, L.P. ("Deerfield

Partners") and Deerfield Private Design Fund V, L.P. ("DPDF"). Deerfield Mgmt, L.P. ("Deerfield Mgmt") is the general partner of Deerfield Partners. Deerfield Mgmt V, L.P. ("Deerfield Mgmt V") is the general partner of DPDF. James E. Flynn is the sole member of the general partner of each of Deerfield Management, Deerfield Mgmt and Deerfield Mgmt V. Deerfield Management, Deerfield Mgmt and Mr. Flynn may be deemed to beneficially own the securities held by Deerfield Partners. Deerfield Management, Deerfield Mgmt V and Mr. Flynn may be deemed to beneficially own the securities held by DPDF. The address for each of Deerfield Partners, DPDF, Deerfield Management, Deerfield Mgmt, Deerfield Mgmt V and Mr. Flynn is 345 Park Avenue South, New York, New York 10010.

(3) Based solely on the information set forth in a Schedule 13D/A filed with the SEC on January 21, 2022 by Icahn School of Medicine at Mount Sinai ("ISMMS"). Consists of 88,355,473 shares of Class A common stock held by ISMMS. The shares are held by ISMMS, a New York Education Corporation. The responsibility and authority for the voting and investment decisions with respect to the shares held by ISMMS is vested in those persons who from time to time are the executive officers of ISMMS under the oversight and direction of its board of directors and its sole member, Mount Sinai Health System, Inc., a New York Not-for-Profit Corporation. The address for Icahn School of Medicine at Mount Sinai is One Gustave L. Levy Place, New York, New York 10029.

(4) Consists of (i) 168,351 shares of Class A common stock and (ii) 7,315,765 shares of Class A common stock subject to options that are exercisable within 60 days of February 22, 2022.

(5) Consists of (i) 250,618 shares of Class A common stock and (ii) 144,676 shares of Class A common stock subject to options that are exercisable within 60 days of February 22, 2022.

(6) Consists of (i) 30,893 shares of Class A common stock and (ii) 2,665,187 shares of Class A common stock subject to options that are exercisable within 60 days of February 22, 2022. Dr. Coffin left the Company in February 2022.

(7) Based solely on the information set forth in a Schedule 13D/A filed with the SEC on January 19, 2022 by CMLS Holdings LLC. Includes (i) 5,000,000 shares of Class A common stock held indirectly by Casdin Partners Master Fund L.P., and (ii) (x) 10,993,750 shares of Class A common stock and (y) 6,736,669 shares of Class A common stock underlying private placement warrants that are exercisable within 60 days of February 22, 2022 held indirectly by CMLS Holdings LLC (the "Former Sponsor"). The Board of Managers of the Former Sponsor is comprised of Mr. Eli Casdin and Mr. Keith Meister who share voting and investment discretion with respect to the Class A common stock held of record by CMLS Holdings LLC. Mr. Casdin is a member of the Board. C-LSH LLC and M-LSH LLC are the members of CMLS Holdings LLC, and Mr. Casdin and Mr. Meister are the managing members of C-LSH LLC and M-LSH LLC, respectively. As such, each of the foregoing may be deemed to have or share beneficial ownership of the Class A common stock held directly by CMLS Holdings LLC. The business address of the Former Sponsor is c/o Corvex Management, L.P., 667 Madison Avenue, New York, NY 10065.

(8) Consists of (i) 25,000 shares of Class A common stock and (ii) 166,666 shares of Class A common stock underlying private placement warrants that are exercisable within 60 days of February 22, 2022.

(9) Based solely on the information set forth in a Schedule 13D/A filed with the SEC on January 19, 2022 by CMLS Holdings LLC. Includes (i) 4,500,000 shares of Class A common stock held indirectly by Corvex Management, L.P. and (ii) (x) 10,993,750 shares of Class A common stock and (y) 6,736,669 shares of Class A common stock underlying private placement warrants that are exercisable within 60 days of February 22, 2022 held indirectly by the Former Sponsor. The Board of Managers of the Former Sponsor is comprised of Mr. Eli Casdin and Mr. Keith Meister who share voting and investment discretion with respect to the Class A common stock held of record by CMLS Holdings LLC. C-LSH LLC and M-LSH LLC are the members of CMLS Holdings LLC, and Mr. Casdin and Mr. Meister are the managing members of C-LSH LLC and M-LSH LLC, respectively. As such, each of the foregoing may be deemed to have or share beneficial ownership of the Class A common stock held directly by CMLS Holdings LLC. The business address of the Former Sponsor is c/o Corvex Management LP, 667 Madison Avenue, New York, NY 10065.

(10) Consists of 3,714 shares of Class A common stock subject to options that are exercisable within 60 days of February 22, 2022.

(11) Consists of 3,714 shares of Class A common stock subject to options that are exercisable within 60 days of February 22, 2022.

(12) Consists of 3,714 shares of Class A common stock subject to options that are exercisable within 60 days of February 22, 2022.

(13) Consists of 181,609 shares of Class A common stock subject to options that are exercisable within 60 days of February 22, 2022.

(14) Consists of (i) 25,000 shares of Class A common stock held by Nat Turner and (ii) 166,666 shares of Class A common stock underlying private placement warrants held by NTWJ Holdings, LLC ("NTWJ"), that are exercisable within 60 days of February 22, 2022. Mr. Turner is a managing member of NTWJ. The address for NTWJ is 139 Reade Street, New York, New York 10013.

(15) Consists of (i) 21,376,237 shares of Class A common stock held directly and indirectly by all current directors and current executive officers of the Company as a group, (ii) 18,014 shares of Class A common stock issuable pursuant to RSUs held directly by all current directors and executive officers of the Company as a group and that will be vested within 60 days of February 22, 2022, (iii) 11,021,001 shares of Class A common stock subject to options held directly by all current directors and executive officers of the Company as a group and that are exercisable within 60 days of February 22, 2022, and (iv) 7,070,001 shares of Class A common stock underlying private placement warrants held directly and indirectly by all current directors and executive officers of the Company as a group and that are exercisable within 60 days of February 22, 2022.

DELINQUENT SECTION 16(A) REPORTS

Section 16(a) of the Exchange Act requires our directors, executive officers, and any persons who own more than 10% of our common stock, to file initial reports of ownership and reports of changes in ownership with the SEC. Based solely on our review of the forms filed with the SEC and written representations from the directors and executive officers, we believe that all Section 16(a) filing requirements were timely met in the fiscal year ended December 31, 2021, with the exception of: a Form 4 with respect to the issuance of restricted stock units ("RSUs") and an associated sale to cover transaction in respect of tax withholding obligations in connection with the vesting and settlement of a portion of the RSUs, which was filed one day late on October 6, 2021 on behalf of Shawn Assad; a Form 4 with respect to a sale to cover transaction in respect of tax withholding obligations in connection with the vesting and settlement of RSUs, which was filed one day late on November 15, 2021 on behalf of Shawn Assad; Forms 4 with respect to the issuance of RSUs and associated sale to cover transactions in respect of tax withholding obligations in connection with the vesting and settlement of a portion of the RSUs, which were filed four days late on November 2, 2021 on behalf of each of Shawn Assad, Daniel Clark, James Coffin, Anthony Prentice, Isaac Ro, Kareem Saad, Eric Schadt, and Karen White; a Form 5 with respect to the exercise of shares underlying the option grant, which was filed eighty-three days late on February 7, 2022 on behalf of Daniel Clark; and a Form 3 that was filed 29 days late on August 30, 2021 for affiliates of Blackstone, which was due within 10 calendar days of July 22, 2021 following the closing of the business combination, by BTO Sema4 Holdings L.P., BTO Holdings Manager L.L.C., Blackstone Tactical Opportunities Associates L.L.C., BTOA L.L.C., Blackstone Family Tactical Opportunities Investment Partnership III ESC L.P., BTO Side-by-Side GP L.L.C., Blackstone Holdings III L.P., Blackstone Holdings III GP L.P., Blackstone Holdings III GP Management L.L.C., Blackstone Tactical Opportunities Fund – FD L.P., Blackstone Tactical Opportunities Associates III – NQ L.P., BTO DE GP – NQ L.L.C., Blackstone Holdings II L.P., Blackstone Aqua Master Sub-Fund, a sub-fund of Blackstone Global Master Fund ICAV, Blackstone Alternative Solutions L.L.C., Blackstone Holdings I L.P., Blackstone Holdings I/II GP L.L.C., Blackstone Inc., Blackstone Group Management L.L.C. and Stephen A. Schwarzman.

MARKET PRICE, TICKER SYMBOL AND DIVIDEND INFORMATION

The Company

Market Price and Ticker Symbol

The Company's Class A common stock and warrants are currently listed on Nasdaq under the symbols "SMFR" and "SMFRW", respectively.

On January 14, 2022, the trading date before the public announcement of the Acquisition, the Company's Class A common stock and warrants closed at $4.04 and $0.75, respectively. On March 30, 2022, the trading date immediately prior to the date of this proxy statement, the Company's Class A common stock and warrants closed at $3.12 and $0.69, respectively.

Holders

As of March 25, 2022 there were 76 holders of record of our Class A common stock and 5 holders of record of our warrants. The number of holders of record does not include a substantially greater number of "street name" holders or beneficial holders whose Class A common stock and warrants are held of record by banks, brokers and other financial institutions.

Dividend Policy

We have not paid any cash dividends on our Class A common stock to date and do not intend to pay cash dividends prior to the completion of the Acquisition. The payment of any cash dividends subsequent to the Acquisition will be within the discretion of the Company's board of directors at such time. Following the Acquisition, we currently expect that the Company will retain future earnings to finance operations and grow its business, and we do not expect the Company to declare or pay cash dividends for the foreseeable future.

INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

Representatives of our independent registered public accounting firm, Ernst & Young LLP, will be present at the special meeting of the Company's stockholders. The representatives will have the opportunity to make a statement if they so desire and they are expected to be available to respond to appropriate questions.

APPRAISAL RIGHTS

Appraisal rights are not available to holders of our shares of Class A common stock in connection with the Acquisition.

HOUSEHOLDING INFORMATION

Unless we have received contrary instructions, we may send a single copy of this proxy statement to any household at which two or more stockholders reside if we believe the stockholders are members of the same family. This process, known as "householding," reduces the volume of duplicate information received at any one household and helps to reduce our expenses. However, if stockholders prefer to receive multiple sets of our disclosure documents at the same address this year or in future years, the stockholders should follow the instructions described below. Similarly, if an address is shared with another stockholder and together both of the stockholders would like to receive only a single set of our disclosure documents, the stockholders should follow these instructions:

- If the shares are registered in the name of the stockholder, the stockholder should contact us at our offices at Sema4 Holdings Corp., 333 Ludlow Street, North Tower, 8th Floor, Stamford, Connecticut 06902 or by telephone at (800) 298-6470, to inform us of his or her request; or
- If a bank, broker or other nominee holds the shares, the stockholder should contact the bank, broker or other nominee directly.

TRANSFER AGENT AND REGISTRAR

The transfer agent for our securities is Continental Stock Transfer & Trust Company.

SUBMISSION OF STOCKHOLDER PROPOSALS

Our Board is aware of no other matter that may be brought before the Special Meeting. Under Delaware law, only business that is specified in the notice of Special Meeting to stockholders may be transacted at the Special Meeting.

FUTURE STOCKHOLDER PROPOSALS

We anticipate that the 2023 annual meeting of stockholders will be held no later than June 2023. For any proposal to be considered for inclusion in the proxy statement and form of proxy for the Company's 2023 annual meeting of stockholders, it must be submitted in writing and comply with the requirements of Rule 14a-8 of the Exchange Act. Stockholder proposals submitted pursuant to Rule 14a-8 under the Exchange Act and intended to be presented at our 2023 annual meeting of stockholders must be received by us not later than December 1, 2022 in order to be considered for inclusion in our proxy materials for that meeting. Such proposals must be received by the Company at its principal executive offices at 333 Ludlow Street, North Tower, 8th Floor, Stamford, Connecticut 06902.

In addition to any other applicable requirements, for business and for nominations to be properly brought before an annual meeting by a stockholder, the Company's bylaws provide that the stockholder must give timely notice in proper written form to our Corporate Secretary at the Company's principal executive offices at 333 Ludlow Street, North Tower, 8th Floor, Stamford, Connecticut 06902, and such business must otherwise be a proper matter for stockholder action. Such notice, to be timely, must be received not less than 75 days nor more than 105 days prior to the first anniversary of the preceding year's annual meeting. As a result, any notice given by or on behalf of a stockholder pursuant to these provisions of the Company's bylaws (and not pursuant to SEC Rule 14a-8) must be received by February 11, 2023 (but not before January 12, 2023). However, that in the event that the date of the

annual meeting is advanced by more than thirty (30) days, or delayed by more than sixty (60) days, a stockholder's notice must be so received not earlier than the one hundred and fifth (105th) day prior to such annual meeting and not later than the close of business on the later of (A) the ninetieth (90th) day prior to such annual meeting and (B) the tenth (10th) day following the day on which notice of the date of such annual meeting was mailed or public disclosure of the date of such annual meeting was made, whichever first occurs. Nominations and proposals also must satisfy other requirements set forth in the bylaws. The chairman of our Board may refuse to acknowledge the introduction of any stockholder proposal not made in compliance with the foregoing procedures and requirements set forth in the bylaws.

WHERE YOU CAN FIND MORE INFORMATION

We file reports, proxy statements and other information with the SEC as required by the Exchange Act. You can read the Company's SEC filings, including this proxy statement, over the Internet at the SEC's website at http://www.sec.gov.

If you would like additional copies of this proxy statement or if you have questions about the transaction or the proposals to be presented at the Special Meeting, you should contact the Company at the following address and telephone number:

333 Ludlow Street
North Tower, 8th Floor
Stamford, Connecticut 06902
Telephone: (800) 298-6470
Attention: Investors@sema4.com

You may also obtain these documents by requesting them in writing or by telephone from the Company's proxy solicitation agent at the following address and telephone number:

D.F. King & Co., Inc.
48 Wall Street, 22nd Floor
New York, NY 10005
Stockholders Call (toll-free): (800) 735-3591
Banks and Brokers Call: (212) 269-5550
Email: Sema4@dfking.com

If you are a stockholder of the Company and would like to request documents, please do so no later than five business days before the Special Meeting in order to receive them before the Special Meeting. If you request any documents from us, we will mail them to you by first class mail, or another equally prompt means.

All information contained in this proxy statement relating to the Company has been supplied by the Company, and all such information relating to GeneDx has been supplied by GeneDx. Information provided by either the Company or GeneDx does not constitute any representation, estimate or projection of any other party.

This document is a proxy statement of the Company for the Special Meeting. We have not authorized anyone to give any information or make any representation about the transaction, the Company or GeneDx that is different from, or in addition to, that contained in this proxy statement. Therefore, if anyone does give you information of this sort, you should not rely on it. The information contained in this proxy statement speaks only as of the date of this proxy statement, unless the information specifically indicates that another date applies.

SEMA4 HOLDINGS CORP.

INDEX TO FINANCIAL STATEMENTS

Report of Independent Registered Public Accounting Firm

To the Shareholders and the Board of Directors of Sema4 Holdings Corp.

Opinion on the Financial Statements

We have audited the accompanying consolidated balance sheets of Sema4 Holdings Corp. (the Company) as of December 31, 2021 and 2020, the related consolidated statements of operations and comprehensive loss, redeemable convertible preferred stock and stockholders' equity (deficit) and cash flows for each of the three years in the period ended December 31, 2021, and the related notes (collectively referred to as the "consolidated financial statements"). In our opinion, the consolidated financial statements present fairly, in all material respects, the financial position of the Company at December 31, 2021 and 2020, and the results of its operations and its cash flows for each of the three years in the period ended December 31, 2021, in conformity with U.S. generally accepted accounting principles.

Restatement of 2020 and 2019 Financial Statements

As discussed in Note 2 to the consolidated financial statements, the 2020 and 2019 financial statements have been restated to correct a misstatement.

Basis for Opinion

These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on the Company's financial statements based on our audits. We are a public accounting firm registered with the Public Company Accounting Oversight Board (United States) (PCAOB) and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement, whether due to error or fraud. The Company is not required to have, nor were we engaged to perform, an audit of its internal control over financial reporting. As part of our audits we are required to obtain an understanding of internal control over financial reporting but not for the purpose of expressing an opinion on the effectiveness of the Company's internal control over financial reporting. Accordingly, we express no such opinion.

Our audits included performing procedures to assess the risks of material misstatement of the financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the financial statements. We believe that our audits provide a reasonable basis for our opinion.

/s/ ERNST & YOUNG LLP

We have served as the Company's auditor since 2018.

New York, New York
March 14, 2022

Auditor Firm Id:	No. 42	Auditor Name:	Ernst & Young LLP	Auditor Location:	New York, New York, United States

Sema4 Holdings Corp.

Consolidated Balance Sheets

(in thousands, except share and per share amounts)

	December 31,	
	2021	2020
Assets		
Current assets:		
Cash and cash equivalents	$ 400,569	$ 108,132
Accounts receivable, net	26,509	32,044
Due from related parties	54	289
Inventory, net	33,456	24,962
Prepaid expenses	19,154	4,557
Other current assets	3,802	4,124
Total current assets	483,544	174,108
Property and equipment, net	62,719	63,110
Restricted cash	900	10,828
Other assets	6,930	3,596
Total assets	$ 554,093	$ 251,642
Liabilities, Redeemable Convertible Preferred Stock and Stockholders' Equity (Deficit)		
Current liabilities:		
Accounts payable	$ 44,693	$ 26,737
Accrued expenses	20,108	11,854
Due to related parties	2,623	1,425
Current portion of capital lease obligations	3,419	3,506
Contract liabilities	473	1,783
Other current liabilities	29,968	28,137
Total current liabilities	101,284	73,442
Long-term debt, net of current portion	11,000	18,971
Stock-based compensation liabilities	—	131,989
Capital lease obligations, net of current portion	18,427	20,778
Other liabilities	3,480	2,074
Warrant liability	21,555	—
Earn-out contingent liability	10,244	—
Total liabilities	165,990	247,254
Commitments and contingencies (Note 9)		
Redeemable convertible preferred stock:		
Series A-1 redeemable convertible preferred stock, $0.00001 par value: 0 and 55,399,943 shares authorized, issued and outstanding at December 31, 2021 and December 31, 2020, respectively; aggregate liquidation preference of $0 and $55,000 at December 31, 2021 and December 31, 2020, respectively	—	51,811

Series A-2 redeemable convertible preferred stock, $0.00001 par value: 0 and 64,718,940 shares authorized at December 31, 2021 and December 31, 2020, respectively; 0 and 49,700,364 shares authorized, issued and outstanding at December 31, 2021 and December 31, 2020, respectively; aggregate liquidation preference of $0 and $49,342 at December 31, 2021 and December 31, 2020, respectively	—	46,480
Series B redeemable convertible preferred stock, $0.00001 par value: 0 and 41,937,960 shares authorized, issued and outstanding at December 31, 2021 and December 31, 2020, respectively; aggregate liquidation preference of $0 and $204,302 at December 31, 2021and December 31, 2020, respectively	—	118,824
Series C redeemable convertible preferred stock, $0.00001 par value: 0 and 24,497,317 shares authorized at December 31, 2021 and December 31, 2020, respectively; 0 and 24,496,946 shares issued and outstanding at December 31, 2021 and December 31, 2020, respectively; aggregate liquidation preference of $0 and $121,397 at December 31, 2021 and December 31, 2020, respectively	—	117,324
Redeemable convertible preferred stock	—	334,439
Stockholders' equity (deficit):		
Preferred Stock, $0.0001 par value: 1,000,000 and 0 shares authorized at December 31, 2021 and December 31, 2020, respectively; 0 shares issued and outstanding at December 31, 2021 and December 31, 2020, respectively	—	—
Class A common stock, $0.0001 par value: 380,000,000 shares authorized, 242,647,604 shares issued and outstanding at December 31, 2021 and $0.00001 par value: 309,584,750 shares authorized, 124 shares issued and outstanding at December 31, 2020	24	—
Class B convertible common stock, $0.00001 par value: 0 and 18,575,085 shares authorized at December 31, 2021 and December 31, 2020, respectively; 0 and 130,557 shares issued and outstanding at December 31, 2021 and December 31, 2020, respectively	—	—
Additional paid-in capital	963,520	—
Accumulated deficit	(575,441)	(330,051)
Total stockholders' equity (deficit)	388,103	(330,051)
Total liabilities, redeemable convertible preferred stock and stockholders' equity (deficit)	$ 554,093	$ 251,642

The accompanying notes are an integral part of these consolidated financial statements.

Sema4 Holdings Corp.

Consolidated Statements of Operations and Comprehensive Loss

(in thousands, except per share and share amounts)

	Year Ended December 31,		
	2021	2020	2019
Revenue		(Restated)[1]	(Restated)[1]
Diagnostic test revenue (including related party revenue of $90, $285 and $0 for the years ended December 31, 2021, 2020, and 2019, respectively)	$ 205,100	$ 175,351	$ 191,667
Other revenue (including related party revenue of $232, $3 and $1,180 for the years ended December 31, 2021, 2020, and 2019, respectively)	7,095	3,971	4,507
Total revenue	212,195	179,322	196,174
Cost of services (including related party expenses of $3,975, $2,189 and $1,859 for the years ended December 31, 2021, 2020, and 2019, respectively)	228,797	175,296	113,389
Gross (loss) profit	(16,602)	4,026	82,785
Research and development	105,162	72,700	34,910
Selling and marketing	112,738	63,183	39,352
General and administrative	205,988	100,742	29,484
Related party expenses	5,659	9,395	9,452
Loss from operations	(446,149)	(241,994)	(30,413)
Other income (expense):			
Change in fair market value of warrant and earn-out contingent liabilities	198,401	—	—
Interest income	79	506	988
Interest expense	(2,835)	(2,474)	(783)
Other income, net	5,114	2,622	504
Total other income, net	200,759	654	709
Loss before income taxes	(245,390)	(241,340)	(29,704)
Income tax provision	—	—	—
Net loss and comprehensive loss	$ (245,390)	$ (241,340)	$ (29,704)
Redeemable convertible preferred stock dividends	—	—	3,039
Net loss attributable to common stockholders	$ (245,390)	$ (241,340)	$ (32,743)
Weighted average shares outstanding, Class A common stock	108,077,439	5,131	124
Basic and diluted net loss per share, Class A common stock	$ (2.27)	$ (47,036)	$ (264,056)

(1) Certain expenses were previously misclassified as cost of services. These expenses are now reported as selling and marketing. This adjustment has no impact on total revenue, loss from operations, net loss and comprehensive loss or net loss per share. Refer to Note 2, "Summary of Significant Accounting Policies" to our consolidated financial statements for further information.

The accompanying notes are an integral part of these consolidated financial statements.

Sema4 Holdings Corp.

Consolidated Statement of Redeemable Convertible Preferred Stock and Stockholders' Equity (Deficit)

(in thousands, except share amounts)

	Redeemable Convertible Preferred Stock		Class A Common Stock		Class B Common Stock				
	Shares	Amount	Shares	Per Value	Shares	Per Value	Additional paid-in capital	Accumulated deficit	Total stockholders' equity (deficit)
Balance at December 31, 2018	102,039,134	$ 64,355	124	$ —	—	$ —	—	$ (55,968)	$ (55,968)
Net loss	—	—	—	—	—	—	—	(29,704)	(29,704)
Preferred Series A dividend	3,061,173	3,039	—	—	—	—	—	(3,039)	(3,039)
Capital contributions	—	30,897	—	—	—	—	—	—	—
Issuance of Preferred Series B, net of issuance costs	41,937,960	$ 118,824	—	—	—	—	—	—	—
Balance at December 31, 2019	147,038,267	$ 217,115	124	$ —	—	$ —	—	$ (88,711)	$ (88,711)
Net loss	—	—	—	—	—	—	—	(241,340)	(241,340)
Preferred Series A dividend	—	—	—	—	130,557	—	—	—	—
Capital contributions	24,496,946	117,324	—	—	—	—	—	—	—
Balance at December 31, 2020	171,535,213	$ 334,439	124	$ —	130,557	$ —		$ (330,051)	$ (330,051)
Net loss	—	—	—	—	—	—		(245,390)	(245,390)
Stock option exercises	—	—	995,526	—	1,253,179	—	1,783	—	1,783
Conversion of Preferred Stock	(171,535,213)	(334,439)	148,543,062	15	—	—	104,517	—	104,532
Conversion of Class B Common Stock	—	—	1,309,320	—	(1,383,736)	—	(744)	—	(744)
Net equity infusion from the Business Combination	—	—	90,333,562	9	—	—	510,742	—	510,751
Stock-based compensation modification reclassification	—	—	—	—	—	—	304,837	—	304,837
Stock-based compensation expense	—	—	—	—	—	—	42,385	—	42,385
Vested restricted stock units converted to common stock	—	—	1,466,010	—	—	—	—	—	—
Balance at December 31, 2021	—	$ —	**242,647,604**	**$ 24**	—	$ —	**$ 963,520**	**$ (575,441)**	**$ 388,103**

The accompanying notes are an integral part of these consolidated financial statements.

Sema4 Holdings Corp.

Consolidated Statements of Cash Flows

(in thousands)

	Year Ended December 31,		
	2021	2020	2019
Operating activities			
Net loss	$ (245,390)	$ (241,340)	$ (29,704)
Adjustments to reconcile net loss to net cash used in operating activities:			
Depreciation and amortization expense	21,807	11,734	6,407
Stock-based compensation expense	219,421	120,231	5,482
Change in fair value of warrant and contingent liabilities	(198,401)	—	—
Provision for excess and obsolete inventory	2,129	—	—
Non-cash lease expense	1,555	2,400	(176)
Loss on extinguishment of debt	301	—	—
Amortization of debt issuance costs	66	—	—
Change in operating assets and liabilities:			
Accounts receivable	5,535	(10,611)	(4,567)
Inventory	(10,624)	(8,979)	(7,970)
Prepaid expenses and other current assets	(14,250)	2,498	(2,526)
Due to/from related parties	1,433	(442)	(919)
Other assets	(1,861)	1,175	(4,395)
Accounts payable and accrued expenses	25,916	14,805	12,847
Contract liabilities	(1,310)	(559)	2,342
Other current liabilities	3,239	15,960	4,451
Net cash used in operating activities	(190,434)	(93,128)	(18,728)
Investing activities			
Purchases of property and equipment	(9,400)	(24,094)	(11,923)
Development of internal-use software assets	(11,386)	(7,880)	(3,533)
Net cash used in investing activities	(20,786)	(31,974)	(15,456)
Financing activities			
Proceeds from issuance of Series B redeemable convertible preferred stock, net of issuance costs	—	—	118,824
Proceeds from issuance of Series C redeemable convertible preferred stock, net of issuance costs	—	117,324	—
Proceeds from PIPE issuance	350,000	—	—
Proceeds from equity infusion from the merger, net of redemptions	442,684	—	—
Legacy Sema4 Shareholder payout	(230,665)	—	—
Payment of transaction costs	(51,760)	—	—
Stock Appreciation Rights payout	(3,795)	—	—
Repayment of long-term debt	(8,741)	—	—
Exercise of stock options	1,271	—	—
Capital contributions from ISMMS	—	—	30,897

Proceeds from long-term debt	—	15,928	—
Long-term debt principal payments	(1,000)	(186)	—
Debt issuance costs	(537)	—	—
Capital lease principal payments	(3,728)	(4,010)	(1,709)
Net cash provided by financing activities	493,729	129,056	148,012
Net increase in cash, cash equivalents and restricted cash	282,509	3,954	113,828
Cash, cash equivalents and restricted cash, at beginning of year	118,960	115,006	1,178
Cash, cash equivalents and restricted cash, at end of year	401,469	118,960	115,006
Supplemental disclosures of cash flow information			
Cash paid for interest	$ 2,751	$ 1,745	$ 305
Cash paid for taxes	$ 349	$ —	$ —
Purchases of property and equipment in accounts payable and accrued expenses	$ 761	$ 447	$ 818
Software development costs in accounts payable and accrued expenses	$ 1,149	$ 1,473	$ 1,040
Non-cash Series A redeemable convertible preferred stock dividends declared and paid	$ —	$ —	$ 3,039
Debt issuance costs incurred but unpaid	$ 1,000	$ —	$ —

The accompanying notes are an integral part of these consolidated financial statements.

Sema4 Holdings Corp.

Notes to Consolidated Financial Statements

1. Organization and Description of Business

Sema4 Holdings Corp., formerly Mount Sinai Genomics Inc., a Delaware corporation ("Legacy Sema4"), as discussed further below, provides genomics-related diagnostic and information services and pursues genomics medical research. Legacy Sema4 utilizes an integrated portfolio of laboratory processes, software tools and informatics capabilities to process DNA-containing samples, analyze information about patient-specific genetic variation and generate test reports for clinicians and their patients. Legacy Sema4 provides a variety of genetic diagnostic tests and information with a focus on reproductive health, including pediatric, oncology and other conditions. In 2020, the Legacy Sema4 began to provide diagnostic testing services in response to the outbreak of the coronavirus ("COVID-19") pandemic. On December 15, 2021, it was announced that COVID-19 testing services would be discontinued by March 31, 2022. Legacy Sema4 primarily serves healthcare professionals who work with their patients and bills third-party payors across the United States, with a substantial portion of its diagnostic testing volume occurring in New York, California, Florida, Connecticut and New Jersey.

On July 22, 2021 (the "Closing Date"), CM Life Sciences, Inc. ("CMLS") completed the acquisition of Legacy Sema4, pursuant to that certain Agreement and Plan of Merger (as amended, the "Merger Agreement"), dated February 9, 2021. On the Closing Date, S-IV Sub, Inc. ("Merger Sub") merged with and into the Legacy Sema4, with Legacy Sema4 surviving the merger as a wholly-owned subsidiary of CMLS (the "Merger" and, together with the other transactions contemplated by the Merger Agreement, the "Business Combination"). In connection with the consummation of the Business Combination, CMLS changed its name to "Sema4 Holdings Corp." ("Sema4 Holdings") and Legacy Sema4 changed its name to "Sema4 OpCo, Inc." All equity securities of Legacy Sema4 were converted into the right to receive the applicable portion of the merger consideration.

The Merger was accounted for as a reverse recapitalization with Legacy Sema4 as the accounting acquirer and CMLS as the acquired company for accounting purposes. The shares and net loss per common share, prior to the Merger, have been retroactively restated as shares reflecting the exchange ratio established in the Merger (1 share of Legacy Sema4 Class A common stock for 123.8339 shares of Sema4 Holdings Class A common stock) (the "Conversion Ratio").

Prior to the Merger, shares of CMLS Class A common stock, CMLS's public warrants, and CMLS's public units were traded on the Nasdaq Capital Market under the ticker symbols "CMLF", "CMFLW", and "CMLFU" respectively. On July 23, 2021, shares of Sema4 Holdings Class A common stock and Sema4 Holdings' public warrants began trading on the Nasdaq Global Select Market (the "Nasdaq") under the ticker symbols "SMFR" and "SMFRW," respectively. See Note 3, "*Business Combination*," for additional details.

Unless otherwise stated herein or unless the context otherwise requires, references in these notes to the "Company," or "Sema4" refer to (i) Legacy Sema4 prior to the consummation of the Business Combination; and (ii) Sema4 Holdings and its subsidiary following the consummation of the Business Combination.

2. Summary of Significant Accounting Policies

Basis of Presentation

The accompanying consolidated financial statements have been prepared in conformity with accounting principles generally accepted in the United States of America ("U.S. GAAP"). The Company's historical financial information includes costs of certain services historically provided by Icahn School of Medicine at Mount Sinai ("ISMMS") pursuant to the Transition Services Agreement ("TSA") and service.

Restatement – 2020 and 2019 annual statements of operations and comprehensive loss

The Company classifies expenses incurred that directly relate to the delivery of revenue as cost of services in its consolidated statements of operations and comprehensive loss.

As a result of expanded accounting resources, the Company identified the misclassification of certain expenses related to the genetic counseling department reported in cost of services that should have been reported in selling and marketing in the prior period financial statements. The Company quantified the amount and determined it necessary to restate its previously reported balances as follows (in thousands):

	December 31, 2020			December 31, 2019		
	As reported	Misclass-ification	Restated	As reported	Misclass-ification	Restated
Total revenue	179,322	—	**179,322**	196,174	—	**196,174**
Cost of services	184,648	(9,352)	**175,296**	119,623	(6,234)	**113,389**
Gross (loss) profit	(5,326)	9,352	**4,026**	76,551	6,234	**82,785**
Research and development	72,700	—	**72,700**	34,910	—	**34,910**
Selling and marketing	53,831	9,352	**63,183**	33,118	6,234	**39,352**
General and administrative	100,742	—	**100,742**	29,484	—	**29,484**
Related party expenses	9,395	—	**9,395**	9,452	—	**9,452**
Loss from operations	(241,994)	—	**(241,994)**	(30,413)	—	**(30,413)**
Total other income, net	654	—	**654**	709	—	**709**
Net loss and comprehensive loss	(241,340)	—	**(241,340)**	(29,704)	—	**(29,704)**

This misclassification did not have any impact to the Company's net loss or net loss per share as reported in the statements of operations and comprehensive loss in any interim or annual periods. Included in the misclassification amount is stock-based compensation expense of $1 million for 2020. There was no impact of misclassification for 2019 related to stock-based compensation expense.

Restatement – 2021 and 2020 interim financial statements (unaudited)

Additionally, the Company has identified quarterly out of period adjustments generally related to recognition of cost of services in the quarterly periods ended March 31, 2021, June 30, 2021 and September 30, 2021. The impact

of the misclassification and quarterly out of period adjustments identified on each of the three months periods in the year ended December 31, 2021 and 2020 are disclosed as follows (in thousands):

2021 interim statements of operations and comprehensive loss (in thousands)

	First Quarter				Second Quarter			
	As reported	Misclass-ification	Adjustment	Restated	As reported	Misclass-ification	Adjustment	Restated
Total revenue	64,351	—	(150)	**64,201**	46,865	—	150	**47,015**
Cost of services	71,812	(3,837)	549	**68,524**	49,631	(2,287)	835	**48,179**
Gross (loss) profit	(7,461)	3,837	(699)	**(4,323)**	(2,766)	2,287	(685)	**(1,164)**
Research and development	53,131	—	2	**53,133**	11,954	—	(2)	**11,952**
Selling and marketing	31,569	3,837	(40)	**35,366**	16,247	2,287	40	**18,574**
General and administrative	101,917	—	121	**102,038**	12,794	—	76	**12,870**
Related party expenses	1,797	—	—	**1,797**	888	—	—	**888**
Loss from operations	(195,875)	—	(782)	**(196,657)**	(44,649)	—	(799)	**(45,448)**
Total other income, net	4,882	—	—	**4,882**	(713)	—	—	**(713)**
Net (loss) income and comprehensive loss	(190,993)	—	(782)	**(191,775)**	(45,362)	—	(799)	**(46,161)**

	Third Quarter				Fourth Quarter
	As reported	Misclass-ification	Adjustment	Restated	As reported
Total revenue	43,178	—	—	**43,178**	57,801
Cost of services	58,752	(6,031)	(1,234)	**51,487**	60,607
Gross (loss) profit	(15,574)	6,031	1,234	**(8,309)**	(2,806)
Research and development	17,831	—	—	**17,831**	22,246
Selling and marketing	22,121	6,031	—	**28,152**	30,646
General and administrative	33,230	—	(105)	**33,125**	57,955
Related party expenses	847	—	—	**847**	2,127
Loss from operations	(89,603)	—	1,339	**(88,264)**	(115,780)
Total other income, net	120,995	—	—	**120,995**	75,595
Net (loss) income and comprehensive loss	31,392	—	1,339	**32,731**	(40,185)

2020 interim statements of operations and comprehensive loss (in thousands)

	First Quarter			Second Quarter			Third Quarter			Fourth Quarter		
	As reported	Misclass-ification	Restated	As reported	Misclass-ification	Restated	As reported	Misclass-ification	Restated	As reported	Misclass-ification	Restated
Total revenue	46,655	—	46,655	30,102		30,102	38,608		38,608	63,957		63,957
Cost of services	39,239	(2,101)	37,138	35,985	(1,480)	34,505	36,530	(2,508)	34,022	72,894	(3,263)	69,631
Gross (loss) profit	7,416	2,101	9,517	(5,883)	1,480	(4,403)	2,078	2,508	4,586	(8,937)	3,263	(5,674)
Research and development	13,096	—	13,096	9,361	—	9,361	19,083	—	19,083	31,160	—	31,160
Selling and marketing	11,733	2,101	13,834	8,686	1,480	10,166	12,735	2,508	15,243	20,677	3,263	23,940
General and administrative	7,164	—	7,164	8,121	—	8,121	24,342	—	24,342	61,115	—	61,115
Related party expenses	2,195	—	2,195	2,111	—	2,111	1,933	—	1,933	3,156	—	3,156
Loss from operations	(26,772)	—	(26,772)	(34,162)	—	(34,162)	(56,015)	—	(56,015)	(125,045)	—	(125,045)
Total other income, net	(218)	—	(218)	2,110	—	2,110	(600)	—	(600)	(638)	—	(638)
Net loss and comprehensive loss	(26,990)	—	(26,990)	(32,052)	—	(32,052)	(56,615)	—	(56,615)	(125,683)	—	(125,683)

The adjustments also affected certain current asset and liability accounts previously reported in the condensed balance sheets as of March 31, 2021 and June 30, 2021 and condensed consolidated balance sheets as of September 30, 2021 as follows (in thousands):

	March 31, 2021			June 30, 2021			September 30, 2021		
	As reported	Adjust-ment	Restated	As reported	Adjust-ment	Restated	As reported	Adjust-ment	Restated
Assets									
Current assets:									
Cash and cash equivalents	58,652	—	**58,652**	26,501	—	**26,501**	461,276	—	**461,276**
Accounts receivable	33,490	(150)	**33,340**	24,568	—	**24,568**	21,257	—	**21,257**
Due from related parties	349	—	**349**	437	—	**437**	413	—	**413**
Inventory	32,969	—	**32,969**	29,128	—	**29,128**	31,174	—	**31,174**
Prepaid expenses and other current assets	15,070	(139)	**14,931**	18,378	—	**18,378**	24,391	—	**24,391**
Total current assets	140,530	(289)	**140,241**	99,012	—	**99,012**	538,511	—	**538,511**
Property and equipment, net	64,632	—	**64,632**	62,097	—	**62,097**	60,333	—	**60,333**
Restricted cash	10,828	—	**10,828**	10,828	—	**10,828**	900	—	**900**
Other assets	3,596	—	**3,596**	3,596	—	**3,596**	3,613	—	**3,613**
Total assets	219,586	(289)	**219,297**	175,533	—	**175,533**	603,357	—	**603,357**
Liabilities, Redeemable Convertible Preferred Stock and Stockholders' Equity (Deficit)									
Current liabilities:									
Accounts payable and accrued expenses	41,609	493	**42,102**	43,650	1,581	**45,231**	43,079	242	**43,321**
Due to related parties	797	—	**797**	1,278	—	**1,278**	1,425	—	**1,425**
Current contract liabilities	2,810	—	**2,810**	1,341	—	**1,341**	493	—	**493**
Other current liabilities	22,991	—	**22,991**	24,764	—	**24,764**	26,369	—	**26,369**
Total current liabilities	68,207	493	**68,700**	71,033	1,581	**72,614**	71,366	242	**71,608**
Long-term debt, net of current portion	18,502	—	**18,502**	18,028	—	**18,028**	11,000	—	**11,000**
Stock-based compensation liabilities	296,952	—	**296,952**	295,049	—	**295,049**	—	—	**—**
Warrant liability	—	—	**—**	—	—	**—**	46,629	—	**46,629**
Earn-out contingent liability	—	—	**—**	—	—	**—**	61,400	—	**61,400**
Other liabilities	22,530	—	**22,530**	21,907	—	**21,907**	21,699	—	**21,699**
Total liabilities	406,191	493	**406,684**	406,017	1,581	**407,598**	212,094	242	**212,336**
Redeemable convertible preferred stock:									
Series A-1 redeemable convertible preferred stock	51,811	—	**51,811**	51,811	—	**51,811**	—	—	**—**
Series A-2 redeemable convertible preferred stock	46,480	—	**46,480**	46,480	—	**46,480**	—	—	**—**
Series B redeemable convertible preferred stock	118,824	—	**118,824**	118,824	—	**118,824**	—	—	**—**
Series C redeemable convertible preferred stock	117,324	—	**117,324**	117,324	—	**117,324**	—	—	**—**
Redeemable convertible preferred stock	334,439	—	**334,439**	334,439	—	**334,439**	—	—	**—**
Stockholders' equity (deficit):									
Preferred Stock	—	—	**—**	—	—	**—**	—	—	**—**
Class A common stock	—	—	**—**	—	—	**—**	24	—	**24**
Class B convertible common stock	—	—	**—**	—	—	**—**	—	—	**—**
Additional paid-in capital	—	—	**—**	1,483	—	**1,483**	926,253	—	**926,253**
Accumulated deficit	(521,044)	(782)	**(521,826)**	(566,406)	(1,581)	**(567,987)**	(535,014)	(242)	**(535,256)**
Total stockholders' (deficit) equity	(521,044)	(782)	**(521,826)**	(564,923)	(1,581)	**(566,504)**	391,263	(242)	**391,021**
Total liabilities, redeemable convertible preferred stock and stockholders' equity	219,586	(289)	**219,297**	175,533	—	**175,533**	603,357	—	**603,357**

The adjustments did not have any impact on the net cash used in operating or investing activities, or net cash used or provided by financing activities previously reported in the condensed statements of cash flows. However, certain line items within the operating section of the condensed statements of cash flows would change by immaterial amounts.

Use of Estimates

The preparation of consolidated financial statements requires management to make certain estimates, judgments and assumptions that affect the reported amounts of assets and liabilities and the related disclosures at the date of the consolidated financial statements as well as the reported amounts of revenues and expenses during the periods presented. The Company bases these estimates on current facts, historical and anticipated results, trends and various other assumptions that it believes are reasonable in the circumstances, including assumptions as to future events. These estimates include, but are not limited to, the transaction price for certain contracts with customers, the capitalization of software costs and the valuation of stock-based awards, inventory, earn-out contingent liability and earn-out RSUs. Actual results could differ materially from those estimates, judgments and assumptions.

Concentration of Credit Risk and Other Risks and Uncertainties

Financial instruments that potentially subject the Company to concentrations of credit risk consist primarily of cash and cash equivalents and accounts receivable.

The Company's cash and cash equivalents are deposited with high-quality financial institutions. The Company has balances in financial institutions that exceed federal depository insurance limits. Management believes these financial institutions are financially sound and, accordingly, that minimal credit risk exists. The Company has not experienced any losses on its deposits of cash and cash equivalents.

The Company assesses both the customer and, if applicable, the third party payor that reimburses the Company on the customer's behalf when evaluating concentration of credit risk. Significant customers and payors are those that represent more than 10% of the Company's total annual revenues or accounts receivable balance at each respective balance sheet date. The significant concentrations of accounts receivable as of December 31, 2021 and 2020 were primarily from large managed care insurance companies and a reference laboratory. There was no individual customer that accounted for 10% or more of revenue or accounts receivable for any of the years presented. The Company does not require collateral as a means to mitigate customer credit risk.

For each significant payor, revenue as a percentage of total revenues and accounts receivable as a percentage of total accounts receivable are as follows:

	Revenue			Accounts Receivable	
	Year Ended December 31,			As of December 31,	
	2021	2020	2019	2021	2020
Payor A	22 %	27 %	36 %	15 %	10 %
Payor B	13 %	14 %	*	*	*
Payor C	*	*	*	*	20 %
Payor D	*	*	24 %	15 %	*

* less than 10%

The Company is subject to a concentration of risk from a limited number of suppliers for certain reagents and laboratory supplies. One supplier accounted for approximately 7%, 11% and 15% for the years ended December 31, 2021, 2020 and 2019, respectively. Another supplier accounted for approximately 11%, 10% and 12% for the years ended December 31, 2021, 2020 and 2019, respectively. This risk is managed by maintaining a target quantity of surplus stock.

Impact of COVID-19

In March 2020, the World Health Organization declared the COVID-19 outbreak a global pandemic. The ongoing COVID-19 pandemic has had, and continues to have, an extensive impact on global health and economic conditions. Many jurisdictions, including those in which the Company has current operations, have implemented measures to combat the spread and resurgence of COVID-19, such as travel restrictions and shelter in place orders. In addition, the healthcare sector generally experienced a decline in discretionary care services at the onset of the pandemic.

Beginning in April 2020, the Company's diagnostic test volumes decreased significantly as compared to the prior year as a result of the COVID-19 pandemic and the related limitations and priorities across the healthcare system. In response, beginning in May 2020, the Company entered into several service agreements with state governments and healthcare institutions to provide testing for the presence of COVID-19 variants. While test volumes have since improved, the Company continues to experience changes in the mix of tests due to the impact of the COVID-19 pandemic. COVID-19 could continue to have a material impact on the Company's results of operations, cash flows and financial condition for the foreseeable future.

In March 2020, the Coronavirus Aid, Relief and Economic Security Act ("CARES Act") was signed into law which was a stimulus bill that, among other things, provided assistance to qualifying businesses and individuals and included funding for the healthcare system. During 2020, as part of the stimulus provided by the CARES Act, the Company received $5.4 million, comprised of $2.6 million received under the Provider Relief Fund ("PRF") distribution and $2.8 million received under the Employee Retention Credit ("ERC") distribution which was recorded in other current liabilities and reflected in this balance as of December 31, 2020 and December 31, 2021.

During 2021, the Company received an additional $5.6 million during 2021 under the PRF distribution, which was recognized in other income (expense), net in the consolidated statements of operations and comprehensive loss.

Additionally, under the CARES Act, the Company deferred payment of U.S. social security taxes in 2020 . As a result, $3.8 million of employer payroll tax payments were deferred as of December 31, 2020 with $1.9 million paid in December 2021 and the remaining $1.9 million payment will be made in December 2022. As of December 31, 2021, the remaining payable is recorded in other current liabilities.

On December 15, 2021, it was announced that COVID-19 testing services would be discontinued by March 31, 2022.

Cash, Cash Equivalents and Restricted Cash

The Company considers all highly liquid investments with original maturities of three months or less from the date of purchase to be cash equivalents. Cash equivalents consist of amounts invested in money market funds. Carrying values of cash equivalents approximate fair value due to the short-term nature of these instruments.

The following table provides a reconciliation of cash, cash equivalents and restricted cash reported on the balance sheets that sum to the total of the same amounts shown on the statements of cash flows (in thousands):

	As of December 31,	
	2021	2020
Cash and cash equivalents	$ 400,569	$ 108,132
Restricted cash	900	10,828
Total	$ 401,469	$ 118,960

Restricted cash as of December 31, 2021 consists of money market deposit accounts that secure an irrevocable standby letter of credit that serve as collateral for security deposits for operating leases (see Note 9).

Accounts Receivable

Accounts receivable consists of amounts due from customers and third party payors for services performed and reflect the consideration to which the Company expects to be entitled in exchange for providing those services. Accounts receivable are estimated and recorded in the period the related revenue is recorded. During the years ended December 31, 2021 and 2020, the Company did not record provisions for doubtful accounts. The Company did not write off any accounts receivable balances for the year ended December 31, 2021 and $0.2 million of accounts receivable was written off for the year ended December 31, 2020.

Inventory, net

Inventory, net which primarily consists of testing supplies and reagents, is capitalized when purchased and expensed when used in performing services. Inventory is stated at the lower of cost or net realizable value. Cost is determined using actual costs on a first-in, first-out basis. The Company periodically performs obsolescence assessments and writes off any inventory that is no longer usable. Any write-down of inventory to net realizable value creates a new cost basis. The Company recorded a reserve for excess and obsolete inventory of $2.1 million as of December 31, 2021. There was no reserve recorded as of December 31, 2020.

Property and Equipment, net

Property and equipment, net are stated at cost less accumulated depreciation and amortization. Equipment includes assets under capital lease. Improvements are capitalized, while maintenance and repairs are expensed as incurred. When assets are retired or otherwise disposed of, the cost and accumulated depreciation and amortization are removed from the balance sheets and any resulting gain or loss is reflected in the statements of operations and comprehensive loss in the period realized.

Capital leases and leasehold improvements are amortized straight-line over the shorter of the term of the lease or the estimated useful life. All other property and equipment assets are depreciated using the straight-line method over the estimated useful life of the asset, which ranges from three to five years.

The Company reviews the recoverability of its long-lived assets when events or changes in circumstances occur that indicate that the carrying value of the asset or asset group may not be recoverable. An impairment loss is recognized when the total estimated future undiscounted cash flows expected to result from the use of the asset and its eventual disposition are less than its carrying amount. Impairment, if any, is assessed using discounted cash flows or other appropriate measures of fair value. There were no long-lived asset impairment losses recorded for any periods presented.

Capitalized Software

We capitalize certain costs incurred related to the development of our software applications for internal use during the application development state. If a project constitutes an enhancement to existing software, we assess whether the enhancement creates additional functionality to the software, thus qualifying the work incurred for capitalization. Costs incurred prior to meeting these criteria together with costs incurred for training and maintenance are expensed as incurred. Once the project is available for general release, capitalization ceases and we estimate the useful life of the asset and begin amortization.

Capitalized software costs are amortized using the straight-line method over an estimated useful life of three years. Capitalized software is reviewed for impairment whenever events or changes in circumstances may indicate that the carrying amount of an asset may not be recoverable

Fair Value Measurements

Financial assets and liabilities are recorded at fair value. Fair value is defined as the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. The Company determines the fair value of its financial instruments based on assumptions that market participants would use in pricing an asset or liability in the principal or most advantageous market. The following

hierarchy lists three levels of fair value based on the extent to which inputs used in measuring fair value are observable in the market:

Level 1: Observable inputs such as quoted prices (unadjusted) in active markets that are accessible at the measurement date for identical assets or liabilities.

Level 2: Observable inputs such as quoted prices for similar instruments in active markets, quoted prices for identical or similar instruments in markets that are not active or model-derived valuations whose significant inputs are observable.

Level 3: Unobservable inputs that are significant to the measurement of fair value but are supported by little to no market data.

The Company's financial assets and liabilities consist of cash and cash equivalents, restricted cash, accounts receivable, accounts payable, accrued liabilities, capital leases and long-term debt. The Company's cash and cash equivalents, restricted cash, accounts receivable, accounts payable and accrued liabilities approximate their fair value due to the relatively short-term nature of these accounts.

The Company's capital leases are classified within level 1 of the fair value hierarchy because such agreements bear interest at rates for instruments with similar characteristics; accordingly, the carrying value of these liabilities approximate their fair values.

The Company's loan from the Connecticut Department of Economic and Community Development is classified within level 2 of the fair value hierarchy. As of December 31, 2021, the long-term debt is recorded at its carrying value of $11.0 million in the consolidated balance sheet. The fair value is $10.2 million, which is estimated based on discounted cash flows using the yields of similar debt instruments of other companies with similar credit profiles.

Warrant Liability

As of the consummation of the Merger in July 2021, there were 21,995,000 warrants to purchase shares of Class A common stock outstanding, including 14,758,333 public warrants and 7,236,667 private placement warrants. As of December 31, 2021, there were 21,994,972 warrants to purchase shares of Class A common stock outstanding, including 14,758,305 public warrants and 7,236,667 private placement warrants outstanding. Each warrant expires five years after the Business Combination or earlier upon redemption or liquidation, and entitles the holder to purchase one share of Class A common stock at an exercise price of $11.50 per share, subject to adjustment, at any time commencing on September 4, 2021.

The Company may redeem the outstanding public warrants if the price per share of the Class A common stock equals or exceeds $18.00 as described below:

- in whole and not in part;
- at a price of $0.01 per public warrant;
- upon not less than 30 days' prior written notice of redemption to each warrant holder; and
- if, and only if, the closing price of the Class A common stock equals or exceeds $18.00 per share (as adjusted) for any 20 trading days within a 30-trading day period ending three trading days before sending the notice of redemption to warrant holders.

The Company may redeem the outstanding public warrants if the price per share of the common stock equals or exceeds $10.00 as described below:

- in whole and not in part;
- at $0.10 per warrant upon a minimum of 30 days' prior written notice of redemption provided that holders will be able to exercise their warrants on a cashless basis prior to redemption and receive that number of shares based on the redemption date and the fair market value of the common stock;

- if, and only if, the closing price of the Class A common stock equals or exceeds $10.00 per share (as adjusted) for any 20 trading days within the 30-trading day period ending three trading days before the Company sends the notice of redemption to the warrant holders; and
- if the closing price of the common stock for any 20 trading days within a 30-trading day period ending three trading days before the Company sends notice of redemption to the warrant holders is less than $18.00 per share (as adjusted), the private placement warrants must also be concurrently called for redemption on the same terms as the outstanding public warrants, as described above.

The private placement warrants were issued to CMLS Holdings, LLC, Mr. Munib Islam, Dr. Emily Leproust and Mr. Nat Turner, and are identical to the public warrants underlying the units sold in the initial public offering, except that (1) the private placement warrants and the common stock issuable upon the exercise of the private placement warrants would not be transferable, assignable or salable until 30 days after the completion of a Business Combination, subject to certain limited exceptions, (2) the private placement warrants are exercisable on a cashless basis, (3) the private placement warrants are non-redeemable (except as described above, upon a redemption of warrants when the price per share of Class A common stock equals or exceeds $10.00) so long as they are held by the initial purchasers or their permitted transferees, and (4) the holders of the private placement warrants and the common stock issuable upon the exercise of the private placement warrants have certain registration rights. If the private placement warrants are held by someone other than the initial purchasers or their permitted transferees, the private placement warrants will be redeemable by the Company and exercisable by such holders on the same basis as the public warrants.

The Company accounts for warrants as liability-classified instruments based on an assessment of the warrant terms and applicable authoritative guidance in accordance with ASC 480-Distinguishing Liabilities from Equity ("ASC 480") and ASC 815-Derivatives and Hedging ("ASC 815"). The assessment considers whether the warrants are freestanding financial instruments pursuant to ASC 480, whether the warrants meet the definition of a liability pursuant to ASC 480, and whether the warrants meet all of the requirements for equity classification under ASC 815. This assessment is conducted at the time of warrant issuance and as of each subsequent quarterly period end date while the warrants are outstanding.

Earn-out contingent liability

In connection with the Merger, all Legacy Sema4 stockholders and option holders at that time became entitled to a pro rata share of 19,021,576 earn-out shares and earn-out Restricted Stock Units ("RSUs"). Based on an assessment of the earn-out shares for the Legacy Sema4 stockholders, the Company considered ASC 480 and ASC 815 and accounted for the earn-out shares as a liability. The Company subsequently measures the fair value of the liability at each reporting period and reports the changes in fair value recorded as a component of other income (expense), net in the consolidated statements of operations and comprehensive loss.

The Company determined the fair value of the earn-out shares issued to the Legacy Sema4 stockholders as of December 31, 2021 was $10.2 million.

As for the earn-out RSUs for the Legacy Sema4 option holders, a total of 2.7 million RSUs were granted on December 9, 2021. The vesting of such arrangement is conditioned on the satisfaction of both a service requirement and on the satisfaction of a market-based requirement. The market-based requirement would be achieved if the Company's stock price is greater than or equal to $13 (Triggering Event I), $15 (Triggering Event II) and $18 (Triggering Event III) during the applicable performance period, based on the volume-weighted average price for a period of at least 20 days out of 30 consecutive trading days. Therefore, the Company accounts for this arrangement in accordance with ASC 718- Compensation — Stock Compensation ("ASC 718") and stock-compensation expense is recognized over the longer of the expected achievement period for the market-based requirement and the service requirement. The Company recorded $0.2 million in relation to the earn-out RSU for the year ended December 31, 2021. In the event that any earn-out RSUs that are forfeited as a result of a failure to achieve the service requirement, the underlying shares will be reallocated on an annual basis to the Legacy Sema4 stockholders and to the Legacy Sema4 option holders who remain employed as of the date of such reallocation. The Company accounts for the re-allocations to Legacy Sema4 option holders as new grants.

The estimated fair value of the earn-out is determined using a Monte Carlo valuation analysis.

Stock-based Compensation

The Company measures stock-based compensation at the grant date based on the fair value of the award and recognizes stock-based compensation expense over the requisite service period for each separate vesting portion of the award on a straight-line basis. Determining the fair value of stock option awards requires judgment, including estimating stock price volatility and expected option life. Restricted stock awards are valued based on the fair value of the stock on the grant date. The Company uses the Black-Scholes option-pricing model to estimate the fair value of its stock option awards.

The Company issues new shares upon share option exercise and vesting of a restricted share unit. Forfeitures of stock-based compensation are recognized as they occur.

Income Taxes

Income taxes are accounted for under the asset and liability method. The provision for income taxes represents income taxes paid or payable for the current year plus the change in deferred taxes during the year. Current and deferred income taxes are measured based on the tax laws that are enacted as of the balance sheet date of the relevant reporting period. Deferred tax assets and liabilities are recognized for the expected future tax consequences of temporary differences between the carrying amounts of assets and liabilities and their respective tax bases using tax rates in effect for the year in which the differences are expected to reverse. The effect on deferred tax assets and liabilities of a change in tax rates is recognized in the statements of operations and comprehensive loss in the period when the change is enacted. A valuation allowance is established when it is more likely than not that some or all of the deferred tax assets will not be realized. Based on the Company's historical operating losses, the Company has recorded a valuation allowance to reduce deferred tax assets to the amount that is more likely than not to be realized.

The Company recognizes the effect of a tax position when it is more likely than not, based on technical merits, that the position will be sustained upon examination by the appropriate taxing authorities. The amount of tax benefit recognized for an uncertain tax position is the largest amount of benefit with a greater than 50 percent likelihood of being realized. Unrecognized tax benefits are included within other liabilities if recognized and are charged to earnings in the period that such determination is made. The Company records interest and penalties related to tax uncertainties, if applicable, as a component of income tax expense.

Leases

The Company categorizes lease agreements at their inception as either operating or capital leases.

For operating leases, the Company recognizes related rent expense on a straight-line basis over the term of the applicable lease agreement. Certain lease agreements contain rent holidays, scheduled rent increases and lease incentives. Rent holidays and scheduled rent increases are included in the determination of rent expense to be recorded over the lease term. Any lease incentives reduce rent expense the Company records on a straight-line basis over the term of the lease. The Company recognizes rent expense beginning on the date it obtains the legal right to use and control the leased space.

For capital leases, the Company records a leased asset with a corresponding liability. Payments are recorded as reductions to the liability with an interest charge recorded based on the remaining liability.

Revenue Recognition

The Company adopted Accounting Standards Codification ("ASC") Topic 606 ("ASC 606"), *Revenue from Contracts with Customers*, on January 1, 2019 using the modified retrospective method applied to contracts which were not completed as of the adoption date. The Company recognizes revenue when control of the promised goods or services is transferred to the customer in an amount that reflects the consideration which the Company expects to be entitled to in exchange for those goods or services. If any changes in customer credit issues are identified which were not assessed at the date of service, provisions for doubtful accounts are recognized and recorded.

Diagnostic test revenue

The Company's diagnostic test revenue contracts typically consist of a single performance obligation to deliver diagnostic testing services to the ordering facility or patient and therefore allocation of the contract transaction price is not applicable. Control over diagnostic testing services is generally transferred at a point in time when the customer obtains control of the promised service which is upon delivery of the test.

Diagnostic test revenues consist primarily of services reimbursed by third-party insurance payors. Third-party insurance payors include managed care health plans and commercial insurance companies, including plans offered through the health insurance exchanges, and employers. In arrangements with third-party insurance payors, the transaction price is stated within the contract, however, the Company accepts payments from third-party payors that are less than the contractually stated price and is therefore variable consideration and the transaction price is estimated.

When determining the transaction price, the Company uses a portfolio approach as a practical expedient to account for categories of diagnostic test contracts as collective groups rather than on an individual contract basis. The portfolio consists of major payor classes based on third-party payors. Based on historical collection trends and other analyses, the Company believes that revenue recognized by utilizing the portfolio approach approximates the revenue that would have been recognized if an individual contract approach was used.

Estimates of allowances for third-party insurance payors that impact the estimated transaction price are based upon the pricing and payment terms specified in the related contractual agreements. Contractual pricing and payment terms in third-party insurance agreements are generally based upon predetermined rates per diagnosis, per diem rates or discounted fee-for-service rates. In addition, for third-party payors in general, the estimated transaction price is impacted by factors such as historical collection experience, contractual provisions and insurance reimbursement policies, payor mix, and other relevant information for applicable payor portfolios.

For institutional clients, the customer is the institution. The Company determines the transaction price associated with services rendered in accordance with the contractual rates established with each customer.

Payment terms and conditions vary by contract and customer, however standard payment terms are generally less than 60 days from the invoice date. In instances where the timing of the Company's revenue recognition differs from the timing of its invoicing, the Company does not assess whether a contract has a significant financing component if the expectation at contract inception is such that the period between payment by the customer and the transfer of the promised services to the customer will be one year or less.

Other revenue

The Company enters into both short-term and long-term project-based collaboration and service agreements with customers. Certain of these contracts include the transfer of a license to the Company's intellectual property or participation by the Company on joint steering committees with the customer, which was considered to be immaterial in the context of the contract. The Company concludes that the goods and services transferred to our customers pursuant to these agreements generally comprise a single performance obligation on the basis that such goods and services are not distinct within the context of the contract. This is because the goods and services are highly interdependent and interrelated such that the Company would not be able to fulfill its underlying promise to our customers by transferring each good or service independently.

The consideration generally includes non-refundable upfront payments and variable payments based upon the achievement of certain milestones or fixed monthly payments during the contract term. Non-refundable upfront payments received prior to the Company performing performance obligation are recorded as a contract liability upon receipt. Milestone payments are included in the transaction price only when it is probable that doing so will not result in a significant reversal of cumulative revenue recognized when the uncertainty associated with the milestone is subsequently resolved. For longer-term contracts, the Company does not account for a significant financing component since a substantial amount of the consideration promised by the customer is variable and the amount or timing of that consideration varies on the basis of a future event that is not substantially within the control of either party.

The Company satisfies its performance obligation generally over time if the customer simultaneously receives and consumes the benefits provided by the Company's services as the Company performs those services. The Company recognizes revenue over time using an input measure based on costs incurred on the basis that this measure best reflects the pattern of transfer of control of the services to the customer. In some contracts, the Company subcontracts certain services to other parties for which the Company is ultimately responsible. Costs incurred for such subcontracted services are included in the Company's measure of progress for satisfying its performance obligation and are recorded in cost of services in the consolidated statements of operations and comprehensive loss. Changes in the total estimated costs to be incurred in measuring the Company's progress toward satisfying its performance obligation may result in adjustments to cumulative revenue recognized at the time the change in estimate occurs.

Segment Information

The Company operates and manages its business as one reportable operating segment based on how the Chief Executive Officer, who is the Company's chief operating decision maker ("CODM"), assesses performance and allocates resources across the business.

Emerging Growth Company

The Company is an "emerging growth company" as defined in the Jumpstart Our Business Startups Act of 2012. As such, the Company is eligible for exemptions from various reporting requirements applicable to other public companies that are not emerging growth companies, including reduced reporting and extended transition periods to comply with new or revised accounting standards for public business entities. The Company has elected to avail itself of this exemption and, therefore, will not be subject to the same new or revised accounting standards as other public companies that are not emerging growth companies.

Recently Adopted Accounting Pronouncements

Effective January 1, 2021, the Company adopted Accounting Standards Update ("ASU") 2018-18, Collaborative Arrangements: Clarifying the Interaction between Topic 808 and Topic 606 ("ASU 2018-18"), which clarifies that certain transactions between participants in a collaborative arrangement should be accounted for under ASC Topic 606 ("ASC 606"), Revenue from Contracts with Customers, when the counterparty is a customer. In addition, ASC Topic 808 ("ASC 808"), Collaborative Arrangements precludes an entity from presenting consideration from a transaction in a collaborative arrangement as revenue from contracts with customers if the counterparty is not a customer for that transaction. Adoption of ASU 2018-18 did not have an impact on the Company's consolidated financial statements as the Company is not currently a participant in any such collaborative arrangements.

The Company adopted ASU 2018-15, Intangibles – Goodwill and Other – Internal-Use Software (Subtopic 350-40): Customer's Accounting for Implementation Costs Incurred in a Cloud Computing Arrangement That Is a Service Contract ("ASU 2018-15") for the annual period ended December 31, 2021. ASU 2018-15 aligns the accounting for costs incurred to implement a cloud computing arrangement that is a service arrangement with the guidance on capitalizing costs associated with developing or obtaining internal-use software. The Company adopted and applied this update prospectively to all implementation costs incurred during the year ended December 31, 2021, $2.3 million of implementation costs are capitalized and recorded in other current and non-current assets. The Company capitalizes certain costs incurred during the application development stage and all costs incurred during the preliminary project and post-implementation stages are expensed as incurred. Amortization begins when the cloud computing arrangement is ready for its intended use and is calculated on a straight-line basis over the fixed noncancellable periods plus renewal periods the Company deems it reasonably certain to exercise.

The Company adopted ASU 2019-12, Income Taxes (Topic 740): Simplifying the Accounting for Income Taxes ("ASU 2019-12"). ASU 2019-12 updates specific areas of ASC 740, Income Taxes, to reduce complexity while maintaining or improving the usefulness of the information provided to users of financial statements. The Company has adopted the new standard in the fourth quarter of 2021 and upon adoption we did not have a material impact on our consolidated financial position and results of operations.

Recently Issued Accounting Pronouncements Not Yet Adopted

In February 2016, the FASB issued ASU 2016-02, Leases ("Topic 842"), which requires lessees to recognize right-of-use assets and lease liabilities for most leases on their balance sheets. Expense recognition for lessees under Topic 842 is similar to current lease accounting and once adopted, it will require enhanced disclosures to help the financial statement users better understand the amount, timing, and uncertainty of cash flows arising from leases. The recognition, measurement and presentation of expenses and cash flows arising from a lease will primarily depend on its classification as a finance or operating lease. As an emerging growth company, the Company elected to adopt the Topic 842 under the extended transition period available to entities in the "all other" category, which would be effective for the annual period beginning on January 1, 2022 and all interim periods within the year ended December 31, 2023. Early adoption is permitted. The Company has selected an information system application to centralize the tracking and accounting for the Company's leases and is currently in the process of completing implementation of that application. The Company plans to adopt the Topic 842 using the modified retrospective transition method and will not restate comparative periods. The modified retrospective transition method requires the cumulative effect, if any, of initially applying the guidance to be recognized as an adjustment to our accumulated deficit as of that adoption date. The Company plans to elect the package of practical expedients permitted under the transition guidance within the Topic 842, which allows the Company to carry forward prior conclusions about lease identification, classification and initial direct costs for leases entered into prior to adoption of the Topic 842. Additionally, the Company plans to not separate lease and non-lease components of the leases. For leases with a term of 12 months or less, the Company plans to elect the short-term lease exemption, which allows it to not recognize right-of-use assets or lease liabilities for qualifying leases existing at transition and new leases we may enter into in the future. The Company is currently in the process of quantifying the impact, but is currently unable to estimate the impact on the consolidated financial statements.

In June 2016, the FASB issued ASU 2016-13, *Financial Instruments – Credit Losses (Topic 326): Measurement of Credit Losses on Financial Instruments* ("ASU 2016-13"). The new credit losses standard changes the impairment model for most financial assets and certain other instruments. For trade and other receivables, contract assets recognized as a result of applying ASC 606, loans and certain other instruments, entities will be required to use a new forward looking "expected loss" model that generally will result in earlier recognition of credit losses than under today's incurred loss model. As an emerging growth company, ASU 2016-13 is effective for annual periods beginning after December 15, 2022, with early adoption permitted. Application of the amendments is through a cumulative-effect adjustment to the opening retained earnings as of the beginning of the first reporting period in which the guidance is effective. The Company is currently evaluating the impact of the new guidance on its financial statements and related disclosures.

In November 2021, the FASB issued ASU 2021-10, Government Assistance (Topic 832), Disclosures by Business Entities About Government Assistance, which requires entities to provide disclosures on material government assistance transactions for annual reporting periods. The disclosures include information around the nature of the assistance, the related accounting policies used to account for government assistance, the effect of government assistance on the entity's financial statements, and any significant terms and conditions of the agreements, including commitments and contingencies. The new standard is effective for the Company on January 1, 2022 and only impacts annual financial statement footnote disclosures. The Company does not expect the impact of adopting this new accounting guidance to have a material effect on its consolidated financial statements and related disclosures.

3. Business Combination

As discussed in Note 1, on July 22, 2021, the Company consummated the Business Combination and received net cash proceeds of $510.0 million.

Pursuant to the Business Combination, the following occurred:

- Holders of 10,188 shares of CMLS's Class A common stock sold in its initial public offering (the "public shares") exercised their right to have such shares redeemed for a full pro rata portion of the trust account

holding the proceeds from CMLS's initial public offering (the "IPO"), which was approximately $10.00 per share, or $101,880 in aggregate.

- Each share of CMLS's Class B common stock was automatically converted into common stock of the Company.
- Each share of the Legacy Sema4 Class B common stock was converted into 1/100th of a share of Legacy Sema4 Class A common stock and each share of Legacy Sema4 common stock and preferred stock was canceled and received a portion of the merger consideration, resulting in certain Legacy Sema4 stockholders receiving $230,665,220 of cash and the Legacy Sema4 stockholders receiving an aggregate of 178,336,298 shares of common stock of the Company.
- Pursuant to subscription agreements entered into on February 9, 2021, certain investors agreed to subscribe for an aggregate of 35,000,000 newly-issued shares of common stock at a purchase price of $10.00 per share for an aggregate purchase price of $350,000,000 (the "PIPE Investment"). Concurrently with the closing of the Business Combination, the Company consummated the PIPE Investment.
- After giving effect to the Merger, the redemption of public shares and the conversion of the CMLS Class B common stock as described above, and the consummation of the PIPE Investment, there were 240,190,402 shares of the Company's common stock issued and outstanding.

The Company recorded $51.8 million of transaction costs which consist of direct, incremental legal, professional, accounting, and other third-party fees that were directly related to the execution of the Merger in additional paid-in capital. Upon consummation of the Merger, $9.0 million of the transaction costs relates to costs incurred by Legacy Sema4 and reclassed to offset against equity from prepaid expense and other current assets.

4. Revenue Recognition

The following table summarizes the Company's disaggregated revenue (in thousands):

	Year Ended December 31,		
	2021	2020	2019
Diagnostic test revenue:			
Patients with third-party insurance	$ 169,576	$ 138,153	$ 169,538
Institutional customers	31,717	35,200	20,888
Self-pay patients	3,807	1,998	1,241
Total diagnostic test revenue	205,100	175,351	191,667
Other revenue	7,095	3,971	4,507
Total	$ 212,195	$ 179,322	$ 196,174

Reassessment of variable consideration

Subsequent changes to the estimate of the transaction price, determined on a portfolio basis when applicable, are generally recorded as adjustments to revenue in the period of the change. The Company updates variable consideration estimated quarterly. Our assessment performed at year-end did not result in material adjustments to the Company's previously reported revenue or accounts receivable amounts.

Remaining performance obligations

Due to the long-term nature of the collaboration service agreement, the Company's obligations pursuant to such agreements represent partially unsatisfied performance obligations as of December 31, 2021. The revenues under existing service agreements with original expected durations of more than one year are estimated to be approximately $10.2 million. The Company expects to recognize the majority of this revenue over the next 3.3 years.

Contract assets and liabilities

Contract assets consist of the Company's right to consideration that is conditional upon its future performance. Contract assets arise in collaboration service agreements for which revenue is recognized over time but the Company's right to bill the customer is contingent upon the achievement of contractually-defined milestones.

Contract liabilities consist of customer payments in excess of revenues recognized. For collaboration service agreements, the Company assesses the performance obligations and recognizes contract liabilities as current or non-current based upon forecasted performance.

A reconciliation of the beginning and ending balances of contract assets and contract liabilities is shown in the table below (in thousands):

	Contract Assets	Contract Liabilities
December 31, 2020	$ 2,028	$ 3,811
Contract asset additions	1,163	—
Customer prepayments	—	2,223
Revenue recognized	105	(2,265)
December 31, 2021	$ 3,296	$ 3,769

The increase in contract assets as of December 31, 2021 is primarily due to the execution of a service agreement with a customer during the year. The Company presents contracts assets and contract liabilities arising from this customer contract on a net basis on its balance sheets. As of December 31, 2021 and December 31, 2020, $0.5 million and $1.8 million are recorded as current contract liabilities, respectively.

Costs to fulfill contracts

Costs associated with fulfilling the Company's performance obligations pursuant to its collaboration service agreements include costs for services that are subcontracted to ISMMS. Amounts are generally prepaid and then expensed in line with the pattern of revenue recognition. Prepayment of amounts prior to the costs being incurred are recognized on the balance sheets as current or non-current asset based upon forecasted performance.

As of December 31, 2021 and 2020, the Company had outstanding deferred costs to fulfill contracts of $1.8 million and $3.0 million, respectively. At each period, all outstanding deferred costs were recorded as other current assets.

Amortization of deferred costs was $1.4 million, $0.9 million and $0.7 million for the years ended December 31, 2021, 2020 and 2019, respectively. The amortization of these costs is recorded in cost of services of the consolidated statements of operations and comprehensive loss.

5. Fair Value Measurements

The following tables set forth the fair value of financial instruments that were measured at fair value on a recurring basis (in thousands):

	December 31, 2021			
	Total	Level 1	Level 2	Level 3
Financial Assets:				
Money market funds	$ 385,370	$ 385,370	$ —	$ —
Total financial assets	$ 385,370	$ 385,370	$ —	$ —
Financial Liabilities:				
Public warrant liability	$ 14,463	$ 14,463	$ —	$ —
Private warrant liability	7,092	—	7,092	—
Earn-out contingent liability	10,244	—	—	10,244
Total financial liabilities	$ 31,799	$ 14,463	$ 7,092	$ 10,244

	December 31, 2020			
	Total	Level 1	Level 2	Level 3
Financial Assets:				
Money market funds	$ 92,940	$ 92,940	$ —	$ —
Total financial assets	$ 92,940	$ 92,940	$ —	$ —

Of the $400.6 million cash and cash equivalents presented on the consolidated balance sheets, $385.4 million is in money market funds and is classified within Level 1 of the fair value hierarchy as the fair value is based on quoted prices in active markets.

The Company's outstanding warrants include publicly-traded warrants (the "Public Warrants") which were originally issued in the IPO and warrants sold in a private placement to CMLS Holdings LLC (the "Private Warrants"). The Company evaluated its warrants under ASC 815-40, Derivatives and Hedging—Contracts in Entity's Own Equity, and concluded that they do not meet the criteria to be classified in stockholders' equity. Since the Public Warrants and Private Warrants meet the definition of a derivative under ASC 815, the Company recorded these warrants as non-current liabilities on the balance sheet at fair value upon the closing of the Business Combination, with subsequent changes in their respective fair values recognized in other income (expense), net on the consolidated statements of operations and comprehensive loss at each reporting date. As of December 31, 2021, the Public Warrants are classified within Level 1 of the fair value hierarchy as they are traded in active markets. The Private Warrants are classified within Level 2 of the fair value hierarchy as management determined the fair value of each Private Warrant is the same as that of a Public Warrant because the terms are substantially the same.

The contingent obligation to issue earn-out shares for Legacy Sema4 stockholders is accounted for as a liability and required remeasurement at each reporting date. The estimated fair value of the total earn-out shares as of December 31, 2021 is determined based on a Monte Carlo simulation valuation model. The fair value of the earn-out contingent liability is sensitive to expected volatility estimated based on selected guideline public companies and Company's common stock price which is sensitive to changes in the forecasts of earnings and/or the relevant

operating metrics. The key assumptions utilized in determining the valuation as of December 31, 2021 and Closing Date were the following:

	December 31, 2021	Closing Date
Stock price	$4.46	$11.60
Expected volatility	62.5%	70.0%
Expected term (in years)	1.6	2.0
Risk-free interest rate	0.58%	0.20%

The earn-out contingent liability is categorized as Level 3 of the fair value hierarchy as the Company utilizes unobservable inputs in estimating volatility rate. Initial fair value determined and recorded at the Closing Date was $143.1 million and a gain of $132.9 million was recorded in the change in fair market value of warrant and earn-out contingent liability in the consolidated statements of operations and comprehensive loss based on re-measurement performed as of December 31, 2021.

6. Property and Equipment

Property and equipment consisted of the following (in thousands):

	As of December 31,	
	2021	2020
Laboratory equipment	$ 28,552	$ 22,818
Equipment under capital leases	21,384	20,743
Leasehold improvements	21,905	16,736
Capitalized software	25,693	14,631
Building under capital lease	6,276	6,276
Construction in-progress	940	4,673
Computer equipment	6,634	4,118
Furniture, fixtures and other equipment	3,241	3,214
Total property and equipment	114,625	93,209
Less: accumulated depreciation and amortization	(51,906)	(30,099)
Property and equipment, net	$ 62,719	$ 63,110

For the years ended December 31, 2021, 2020 and 2019, depreciation and amortization expense was $21.8 million, $11.7 million and $6.4 million, respectively, which included software amortization expense of $5.6 million, $3.0 million and $1.2 million for the years ended December 31, 2021, 2020 and 2019, respectively. Depreciation and amortization expense is included within the statements of operations and comprehensive loss as follows (in thousands):

	Year Ended December 31,		
	2021	2020	2019
Cost of services	$ 14,094	$ 9,055	$ 4,752
Research and development	5,819	1,040	821
Selling and marketing	3	—	—
General and administrative	1,891	1,639	834
Total depreciation and amortization expenses	$ 21,807	$ 11,734	$ 6,407

7. Related Party Transactions

On June 1, 2017, the Company signed a contribution and funding agreement and other agreements with ISMMS, whereby ISMMS contributed certain assets and liabilities related to the Company's operations, provided certain services to the Company, and also committed to funding the Company up to $55.0 million in future capital contributions in exchange for equity in the Company, of which $55.0 million was drawn as of December 31, 2019. Following the transaction, the Company commenced operations and began providing the services and performing research.

For years ended December 31, 2021, 2020 and 2019, the Company incurred certain costs with ISMMS. Expenses recognized under the TSA totaled $1.4 million, $7.2 million and $7.8 million for the years ended December 31, 2021, 2020 and 2019, respectively, and are presented within related party expenses in the consolidated statements of operations and comprehensive loss. The Company had TSA payables due to ISMMS of $0 and $0.6 million as of December 31, 2021 and 2020, respectively. These amounts are included within due to related parties on the Company's consolidated balance sheets.

Expenses recognized pursuant to other service arrangements with ISMMS totaled $7.0 million, $4.4 million and $3.5 million for the years ended December 31, 2021, 2020 and 2019, respectively. These amounts are included in either cost of services or related party expenses on the consolidated statements of operations and comprehensive loss depending on the particular activity to which the costs relate. Payables due to ISMMS for the other service arrangements were $2.6 million and $0.8 million as of December 30, 2021 and 2020, respectively. These amounts are included within due to related parties on the Company's consolidated balance sheets.

Additionally, the Company incurred $1.3 million in purchases of diagnostic testing kits and materials for the year ended December 31, 2021 from an affiliate of a member of the Board of Directors who has served in the role since July 2021. The prices paid represent market rates. Payables due were $0.1 million as of December 31, 2021.

Total related party costs are included within cost of services and related party expenses in the consolidated statements of operations and comprehensive loss as follows (in thousands):

	Year Ended December 31,		
	2021	2020	2019
Costs of services	$ 3,975	$ 2,189	$ 1,859
Related party expenses	5,659	9,395	9,452
Total related party costs	$ 9,634	$ 11,584	$ 11,311

8. Long-Term Debt

Loan and Security Agreement (the "SVB Agreement")

On November 15, 2021, the Company and Sema4 OpCo (together, the "Borrower") entered into the SVB Agreement with Silicon Valley Bank ("SVB"). The SVB Agreement provides for a Revolver up to an aggregate principal amount of $125.0 million, including a sublimit of $20.0 million for Letters of Credit (as such terms are defined in the SVB Agreement). The outstanding principal amount of any Advance (as such term is defined in the SVB Agreement) will bear interest at a floating rate per annum equal to the greater of (1) 4.00% and (2) the Prime Rate plus the Prime Rate Margin. The Revolver will mature on November 15, 2024.

The obligations under the SVB Agreement are secured by a first priority perfected security interest in substantially all of the Company's assets except for (i) Governmental Collection Accounts (as defined in the SVB Agreement), (ii) more than 65% of the presently existing and thereafter arising issued and outstanding shares of capital stock owned by Borrowers in a Foreign Subsidiary (as such term is defined in the SVB Agreement) and (iii) intellectual property pursuant to the terms of the SVB Agreement.

The SVB Agreement contains affirmative and negative covenants, including, among other things, restrictions on indebtedness, liens, investments, mergers, dispositions, and dividends and other distributions.

The SVB Agreement requires the Borrower to comply with certain financial covenants if Liquidity (as such term is defined in the SVB Agreement) falls below $135.0 million. These financial covenants include (i) a minimum Adjusted Quick Ratio (as such term is defined in the SVB Agreement) and (ii) the achievement of certain minimum revenue targets. On a monthly basis, the Borrowers would be required to maintain a minimum Adjusted Quick Ratio of greater than or equal to 1.25 to 1.0. The Borrower must also maintain certain trailing six-month minimum revenue targets through maturity if outstanding borrowings under the Revolver exceed $50.0 million.

The SVB Agreement also includes customary events of default, including failure to pay principal, interest or certain other amounts when due, material inaccuracy of representations and warranties, violation of covenants, certain bankruptcy and insolvency events, certain undischarged judgments, material invalidity of guarantees or grant of security interest, material adverse change, and involuntary delisting from the Nasdaq Stock Market, in certain cases subject to certain thresholds and grace periods. If one or more events of default occurs and continues beyond any applicable cure period, SVB may, without notice or demand to the Borrower, terminate its commitment to make further loans and declare all of the obligations of the Borrowers under the SVB Agreement to be immediately due and payable. The Company is in compliance with all covenants as of December 31, 2021.

No amounts have been drawn under the SVB Agreement as of December 31, 2021.

2016 Funding Commitment

In April 2016, ISMMS received a $5.0 million loan funding commitment (the "DECD Loan Agreement") from the Connecticut Department of Economic and Community Development ("DECD") to support the Genetic Sequencing Laboratory Project in Branford, Connecticut (the "Project"). The DECD made a commitment to offer a total of $9.5 million in loan funding for leasehold improvements, construction, equipment, research and development, and administrative expenses over a period of ten years at an annual interest rate of 2.0% (collectively, "Phase 1" and "Phase 2" of funding for the Project). On June 1, 2017, as part of the Spin-out, ISMMS assigned both the agreement underlying the Project and the DECD Loan Agreement to Sema4 OpCo, Inc. ("OpCo"). ISMMS guaranteed and continues to guarantee's obligation to repay the DECD. Debt due to the DECD is collateralized by providing a security interest in certain machinery and equipment the Company acquired from ISMMS, as defined in a separate security agreement (the "DECD Security Agreement"). The DECD Security Agreement provides a security for the payment and performance of meeting the Company's obligations to the DECD until the obligations have been fully satisfied.

In June 2018, the Company amended the existing $9.5 million DECD Loan Agreement (the "Amended DECD Loan Agreement") with the DECD by increasing the total loan commitment to $15.5 million at the same fixed annual interest rate of 2.0% for a term of 10 years from the date the new funds are disbursed ("Phase 3" of funding for the Project). The terms of the Amended DECD Loan Agreement require the Company to make interest-only payments through July 2023 and principal and interest payments commencing in August 2023 through July 2028.

In addition, under the terms of the Amended DECD Loan Agreement, the DECD may grant partial principal loan forgiveness of up to $12.3 million in the aggregate. Such forgiveness is contingent upon the Company achieving job creation and retention milestones, specifically:

- $4.5 million of Phase 1 funding ($5.0 million) was forgiven in September 2018 based on creating and maintaining 35 new full-time positions in Connecticut, with a combined annual average compensation of $70,000 for a period of 24 continuous months by December 31, 2017;
- $2.8 million of Phase 2 funding ($4.5 million) will be forgiven based on creating 228 new full-time positions in Connecticut, with a combined annual average compensation of $83,000, and maintaining an average of 269 full-time positions for a period of 24 continuous months by December 31, 2021;
- $3.0 million of Phase 3 funding ($6.0 million) will be forgiven based on creating an additional 181 full-time positions in Connecticut, with a combined annual average compensation of $83,000, and maintaining an average of 450 full-time positions for a period of 24 continuous months by December 31, 2022; and

– An additional $2.0 million of funding will be forgiven based on creating an additional 103 full-time positions in Connecticut, with a combined annual average compensation of $83,000, and maintaining an average of 553 full-time positions for a period of 24 continuous months by December 31, 2023.

The outstanding loan balance from the DECD was $11.0 million at December 31, 2021 and 2020.

As of December 31, 2021, long-term debt matures as follows (in thousands):

2022	$	—
2023		875
2024		2,131
2025		2,174
2026		2,218
Thereafter		3,602
Total maturities of long-term debt		11,000
Less: Current portion of long-term debt		—
Total long-term debt, net of current portion	$	11,000

Debt due to the DECD is collateralized by providing a security interest in certain machinery and equipment the Company acquired from ISMMS, as defined in a separate security agreement. The DECD Security Agreement provides a security for the payment and performance of meeting the Company's obligations to the DECD until the obligations have been fully satisfied.

2020 Master Loan Agreement

In August 2020, the Company entered into a loan and security agreement with a bank (the "Master Loan Agreement"), in which the Company received a loan of $6.3 million and deposited the proceeds into a deposit account held by the bank. The Company was required to make sixty consecutive monthly payments of principal and interest at a fixed monthly amount of $0.1 million beginning in November 2020. Interest payments were fixed at an annual interest rate of 4.75%.

The Company recorded the $6.3 million proceeds as restricted cash on the consolidated balance sheets at December 31, 2020. The outstanding loan balance was $6.1 million at December 31, 2020. In July 2021, the Company terminated the Master Loan Agreement by paying off the full amount, including $5.4 million principal and interest and $0.1 million in early payment penalties assessed pursuant to the terms of the agreement which is included in other income, net in the consolidated statements of operations and comprehensive loss.

2020 Master Lease Agreement

In December 2020, the Company entered into a lease agreement with a lender whereby the Company agreed to sell certain equipment and immediately lease back the equipment, resulting in proceeds of $3.6 million. Per the terms of the agreement, a financial institution issued an irrevocable standby letter of credit to the lender for $3.6 million. The Company was required to make sixty consecutive monthly payments of principal and interest at a fixed monthly amount of $0.1 million beginning in February 2021. Interest payments were fixed at an annual interest rate of 3.54%.

The Company was required to maintain an aggregate amount on deposit equal to at least 105% of the value of any outstanding letters of credit issued by the financial institution on the Company's behalf. The letter of credit was required to be in place until all obligations had been paid in full. Further, the Company was required to furnish annual audited financial statements and other financial information to the lender on a regular basis. The Company was in compliance with the covenants as of December 31, 2020.

The Company recorded the $3.6 million proceeds as restricted cash on the consolidated balance sheets at December 31, 2020. The outstanding loan balance was $3.6 million at December 31, 2020. In July 2021, the

Company terminated the Master Lease Agreement by paying off the full amount, including $3.3 million principal and interest and early payment penalties of $0.2 million assessed pursuant to the terms of the agreement which is included in other income, net in the consolidated statements of operations and comprehensive loss.

9. Commitments and Contingencies

Operating Leases

The Company's operating lease arrangements are principally for office space and laboratory facilities. The Company's headquarter lease was initially entered into via sub-lease agreements with ISMMS and a third party and they will expire in 2034. The agreements include escalating rent and rent-free period provisions. The third-party sub-lease agreement required the Company to deliver a letter of credit from a financial institution equal to the amount of the security deposit on the office space. Accordingly, in February 2020, a financial institution issued an irrevocable standby letter of credit to the third party for $0.9 million, which is recorded as restricted cash on the consolidated balance sheets as of December 31, 2021.

In April 2019, the Company entered into a sublease agreement to rent a building to be used for office and laboratory facility (the "Stamford Lease") for a base term of 325 months, expiring in October 2046. The Company has the option to renew the lease at the end of the initial base term for either one period of 10 years, or two periods of 5 years. There is also an early termination option in which the Company may cancel the lease after the 196th month with cancellation fees. At inception of the Stamford Lease, the value of the land was determined to be more than 25% of the total value and therefore the building is accounted for as a capital lease and the land as an operating lease.

In January 2020, the Company entered into a lease agreement which expanded our existing laboratory facility in Branford, Connecticut. The lease commenced in February 2020 with a 10 year term. The lease includes escalating rent fees over the lease term.

Future minimum payments under non-cancelable operating leases as of December 31, 2021 are as follows (in thousands):

2022	$	4,383
2023		4,474
2024		4,562
2025		4,684
2026		4,775
Thereafter		45,463
Total operating lease obligations	$	68,341

Rent expense is recognized on a straight-line basis over the lease term and the Company recorded rent expense related to non-cancelable operating leases of $5.7 million, $5.3 million and $0.8 million for the years ended December 31, 2021, 2020 and 2019, respectively. Rent expense related to month-to-month operating leases was $1.2 million, $3.2 million, and $2.8 million for the years ended December 31, 2021, 2020 and 2019, respectively.

Capital Leases

The Company entered into various capital lease agreements to obtain laboratory equipment which contain bargain purchase commitments at the end of the lease term. The terms of the capital leases range from 3 to 5 years with interest rates ranging from 3.7% to 12.0% The leases are secured by the underlying equipment. Interest rate for the Stamford Lease is 13.1%.

Property and equipment under capital leases was $27.7 million and $27.0 million as of December 31, 2021 and 2020, respectively. Accumulated amortization on capital lease assets was $13.6 million and $9.7 million at December 31, 2021 and 2020, respectively.

For all capital leases, the portion of the future payments designated as principal repayment is recorded as a capital lease obligation on the Company's consolidated balance sheets in accordance with repayment terms. Future payments under capital leases at December 31, 2021, are as follows (in thousands):

2022	$ 4,890
2023	3,584
2024	2,763
2025	2,451
2026	2,003
Thereafter	49,883
Total capital lease obligations	65,574
Less: amounts representing interest	(43,728)
Present value of net minimum capital lease payments	21,846
Less: current portion	(3,419)
Capital lease obligations, net of current portion	$ 18,427

Assets acquired under capital leases was $0.6 million, $7.5 million and $9.8 million for the years ended December 31, 2021, 2020 and 2019, respectively. Interest expense related to capital leases was $2.3 million, $2.2 million and $0.7 million for the years ended December 31, 2021, 2020 and 2019, respectively.

Purchase Obligations

The following sets forth purchase obligations as of December 31, 2021 with a remaining term of at least one year (in thousands):

Contractual Obligations	2022	2023	2024	Total Commitments
Materials, services and reagents provider	$ 11,184	$ 663	$ —	$ 11,847
Software provider	3,084	3,092	1,076	$ 7,252
Research and development	1,910	1,010	64	$ 2,984
Equipment provider	469	400	139	$ 1,008
	$ 16,647	$ 5,165	$ 1,279	$ 23,091

The Company enters into contracts with suppliers to purchase materials needed for diagnostic testing. These contracts generally do not require multiple-year purchase commitments.

Contingencies

The Company is a party to various actions and claims arising in the normal course of business. The Company does not believe that the outcome of these matters will have a material effect on the Company's consolidated financial position, results of operations or cash flows. However, no assurance can be given that the final outcome of such proceedings will not materially impact the Company's financial condition or results of operations.

The Company was not a party to any material legal proceedings as of December 31, 2021, nor is it a party to any legal proceedings as of the date of issuance of these consolidated financial statements.

Defined Contribution Plan

Substantially all of the Company's employees in the U.S. are eligible to participate in the defined contribution plan the Company sponsors. The defined contribution plan allows employees to contribute a portion of their compensation in accordance with specified guidelines. The Company, at its discretion, makes matching contributions. The Company contributed $8 million, $5.5 million and $4 million for the years ended December 31, 2021, 2020 and 2019, respectively.

10. Stock-Based Compensation

Stock Incentive Plans

The Company's 2017 Equity Incentive Plan (the "2017 Plan"), as amended in February 2018, allowed the grant of options, restricted stock awards, stock appreciation rights and restricted stock units. No options granted under the 2017 Plan are exercisable after 10 years from the date of grant, and option awards generally vest over a four-year period.

The 2017 Plan was terminated in connection with the adoption of the Company's 2021 Equity Incentive Plan (the "2021 Plan"). Any awards granted under the 2017 Plan that remained outstanding as of the Closing Date and were converted into awards with respect to the Company's Class A common stock in connection with the consummation of the Business Combination continue to be subject to the terms of the 2017 Plan and applicable award agreements, except for a modification of the repurchase provision, which is discussed further below.

On July 22, 2021, in connection with the Business Combination, the 2021 Plan became effective and 32,734,983 authorized shares of common stock were reserved for issuance thereunder. This Plan will be administered by the Compensation Committee of the Company's Board of Directors, including determination of the vesting, exercisability and payment of the awards to be granted under this Plan. No awards granted under the 2021 Plan are exercisable after 10 years from the date of grant, and the awards granted under the 2021 Plan generally vest over a four-year period on a graded vesting basis.

As of December 31, 2021, there was an aggregate of 15,467,838 shares available for grants of stock options or other awards under the 2021 Plan.

Employee Stock Purchase Plan

The 2021 Employee Stock Purchase Plan (the "2021 ESPP") became effective in connection with the Business Combination. The 2021 ESPP authorizes the issuance of shares of common stock pursuant to purchase rights granted to employees. A total of 4,804,011 shares of common stock have been reserved for future issuance under the 2021 ESPP. On each January 1 of each of 2022 through 2031, the aggregate number of shares of common stock reserved for issuance under the 2021 Plan may be increased automatically by the number of shares equal to one percent (1%) of the total number of shares of all classes of common stock issued and outstanding on the immediately preceding December 31. The Company did not make any grants of purchase rights under the 2021 ESPP during the year ended December 31, 2021.

Stock Option Activity

Under the 2017 Plan, the Company had a call option to repurchase awards for cash from the plan participants upon termination of the participant's employment or consulting agreement (the "2017 Plan Call Option"). The options granted under the 2017 plan were accounted for as liability awards due to the 2017 Plan Call Option. The Company had a history of repurchase practice and the intention to repurchase the vested options. Therefore, the fair value of the liability awards was remeasured at each reporting period until the stockholder bears the risks and rewards of equity ownership for a reasonable period of time, which the Company concludes is at least six months.

Upon consummation of the Business Combination, the Company's Board of Directors waived the Company's right under the 2017 Plan Call Option to repurchase awards for cash from the plan participants upon termination of the participant's employment or consulting agreement. As such, the Company modified the liability awards to equity awards and reclassified the modification date fair value of the awards to stockholders' equity in the consolidated financial statements as of July 22, 2021. An incremental expense of $0.4 million resulting from the modification event was recorded in the year ended December 31, 2021.

All stock options granted under the 2021 Plan are accounted for as equity awards.

The following summarizes the stock option activity, which reflects the conversion of the options granted under the 2017 Plan into awards with respect to the Company Class A common stock in connection with the consummation of the Business Combination (in thousands, except share and per share amounts):

	Stock Options Outstanding	Weighted Average Exercise Price	Weighted Average Remaining Contractual Life (years)	Aggregate Intrinsic Value
Balance at December 31, 2020	32,339,970	$ 0.54	7.82	$ 159,899
Options granted	3,474,905	$ 7.29	—	—
Options exercised	(2,248,705)	$ 0.61	—	—
Options forfeited and canceled	(2,660,627)	$ 1.16	—	—
Balance at December 31, 2021	30,905,543	$ 1.24	6.80	$ 109,887
Options exercisable at December 31, 2021	22,930,309	$ 0.45	6.08	$ 92,974

Nonvested options outstanding at the end of the year was 7,975,234 with weighted average grant-date fair value of $8.38.

The weighted-average grant-date fair value of options granted and total fair value of the options with tranches vested was $4.97 and $44.6 million for the year ended December 31, 2021, respectively. The weighted-average grant-date fair value of options forfeited and canceled was $10.52 for the year ended December 31, 2021. The aggregate intrinsic value of exercised options was $17.1 million, $0.6 million and $0.0 million in the years ended December 31, 2021, 2020 and 2019, respectively, and is calculated based on the difference between the exercise price and the fair value of the Company's common stock as of the exercise date. The total payments for share-based liabilities were $0.1 million, $0.3 million and $1.0 million in the years ended December 31, 2021, 2020 and 2019, respectively.

Due to the historical accounting under the liability awards and modification accounting applied upon consummation of the Business Combination, as described above, the Company used the fair value determined on the modification date when calculating the grant-date and total fair value disclosed.

The fair value of the stock option awards for the period ended December 31, 2021, and as of December 31, 2020, and 2019 were estimated using the Black-Scholes option pricing model with the following assumptions:

	2021	2020	2019
Expected volatility	49.60%-67.70%	65.80%	60.00%
Weighted-average expected volatility	66.15%	65.80%	60.00%
Expected term (in years)	5.00-6.06	0.50–1.49	3.00–5.00
Risk-free interest rate	0.71%-1.26%	0.10%	1.40%–1.43%
Dividend yield	—	—	—
Fair value of Class A common stock	$7.62-$11.60	$5.49	$0.77

We estimated a volatility factor for the Company's options based on analysis of historical share prices of a peer group of public companies. We did not rely on the volatility of the Company's common stock because its limited trading history. We estimated the expected term of options granted using the "simplified method," which is the mid-point between the vesting date and the ending date of the contractual term. We did not rely on the historical holding periods of the Company's options due to the limited availability of exercise data. We used a risk-free interest rate based on the U.S. Treasury yield curve in effect for bonds with maturities consistent with the expected term of the option.

Restricted Stock Units (RSU)

The Company issued time-based RSUs to employees under the 2021 Plan. The RSUs automatically convert to common stock on a one-for-one basis as the awards vest. The Company measures the value of RSUs at fair value based on the closing price of the underlying common stock on the grant date. The RSUs granted generally vest over a four year vesting period from the grant date, however, the Company also granted certain RSUs during the three months ended December 31, 2021, which were vesting beginning 12 months from the grant date and vesting immediately on the grant date. The following table summarizes the activity related to the Company's time-based RSUs:

	Restricted Stock Units Outstanding	Weighted Average Grant Date Fair Value Per Unit
Balance at December 31, 2020	—	—
Restricted Stock Units granted	14,250,909	$7.55
Restricted Stock Units vested	(1,466,010)	$6.75
Restricted Stock Units forfeited	(195,341)	$7.62
Balance at December 31, 2021	12,589,558	$7.64

Nonvested RSUs outstanding at the end of the year was 12,589,558 with weighted average grant-date fair value of $7.64. The total fair value of RSUs vested for the year ended December 31, 2021 was $9.9 million.

Earn-out RSUs

The grant date fair value determined for Triggering Event I, II and III was $1.82, $1.39 and $0.94 per unit, respectively. Any re-allocated RSUs due to the Sema4 Legacy option holders' forfeiture activities were accounted for as new grants and the fair value determined for Triggering Event I, II and III was $0.86, $0.61 and $0.41 per unit, respectively. Based on the grant date fair value, the Company expects to record total expense related to the Earn-out RSU Awards of $3.5 million. The Company expects to recognize the stock-compensation cost over the longer of the derived service period or service period.

Stock Appreciation Rights (SAR) Activity

The Company historically granted SAR to one employee and one consultant with exercise condition of a liquidation event. As a result of the Business Combination, settlement of the outstanding vested SARs in exchange for a cash payment and to cancel the outstanding unvested SARs was agreed upon and an expense of $3.8 million related to the vested SAR was recognized by the Company during the year ended December 31, 2021. There were no outstanding SARs as of December 31, 2021.

Stock-Based Compensation Expense

Stock-based compensation expense is included within the consolidated statements of operations and comprehensive loss as follows (in thousands):

	Year Ended December 31,		
	2021	2020	2019
		(Restated)[1]	
Cost of services	$ 22,567	$ 12,942	$ 710
Research and development	47,183	26,650	1,281
Selling and marketing	29,110	11,755	650
General and administrative	120,561	68,884	2,841
Total stock-based compensation expense	$ 219,421	$ 120,231	$ 5,482

(1) Refer to Note 2, "Summary of Significant Accounting Policies." for further details and discussions.

As of December 31, 2021, unrecognized stock-based compensation cost related to the unvested portion of the Company's stock options was $29.7 million, which is expected to be recognized on a graded-vesting basis over a weighted-average period of 1.6 years. As of December 31, 2021, unrecognized stock-based compensation cost related to the Company's RSUs was $78.4 million, which is expected to be recognized on a graded-vesting basis over a weighted-average period of 1.7 years.

11. Redeemable Convertible Preferred Stock

There were no shares of Redeemable Convertible Preferred Stock outstanding as of December 31, 2021. Redeemable Convertible Preferred Stock as of December 31, 2020 consisted of the following (in thousands, except share data):

Redeemable Convertible Preferred Stock	Shares Authorized	Shares Issued and Outstanding	Amount	Aggregate Liquidation Preference
Series A-1	55,399,943	55,399,943	$ 51,811	$ 55,000
Series A-2	64,718,940	49,700,364	46,480	49,342
Series B	41,937,960	41,937,960	118,824	204,302
Series C	24,497,317	24,496,946	117,324	121,397
Total Redeemable Convertible Preferred Stock	186,554,160	171,535,213	$ 334,439	$ 430,041

Prior to the completion of the Business Combination, there were no significant changes to the terms of the Convertible Preferred Stock. Upon closing of the Merger, each share Preferred Stock (as defined in the Proxy Statement) was cancelled and received a portion of the merger consideration, resulting in certain Legacy Sema4 preferred stockholders receiving $230.0 million of cash and an aggregate of 148,543,062 shares of common stock. The Company recorded the conversion at the carrying value of the Redeemable Convertible Preferred Stock at the time of Closing.

12. Common Stock

There were 242,647,604 shares of Sema4 Holdings Class A common stock and 124 shares of Legacy Sema4 Class A common stock issued and outstanding as of December 31, 2021 and 2020, respectively. There were 0 and 130,557 shares of Class B common stock issued and outstanding as of December 31, 2021 and 2020, respectively.

13. Income Taxes

The components of income before incomes taxes consisted of the following (in thousands):

	Year Ended December 31,		
	2021	2020	2019
Foreign	$ —	$ —	$ —
Domestic	(245,390)	(241,340)	(29,704)
Total	(245,390)	(241,340)	(29,704)

	Year Ended December 31,		
	2021	2020	2019
Current	$ —	$ —	$ —
Federal	—	—	—
State and Local	—	—	—
Foreign	—	—	—
Total Current	$ —	$ —	$ —
Deferred			
Federal	$ —	$ —	$ —
State and Local	—	—	—
Foreign	—	—	—
Total Deferred	—	—	—
Total Tax Expense	$ —	$ —	$ —

For the years ended December 31, 2021, 2020 and 2019, the Company did not have a current or deferred income tax expense or (benefit). Accordingly, the effective tax rate for the Company for the years ended December 31, 2021, 2020 and 2019 was zero percent. A reconciliation of the anticipated income tax expense/(benefit) computed by applying the statutory federal income tax rate of 21% to income before taxes to the amount reported in the statement of operations and comprehensive loss is as follows (in thousands):

	Year Ended December 31,		
	2021	2020	2019
U.S. federal taxes at statutory rate	21.0%	21.0%	21.0%
State taxes (net of federal benefit)	10.5	2.1	3.5
Research and development tax credits	0.7	0.6	3.4
Non-deductible stock-based compensation	(11.3)	(7.8)	(3.3)
162(m) Limitation	(5.7)	—	—
Permanent Items	(0.2)	—	(0.5)
Unrealized fair market value gain on warrants	17.0	—	—
Change in valuation allowance	(32.0)	(15.9)	(24.1)
Effective tax rate	—%	—%	—%

The tax effects of temporary differences and carryforwards that give rise to significant portions of the net deferred tax assets were as follows (in thousands):

	As of December 31,	
	2021	2020
Deferred tax assets:		
Net operating loss carryforwards	$ 132,075	$ 44,583
Stock-based compensation	12,311	7,538
Accrued compensation	4,170	2,337
Transaction costs	416	—
Research and development credits	7,285	4,667
Deferred rent	1,443	493
Unearned revenue	145	186
Deferred employer taxes	932	1,050
Interest expense	372	479
Property and equipment	608	—
Obsolete inventory reserve	655	—
Other	51	23
Gross deferred tax assets	160,463	61,356
Valuation allowance	(155,668)	(58,264)
Total deferred tax assets	4,795	3,092
Deferred tax liabilities:		
Property and equipment	—	(685)
Capitalized software	(4,795)	(2,407)
Total deferred tax liabilities	(4,795)	(3,092)
Net deferred tax assets	$ —	$ —

As of December 31, 2021, the Company had the following tax net operating loss carryforwards available to reduce future federal and state taxable income, and tax credit carryforwards available to offset future federal and Connecticut income taxes (in thousands):

	Amount	Expiration period
Tax net operating loss carryforwards:		
Federal (pre-2018 net operating losses)	33,056	2036-2037
Federal (post-2017 net operating losses)	395,421	No expiration
State and Local	589,584	2028-2042
State and Local	25,704	No expiration
Tax credit carryforwards:		
Federal research and development	5,096	2038-2040
Connecticut research and experimental	1,633	2034-2035
Connecticut research and development	556	No expiration

The Company had the following deferred tax valuation allowance balances (in thousands):

Year	Balance at the Beginning of Period	Additions	Write-Offs/Other	Balance at the End of Period
2021	$ 58,264	97,404	—	$ 155,668
2020	$ 20,082	38,182	—	$ 58,264
2019	$ 12,928	7,154	—	$ 20,082

The CARES Act, among other things, includes provisions relating to refundable payroll tax credits, net operating loss carryback periods, alternative minimum tax credit refunds, modifications to the net interest deduction limitations and technical corrections to tax depreciation methods for qualified improvement property.

The CARES Act also provides for the elective deferral of the deposit and payment of the employer share of Social Security taxes for the period beginning March 27, 2020 and ending December 31, 2020. Under the CARES Act, 50% percent of the employer portion of Social Security tax is to be remitted no later than December 31, 2021, with the remaining 50% to be remitted no later than December 31, 2022. The Company has evaluated the effect of the elective deferral on its income tax positions and determined that the corresponding deduction related to the employer portion of Social Security tax is not deductible in the year ended December 31, 2020, resulting in a nominal deferred tax asset. The Company continues to evaluate the potential effects the CARES Act may have on its operations and consolidated financial statements in future periods.

Future realization of the tax benefits of existing temporary differences and carryforwards ultimately depends on the existence of sufficient taxable income within the carryforward period. As of December 31, 2021 and 2020, the Company performed an evaluation to determine whether a valuation allowance was needed. Based on the Company's analysis, which considered all available evidence, both positive and negative, the Company determined that it is more likely than not that its net deferred tax assets will not be realized. Accordingly, the Company maintained a full valuation allowance as of December 31, 2021, 2020 and 2019. The valuation allowance increased by $97.4 million in 2021, $38.1 million in 2020 and $7.1 million in 2019 primarily due to the increase in net operating loss carryforwards, research and development tax credits, accrued compensation expenses, stock-based compensation and deferred rent expense.

Under Internal Revenue Code Section 382, if a corporation undergoes an "ownership change," the corporation's ability to use its pre-change NOL carryforwards and other pre-change tax attributes to offset its post-change income may be limited. Generally, an ownership change occurs when certain shareholders increase their aggregated ownership by more than 50 percentage points over their lowest ownership percentage in a testing period (typically three years). The Company has not completed a study to assess whether an ownership change has occurred or whether there have been multiple ownership changes since becoming a "loss corporation" as defined in Section 382. Future changes in stock ownership, which may be outside of the Company's control, may trigger an ownership change. In addition, future equity offerings or acquisitions that have an equity component of the purchase price could result in an ownership change. If an ownership change has occurred or does occur in the future, utilization of the NOL carryforwards or other tax attributes may be limited.

ASC 740 addresses the determination of whether tax benefits claimed or expected to be claimed on a tax return should be recorded in the financial statements by prescribing a model for recognizing, measuring, and disclosing uncertain tax positions. Unrecognized income tax benefits represent income tax positions taken on income tax returns but not yet recognized in the financial statements.

As of December 31, 2021, 2020 and 2019, the Company had nominal gross unrecognized tax benefits which, if recognized, would not impact the effective tax rate due to the Company's valuation allowance position. Due to the uncertainties associated with any examinations that may arise with the relevant tax authorities, it is not possible to reasonably estimate the impact of any significant increase or decrease to the unrecognized tax benefits within the next twelve months.

A reconciliation of the beginning and ending amounts of unrecognized tax benefits for the years ended December 31, 2021, 2020 and 2019 is as follows (in thousands):

	As of December 31,		
	2021	2020	2019
Unrecognized tax benefits – January 1	$ 537	$ 374	$ 195
Gross increases – tax positions in current period	—	163	179
Unrecognized tax benefits – December 31	$ 537	$ 537	$ 374

To the extent penalties and interest would be assessed on any underpayment of income tax, the Company's policy is that such amounts would be accrued and classified as a component of income tax expense in the financial statements. As of December 31, 2021, 2020 and 2019, the Company has not accrued interest or penalties related to uncertain tax positions.

The Company files U.S federal and multiple state income tax returns as prescribed by the tax laws of the jurisdictions in which it operates. In the normal course of business, the Company is subject to examination by federal and state jurisdictions, where applicable. There are currently no pending federal or state income tax examinations. As a result of the Company's net operating loss carryforwards, the Company's federal and state statutes of limitations remain open from 2016 and forward until the net operating loss carryforwards are utilized or expire prior to utilization.

14. Net Loss per Share

Basic net loss per share is computed by dividing the net loss attributable to common stockholders by the weighted-average number of shares of common stock outstanding for the period. The following table sets forth the computation of basic and diluted net loss per share attributable to common stockholders (in thousands, except for share and per share amounts):

	Year Ended December 31,		
	2021	2020	2019
Numerator:			
Net loss attributable to common stockholders	$ (245,390)	$ (241,340)	$ (32,743)
Denominator:			
Denominator for basic and diluted earnings per share-weighted-average common shares	108,077,439	5,131	124
Basic and diluted (loss) per share	$ (2.27)	$ (47,036)	$ (264,056)

As a result of the Merger, the Company has retroactively adjusted the weighted-average number of shares of common stock outstanding prior to the Merger by multiplying them by the conversion ratio of 123.8339 used to determine the number of shares of common stock into which they converted. The common stock issued as a result of the redeemable convertible preferred stock conversion upon closing of the Merger was included in the basic and diluted (loss) per share calculation on a prospective basis.

Prior to the consummation of the Merger, the Company applied the two-class method to calculate its basic and diluted net loss per share of common stock, as there were outstanding Class B common stock and redeemable convertible preferred stock that were participating securities. The two-class method is an earnings allocation formula that treats a participating security as having rights to earnings that otherwise would have been available to common stockholders. As the securities were all converted into Sema4 Holdings Class A common stock upon consummation of the Merger, all outstanding Legacy Sema4 Class B common stock has been retroactively converted to the Sema4 Holdings Class A common stock.

The following tables summarize the outstanding shares of potentially dilutive securities that were excluded from the computation of diluted net loss per share attributable to common stockholders for the period presented because including them would have been anti-dilutive:

	Year Ended December 31,		
	2021	2020	2019
Outstanding options and RSUs	35,519,867	32,339,971	22,491,757
Outstanding warrants	21,994,972	—	—
Outstanding earn-out shares	16,351,897	—	—
Outstanding earn-out RSUs	2,669,679	—	—
Redeemable convertible preferred stock (on an if-converted basis)	—	157,618,388	121,298,525
Total	76,536,415	189,958,359	143,790,282

15. Supplemental Financial Information

Other current liabilities consisted of the following (in thousands):

	As of December 31,	
	2021	2020
Accrued bonus	$ 13,561	$ 9,821
Accrued payroll	7,013	6,834
Accrued benefits	1,057	3,663
Accrued commissions	2,826	1,540
Current portion of long-term debt	—	1,770
Other	5,511	4,509
Total current other liabilities	$ 29,968	$ 28,137

16. Subsequent Events

GeneDx Acquisition

On January 14, 2022, the Company entered into an Agreement and Plan of Merger and Reorganization (the "Merger Agreement") with GeneDx, Inc., a New Jersey corporation ("GeneDx") and a wholly-owned subsidiary of OPKO Health, inc, and the other parties thereto.

Subject to the terms and conditions of the Merger Agreement, the Company agreed to pay to OPKO Health Inc., of (i) $150 million in cash at the closing of the acquisition (the "Closing"), subject to certain adjustments as provided in the Merger Agreement, (ii) 80 million shares of the Company's Class A common stock, to be issued at the Closing and (iii) up to $150 million payable following the Closing, if certain revenue-based milestones are achieved for each of the fiscal years ending December 31, 2022 and December 31, 2023 (the "Milestone Payments"). Each Milestone Payment, if and to the extent earned under the terms of the Merger Agreement, will be satisfied through the payment and/or issuance of a combination of cash and shares of Company Class A common stock (valued at $4.86 per share based on the average of the daily volume average weighted price of Company Class A common stock over the period of 30 trading days ended January 12, 2022), with such mix to be determined in Sema4's sole discretion. The acquisition is expected to close in the first half of 2022, subject to the receipt of the required approval by the Company's stockholders and the satisfaction of the closing conditions set forth in the Merger Agreement.

Subscription Agreements and PIPE Investment (Private Placement)

On January 14, 2022, concurrently with the execution of the Merger Agreement, the Company entered into subscription agreements for a private placement financing to issue and sell $200 million in Class A common stock at a price of $4.00 per share to a syndicate of institutional investors.

GENEDX, INC. AND SUBSIDIARY

INDEX TO COMBINED CARVE OUT FINANCIAL STATEMENTS

YEARS ENDED DECEMBER 31, 2021 and 2020

Report of Independent Auditors

To the Shareholders and the Board of Directors of GeneDx, Inc. and Subsidiary

Opinion
We have audited the combined carve-out financial statements of GeneDx, Inc. and subsidiary (the Company), which comprise the combined balance sheets as of December 31, 2021 and 2020, and the related combined statements of comprehensive loss, equity and cash flows for the years then ended, and the related notes (collectively referred to as the "combined financial statements").

In our opinion, the accompanying financial statements present fairly, in all material respects, the financial position of the Company at December 31, 2021 and 2020, and the results of its operations and its cash flows for the years then ended in accordance with accounting principles generally accepted in the United States of America.

Basis for Opinion
We conducted our audits in accordance with auditing standards generally accepted in the United States of America (GAAS). Our responsibilities under those standards are further described in the Auditor's Responsibilities for the Audit of the Financial Statements section of our report. We are required to be independent of the Company and to meet our other ethical responsibilities in accordance with the relevant ethical requirements relating to our audits. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

Responsibilities of Management for the Financial Statements
Management is responsible for the preparation and fair presentation of the financial statements in accordance with accounting principles generally accepted in the United States of America, and for the design, implementation, and maintenance of internal control relevant to the preparation and fair presentation of financial statements that are free of material misstatement, whether due to fraud or error. In preparing the financial statements, management is required to evaluate whether there are conditions or events, considered in the aggregate, that raise substantial doubt about the Company's ability to continue as a going concern for one year after the date that the financial statements are available to be issued.

Auditor's Responsibilities for the Audit of the Financial Statements
Our objectives are to obtain reasonable assurance about whether the financial statements as a whole are free of material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion. Reasonable assurance is a high level of assurance but is not absolute assurance and therefore is not a guarantee that an audit conducted in accordance with GAAS will always detect a material misstatement when it exists. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control. Misstatements are considered material if there is a substantial likelihood that, individually or in the aggregate, they would influence the judgment made by a reasonable user based on the financial statements.

In performing an audit in accordance with GAAS, we:

- Exercise professional judgment and maintain professional skepticism throughout the audit.
- Identify and assess the risks of material misstatement of the financial statements, whether due to fraud or error, and design and perform audit procedures responsive to those risks. Such procedures include examining, on a test basis, evidence regarding the amounts and disclosures in the financial statements.
- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Company's internal control. Accordingly, no such opinion is expressed.
- Evaluate the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluate the overall presentation of the financial statements.
- Conclude whether, in our judgment, there are conditions or events, considered in the aggregate, that raise substantial doubt about the Company's ability to continue as a going concern for a reasonable period of time.

We are required to communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit, significant audit findings, and certain internal control-related matters that we identified during the audit.

/s/ ERNST & YOUNG LLP

Miami, FL

March 15, 2022

GeneDx, Inc. and Subsidiary

COMBINED CARVE OUT BALANCE SHEETS

(in thousands, except share and per share data)

	December 31,	
	2021	2020
ASSETS		
Current assets:		
Cash and cash equivalents	$ 144	$ 199
Accounts receivable, net	20,341	22,587
Inventory	7,828	7,219
Prepaid expenses and other current assets	5,226	3,675
Total current assets	33,539	33,680
Investment in related companies	205	245
Property, plant and equipment, net	28,277	20,171
Intangible assets, net	166,888	183,702
Goodwill	282,024	282,024
Due from Parent and its subsidiaries	5	3
Operating lease right-of-use assets	5,789	6,858
Other assets	53	64
Total assets	$ 516,780	$ 526,747
LIABILITIES AND EQUITY		
Current liabilities:		
Accounts payable	$ 5,397	$ 4,897
Accrued expenses	15,565	15,779
Income taxes payable	180	163
Other current liabilities	571	691
Total current liabilities	21,713	21,530
Deferred tax liabilities, net	24,063	36,690
Operating lease liabilities	9,936	7,340
Other long-term liabilities	—	981
Total long-term liabilities	33,999	45,011
Total liabilities	55,712	66,541
Equity:		
Common Stock - $0.01 par value per share, 100 shares authorized; 100 shares issued and outstanding at December 31, 2021 and 2020, respectively	—	—
Additional paid-in capital	660,506	622,752
Accumulated deficit	(199,438)	(162,546)
Total shareholder's equity	461,068	460,206
Total liabilities and equity	$ 516,780	$ 526,747

The accompanying Notes to Combined Financial Statements are an integral part of these statements.

GeneDx, Inc. and Subsidiary

COMBINED CARVE OUT STATEMENTS OF COMPREHENSIVE LOSS

(in thousands)

	For the years ended December 31,	
	2021	**2020**
Revenues	$ 116,595	$ 95,020
Costs and expenses:		
Cost of revenue	84,361	74,367
Selling, general and administrative	52,439	41,583
Research and development	12,377	9,110
Amortization of intangible assets	16,813	16,813
Total costs and expenses	165,990	141,873
Operating loss	(49,395)	(46,853)
Other expense, net:		
Other expense	(44)	(87)
Other expense	(44)	(87)
Loss before income taxes	(49,439)	(46,940)
Income tax benefit	12,547	12,037
Net loss and comprehensive loss	$ (36,892)	$ (34,903)

The accompanying Notes to Combined Financial Statements are an integral part of these statements.

GeneDx, Inc. and Subsidiary

COMBINED CARVE OUT STATEMENTS OF EQUITY

(in thousands, except share data)

For the years ended December 31, 2021 and 2020

	Common Stock		Additional Paid-In Capital	Accumulated Deficit	Total
	Shares	Dollars			
Balance at December 31, 2019	100	—	$ 601,312	$ (127,755)	$ 473,557
Contributions from BioReference	—	—	21,321	—	21,321
Equity-based compensation expense	—	—	119	—	119
Genome dissolution entries	—	—	—	112	112
Net loss	—	—	—	(34,903)	(34,903)
Balance at December 31, 2020	100	—	$ 622,752	$ (162,546)	$ 460,206

	Common Stock		Additional Paid-In Capital	Accumulated Deficit	Total
	Shares	Dollars			
Balance at December 31, 2020	100	—	$ 622,752	$ (162,546)	$ 460,206
Contributions from BioReference	—	—	35,932	—	35,932
Equity-based compensation expense	—	—	1,822	—	1,822
Net loss	—	—	—	(36,892)	(36,892)
Balance at December 31, 2021	100	—	$ 660,506	$ (199,438)	$ 461,068

The accompanying Notes to Combined Financial Statements are an integral part of these statements.

GeneDx, Inc. and Subsidiary

COMBINED CARVE OUT STATEMENTS OF CASH FLOWS

(in thousands)

	For the years ended December 31,	
	2021	**2020**
Cash flows from operating activities:		
Net loss	$ (36,892)	$ (34,903)
Adjustments to reconcile net loss to net cash used in operating activities:		
Depreciation and amortization	21,947	20,905
Dissolution of Gnome	—	112
Equity-based compensation	1,822	119
Provision for bad debts	—	84
Deferred income taxes	(12,627)	(12,240)
Gain on sale of equipment and other assets	—	5
Non-cash lease expense	3,664	465
Changes in assets and liabilities:		
Accounts receivable	2,246	11,753
Inventory	(609)	32
Prepaid expenses and other current assets	(1,551)	(1,228)
Other assets	52	25
Accounts payable	500	(961)
Accrued expenses and other liabilities	(1,496)	3,969
Net cash used in operating activities	(22,944)	(11,863)
Cash flows from investing activities:		
Capital expenditures	(13,041)	(9,815)
Investment in related companies		(245)
Proceeds from the sale of property, plant, and equipment	—	90
Net cash used in investing activities	(13,041)	(9,970)
Cash flows from financing activity:		
Subsidiary financing	(2)	(4)
Equity contributions	35,932	21,321
Net cash provided by financing activity	35,930	21,317
Net decrease in cash and cash equivalents	(55)	(516)
Cash and cash equivalents at beginning of period	199	715
Cash and cash equivalents at end of period	$ 144	$ 199
Supplemental Information:		
Income taxes paid, net	$ 60	$ 75
Purchases of property and equipment in accounts payable and accrued expenses	198	1,278
Cash paid for interest	3	80

The accompanying Notes to Combined Financial Statements are an integral part of these statements.

GeneDx, Inc. and Subsidiary

NOTES TO COMBINED CARVE OUT FINANCIAL STATEMENTS

Note 1 Business and Organization

GeneDx, Inc., a New Jersey corporation (including its subsidiaries as described below, "GeneDx", we, our or us), is a patient-centric health information company and leader in delivering clinical genomic answers to an ever-increasing community of patients, families and healthcare providers. With more than 20 years of experience in diagnosing rare disorders and diseases, we have pioneered panels, exome and whole genome sequencing and have developed a proprietary genomic interpretation and information services platform in support of healthcare partners and patients globally. We create, follow, and are informed by cutting-edge science and technology.

GeneDx, Inc. is a wholly owned subsidiary of BioReference Laboratories, Inc. ("BioReference"). BioReference and its subsidiaries, including GeneDx, are wholly owned subsidiaries of OPKO Health, Inc. ("OPKO" or "Parent"). MyGeneTeam and MyGeneTeam Canada are wholly owned subsidiaries of OPKO. GeneDx, MyGeneTeam, and MyGeneTeam Canada comprise the Combined Carve Out Financial Statements and are collectively referred to as GeneDx or the "Company". All assets and liabilities directly attributable to entities outside GeneDx have been excluded. The accompanying Combined Carve Out Financials Statements present the combined financial results of GeneDx as of and for the years ended December 31, 2021 and 2020 and are being prepared in connection with the definitive agreement between Sema4 Holdings Corp ("Sema4") and OPKO announced in January 2022 pursuant to which Sema4 has agreed to acquire GeneDx. If Sema4 does not acquire GeneDx, OPKO has committed to support the capital requirements of GeneDx necessary to meet our obligations through March 16, 2023.

In February 2020, we dissolved the operations of Genome Diagnostics, a wholly owned subsidiary of GeneDx.

Our corporate office and laboratory, which is our only physical location, is located at 207 Perry Parkway, Gaithersburg, Maryland 20877, which is a leased space.

Note 2 Impact of COVID-19

As the disease caused by SARS-CoV-2, a strain of coronavirus, COVID-19 continues to spread and severely impact the economy of the United States, we are committed to being a part of the coordinated public and private sector response to this unprecedented challenge. During the outbreak of the pandemic, the facility space and certain human resources and supplies of GeneDx were deployed to perform COVID-19 RT-PCR testing on behalf of our parent company BioReference. From 2020 through 2021, GeneDx resulted approximately 1.6 million COVID-19 RT-PCR tests. All COVID-19 testing operations of GeneDx ceased in June 2021. None of the revenue or associated costs with the COVID-19 operations run at the GeneDx facility are included in the GeneDx Combined Financial Statements.

In March 2020, in response to the outbreak of the COVID-19 pandemic, the Coronavirus Aid, Relief, and Economic Security (CARES) Act was signed into law. The CARES Act provides numerous tax provisions and other stimulus measures, including temporary changes regarding the prior and future utilization of net operating losses, temporary changes to the prior and future limitations on interest deductions, temporary suspension of certain payment requirements for the employer portion of Social Security taxes, technical corrections from prior tax legislation for tax depreciation of certain qualified improvement property, and the creation of certain payroll tax credits associated with the retention of employees.

We have received a number of benefits under the CARES Act including, but not limited to:

- We are eligible to defer depositing the employer's share of Social Security taxes for payments due from March 27, 2020, through December 31, 2020, interest-free and penalty-free;
- We received approximately $0.3 million during the year ended December 31, 2020 from the funds that were distributed to healthcare providers for related expenses or lost revenues that are attributable to the COVID-19 pandemic; and

- Clinical laboratories are provided with a one-year reprieve from the reporting requirements under the Protecting Access to Medicare Act as well as a one-year delay of reimbursement rate reductions for clinical laboratory services provided under Medicare that were scheduled to take place in 2021.

Note 3 Summary of Significant Accounting Policies

Basis of presentation. The accompanying Combined Carve Out Financial Statements have been prepared in accordance with accounting principles generally accepted in the United States (US GAAP).

Principles of consolidation. The accompanying Combined Carve Out Financial Statements include the accounts of GeneDx and of our wholly owned subsidiary, MyGeneTeam and MyGeneTeam Canada and were derived from the Consolidated Financial Statements and accounting records of the Parent as if GeneDx were operated on a standalone basis during the periods presented and were prepared in accordance with US GAAP. All intercompany accounts and transactions were eliminated in consolidation.

The Combined Carve Out Statements of Operations of GeneDx reflect general corporate and operating expenses provided by both the Parent and BioReference to GeneDx, including, but not limited to, executive management, finance, legal, information technology, employee benefits administration, treasury, procurement, and other shared services. Actual costs that may have been incurred had GeneDx been a standalone company would have depended on a number of factors, including the chosen organizational structure, outsourced functions versus those performed by employees, and strategic decisions made in areas such as information technology and infrastructure.

The Combined Carve Out Balance Sheets (the "Combined Carve Out Balance Sheets") of GeneDx include Parent and BioReference assets and liabilities that were specifically identifiable or otherwise attributable to GeneDx, including subsidiaries and affiliates in which the Parent has a controlling financial interest or is the primary beneficiary. All cash inflows and outflows obtained and used from operations were swept to BioReference's centralized account. GeneDx reflects transfers of cash to and from BioReference's cash management system as a component of Total Shareholder's Equity in the Combined Carve Out Balance Sheets.

The Combined Carve Out Financial Statements include GeneDx's net assets and statement of comprehensive loss as described above. All intercompany transactions and accounts within the combined businesses of GeneDx have been eliminated.

Use of estimates. The preparation of financial statements in conformity with US GAAP requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the reporting period. Actual results could differ significantly from these estimates.

Cash and cash equivalents. Cash and cash equivalents include short-term, interest-bearing instruments with original maturities of 90 days or less at the date of purchase. We also consider all highly liquid investments with original maturities at the date of purchase of 90 days or less as cash equivalents. These investments include money markets and bank deposits.

Inventory. Inventory is valued at the lower of cost and net realizable value. Cost is determined by the first-in, first-out method. We consider such factors as the amount of inventory on hand, estimated time required to sell such inventory, remaining shelf-life, quality assessments and current market conditions to determine whether inventory is stated at the lower of cost and net realizable value. Inventory consists primarily of purchased laboratory supplies, which are used in our testing laboratory. GeneDx relies on a limited number of suppliers for certain laboratory reagents, as well as sequencers and other equipment and materials that it uses in its laboratory operations. GeneDx does not have short- or long-term agreements with all of its suppliers, and its suppliers could cease supplying these materials and equipment at any time, or fail to provide it with sufficient quantities of materials or materials that meet its specifications.

Goodwill and intangible assets. Goodwill represents the difference between the purchase price and the estimated fair value of net assets acquired as accounted for under the acquisition method of accounting. We recognized goodwill and intangible assets as a result of applying pushdown accounting in connection with OPKO's

acquisition of BioReference in 2015. We determined the fair value of our intangible assets using the "income method."

Goodwill and indefinite lived intangible assets are tested at least annually as of October 1 for impairment, or when events or changes in circumstances indicate that the carrying amount of such assets may not be recoverable, by assessing qualitative factors, and performing a quantitative analysis if and when required, in determining whether it is more likely than not that its fair value exceeds the carrying value. Intangible assets are tested for impairment whenever events or changes in circumstances indicate that the carrying amount of such assets may not be recoverable.

Goodwill was $282.0 million as of both December 31, 2021 and 2020. Estimating the fair value of a reporting unit for goodwill impairment is highly sensitive to changes in projections and assumptions and changes in assumptions could potentially lead to impairment. We perform sensitivity analyses around our assumptions in order to assess the reasonableness of the assumptions and the results of our testing. Ultimately, potential changes in these assumptions may impact the estimated fair value of a reporting unit and result in an impairment if the fair value of such reporting unit is less than its carrying value.

Net intangible assets other than goodwill were $166.9 million and $183.7 million, respectively, as of December 31, 2021 and 2020.

We believe that our estimates and assumptions are reasonable and otherwise consistent with assumptions that marketplace participants would use in their estimates of fair value. However, if future results are not consistent with our estimates and assumptions, including as a result of the COVID-19 pandemic, then we may be exposed to an impairment charge, which could be material. We have one reporting segment and have reached a cumulative goodwill impairment loss of $170.6 million prior to January 1, 2019. No goodwill or intangible asset impairment was recorded for the years ended December 31, 2021 and 2020 as a result of our testing.

We amortize intangible assets with definite lives on a straight-line basis over their estimated useful lives, ranging from 3 to 20 years. We use the straight-line method of amortization as there is no reliably determinable pattern in which the economic benefits of our intangible assets are consumed or otherwise used up. Amortization expense was $16.8 million for each of the years ended December 2021 and 2020. Amortization expense from operations for our intangible assets is expected to be $16.8 million, $15.2 million, $12.3 million, $12.0 million, and $11.5 million for the years ended December 31, 2022, 2023, 2024, 2025 and 2026, respectively.

Fair value measurements. The carrying amounts of our cash and cash equivalents, accounts receivable and accounts payable approximate their fair values due to the short-term maturities of these instruments and accounts. The fair value of the due to/due from Parent and its subsidiaries is not practical to estimate due to the uncertainty regarding the timing of future payments.

Property, plant and equipment. Property, plant and equipment are recorded at cost. Depreciation is provided using the straight-line method over the estimated useful lives of the assets and includes amortization expense for assets capitalized under capital leases. The estimated useful lives by asset class are as follows: software - 3 years, computer equipment - 5 years, machinery, medical and other equipment - 8 years, furniture and fixtures - 12 years, leasehold improvements - the lesser of 10 years or the lease term and automobiles - lease term. Expenditures for repairs and maintenance are charged to expense as incurred. Depreciation expense was $5.1 million and $4.1 million for the years ended December 31, 2021 and 2020, respectively.

Impairment of long-lived assets. Long-lived assets, such as property and equipment, are reviewed for impairment whenever events or changes in circumstances indicate that the carrying amount of an asset may not be recoverable. Recoverability of assets to be held and used is measured by a comparison of the carrying amount of an asset to estimated undiscounted future cash flows expected to be generated by the asset. If the carrying amount of an asset exceeds its estimated future cash flows, then an impairment charge is recognized for the amount by which the carrying amount of the asset exceeds the fair value of the asset. No impairment charges were recorded for the years ended December 31, 2021 and 2020.

Impairment of Equity Method Investments. Equity method investments are assessed for impairment annually or when events or circumstances suggest that the carrying amount of the investment may be impaired. An impairment charge is recorded in earnings when the decline in value below the carrying amount of its equity method investment is determined to be other-than-temporary.

Stock Compensation. OPKO grants stock options to certain employees of GeneDx and the annual contribution of non-cash employee stock compensation is recorded in operating expenses in the accompanying Combined Carve Out Statements of Comprehensive Loss with a corresponding contribution to additional paid in capital. Stock compensation for the years ended December 31, 2021 and and December 31, 2020 were:

	2021	2020
Cost of services	$ 293	$ 58
Research and development	274	39
Selling and marketing	133	7
General and administrative	1,122	15
Total stock-based compensation expense	$ 1,822	$ 119

Income taxes. Income taxes are determined as if we filed tax returns on a standalone basis utilizing the Separate Return Method. We are included in the consolidated federal income tax return filed by OPKO.

Income taxes are accounted for under the asset-and-liability method. Deferred tax assets and liabilities are recognized for the future tax consequences attributable to differences between the financial statement carrying amounts of existing assets and liabilities and the respective tax bases and for operating loss and tax credit carryforwards. Deferred tax assets and liabilities are measured using enacted tax rates expected to apply to taxable income in the years in which those temporary differences are expected to be recovered or settled. The effect on deferred tax assets and liabilities of a change in tax rates is recognized in operations in the period that includes the enactment date. We periodically evaluate the realizability of our net deferred tax assets. Our tax accruals are analyzed periodically and adjustments are made as events occur to warrant such adjustment. Valuation allowances on certain U.S. deferred tax assets and non-U.S. deferred tax assets may be established because realization of these tax benefits does not meet the more-likely-than-not threshold.

The Company recognizes the tax benefit from an uncertain tax position only if it is more likely than not that the tax position will be sustained on examination by the taxing authorities.

Revenue recognition. We recognize revenue when a customer obtains control of promised goods or services in accordance with Accounting Standards Codification Topic 606, *Revenue from Contracts with Customers* ("Topic 606"). The amount of revenue that is recorded reflects the consideration that we expect to receive in exchange for those goods or services. We apply the following five-step model in order to determine this amount: (i) identify the contract(s) with a customer; (ii) identify the performance obligations in the contract; (iii) determine the transaction price; (iv) allocate the transaction price to the performance obligations in the contract; and (v) recognize revenue when (or as) we satisfy a performance obligation.

We apply the five-step model to contracts when it is probable that we will collect the consideration we are entitled to in exchange for the goods or services we transfer to the customer. At contract inception, once the contract is determined to be within the scope of Topic 606, we review the contract to determine which performance obligations we must deliver and which of these performance obligations are distinct. We recognize as revenue the amount of the transaction price that is allocated to the respective performance obligation when the performance obligation is satisfied or as it is satisfied.

Revenue for laboratory services is recognized at the time test results are reported, which approximates when services are provided and the performance obligations are satisfied. Services are provided to patients covered by various third-party payer programs, including various managed care organizations, as well as the Medicare and Medicaid programs. For the years ended December 31, 2021 and 2020, approximately 8.6% and 6.2%, respectively, of our revenues were derived directly from the Medicare and Medicaid programs. Billings for services under third-

party payer programs are included in revenue net of allowances for contractual discounts, allowances for differences between the amounts billed and estimated program payment amounts and implicit price concessions provided to uninsured patients which are all elements of variable consideration.

The complexities and ambiguities of billing, reimbursement regulations and claims processing, as well as issues unique to Medicare and Medicaid programs, require us to estimate the potential for retroactive adjustments in the recognition of revenue in the period the related services are rendered. Adjustments to the estimated payment amounts are recorded upon settlement as an adjustment to revenue.

Concentration of credit risk and allowance for doubtful accounts. Financial instruments that potentially subject us to concentrations of credit risk consist primarily of accounts receivable. Substantially all of our accounts receivable are with either companies in the health care industry or patients. However, credit risk is limited due to the number of our clients as well as their distribution across many different geographic regions.

While we have receivables due from federal and state governmental agencies, we do not believe that such receivables represent a credit risk because the related health care programs are funded by federal and state governments, and payment is primarily dependent upon submitting appropriate documentation. As of December 31, 2021 and 2020, receivable balances (net of explicit price concessions) from Medicare and Medicaid were 3.7% and 6.9%, respectively, of our Accounts receivable, net.

The portion of our accounts receivable due from individual patients comprises the largest portion of credit risk. As of December 31, 2021 and 2020, receivables due from patients represented approximately 2.0% and 3.0%, respectively, of our Accounts receivable, net.

We assess the collectability of accounts receivable balances by considering factors such as historical collection experience, customer credit worthiness, the age of accounts receivable balances, regulatory changes and current economic conditions and trends that may affect a customer's ability to pay. Actual results could differ from those estimates. Our reported net loss is directly affected by our estimate of the collectability of accounts receivable.

Due to/from Parent and its subsidiaries. Due to/from Parent and its subsidiaries primarily represents operations between GeneDx and subsidiaries of the Parent. The Company uses a centralized approach to cash management and financing of its operations. The fair value of the due from/to Parent and its subsidiaries is not practical to estimate due to the uncertainty regarding the timing of future payments.

Shipping and handling costs. We do not charge customers for shipping and handling costs. Shipping and handling costs are classified as Cost of revenues in the Combined Carve Out Statements of Comprehensive Loss.

Recently adopted accounting pronouncements.

In June 2016, the FASB issued ASU No. 2016-13, "Financial Instruments - Credit Losses (Topic 326): Measurement of Credit Losses on Financial Instruments," which amends the impairment model by requiring entities to use a forward-looking approach based on expected losses rather than incurred losses to estimate credit losses on certain types of financial instruments, including trade receivables. This may result in the earlier recognition of allowances for losses. The ASU is effective for public entities for fiscal years beginning after December 15, 2019, with early adoption permitted. The adoption of ASU 2016-13 on January 1, 2020, did not have a significant impact on our Combined Financial Statements.

Pending accounting pronouncements.

In August 2020, the FASB issued ASU No. 2020-06, "Debt – Debt with Conversion and Other Options (Subtopic 470-20) and Derivatives and Hedging – Contracts in Entity's Own Equity (Subtopic 815-40)." ASU 2020-06 will simplify the accounting for convertible instruments by reducing the number of accounting models for convertible debt instruments and convertible preferred stock. The ASU is effective for public entities for fiscal years beginning after December 15, 2021, with early adoption permitted. We are currently evaluating the impact of this new guidance on our Combined Financial Statements.

Note 4 Cost Allocations from BioReference

The historical costs and expenses reflected in our Combined Carve Out Financial Statements include an allocation for certain corporate and shared service functions provided by BioReference, including, but not limited to accounting, legal, human resources, information technology and other shared services. These expenses have been allocated to us on the basis of direct usage when identifiable, with the remainder allocated based on estimates to reasonably reflect the historical utilization of these services.

Management believes the assumptions underlying our Combined Carve Out Financial Statements, including the assumptions regarding the allocation of general corporate expenses from BioReference, are reasonable. Nevertheless, our Combined Carve Out Financial Statements may not include all of the actual expenses that would have been incurred had we operated as a standalone company during the periods presented and may not reflect our combined results of operations, financial position and cash flows had we operated as a standalone company during the periods presented. Actual costs that would have been incurred if we had operated as a standalone company would have depended on multiple factors, including organizational structure and strategic decisions made in various areas.

Note 5 Investments

In August 2020, GeneDx announced that it had entered into an operating agreement with Pediatrix Medical Group ("Pediatrix"), a provider of maternal-fetal, and pediatric medical and surgical subspecialty physician services, to offer genomic sequencing to support clinical diagnosis in neonatal intensive care units staffed by Pediatrix's affiliated neonatologists (the "Operating Agreement"). The offering had planned to include whole exome and whole genome sequencing and genomic support services under the brand Detect Genomix (the "Joint Venture").

Our initial capital investment in the Joint Venture was $245,000, for which we received a 49% ownership interest the Joint Venture. Beyong the initial investment, we have not made any other investments in or loans in the Joint Venture through December 31, 2021.

In order to determine the primary beneficiary of the Joint Venture, we evaluated our investment to identify if we had the power to direct the activities that most significantly impact the economic performance of the Joint Venture. Based on the capital structure, governing documents and overall business operations of the Joint Venture, we determined that, while a variable interest entity (VIE), we do not have the power to direct the activities that most significantly impact the Joint Venture's economic performance. We determined, however, that we can significantly influence control of the Joint Venture through our board representation and voting power. Therefore, we have the ability to exercise significant influence over the Joint Venture's operations and account for our investment the Joint Venture under the equity method.

In January 2022, GeneDx and Pediatrix reached a mutual agreement to withdraw as members of the Joint Venture, release each party's restrictions and obligations under the Operating Agreement, cooperate to effect the winding down and dissolution of the Joint Venture, and effect other customary release and discharges related to the Joint Venture. We determined an other-than-temporary impairment on our equity method investment as a result of the termination and adjusted the carrying value of the investment as of December 31, 2021 to our recovery value.

The proportionate share of cash on hand at the Joint Venture was returned to GeneDx in February 2022.

Note 6 Composition of Certain Combined Carve Out **Financial Statement Captions**

(In thousands)	December 31, 2021	December 31, 2020
Prepaid expenses and other current assets:		
Prepaid supplies, insurance and maintenance	$ 3,422	$ 953
Taxes recoverable	1,516	1,515
Other receivables	288	1,207
	$ 5,226	$ 3,675
Property, plant and equipment, net:		
Machinery, medical and other equipment	$ 28,558	$ 32,232
Leasehold improvements	16,633	11,215
Furniture and fixtures	1,035	733
Software	179	35
Less: accumulated depreciation	(18,128)	(24,044)
	$ 28,277	$ 20,171
Intangible assets, net:		
Customer relationships	$ 237,725	$ 237,725
Technologies	36,100	36,100
Covenants not to compete	3,400	3,400
Less: accumulated amortization	(110,337)	(93,523)
	$ 166,888	$ 183,702
Accrued expenses:		
Employee benefits	$ 8,341	$ 7,021
Other	7,224	8,758
	$ 15,565	$ 15,779
Other long-term liabilities:		
Social Security employer deferral	$ —	$ 980
Other	—	1
	$ —	$ 981

Note 7 Shareholder's Equity

Our authorized capital stock consists of 100 shares of common stock, $0.01 par value per share. As of December 31, 2021 and 2020, all shares of our common stock were issued and outstanding and held by BioReference.

Note 8 Debt Guarantee

On November 5, 2015, BioReference and certain of its subsidiaries, including GeneDx, entered into a credit agreement with JPMorgan Chase Bank, N.A. ("CB"), as lender and administrative agent, which was amended and restated on August 30, 2021 (the "A&R Credit Agreement"). The A&R Credit Agreement provides for a $75.0 million secured revolving credit facility and includes a $20.0 million sub-facility for swingline loans and a $20.0 million sub-facility for the issuance of letters of credit. The A&R Credit Agreement matures on August 30, 2024 and is guaranteed by all of BioReference and its domestic subsidiaries including GeneDx. The A&R Credit Agreement is also secured by substantially all assets of BioReference and its domestic subsidiaries, including GeneDx. Availability under the A&R Credit Agreement is based on a borrowing base composed of BioReference's eligible accounts receivables, which includes GeneDx, as specified therein. As of December 31, 2021, there was no outstanding balance and as of December 31, 2020, $7.1 million was outstanding under the A&R Credit Agreement.

At BioReference's option, borrowings under the A&R Credit Agreement (other than swingline loans) will bear interest at (i) the CB floating rate (defined as the higher of (a) the prime rate and (b) the LIBOR rate (adjusted for statutory reserve requirements for Eurocurrency liabilities) for an interest period of one month plus 2.50%) plus an applicable margin of 0.75% or (ii) the LIBOR rate (adjusted for statutory reserve requirements for Eurocurrency liabilities) plus an applicable margin of 1.75%. Swingline loans will bear interest at the CB floating rate plus the applicable margin. The A&R Credit Agreement also calls for other customary fees and charges, including an unused commitment fee of 0.375% if the average quarterly availability is 50% or more of the revolving commitment, or 0.25% if the average quarterly availability is less than or equal to 50% of the revolving commitments.

As of December 31, 2021, $64.8 million remained available to BioReference for borrowing under the A&R Credit Agreement.

Note 9 Income Taxes

Our Carve Out Financial Statements and related disclosures apply the Separate Return Method and recognize the current and deferred income tax consequences that result from our activities during the current and preceding periods pursuant to the provisions of Accounting Standards Codification Topic 740, Income Taxes (ASC 740), as if we were a separate taxpayer rather than a member of OPKO's consolidated income tax return. In 2021 and 2020, the difference between our separate company income tax benefit and cash flows attributable to income taxes have been recognized as capital contributions from BioReference.

We operate and are required to file tax returns in the United States and Canada, as well as with various U.S. states.

The provision for income taxes consists of the following benefit (expense):

	For the years ended December 31,	
(In thousands)	**2021**	**2020**
Current		
Federal	$ —	—
State	(4)	(23)
Foreign	(75)	(180)
	(79)	(203)
Deferred		
Federal	10,382	9,838
State	2,244	2,402
	12,626	12,240
Total income tax benefit, net	$ 12,547	$ 12,037

Deferred income tax assets and liabilities as of December 31, 2021 and 2020 consist of the following:

(In thousands)	For the year ended December 31, 2021	2020
Deferred income tax assets:		
Accruals	$ 16	$ 427
Stock options	1,361	949
Lease liability	2,467	1,819
Federal net operating losses	14,237	6,433
State net operating losses	3,444	1,576
Other	276	517
Total deferred income tax assets	21,801	11,721
Deferred income tax liabilities:		
Intangible assets	(41,327)	(45,319)
Fixed assets	(1,572)	(752)
Lease assets	(2,215)	(1,699)
Other	(750)	(641)
Deferred income tax liabilities	(45,864)	(48,411)
Net deferred income tax liabilities	$ (24,063)	$ (36,690)

As of December 31, 2021, we had tax-effected federal and state net operating loss carryforwards of approximately $14.2 million and $3.4 million respectively, which expire in varying amounts and various dates through 2041 unless indefinite in nature. While the Company on a separate return method has net operating losses, these net operating losses have been absorbed by OPKO. As of each reporting date, we evaluated the realization of our U.S. and Canadian deferred tax assets and have determined that all deferred tax assets will more likely than not be realized and no valuation allowance is required. We file federal income tax returns in the U.S. and Canada, as well as with various U.S. states. We are subject to routine tax audits in all jurisdictions for which we file tax returns. Tax audits by their very nature are often complex and can require several years to complete.

U.S. Federal: Under the tax statute of limitations applicable to the Internal Revenue Code, we are no longer subject to U.S. federal income tax examinations by the Internal Revenue Service for tax years before 2018.

State: Under the statutes of limitation applicable to most state income tax laws, we are no longer subject to state income tax examinations by tax authorities for years before 2017 in states in which we have filed income tax returns. Certain states may take the position that we are subject to income tax in such states even though we have not filed income tax returns in such states and, depending on the varying state income tax statutes and administrative practices, the statutes of limitations in such states may extend to years before 2017.

Foreign: Under the statutes of limitations applicable to our operations in Canada, we are generally no longer subject to tax examination for years before 2018 in jurisdictions where we have filed income tax returns.

Other Income Tax Disclosures

The significant elements contributing to the difference between the federal statutory tax rate and the effective tax rate are as follows:

	For the years ended December 31,	
	2021	2020
Federal statutory rate	21.0 %	21.0 %
State income taxes, net of federal benefit	5.0 %	5.1 %
Rate change	(0.5)%	(0.1)%
Permanent differences	(0.1)%	(0.1)%
Income tax refunds	0.0 %	0.0 %
Other	0.0 %	(0.2)%
Total	25.4 %	25.7 %

On December 22, 2017, the 2017 Tax Cuts and Jobs Act (the "Tax Act") was enacted into law and the new legislation contained several key tax provisions, including a reduction of the corporate income tax rate from 35% to 21% effective January 1, 2018. We were required to recognize the effect of the tax law changes in the period of enactment, such as remeasuring our U.S. deferred tax assets and liabilities, as well as reassessing the net realizability of our deferred tax assets and liabilities.

Prior to the enactment of the Tax Act, we regularly determined the undistributed earnings in Canada to be indefinitely reinvested outside the United States. Our intent is to permanently reinvest these funds outside the U.S. and our current plans do not demonstrate a need to repatriate the cash to fund U.S. operations. However, if these funds were repatriated, we would be required to accrue and pay applicable U.S. taxes (if any) and withholding taxes payable to foreign tax authorities.

Note 10 Related Party Transactions

Dr. Roger Medel, a director of OPKO as of December 18, 2020, is the former Chief Executive Officer of Pediatrix. Dr. Medel continues to serve on the board of Pediatrix.

Note 11 Employee Benefit Plans

Effective January 1, 2017, employees of GeneDx were eligible for participation in the OPKO Health Savings and Retirement Plan (the "Plan"). The Plan permits employees to contribute up to 100% of qualified pre-tax annual compensation up to annual statutory limitations. The discretionary company match for employee contributions to the Plan is 100% up to the first 4% of the participant's earnings contributed to the Plan. Our matching contributions to our plans, including our predecessor plans, was $1.9 million for the year ended December 31, 2021 and $1.7 million for the year ended December 31, 2020.

Note 12 Commitments and Contingencies

On October 11, 2019, GeneDx received a letter from the Centers for Medicare and Medicaid Services ("CMS"), notifying GeneDx of CMS's determination to suspend Medicare payments to GeneDx, which suspension became effective on September 27, 2019. CMS advised that it suspended payments due to possible overpayments to GeneDx in connection with reimbursement claims for genetic testing services based on a diagnosis of family history of cancer, which testing CMS has alleged is not covered by Medicare under the applicable provisions of the Social Security Act on the basis that such testing is not reasonable and necessary for the diagnosis or treatment of illness or injury. CMS lifted the suspension on February 3, 2020 and issued an extrapolated overpayment finding of approximately $576,332, which GeneDx paid.

In September 2018, GeneDx received two document request letters from Cigna's Special Investigations Unit in connection with claims submitted for laboratory services performed on Cigna members by GeneDx. Cigna requested

records and other documentation for 100 individual members for which GeneDx had submitted claims. The parties negotiated a final settlement agreement in January 2021 that included a $500,000 payment from GeneDx to Cigna without any admission of error or liability and a mutual release of any and all claims prior to the execution of the settlement agreement.

We accrue a liability for legal contingencies when we believe that it is both probable that a liability has been incurred and that we can reasonably estimate the amount of the loss. We review established accruals and adjust them to reflect ongoing negotiations, settlements, rulings, advice of legal counsel and other relevant information. To the extent new information is obtained and our views on the probable outcomes of claims, suits, assessments, investigations or legal proceedings change, changes in our accrued liabilities would be recorded in the period in which such determination is made. For the matters referenced in the paragraph below, the amount of liability is not probable, or the amount cannot be reasonably estimated; and, therefore, accruals have not been made. In addition, in accordance with the relevant authoritative guidance, for matters which the likelihood of material loss is at least reasonably possible, we provide disclosure of the possible loss or range of loss; however, if a reasonable estimate cannot be made, we will provide disclosure to that effect.

From time to time, we may receive inquiries, document requests, Civil Investigative Demands ("CIDs") or subpoenas from the Department of Justice, the Office of Inspector General and Office for Civil Rights ("OCR") of the Department of Health and Human Services, the Centers for Medicare and Medicaid Services, various payors and fiscal intermediaries, and other state and federal regulators regarding investigations, audits and reviews. In addition to the matters discussed in this note, we are currently responding to CIDs, subpoenas or document requests for various matters relating to our laboratory operations. Some pending or threatened proceedings against us may involve potentially substantial amounts as well as the possibility of civil, criminal, or administrative fines, penalties, or other sanctions, which could be material. Settlements of suits involving the types of issues that we routinely confront may require monetary payments as well as corporate integrity agreements. Additionally, qui tam or "whistleblower" actions initiated under the civil False Claims Act may be pending but placed under seal by the court to comply with the False Claims Act's requirements for filing such suits. Also, from time to time, we may detect issues of non-compliance with federal healthcare laws pertaining to claims submission and reimbursement practices and/or financial relationships with physicians, among other things. We may avail ourselves of various mechanisms to address these issues, including participation in voluntary disclosure protocols. Participating in voluntary disclosure protocols can have the potential for significant settlement obligations or even enforcement action. The Company generally has cooperated, and intends to continue to cooperate, with appropriate regulatory authorities as and when investigations, audits and inquiries arise.

We are a party to other litigation in the ordinary course of business. While we cannot predict the ultimate outcome of legal matters, we accrue a liability for legal contingencies when we believe that it is both probable that a liability has been incurred and that we can reasonably estimate the amount of the loss. It is reasonably possible the ultimate liability could exceed amounts currently estimated and we review established accruals and adjust them to reflect ongoing negotiations, settlements, rulings, advice of legal counsel and other relevant information. To the extent new information is obtained and our views on the probable outcomes of claims, suits, assessments, investigations or legal proceedings change, changes in our accrued liabilities would be recorded in the period in which such determination is made. Because of the high degree of judgment involved in establishing loss estimates, the ultimate outcome of such matters could be material to our business, financial condition, results of operations, and cash flows.

We have employment agreements with certain executives that provide for compensation and certain other benefits and for severance payments under certain circumstances. During the years ended December 31, 2021 and 2020, we recognized $0.3 million and $0.2 million, respectively, of severance costs pursuant to employment agreements with former executives as a component of selling, general and administrative expense.

On December 31, 2021, we were committed to make future purchases for inventory and other items in 2022 that occur in the ordinary course of business under various purchase arrangements with fixed purchase provisions aggregating $14.5 million.

We maintain medical malpractice insurance coverage at a level in excess of historical claims.

Note 13 Revenue Recognition

Revenue for laboratory services is recognized at the time test results are reported, which approximates when services are provided, and the performance obligations are satisfied. Services are provided to patients covered by various third-party payor programs including various managed care organizations, as well as Medicare and Medicaid programs. Billings for services are included in revenue net of allowances for explicit price concessions, and implicit price concessions provided to uninsured patients which are all elements of variable consideration.

The following are descriptions of our payors for laboratory services:

Healthcare Insurers. Reimbursements from healthcare insurers are based on negotiated fee-for-service schedules. Revenues consist of amounts billed, net of explicit price concessions and implicit price concessions for differences between amounts billed and the estimated consideration we expect to receive from such payors, which considers historical denial and collection experience and the terms of our contractual arrangements. Adjustments to the allowances, based on actual receipts from the third-party payors, are recorded upon settlement.

Government Payors. Reimbursements from government payors are based on fee-for-service schedules set by governmental authorities, including traditional Medicare and Medicaid. Revenues consist of amounts billed, net of explicit price concessions and implicit price concessions for differences between amounts billed and the estimated consideration we expect to receive from such payors, which considers historical denial and collection experience and the terms of our contractual arrangements. Adjustments to the allowances, based on actual receipts from the government payors, are recorded upon settlement.

Client Payors. Client payors include physicians, hospitals, employers, and other institutions for which services are performed on a wholesale basis and are billed and recognized as revenue based on negotiated fee schedules.

Patients. Uninsured patients are billed based on established patient fee schedules or fees negotiated with physicians on behalf of their patients. Insured patients (including amounts for coinsurance and deductible responsibilities) are billed based on fees negotiated with healthcare insurers. Collection of billings from patients is subject to credit risk and ability of the patients to pay. Revenues consist of amounts billed net of discounts provided to uninsured patients in accordance with our policies and implicit price concessions. Implicit price concessions represent differences between amounts billed and the estimated consideration that we expect to receive from patients, which considers historical collection experience and other factors including current market conditions. Adjustments to the estimated allowances, based on actual receipts from the patients, are recorded upon settlement.

The complexities and ambiguities of billing, reimbursement regulations and claims processing, as well as issues unique to Medicare and Medicaid programs, require us to estimate the potential for retroactive adjustments as an element of variable consideration in the recognition of revenue in the period the related services are rendered. Actual amounts are adjusted for the period in which those adjustments become known. For the years ended December 31, 2021 and 2020, revenue reductions due to changes in estimates of implicit price concessions for performance obligations satisfied in prior periods of $4.2 million and $5.0 million, respectively, were recognized.

Third-party payors, including government programs, may decide to deny payment or recoup payments for testing they contend were improperly billed or not medically necessary, against their coverage determinations, or for which they believe they have otherwise overpaid (including as a result of their own error), and we may be required to refund payments already received. Our revenues may be subject to retroactive adjustment as a result of these factors among others, including without limitation, differing interpretations of billing and coding guidance and changes by government agencies and payors in interpretations, requirements, and “conditions of participation” in various programs. We have processed requests for recoupment from third-party payors in the ordinary course of our business, and it is likely that we will continue to do so in the future. If a third-party payer denies payment for testing or recoups money from us in a later period, reimbursement revenue for our testing could decline.

As an integral part of our billing compliance program, we periodically assess our billing and coding practices, respond to payor audits on a routine basis, and investigate reported failures or suspected failures to comply with federal and state healthcare reimbursement requirements, as well as overpayment claims which may arise from time to time without fault on the part of the Company. We may have an obligation to reimburse Medicare, Medicaid, and

third-party payors for overpayments regardless of fault. We have periodically identified and reported overpayments, reimbursed payors for overpayments and taken appropriate corrective action.

Settlements with third-party payors for retroactive adjustments due to audits, reviews or investigations are also considered variable consideration and are included in the determination of the estimated transaction price for providing services. These settlements are estimated based on the terms of the payment agreement with the payor, correspondence from the payor and our historical settlement activity, including an assessment of the probability a significant reversal of cumulative revenue recognized will occur when the uncertainty is subsequently resolved. Estimated settlements are adjusted in future periods as adjustments become known (that is, new information becomes available), or as years are settled or are no longer subject to such audits, reviews, and investigations. As of December 31, 2021 and 2020, we had liabilities of $0.0 million and $1.5 million, respectively, within Accrued expenses related to reimbursements for payor overpayments.

The composition of Revenue by payor for the years ended December 31, 2021 and 2020 is as follows:

(In thousands)	2021	2020
Healthcare insurers	$ 47,175	$ 35,314
Government payors	15,596	9,687
Client payors	52,047	47,326
Patients	1,777	2,693
Total revenue	$ 116,595	$ 95,020

Note 14 Leases

We have an operating lease for office space and laboratory operations. We determine if a contract contains a lease at inception or modification of a contract. Our lease does not provide an implicit interest rate, and we therefore use our incremental borrowing rate as the discount rate when measuring operating lease liability. The incremental borrowing rate represents an estimate of the interest rate we would incur, calculated at the Parent level, at lease commencement to borrow an amount equal to the lease payments on a collateralized basis over the term of the lease within a particular currency environment. We used the incremental borrowing rate as of January 1, 2019 for this operating lease. We factored into our determination of the lease payments any rental escalation, renewal options, and/or termination options as appropriate. Variable lease payment amounts that cannot be determined at the commencement of the lease are not included in the right-to-use assets or liabilities.

We elected the use of permitted practical expedients of not recording leases on our Combined Balance Sheet when the leases have terms of 12 months or less, and we elected not to separate nonlease components from lease components and instead account for each separate lease component and the nonlease components associated with that lease component as a single lease component.

The following table presents the lease balances within the Combined Balance Sheet as of December 31, 2021:

(in thousands)	Classification on the Balance Sheet	December 31, 2021	December 31, 2020
Assets			
Operating lease assets	Operating lease right-of-use assets	$ 5,789	$ 6,858
Liabilities			
Current			
Operating lease liabilities	Current maturities of operating leases	—	—
Long-term			
Operating lease liabilities	Operating lease liabilities	9,936	7,340
Weighted average remaining lease term			
Operating leases		10 years	11 years
Weighted average discount rate			
Operating leases		7.2 %	7.2 %

The following table reconciles the undiscounted future minimum lease payments (displayed by year and in the aggregate) under noncancelable operating leases with terms of more than one year to the total operating lease liabilities recognized on our Combined Balance Sheet as of December 31, 2021:

Year Ending	(In thousands)
2022	$ (396)
2023	1,048
2024	1,659
2025	1,715
2026	1,773
Thereafter	9,116
Total undiscounted future minimum lease payments	$ 14,915
Less: Difference between lease payments and discounted lease liabilities	4,979
Total lease liabilities	$ 9,936

The minimum lease payments above include tenant improvement payments of $2.0 million and $0.6 million for the years ended 2022 and 2023, respectively. We conduct certain of our operations under operating lease agreements. Rent expense under operating leases was approximately $1.3 million for the year ended December 31, 2021 and $0.9 million for the year ended December 31, 2020.

Supplemental cash flow information is as follows:

	For the years ended December 31,	
(in thousands)	2021	2020
Operating cash out flows from operating leases	$ 479	$ 801
Total	$ 479	$ 801

Note 15 Selected Quarterly Financial Data (Unaudited)

	For the 2021 Quarters Ended			
(In thousands)	**March 31**	**June 30**	**September 30**	**December 31**
Total revenues	$ 23,159	$ 29,987	$ 30,351	$ 33,098
Total costs and expenses, net	35,787	35,098	36,020	46,582
Net loss	(12,628)	(5,111)	(5,669)	(13,484)

	For the 2020 Quarters Ended			
(In thousands)	**March 31**	**June 30**	**September 30**	**December 31**
Total revenues	$ 32,101	$ 23,365	$ 19,289	$ 20,265
Total costs and expenses, net	34,875	31,065	34,903	29,080
Net loss	(2,774)	(7,700)	(15,614)	(8,815)

Note 16 Subsequent Events

We have reviewed all subsequent events and transactions that occurred after the date of our December 31, 2021 Combined Carve Out Balance Sheet date up through March 15, 2022, which is the date that the Combined Financial Statements were available to be issued, noting no items that required adjustment or disclosures in the Combined Carve Out Financial Statements, except for, the January 2022 announcement by Sema4 Holdings Corp. (“Sema4”) and OPKO that they had signed a definitive agreement pursuant to which Sema4 has agreed to acquire GeneDx, subject to the satisfaction of customary closing conditions (the “GeneDx Transaction”). The GeneDx Transaction is expected to close in the second quarter of 2022.

ANNEX A

MERGER AGREEMENT

AGREEMENT AND PLAN OF MERGER AND REORGANIZATION

by and among

SEMA4 HOLDINGS CORP.,
a Delaware corporation,

ORION MERGER SUB I, INC.,
a Delaware corporation,

ORION MERGER SUB II, LLC,
a Delaware limited liability company,

GENEDX, INC.,
a New Jersey corporation,

GENEDX HOLDING 2, INC.,
a Delaware corporation,

AND

OPKO HEALTH, INC.,
a Delaware corporation,

Dated as of January 14, 2022

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AGREEMENT AND PLAN OF MERGER AND REORGANIZATION

This **AGREEMENT AND PLAN OF MERGER AND REORGANIZATION** (this "***Agreement***"), dated as of January 14, 2022 (the "***Agreement Date***"), is entered into by and among Sema4 Holdings Corp., a Delaware corporation ("***Acquirer***"), Orion Merger Sub I, Inc., a Delaware corporation ("***Merger Sub I***"), Orion Merger Sub II, LLC, a Delaware limited liability company ("***Merger Sub II***" and together with Merger Sub I, the "***Merger Subs***"), GeneDx, Inc., a New Jersey corporation (the "***Company***"), GeneDx Holding 2, Inc., a Delaware corporation ("***Holdco2***"), and OPKO Health, Inc., a Delaware corporation (the "***Seller***"). Acquirer, the Merger Subs, the Company, Holdco2, and Seller are sometimes referred to individually as a "***Party***" and collectively as the "***Parties***."

RECITALS

WHEREAS, Acquirer desires to acquire the Company upon the terms set forth herein;

WHEREAS, Seller owns indirectly 100% of the issued and outstanding shares of capital stock of the Company as of the Agreement Date;

WHEREAS, (a) Merger Sub I is a wholly owned direct Subsidiary of Acquirer that was formed for purposes of consummating the First Merger and (b) Merger Sub II is a wholly owned direct Subsidiary of Acquirer that was formed for purposes of consummating the Second Merger;

WHEREAS, prior to the First Merger and the Second Merger (each as defined below), the following steps will be taken: (i) OPKO Ireland R&D, Ltd, an indirect subsidiary of Seller, will transfer all the shares of MyGeneTeamCanada, Ltd. ("***MGT Canada***") to Seller; (ii) Seller will contribute all of the shares of MGT Canada and of MyGeneTeam LLC. ("***MGTUS***" and together with MGT Canada, the "***MGT Group***") to Bio-Reference Laboratories, Inc., a New Jersey corporation and wholly owned subsidiary of Seller ("***BioReference***"); (iii) BioReference will contribute all of the shares of the MGT Group to the Company; (iv) Seller will form Bio-Reference Laboratories, Inc, a Delaware corporation ("***BioReference Delaware***"), as a direct subsidiary, and BioReference will merge with and into BioReference Delaware with BioReference Delaware surviving the merger; (v) Seller has formed GeneDx Holding 1, Inc. ("***Holdco1***") and will transfer the shares of BioReference Delaware to Holdco1; (vi) BioReference Delaware will convert into an LLC ("***BioReference Laboratories, LLC***") and transfer the shares of the Company to Holdco1; (vii) Holdco1 will form GeneDx, Inc, a Delaware corporation ("***GeneDx Delaware***") and shall merge the Company with and into GeneDx Delaware with GeneDx Delaware surviving the merger with all of the rights and obligations of the Company; and (viii) all of the shares of Holdco 2, then a wholly owned subsidiary of Seller, will be contributed by Seller to Holdco1, and Holdco1 will transfer all of the shares of GeneDx Delaware to Holdco2 and GeneDx Delaware will convert to GeneDx, LLC, a Delaware LLC ("***GeneDx Delaware LLC***" or as of or subsequent to the Pre-Closing Restructuring, either "GeneDx Delaware LLC" or the "Company"), and will be a wholly owned subsidiary of Holdco2 and an indirect subsidiary of Seller, with all the rights and obligations of GeneDx Delaware, all as also set forth on Schedule D, together with such changes, if any, that do not adversely affect any of the Parties, as may be necessary or desirable for Tax purposes (collectively, the "***Pre-Closing Restructuring***");

WHEREAS, upon the terms and conditions set forth herein, on the Closing Date but following consummation of the Pre-Closing Restructuring, Merger Sub I will merge with and into Holdco2 (the "***First Merger***"), with Holdco2 as the surviving corporation in the First Merger;

WHEREAS, immediately after the consummation of the First Merger, as part of the same overall transaction, Holdco2, as the surviving corporation in the First Merger, will merge with and into Merger Sub II (the "***Second Merger***" and, together with the First Merger, the "***Mergers***"), with Merger Sub II as the surviving corporation and the direct owner of all of the equity interests in GeneDx Delaware LLC;

WHEREAS, after giving effect to the First Merger, Holdco2 shall be a wholly owned direct Subsidiary of Acquirer, and each share of Holdco2 Common Stock will be converted into the right to receive the Merger Consideration, on the terms and subject to the conditions set forth in this Agreement;

WHEREAS, each of the parties hereto intend that, for United States federal income tax purposes, the Mergers will be treated as a single integrated transaction and qualify as a "reorganization" within the meaning of Section 368(a) of the Code (a "***Reorganization***"), to which each of the Parties are to be parties under Section 368(b) of the Code, and this Agreement is intended to constitute a "plan of reorganization" within the meaning of Treasury Regulations Section 1.368-2(g);

WHEREAS, the board of directors of Holdco2 (the "***Holdco2 Board***") has unanimously adopted the Holdco2 Board Approval and the board of directors of Seller (the "***Seller Board***") has unanimously adopted the Seller Board Approval;

WHEREAS, each of the boards of directors of the Acquirer and Merger Sub I, in its capacity as the sole member of Merger Sub II, has (a) approved and declared advisable this Agreement and Transactions, upon the terms set forth herein and (b) determined that this Agreement and the Transactions are fair to, and in the best interests of, each such Acquirer Party and their respective equityholders;

WHEREAS, concurrent with the execution of this Agreement, and as a condition and inducement to Acquirer's willingness to enter into this Agreement, each of the Key Employees has entered into an employment agreement with Acquirer, together with Acquirer's customary form of proprietary information and inventions agreement (each, a "***Key Employee Agreement***"), each to become effective subject to and upon the Closing;

WHEREAS, immediately following the execution and delivery of this Agreement, Holdco2 shall seek to obtain and deliver to Acquirer a written consent in form and substance reasonably satisfactory to Acquirer (a "***Written Consent***") executed by Seller, (a) evidencing the obtainment of the Holdco2 Stockholder Approval, (b) waiving any rights of Seller to appraisal rights under Section 262 of the DGCL in connection with the Transactions, and (c) taking certain other actions in connection with the approval of this Agreement and the Transactions, including the Mergers;

WHEREAS, concurrently with the execution of this Agreement, and as a condition and inducement to Acquirer's, Merger Sub I's and Merger Sub II's willingness to enter into this Agreement, Seller and each of the stockholders of Seller identified on Schedule A (collectively, the "***Lock-Up Holders***") shall enter into and deliver to Acquirer a shareholder agreement in substantially the form attached hereto as Exhibit A (the "***Shareholder Agreement***");

WHEREAS, concurrently with the execution of this Agreement, and as a condition and inducement to Seller's and the Company Parties' willingness to enter into this Agreement, each of the stockholders of Acquirer identified on Schedule B (the "***Supporting Stockholders***") shall enter into and deliver to Seller and the Company a support agreement in substantially the form attached hereto as Exhibit B; and

WHEREAS, on or prior to the Agreement Date, Acquirer entered into Subscription Agreements with PIPE Investors pursuant to which, and on the terms and subject to the conditions of which, such PIPE Investors agreed to purchase from Acquirer shares of Acquirer Stock for an aggregate purchase price equal to the PIPE Investment Amount, such purchases to be consummated prior to or substantially concurrently with the Closing (the "***PIPE Investment***").

AGREEMENT

NOW THEREFORE, in consideration of the respective covenants and promises contained herein and for other good and valuable consideration, the receipt and adequacy of which are hereby acknowledged, the Parties, intending to be legally bound, agree as follows:

ARTICLE 1
DEFINITIONS

1.1 Defined Terms. As used herein, the terms below shall have the following meanings. Other terms may be defined elsewhere in the text of this Agreement and, unless otherwise indicated, shall have such meaning indicated throughout this Agreement.

"***Accounting Standards***" means accounting principles generally accepted in the United States, consistently applied for the applicable periods presented.

"***Acquirer Board***" means the board of directors of Acquirer.

"***Acquirer Disclosure Schedules***" means the Disclosure Schedules delivered by Acquirer to the Company in connection with the execution of this Agreement.

"***Acquirer Fundamental Representations***" means the representations and warranties contained in Section 3.1 (Organization of the Acquirer Parties), Section 4.2 (Authorization), Section 4.3 (Capitalization) and Section 4.8 (No Brokers).

"***Acquirer Group***" means any consolidated, combined, unitary or other aggregate group of entities for Tax purposes (including Code Section 1504 and similar provisions of state and local Laws) in which Acquirer is the common parent entity.

"***Acquirer Party***" means Acquirer, Merger Sub I and Merger Sub II.

"***Acquirer Stock***" means shares of Class A common stock, par value $0.0001 per share, of Acquirer.

"***Acquirer Stockholder Approval***" means the approval of: (i) the issuance of the Stock Consideration pursuant to this Agreement by the affirmative vote of holders of shares of Acquirer Stock having a majority in voting power of the votes cast by the holders of all of the shares of Acquirer Stock present or represented at the Acquirer Stockholders' Meeting and voting affirmatively or negatively and (ii) the approval of an amendment to Acquirer's current Third Amended and Restated Certificate of Incorporation to increase the authorized shares of Acquirer Stock as the Acquirer Board deems necessary or advisable in connection with the consummation of the Transactions (but in no event to a number greater than 1.0 billion) by the affirmative vote of holders of shares of Acquirer Stock having a majority of the shares of Acquirer Stock outstanding as of the applicable record date (and, for the elimination of doubt, abstentions and broker non-votes may be counted to determine the presence of a quorum at the Acquirer Stockholders' Meeting but shall not be counted as votes cast for or against any proposal).

"***Acquisition Proposal***" means any proposal or offer from any Person relating to any direct or indirect acquisition or purchase of a material portion of the assets, net revenues or net income of the Company, or 50% or more of the aggregate equity interests of the Company, any tender offer or exchange offer that if consummated would result in any Person beneficially owning 50% or more of the aggregate equity interests of the Company, any merger, consolidation, business combination, recapitalization, liquidation, dissolution or similar transaction involving the acquisition of 50% or more of the aggregate equity interests or assets of the Company, in each case, other than the Transactions, any material joint venture or other strategic investment in or involving the Company, including any third party financing, investment in or recapitalization of the Company. For the elimination of doubt, the PIPE Investment is not an Acquisition Proposal.

"***Affiliate***" means, with respect to any Person, any other Person which directly or indirectly controls, is controlled by or is under common control with such first Person. As used in this definition, "***control***" means (a) the ownership of more than 50% of the voting securities or other voting interest of any Person, or (b) the possession,

directly or indirectly, of the power to direct or cause the direction of the management and policies of such Person, whether through ownership of voting securities, by Contract, as a general partner, as a manager or otherwise. From and after the Effective Time, the Company shall be considered an Affiliate of the Acquirer.

"***Ancillary Agreements***" means the Certificates of Merger, the Escrow Agreement, the Shareholder Agreements, the Transition Services Agreement and each other agreement, document, instrument or certificate contemplated by this Agreement and executed or to be executed in connection with the Transactions.

"***Antitrust Laws***" means any federal, state, provincial, territorial and foreign statutes, rules, regulations, governmental orders, administrative and judicial doctrines and other applicable Laws that are designed or intended to prohibit, restrict or regulate foreign investment or actions having the purpose or effect of monopolization or restraint of trade or lessening of competition through merger or acquisition.

"***Bayh-Dole Act***" means the Patent and Trademark Law Amendments Act of 1980, codified at 35 U.S.C. sections 200-212, as amended, as well as any regulations promulgated pursuant thereto, including in 37 C.F.R. Part 401.

"***Benefit Plan***" means each benefit plan, program, policy, practice, trust, fund, Contract, agreement or arrangement (whether or not an "employee benefit plan" within the meaning of Section 3(3) of ERISA), including any pension, profit-sharing, 401(k) retirement, bonus, incentive compensation, deferred compensation, loan, vacation, sick pay, employee stock ownership, stock purchase, stock option or other equity based compensation plans, severance, employment, Contractor, unemployment, death, hospitalization, sickness, or other medical, dental, vision, life, or other insurance, long- or short-term disability, change of control, fringe benefit, cafeteria plan or any other employee or fringe benefit plan, program, policy, practice, trust, fund, Contract, agreement or arrangement that provides benefits to current or former employees, directors, officers or independent contractors who are natural persons (or beneficiaries thereof).

"***Business***" means the business of the Company Group as currently conducted by the Company Group as of the date of this Agreement; provided, that, for purposes of, and subject to, Section 2.7 the "Business" means the business of the Company Group as conducted during the First Milestone Period and the Second Milestone Period, as applicable.

"***Business Day***" means a day other than a Saturday, Sunday or other day on which commercial banks in New York, New York are authorized or required by applicable Law to remain closed.

"***CARES Act***" means the Coronavirus Aid, Relief, and Economic Security Act of 2020, Pub. L. No. 116-136, 131 Stat. 281.

"***Cash Consideration***" means: (i) $150,000,000 in cash, plus (ii) the Closing Net Working Capital Surplus, if any, minus (iii) the Closing Net Working Capital Shortfall, if any, minus (iv) the amount of Closing Indebtedness, if any, minus (v) the aggregate amount of Transaction Expenses that have not been fully paid as of immediately prior to the Closing.

"***Closing Indebtedness***" means the aggregate amount of all Indebtedness of the Company Group outstanding as of the Measurement Time (other than with respect to Taxes included in Indebtedness, which shall be calculated as of the end of the day on the Closing Date after giving effect to the Transactions); provided that, the calculation of Closing Indebtedness shall exclude: (i) in the event the Closing has not occurred within three months immediately following the Agreement Date, 100% of the portion of the Seller Debt attributable to the Company Group operations during the fourth through sixth months immediately following the Agreement Date, up to a maximum amount of $15,000,000 and (ii) in the event the Closing has not occurred within six months immediately following the Agreement Date, (A) the amounts excluded pursuant to clause (i) with respect to the fourth through the sixth months plus (B) with respect to each month during the period commencing with the seventh month immediately following the Agreement Date and ending at the Measurement Time, a portion of the Seller Debt attributable to the Company Group operations equal to 50% of the amount specified for the applicable month in the Pre-Closing Budget (clause (i) and (ii), collectively, the "***Assumed Seller Debt***"). For the elimination of doubt, any current or other portion of Indebtedness shall be included in Closing Indebtedness and not included in Company Net Working Capital.

"***Closing Net Working Capital Shortfall***" means the amount, if any, by which the Closing Net Working Capital Target exceeds Company Net Working Capital.

"***Closing Net Working Capital Surplus***" means the amount, if any, by which the Company Net Working Capital exceeds the Closing Net Working Capital Target.

"***Closing Net Working Capital Target***" means $22,000,000. "***Code***" means the U.S. Internal Revenue Code of 1986.

"***Commercial Software***" means any Software or Software as a service services that are commercially available and (i) are licensed or provided as a service to any member of the Company Group pursuant to a nonexclusive Software license or Software services agreement for a one-time or annual fee of $100,000 or less, (ii) are not material to the conduct of the Business by the Company Group and (iii) have not been modified or customized for any member of the Company Group.

"***Company Data***" means all data Processed in connection with the marketing, or use of any Company Product or the conduct of the Business, including Company-Licensed Data, Company-Owned Data and Personal Data.

"***Company Data Agreement***" means any Contract relating to or otherwise addressing the Processing of Company Data by or on behalf of the Company Group or otherwise in connection with the conduct of the Business (including Contracts with third parties relating to the Processing of Company Data) to which any member of the Company Group, Seller or its Affiliates is a party or by which they are bound, including the standard terms of service entered into by users of the Company Products (copies of which have been Delivered to Acquirer).

"*Company Databases*" means each distinct electronic or other repository or database containing (in whole or in part) Company Data maintained by or for any member of the Company Group at any time, which for clarity contain more than 300,000 exomes and 2.1 million phenotypes.

"***Company Disclosure Schedules***" means the Disclosure Schedules delivered by the Seller and the Company Parties to Acquirer in connection with the execution of this Agreement.

"***Company Employee***" means each current and former officer or employee of any member of the Company Group.

"***Company Fundamental Representations***" means the representations and warranties contained in Section 3.1 (Organization of Seller and the Company Group), Section 3.2 (Subsidiaries), Section 3.3 (Authorization), Section 3.4 (Capitalization), Section 3.5(b) (Title to and Sufficiency of Real and Tangible Properties and Assets), Section 3.12 (Taxes), Section 3.19(b) and (p) (Sufficiency of Intangible Properties and Assets) and Section 3.23 (No Brokers).

"***Company Group***" means (x) the Company and its Subsidiaries as of the Agreement Date and (y) immediately following consummation of the Pre-Closing Restructuring, Holdco2 and its direct subsidiary, GeneDx Delaware LLC, together with the Subsidiaries of GeneDx Delaware LLC immediately following the Pre-Closing Restructuring.

"***Company IP***" means any Company Owned IP and any Company Licensed IP. "***Company IP Contracts***" means any and all Contracts concerning Intellectual Property to which any member of the Company Group is a party or beneficiary or by which any member of the Company Group, or any of its or their properties or assets, may be bound, including all (i) licenses of Intellectual Property by the Company Group to any third party, (ii) licenses of Intellectual Property by any third party to any member of the Company Group, (iii) other Contracts between any member of the Company Group and any third party relating to the transfer, development, maintenance or use of Intellectual Property and (iv) consents, settlements, and Orders governing the use, validity or enforceability of Intellectual Property.

"***Company IT Assets***" means any and all IT Assets used or held for use in connection with the operation of the Business that are owned or controlled by any member of the Company Group, Seller or its Affiliates.

"***Company-Licensed Data***" means all data owned by third parties that are Processed by the Company Group or, otherwise, in connection with the marketing or use of any Company Product or the conduct of the Business.

"***Company Licensed IP***" means any Intellectual Property that is licensed to the Company Group from another Person, including for clarity any Intellectual Property in and to Company Products other than Company Owned IP.

"***Company Net Working Capital***" means, as of the Measurement Time: (i) the Company Group's consolidated total current assets less (ii) the Company Group's consolidated total current liabilities, in each case as specifically set forth in the Company Net Working Capital Schedule. For the elimination of doubt (A) the Company Group's current assets shall exclude (I) accounts receivable that are aged longer than 150 days, (II) any deferred Tax assets and (III) any loans or indebtedness of the Company Group's officers in favor of any member of the Company Group, (B) the Company Group's current liabilities shall include, without duplication, all Liabilities for (I) accounts payable, (II) accrued expenses, (III) vacation and paid time off accrued by or for the Company Employees (iii) deferred revenue and customer deposits, and (iv) local non-income taxes payable and (C) the Company Group's current assets and liabilities shall exclude all (I) operating lease assets and liabilities (including tenant improvement assets), (II) current income tax assets and liabilities (including current income tax assets, income tax receivable or recoverable, income taxes payable, valuation allowance for current income taxes), and (III) intercompany receivables and liabilities. For the avoidance of doubt, Company Net Working Capital shall exclude (x) all Liabilities for Transaction Expenses that are incurred but unpaid as of the Closing, (y) any Closing Indebtedness and (z) any Seller Debt. An example calculation of Company Net Working Capital as of November 30, 2021 is included in the Company Net Working Capital Schedule.

"***Company Net Working Capital Schedule***" means the example calculation, for illustrative purposes only, of Company Net Working Capital as of November 30, 2021 contained in Exhibit D.

"***Company-Owned Data***" means each element of data Processed that (a) is used or held for use in the Business that is not Personal Data or Company-Licensed Data and (b) the Company Group owns or purports to own.

"***Company Owned IP***" means any Intellectual Property in which any member of the Company Group has or purports to have an ownership interest (whether solely or jointly with one or more other persons).

"***Company Parties***" (and each, a "***Company Party***") means (i) the Company and Holdco2 as of the Agreement Date until immediately prior to consummation of the Pre-Closing Restructuring and (ii) Holdco2 and GeneDx Delaware LLC following consummation of the Pre-Closing Restructuring.

"***Company Privacy Commitments***" means, collectively: (A) the Company Group's obligations under the Company Privacy Policies, (B) providing adequate notice and obtaining any necessary consents from end users and other natural Persons, as applicable required for the Processing of Personal Data as conducted by or for the Company Group, (C) any notices, consents, authorizations and privacy choices (including opt-in and opt-out preferences, as required) of end users and other natural Persons relating to Personal Data and (D) industry self-regulatory principles and codes of conduct applicable to the protection or Processing of Personal Data, biometrics, internet of things, direct marketing, e-mails, text messages, robocalls, telemarketing or other electronic communications (including the Payment Card Industry Data Security Standards) to which any member of the Company Group is bound or otherwise represents compliance.

"***Company Privacy Policies***" means, collectively, any and all (A) of the Company Group's currently applicable data privacy and security policies, procedures, and notices, whether applicable internally, or published on Company Websites or otherwise made available by the Company Group to any Person, and (B) public representations (including representations on Company Websites), made by or on behalf of the Company Group with regard to Personal Data.

"***Company Product***" means any product or service currently produced, marketed, licensed, sold, distributed or performed by the Company Group and any product or service that is being researched or under development for use in the Business, including those set forth in Section 3.15(b) of the Company Disclosure Schedule.

"***Company Software***" means all Software used or held for use in connection with the operation of the Business.

"***Company Websites***" means all websites owned, operated or hosted by the Company Group or through which the Company Group conducts the Business, and the underlying platforms for such websites.

"***Confidentiality Agreement***" means the letter agreement between Seller, the Company and Acquirer, dated October 12, 2021.

"***Consent***" means any required consent, waiver or approval of a third party for the consummation of the Transactions or to the Transfer, or amendment of a Contract.

"***Continuing Employees***" means all employees of any member of the Company Group immediately prior to the Effective Time.

"***Contract***" means any agreement, understanding, contract, note, bond, deed, mortgage, lease, sublease, license, sublicense or instrument that is legally binding, whether written or oral.

"***Controlled Group Liability***" means any and all Liabilities (a) under Title IV of ERISA, (b) under Section 302 of ERISA, (c) under Section 412 and 4971 of the Code, and (d) as a result of a failure to comply with the continuation coverage requirements of Section 601 et seq. of ERISA and Section 4980B of the Code, other than such Liabilities that arise solely out of, or relate to, Company Benefit Plans.

"***Copyrights***" means all copyrights, whether in published or unpublished works; databases, data collections and rights therein, mask work rights, Software, web site content; rights to compilations, collective works and derivative works of any of the foregoing and moral rights in any of the foregoing; registrations and applications for registration for any of the foregoing and any renewals or extensions thereof.

"***COVID-19***" means the novel coronavirus known as SARS-CoV-2 or COVID-19, and variant thereof.

"***COVID-19 Response***" means any quarantine, travel restriction, "stay-at-home" orders, social distancing measures or other safety measures, workforce reductions, workplace or worksite shutdowns or slowdowns, factory closures, "shelter in place", "stay at home", workforce reduction sequester safety or similar Law, directive or guidelines promulgated by any applicable Governmental Authority or other measures initiated to the extent reasonably necessary to, respond to, or mitigate the effects of, the COVID-19 pandemic, as recommended by any applicable Governmental Authority, including the Centers for Disease Control and Prevention or the World Health Organization, in each case, in connection with or in response to COVID-19, including the Coronavirus Aid, Relief and Economic Security Act, as may be amended, or the Families First Coronavirus Response Act, as may be amended or any other applicable Law.

"***Data Room***" means the virtual data room for the Transactions hosted at securevdr.com, to which Acquirer and its Representatives have access.

"***Default***" means (i) any actual breach, violation or default, (ii) the existence of circumstances or the occurrence of an event that, with the passage of time or the giving of notice or both, would constitute a breach, violation or default or (iii) the existence of circumstances or the occurrence of an event that, with or without the passage of time or the giving of notice or both, would give rise to a right of cancellation, termination, modification renegotiation or acceleration.

"***Deliver***" means (i) providing to Acquirer a copy of any item required to be delivered to Acquirer directly or (ii) including any such item in the Data Room, in each case (clauses (i) and (ii)), not less than one Business Day prior to the Agreement Date (except if a particular date of Delivery is specified).

"***Detect Genomix***" shall mean Detect Genomix, LLC, a Florida limited liability company, with principal office at 1301 Concord Terrace, Sunrise, Florida 33323

"***DGCL***" means the General Corporation Law of the State of Delaware.

"***Dispute***" means any dispute, controversy or claim (of any and every kind or type, whether based on contract, tort, statute, regulation, or otherwise) arising out of, relating to, or in connection with this Agreement, the

negotiation, execution or performance of this Agreement (including any such dispute, controversy or claim based upon, arising out of or related to any representation or warranty made in or in connection with this Agreement or as an inducement to enter into this Agreement) or the Transactions, including any dispute as to the construction, validity, interpretation, enforceability or breach of this Agreement.

"***Domain Names***" means Internet electronic addresses, uniform resource locators and alphanumeric designations associated therewith registered with or assigned by any domain name registrar, domain name registry or other domain name registration authority as part of an electronic address on the Internet and all applications for any of the foregoing.

"***EMA***" means the European Medicines Agency and any successor agency(ies) or authority having substantially the same function.

"***Encumbrance***" means any charge, claim, mortgage, lien, option, pledge, security interest, right of first refusal, easement, deed of trust or encumbrance.

"***Environmental Law***" means all applicable Laws which relate to pollution, the environment, natural resources or human health and safety, including any Laws which relate to (i) the protection, preservation or restoration of the environment (including air, water vapor, surface water, groundwater, drinking water supply, surface land, subsurface land, plant and animal life or any other natural resource), or (ii) the exposure to, or the use, storage, recycling, treatment, generation, transportation, processing, handling, labeling, production, release or disposal of Hazardous Substances.

"***ERISA***" means the Employee Retirement Income Security Act of 1974, as amended. "***ERISA Affiliate***" means any Person which is (or at any relevant time was or will be) a member of a "controlled group of corporations" with, under "common control" with, or a member of an "affiliate service group" with the Company Group as such terms are defined in Sections 414(b), (c), (m) or (o) of the Code.

"***Escrow Account***" means the escrow account established by the Escrow Agent to hold the Escrow Amount in trust.

"***Escrow Amount***" means $13,470,000 in cash and 8,314,815 shares of Acquirer Stock. "***Escrow Expiration Date***" shall mean the 12-month anniversary of the Closing Date. "***Estimated Cash Consideration***" means the Company's good faith estimate of the Cash Consideration set forth in the Estimated Closing Statement.

"***Estimated Closing Statement***" means a statement, setting forth, Seller's and the Company Parties' good faith estimates of: (a) the Company Net Working Capital (including (i) the Company Group's balance sheet as of the Closing Date prepared in accordance with the Accounting Standards, (ii) an itemized list of the Company Group's consolidated total current assets (in each case as set forth in the Company Net Working Capital Schedule), (iii) an itemized list of the Company Group's consolidated total current liabilities (in each case as set forth in the Company Net Working Capital Schedule) and (iv) the calculation of the Closing Net Working Capital Shortfall or Closing Net Working Capital Surplus, as applicable); (b) the amount of the Closing Indebtedness (including an itemized list of each item of Company Indebtedness with a description of the nature of such Company Indebtedness and the Person to whom such Company Indebtedness is owed) and the aggregate amount of Seller Debt (including itemized detail reflecting the amount attributable to each month of Company Group operations during the Pre-Closing Period); (c) unpaid Transaction Expenses (including an itemized list of each Transaction Expense with a description of the nature of such expense and the Person to whom such expense is owed); and (d) based on such amounts, the calculation of the Cash Consideration.

"***European Union***" means the economic, scientific and political organization of member states as it may be constituted from time to time, which as of the Agreement Date consists of Austria, Belgium, Bulgaria, Croatia, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden and that certain portion of Cyprus included in such organization.

"***Exchange Act***" means the Securities Exchange Act of 1934, as amended. "***FCPA***" means the United States Foreign Corrupt Practices Act.

"***FDA***" means the United States Food and Drug Administration and any successor agency thereto.

"***FDCA***" means the United States Federal Food, Drug, and Cosmetic Act, 21 U.S.C. § 301 et seq.

"***Fraud***" means common law fraud with the element of scienter, as interpreted under the Laws of the State of Delaware and, for the avoidance of doubt, excluding claims based on negligence or recklessness.

"***Fundamental Representations***" means the Acquirer Fundamental Representations and the Company Fundamental Representations, as applicable.

"***Governing Documents***" means the legal document(s) by which any Person (other than an individual) establishes its legal existence or other organizational documents of such Person. For example, the "Governing Documents" of a corporation are its certificate or articles of incorporation and by-laws and the "Governing Documents" of a limited liability company are its operating or limited liability company agreement and certificate of formation.

"***Governmental Authority***" means any (a) nation, state, commonwealth, province, territory, county, municipality, district or other jurisdiction of any nature; (b) international, multinational, supra-national, federal, state, local, municipal, foreign or other government, agency or authority; (c) governmental or quasi-governmental authority of any nature (including any governmental division, department, agency, commission, securities exchange or instrumentality and any court or other tribunal) or (d) any bureau, instrumentality or commission or any court, tribunal, judicial or arbitral body, industry or trade or private body exercising any regulatory or quasi regulatory power or authority, including the FDA, European Commission and EMA, and any Institutional Review Board or Ethics Committee.

"***Governmental Program***" means all "federal health care programs" (as defined by 42

U.S.C. § 1320a–7b(f)), including Medicare, Medicaid, TRICARE, Maternal and Child Health Service Block Grant, Children's Health Insurance Program, and any other similar or successor federal, state or local healthcare payment programs with, or sponsored in whole or in part by, any Governmental Authority or any agent or contractor of a Governmental Authority.

"***Hazardous Substances***" means any pollutant, chemical, substance and any toxic, infectious, carcinogenic, reactive, corrosive, ignitable or flammable chemical, chemical compound, hazardous substance, material or waste, whether solid, liquid or gas, that is subject to regulation, control or remediation under any Environmental Laws, including any quantity of petroleum product or byproduct, solvent, flammable or explosive material, radioactive material, asbestos, lead paint, polychlorinated biphenyls (or PCBs), dioxins, dibenzofurans, heavy metals, radon gas, mold, mold spores, and mycotoxins.

"***Health Care Laws***" means any applicable Law regarding health care products and services applicable to the Company Group or Company Products, including any applicable Law the purpose of which is to ensure the safety, efficacy and quality of genetic testing and diagnostic and similar products by regulating the research, development, manufacturing and distribution of such products, including applicable Law relating to CLIA requirements, record keeping and filing of required reports, and relating to promotion and sales of health care products to providers and facilities that bill or submit claims under government healthcare programs, including (i) CLIA, the PHSA, and applicable FDA Emergency Use Authorization ("***EUA***") requirements(ii) the federal Anti-kickback Statute (42 U.S.C. § 1320a-7b(b)); the Anti-Inducement Law (42 U.S.C. § 1320a-7a(a)(5)); the Stark Law (42 U.S.C. §1395nn et seq); the civil False Claims Act (31 U.S.C. §§ 3729 et seq.); the administrative False Claims Law (42 U.S.C. § 1320a- 7b(a)); the Exclusion Laws and the Civil Monetary Penalties Law (42 U.S.C. § 1320a-7 and 1320a-7a); the Medicare statute (Title XVIII of the Social Security Act), including Social Security Act §§ 1860D-1 to 1860D-43 (relating to Medicare Part D and the Medicare Part D Coverage Gap Program); the Medicaid statute (Title XIX of the Social Security Act); the Physician Payments Sunshine Act (42 U.S.C. § 1320a- 7h), and any other similar applicable Law, whether of the United States or any other applicable jurisdiction, (iii) the Clinical Laboratory

Improvement Amendments of 1988, (iv) the Program Fraud Civil Remedies Act (31 U.S.C. §§ 3801-3812), (v) the Prohibition on Inducement of Beneficiaries Statute (42 U.S.C. § 1320a-7a(a)(5)), (vi) the Federal Health Care Fraud Law (18 U.S.C. § 1347), (vii) the Health Insurance Portability and Accountability Act of 1996, as amended by the Health Information Technology for Economic and Clinical Health Act of 2009 (codified at 42 U.S.C. § 300gg and 29 U.S.C. § 1181 et seq. and 42 USC 1320d et seq.), (viii) Medicare (Title XVIII of the Social Security Act), (ix) Medicaid (Title XIX of the Social Security Act) and (x) all applicable state privacy and confidentiality laws, and state laws, including those related to insurance, balance billing, out-of-network services and the waiver of deductibles, copayments or cost-sharing.

"***Holdco2 Common Stock***" means the common stock, par value $0.0001 per share, of Holdco2.

"***HSR Act***" means the Hart-Scott-Rodino Antitrust Improvements Act of 1976, as amended, and the rules and regulations promulgated thereunder.

"***Indebtedness***" means (without duplication), as to any Person: (a) all obligations for the payment of principal, interest, penalties, fees or other Liabilities for borrowed money (including notes payable), incurred or assumed (including pursuant to the Paycheck Protection Program of the CARES Act to the extent not forgiven or subject to forgiveness under the CARES Act), including in the case of the Company Group, the Seller Debt, (b) all obligations for the deferred purchase price of property or services including pursuant to any earn-out or similar obligation (other than current trade payables or short-term accruals incurred in the Ordinary Course of Business), (c) any obligations for amounts drawn under any letter of credit, surety bond, debenture, promissory note, performance bond or other similar instrument, (d) all obligations as lessee under leases that are required to be recorded as capital or finance leases under the Accounting Standards (including leases excluded from the balance sheet due to duration of term), (e) (i) all obligations under that certain Amended and Restated Credit Agreement, dated August 30, 2021, by and among BioReference Laboratories, Inc., certain of its subsidiaries, including the Company, and JPMorgan Chase Bank, N.A., only to the extent the Company Group and its assets have not been fully and irrevocably released from all obligations thereunder and any corresponding security interest arising thereunder has not been terminated prior to the Closing and (ii) all indebtedness of Third Parties secured by an Encumbrance on any asset or property owned or acquired by such Person (if recourse for such security interest is limited to such asset or property, in an amount equal to the lesser of (x) such indebtedness and (y) the fair market value of such asset or property), (f) any obligation that is required to be reflected as debt on the balance sheet of such Person under the Accounting Standards, (g) all obligations in respect of interest rate and currency swaps, protection agreements, hedges, caps or collar agreements or similar arrangements either generally or under specific contingencies, (h) all obligations in respect of deferred compensation or unfunded or underfunded pension obligations, including any Controlled Group Liability, but excluding accrued but unpaid 401(k) plan employer match contributions under the Seller 401(k) Plan for the portion of the plan year ending on the Closing Date (the "***Accrued 2022 401(k) Match***") (i) any unpaid executive sign-on bonuses or bonuses related to COVID-19, unpaid discretionary annual bonuses for the period ending December 31, 2021 as determined in Seller's sole discretion and unpaid pro-rated discretionary annual bonuses for the year-ended December 31, 2022 based on actual performance through the Closing Date) (and the employer portion of any payroll Taxes of such member of the Company Group or Acquirer arising from the payment of any such bonuses or payments), (j) any Repayment Obligations, (k) any Pre- Closing Taxes and any other Liabilities of the Company Group for Taxes as of the Closing, whether or not such Liabilities for Taxes would then be due and payable (including, for the avoidance of doubt, employer payroll taxes or other Taxes arising in connection with any payment required pursuant to, or arising as a result of, this Agreement or the Transactions, and including any such taxes that have been deferred pursuant to the CARES Act, and taking into account Transaction Tax Deductions to the extent permitted by applicable Law on a "more likely than not" basis), and (l) all indebtedness of others referred to in clauses (a) through (l) above guaranteed directly or indirectly in any manner by such Person.

"***Intellectual Property***" means all worldwide intellectual property or industrial property rights protected, created, arising under or recognized by any Laws or Governmental Authority, including (i) Patents; (ii) Trademarks; (iii) Copyrights; (iv) Trade Secrets; (v) all rights to sue and recover damages for past, present and future infringement, misappropriation, dilution or other violation of any of the foregoing;, and (vi) all other rights similar or pertaining to any of the foregoing in anywhere in the world.

"***IRS***" means the Internal Revenue Service of the United States.

"***IT Assets***" means Software, databases, systems, servers, computers, hardware, firmware, middleware, storage media (e.g., backup tapes), networks, data communications lines, routers, hubs, switches, network devices and all other information technology equipment, and all associated documentation.

"***Key Employee***" means Katherine Stueland, Kevin Feeley and Jennifer Brendel.

"***Knowledge***" means: (i) with respect to the Company, the actual knowledge of the persons listed in Section 1.1 of the Company Disclosure Schedules, including such knowledge that would be acquired by such persons through their reasonable inquiry and (ii) with respect to Acquirer, the actual knowledge of the persons listed on Section 1.1 of the Acquirer Disclosure Schedules, including such knowledge that would be acquired by such persons through their reasonable inquiry.

"***Law***" means any applicable federal, state, local or other domestic or foreign law (including common law), statute, ordinance, rule, regulation, Order, writ, or other requirement issued, enacted, adopted, promulgated, implemented or otherwise put into effect by or under the authority of any Governmental Authority.

"***Liability***" means any direct or indirect liability, indebtedness, obligation, commitment, expense, claim, deficiency, guaranty or endorsement of or by any Person of any type, known or unknown, and whether accrued, absolute, contingent, matured, unmatured or other.

"***Material Adverse Effect***" means any event, change, condition, circumstance, effect, development, occurrence or state of facts ("***Effect***") that, individually or in the aggregate with all other Effects, has, or would reasonably be expected to have, a material adverse effect on (i) the condition (financial or otherwise), business, results of operations or assets of the Company Group (taken as a whole) or (ii) the ability of Seller or the Company Parties to perform their respective obligations under this Agreement; provided that no Effect attributable to any of the following shall be taken into account in determining the existence of a Material Adverse Effect solely for purposes of clause (i) above: (A) conditions affecting the industry, financial markets or securities markets in, or the economy as a whole of, the United States, (B) changes in Law or Accounting Standards (or, in each case, any interpretation thereof) after the Closing Date, (C) earthquakes, hostilities, acts of war, sabotage or terrorism or military actions, epidemic, public health event or pandemic (including COVID-19 and any worsening thereof (including any COVID-19 Response)), (D) any actions required under this Agreement or otherwise negotiated separately to obtain any approval or authorization under applicable antitrust or competition Laws for the consummation of the transactions contemplated hereby, (E) the announcement or pendency of this Agreement and the consummation of the transactions contemplated hereby (including the effects of such announcement and pendency on relationships with customers, suppliers, Governmental Authorities, employees or other third-party relationships), (F) any actions taken (or omitted to be taken) by or at the written request of the Acquirer or as required by this Agreement, or (G) any failure, in and of itself, of the Company Group to meet any internal or published projections, forecasts or revenue or earnings predictions for any period (it being understood that the underlying causes of the facts or occurrences giving rise to such failure may be taken into account in determining whether a Material Adverse Effect has occurred), except, in the case of the forgoing clauses (A), (B) and (C), to the extent such conditions, changes or events disproportionately affect the Company Group relative to similarly situated industry participants (in which case the incremental disproportionate impact or impacts may be taken into account in determining whether there has been a Material Adverse Effect).

"***Measurement Time***" means 11:59 p.m., Eastern Time, on the date immediately preceding the Closing Date.

"***Merger Consideration***" means the Cash Consideration plus the Stock Consideration.

"***Most Recent Balance Sheet***" means the balance sheet of the Company as of September 30, 2021.

"***Nasdaq***" means the Nasdaq Global Select Market.

"***Order***" means any writ, judgment, injunction, determination, consent, order, decree, stipulation, award or executive order of or by any Governmental Authority.

"***Ordinary Course of Business***" means the ordinary course of business of the Company Group, consistent with past practice.

"***Parent***" means OPKO Health Inc., a Delaware corporation.

"***Parent Group***" means any consolidated, combined, unitary or other aggregate group of entities for Tax purposes (including Code Section 1504 and similar provisions of state and local Laws) in which Parent is the common parent entity.

"***Patents***" means any and all patents, industrial and utility models, industrial designs, petty patents, design patents, patents of importation, patents of addition, certificates of invention, and other indicia of invention ownership issued or granted by any Governmental Authority; applications for any of the foregoing, including provisional, utility, design, priority, divisional, and continuation (in whole or in part) applications, and all other pre-grant forms of any of the foregoing; extensions, reissues, re- examinations, renewals, or other post-grant forms of any of the foregoing; equivalent or similar rights in inventions and discoveries anywhere in the world; counterparts of any of the foregoing anywhere in the world; and other forms of government issued rights substantially similar to any of the foregoing.

"***Payor Parties***" (and each, a "***Payor Party***") means any payors administering Governmental Program benefits or any other healthcare service plan, any health maintenance organizations, any health insurers and any other private and commercial payors.

"***Permits***" means all licenses and operating licenses, permits, concessions, franchises, approvals, clearances, registrations, certificates, rights, grants, exceptions, exemptions, qualifications, privileges, exemptions, authorizations (including marketing and testing authorizations), easements, variances, permissions, consents or Orders of, any Governmental Authority, including any marketing authorizations, and any approvals or filings relating to any pre-clinical or clinical development, together with all applications therefor and all renewals, extensions, or modifications thereof and additions thereto.

"***Permitted Encumbrances***" means (i) Encumbrances for Taxes not yet due and payable and that are reserved for in full on the Most Recent Balance Sheet in accordance with the Accounting Standards, (ii) statutory, mechanics', laborers' and materialmen liens arising in the Ordinary Course of Business for sums not yet due and payable and not otherwise in default (or for which the validity or amount of which is being contested in good faith), (iii) zoning, entitlement, conservation restriction and other land use and environmental regulations promulgated by Governmental Authorities, (iv) Encumbrances granted to any lender at the Closing in connection with any financing by the Acquirer, (v) any right, interest, lien, title or other Encumbrance of a lessor or sublessor under any lease or other similar agreement or in the property (other than Intellectual Property) being leased, (vi) restrictions on the transfer of securities arising under federal and state securities laws, (viii) non-exclusive licenses of Intellectual Property granted in the Ordinary Course of Business (A) for the use of results generated by Company Products from a patient sample solely for the clinical care of the patient from which such sample was collected, or (B) for incidental use of trademarks by payors, customers or service providers solely to identify Company Group as the provider of Company Products ((A) and (B) collectively, "***Ordinary Course Licenses***") and (ix) Encumbrances listed on Schedule 1.1(b) of the Company Disclosure Schedules.

"***Person***" means any person or entity, whether an individual, sole proprietorship, general partnership, limited partnership, limited liability partnership, corporation, limited liability company, limited liability limited partnership, business trust, joint stock company, trust, unincorporated association, joint venture, estate, Governmental Authority or other entity or organization.

"***Personal Data***" means all data or information that constitutes personal data, protected health information, individually identifiable health information or personal information under any applicable Law.

"***PHSA***" means the United States Public Health Service Act.

"***PIPE Investment Amount***" means the aggregate gross purchase price received by Acquirer prior to or substantially concurrently with Closing for the shares in the PIPE Investment.

"***PIPE Investors***" means those certain investors participating in the PIPE Investment pursuant to the Subscription Agreements.

"***Post-Closing Tax Period***" means any Tax period beginning after the Closing Date and that portion of any Straddle Period beginning after the Closing Date.

"***PPP Loan***" means (i) any covered loan under paragraph (36) of Section 7(a) of the Small Business Act (15 U.S.C. 636(a)), as added by Section 1102 of the CARES Act, or (ii) any loan that is an extension or expansion of, or is similar to, any covered loan described in clause (i).

"***Pre-Closing Budget***" means the budget set forth on Schedule C.

"***Pre-Closing Restructuring***" has the meaning set forth in the Recitals, as further described on Schedule D.

"***Pre-Closing Tax Period***" means any Tax period ending on or before the Closing Date and that portion of any Straddle Period ending on and including the Closing Date.

"***Pre-Closing Taxes***" means (i) any Liability for any Tax of or owed by the Company Group in respect of any Pre-Closing Tax Period, (ii) any Liability for any Taxes of Seller, (iii) all Taxes imposed in respect of a Pre-Closing Tax Period the payment of which Taxes is deferred to a taxable period (or portion thereof) beginning after the Closing Date, (iv) all Taxes of any member of an affiliated group of corporations, within the meaning of Section 1504 of the Code (or any predecessor provision or comparable provision of state, local or foreign Law) of which any member of the Company Group (or any predecessor of any such member) is or was a member on or prior to the Closing Date, including pursuant to Treasury Regulations Section 1.1502-6 or any analogous or similar U.S. state or local, or non-U.S. Law, (v) Taxes of Seller arising from the Transactions, (vi) any Transfer Taxes for which Seller is liable pursuant to this Agreement or under applicable Law, and (vii) any Taxes of any Person imposed on any member of the Company Group as a transferee or successor, by Contract or pursuant to any Law, which Taxes relate to an event or transaction occurring before the Closing. Notwithstanding the foregoing, Pre-Closing Taxes shall not include Taxes otherwise included in the calculation of the amount of Company Net Working Capital, Closing Indebtedness or the Merger Consideration, Taxes attributable to transactions occurring after the Closing on the Closing Date outside the Ordinary Course of Business, or Taxes attributable to breaches by the Acquirer of its agreements, representations, warrants or covenants under this Agreement.

"***Privacy Laws***" means (i) each U.S. federal or state Law applicable to the Company Group with respect to protection or Processing or both of Personal Data, and includes, but is not limited to (A) the Health Insurance Portability and Accountability Act of 1996 as amended by the Health Information Technology for Economic and Clinical Health Act of 2009 as otherwise amended from time to time, and the rules and regulations promulgated thereunder, including the Privacy Standards (45 C.F.R. Parts 160 and 164), the Electronic Transactions Standards (45 C.F.R. Parts 160 and 162), and the Security Standards (45 C.F.R. Parts 160, 162 and 164) ("***HIPAA***"), and (B) law, regulations and/or rules relating to the Processing of biometric data, direct marketing, e-mails, text messages, robocalls, telemarketing or other electronic commercial messages and (ii) binding guidance issued by a Governmental Authority that pertains to one of the laws, rules or regulations outlined in clause (i).

"***Proceeding***" means any suit, litigation, arbitration, mediation, alternative dispute resolution procedure, claim, action, complaint, proceeding, hearing, or investigation (whether civil or criminal, administrative or judicial, and whether public or private), in each case to, from, by or before any Governmental Authority.

"***Process***" or "***Processing***" or "***Processed***" means, with respect to data, the use, collection, processing, storage, recording, organization, adaption, alteration, transfer, retrieval, consultation, disclosure, dissemination or combination of such data.

"***Public Official***" means (a) any Representative of any Governmental Authority, (b) any Representative of any commercial enterprise that is wholly owned or controlled by a Governmental Authority, including any state-owned or controlled medical facility, and (c) any political party, party official or candidate for political office.

"***Public Software***" means any Software that is distributed as freeware, shareware, open source Software (e.g., Linux) or similar licensing or distribution models. For the avoidance of doubt, "Public Software" includes Software licensed, distributed under or otherwise subject to any of the following licenses or distribution models (or licenses or distribution models similar thereto): (A) GNU's General Public License (GPL) or Lesser/Library GPL (LGPL); (B) the GNU Affero GPL license; (C) the Artistic License (e.g., PERL); (D) the Mozilla Public License; (E) the Netscape Public License; (F) the Sun Community Source License (SCSL); (G) the Sun Industry Standards License (SISL); (H) the BSD License; (I) Red Hat Linux; (J) the Apache License; and (K) any other license or distribution model described by the Open Source Initiative as set forth on www.opensource.org, and any other free, open-source, or "copy left" license or terms that requires as a condition of use, modification or distribution that such software or other software combined or distributed with it be (i) disclosed or distributed in source code form; (ii) licensed for the purpose of making derivative works; (iii) redistributable at no charge; or (iv) licensed subject to a patent non-assert or royalty-free patent license.

"***Registered Company IP***" means all Registered IP included in the Company Owned IP. "***Registered IP***" means all Intellectual Property that is registered, issued, granted by any Governmental Authority (including the United States Patent and Trademark Office or United States Copyright Office), and all applications, registrations and grants for any of the foregoing.

"***Regulatory Approval***" means, with respect to a Company Product in a country, any and all approvals, licenses, registrations or authorizations of any Governmental Authority necessary to commercially distribute, sell or market such Company Product in such country, including, where applicable, pricing or reimbursement approval in such country and (ii) pre- and post-approval marketing authorizations (including any prerequisite manufacturing approval or authorization related thereto).

"***Regulatory Authority***" means any applicable Governmental Authority that regulates or otherwise exercises authority with respect to the Exploitation of any Company Product or administers Health Care Laws.

"***Regulatory Documentation***" means all (i) Regulatory Approvals and Regulatory Permits; correspondence and reports submitted to or received from Regulatory Authorities (including minutes and official contact reports relating to any communications with any Regulatory Authority) and all supporting documents with respect thereto, including all adverse event files and complaint files; and (iii) pre-clinical, clinical and other data contained or relied upon in any of the foregoing; in each case (clauses (i), (ii) and (iii)) relating to the Company Products.

"***Regulatory Permit***" means governmental licenses, franchises, permits, certificates, consents, approvals, registrations, concessions or other authorizations required to have been obtained from, or filings required to have been made with, Governmental Authorities pursuant to a Health Care Law in order to allow the conduct of a regulated activity.

"***Related Party***" means: (i) Seller; (ii) each Person who is, or who was at the time of the entry into this Agreement or the creation of the interest in question an officer or director of any member of the Company Group or Seller, or who, beneficially or of record, held shares or other equity interests in any member of the Company Group, or who served as a an officer or officer of a Person who, beneficially or of record, owned shares or other equity interests in any member of the Company Group; and (iii) each member of the immediate family of each of the Persons referred to in clause (i) or (ii) above. For purposes of this definition, the "immediate family" of an individual means (x) the individual's spouse and (y) the individual's parents, brothers, sisters and children.

"***Repayment Obligations***" means any repayment obligations of the Company Group arising from or related to services rendered prior to the Closing which are ultimately not paid, or where reimbursement is subsequently refunded to or recouped, in each case in whole or in part, by the applicable Payor Party due to actual or alleged errors or omissions, including improper coding, lack of coverage, lack of medical necessity or non-compliance with other applicable Payor Party requirements.

"***Representative***" means, with respect to any Person, any officer, director, principal, attorney, agent, employee or other representative of such Person.

"***Required Financial Statements***" means such financial statements of the Company Group as are required by Regulation S-X to be included in the Proxy Statement or Closing 8-K.

*"**SEC**"* means the U.S. Securities and Exchange Commission. "***Securities Act***" means the Securities Act of 1933.

"***Seller Debt***" means the financing provided by Seller to the Company Group during the Pre-Closing Period in order to fund the Company Group's operations in accordance with the Pre-Closing Budget and evidenced by an inter-company note bearing interest at the statutory applicable federal annual mid-term rate.

"***Share Value***" means $4.86.

"***Software***" means all (i) computer programs, applications, systems and code, including software implementations of algorithms, models and methodologies, and source code and object code, (ii) Internet and intranet websites, databases and compilations, including data and collections of data, whether machine-readable or otherwise, (iii) software development and design tools, library functions and compilers, (iv) technology supporting websites, and the contents and audiovisual displays of websites and (v) documentation, other works of authorship and media, including user manuals and training materials, relating to or embodying any of the foregoing or on which any of the foregoing is recorded.

"***SPAC Merger Agreement***" means that certain Agreement and Plan of Merger, dated February 9, 2021, entered into by and among CM Life Sciences, Inc., S-IV Sub, Inc. and Legacy Sema4, as amended.

"***Specified Designees***" means (i) one (1) individual designated by the Company and (ii) one (1) one individual designated by Seller who is independent from Seller and the Company Group, in each case as mutually agreed with Acquirer.

"***Stock Consideration***" means 80,000,000 shares of Acquirer Stock, as adjusted for any stock split, stock dividend, recapitalization, merger, consolidation or similar event occurring after the Agreement Date.

"***Straddle Period***" means any Tax period beginning on or before the Closing Date and ending after the Closing Date.

"***Stueland Employment Agreement***" means that certain Employment Agreement, dated as of June 7, 2021, by and among Katherine Stueland, Seller and the Company.

"***Stueland Employment Agreement Obligations***" means the sum of (i) the aggregate amount of the Sign On Bonus (within the meaning of the Stueland Employment Agreement) that has not been paid to Katherine Stueland as of the Closing Date, plus (ii) the aggregate fair market value of the Initial Option (within the meaning of the Stueland Employment Agreement), regardless of whether or not the Initial Option is outstanding as of the Closing Date or will remain outstanding as of immediately following the Closing but subject to clause (C) below, and the Additional Option (within the meaning of the Stueland Employment Agreement), with such aggregate fair market value determined based on the closing price of Seller's common stock as of the trading day immediately preceding the Closing Date minus the applicable exercise price per share (for the avoidance of doubt, if such closing price equals or exceeds the exercise price per share of the Initial Option or the Additional Option, the fair market value of the Initial Option or Additional Option, as applicable, for purposes of this clause (ii) shall be zero); provided that: (A) if the Closing occurs prior to June 21, 2022 or Katherine Stueland waives her right to receive the Additional Option prior to or in connection with the Closing, then the Additional Option shall be deemed to have a fair market value of $0, (B) if the Closing occurs on or following June 21, 2022, the Additional Option has not been granted as of the trading day immediately preceding the Closing Date, and Katherine Stueland does not waive her right to receive the Additional Option prior to or in connection with the Closing, then the per share exercise price of the Additional Option shall be deemed to equal the closing price of Seller's common stock as of June 21, 2022 (or if June 21, 2022 is not a trading day, the closing price of Seller's common stock as of the immediately preceding trading day), and (C) if Katherine Stueland's employment terminates for any reason prior to the Closing, then (i) any portion of the Initial Option that is forfeited in connection with such termination of employment and (ii) any portion

of the Initial Option that is not forfeited in connection with such termination of employment and is exercised prior to the Closing, shall in each case be deemed to have a fair market value of $0.

"***Subscription Agreements***" means the subscription agreements pursuant to which the PIPE Investment will be consummated.

"***Subsidiary***" means, when used with respect to any Person, including the Company, any entity, corporation or other organization, whether incorporated or unincorporated, for which at least a majority of the securities or other interests having ordinary voting power to elect a majority of the board of directors or others performing similar functions with respect to such entity, corporation or other organization is directly or indirectly owned or controlled by such Person or by any one or more of its Subsidiaries.

"***Tax***" means any and all federal, state, local or non-U.S. taxes and duties and similar governmental charges, assessments, levies, imposts or withholdings, including net income, gross income, capital gains, alternative minimum, base erosion anti-abuse, diverted profits, digital services, value added, goods and services, gross margin, gross receipts, sales, use, ad valorem, transfer, franchise, profits, license, lease, service, service use, withholding, payroll, employment, unemployment, social security, disability, excise, severance, environmental, stamp, occupation, premium, property, unclaimed property, escheat, windfall profits, customs, duties or other actual or estimated taxes, together with any interest, fines, penalties, surcharges and charges in respect of Taxes (including as a result of any failure to timely file a Tax Return) and any additions to tax or additional amounts with respect thereto.

"***Tax Authority***" means any Governmental Authority responsible for the determination, assessment, collection or administration of Taxes.

"***Tax Return***" means any return, declaration, report, statement, claim for refund, information statement or other document filed or required to be filed with a Tax Authority in connection with the determination, assessment, collection or administration of Taxes, as well as any schedule, attachment thereto or amendment thereof.

"***Third Party***" means any Person other than the Company Parties, the Acquirer Parties, Seller and their respective Affiliates (including their respective Subsidiaries).

"***Total Merger Consideration***" means the Merger Consideration plus the Milestone Payments, if and to the extent such amounts become payable pursuant to Section 2.7.

"***Trade Secrets***" means unpublished inventions (whether patentable or not and whether or not reduced to practice), industrial designs, discoveries, improvements, ideas, designs, models, chemical and biological materials, compounds, formulae, recipes, patterns, compilations, results, data (including pre- clinical and clinical data), databases, data collections and compilations, analyses, diagrams, drawings, blueprints, mask works, devices, methods, compositions, algorithms, techniques, patterns, processes, know- how and other forms of technology (whether or not embodied in any tangible form and including all tangible embodiments of the foregoing, such as laboratory notebooks, studies and summaries), proprietary rights in confidential information of any kind, instructions, configurations, prototypes, samples, formulations, specifications, analytic models, customer lists, source code, development tools,, in each case, to the extent constituting a trade secret as defined under the Uniform Trade Secrets Act or other applicable Laws.

"***Trademarks***" means trademarks, service marks, trade names, service names, brand names, trade dress, logos, as well as Internet domain names, corporate and other business names, other like source or business identifiers and other proprietary rights to any words, names, slogans, symbols, logos, devices or combinations thereof to the extent that they are used and function to identify, distinguish and indicate the source or origin of goods or services, together with the goodwill associated with any of the foregoing; and all registrations and renewals, applications for registration, equivalents or counterparts thereof; and all statutory, federal, common law, and rights provided by international treaties or conventions, in any of the foregoing.

"***Transaction Certificates***" means all certificates contemplated by this Agreement to be delivered at Closing by the Parties pursuant to this Agreement.

"***Transaction Documents***" means this Agreement and the Ancillary Agreements. "***Transaction Expenses***" means (a) any out-of-pocket fees, costs, payments and expenses of the Company Group, including legal and accounting fees, valuation services, investment banking fees, and related disbursements, in each case in connection with (i) the participation in or response to the investigation, review and inquiry conducted by Acquirer and its Representatives with respect to the business of the Company Group (and the furnishing of information to Acquirer and its Representatives in connection with such investigation and review), (ii) the negotiation, preparation, drafting, review, execution, delivery or performance of this Agreement or any Ancillary Agreement or any other document delivered or to be delivered in connection with the Transactions, (iii) the obtaining of any consent, waiver or approval required to be obtained in connection with any of the Transactions; (b) 50% of the out-of-pocket fees, costs, payments and expenses incurred in connection with the preparation and submission of any regulatory filing or notice required to be made or given in connection with any of the Transactions, including pursuant to HSR; (c) any sale bonuses, change in control bonuses, payments in respect of equity awards, retention payments or similar amounts that become payable by any member of the Company Group by reason of, or in connection with, the Closing, other than any such bonus or payment (i) payable pursuant to a Contract entered into by or at the request of the Acquirer or (ii) to the extent that the amount thereof is increased pursuant to the amendment to a Contract undertaken at the request of Acquirer; provided that an amount equal to the Stueland Employment Agreement Obligations shall be treated as a "Transaction Expense," (d) any severance or similar termination payments payable by any member of the Company Group to any current or former employee, or any current or former director, officer or contractor of any member of the Company Group, by reason of, or in connection with, the Closing, other than any such payment (i) payable pursuant to a Contract entered into at the request of the Acquirer, (ii) to the extent that the amount thereof is increased pursuant to the amendment to a Contract undertaken at the request of Acquirer or (iii) triggered by any action of Acquirer or the Company Group after the Closing; and (e) the employer portion of any payroll Taxes of any member of the Company Group or Acquirer arising from the payment of any amounts described in clauses (c) and (d), in each case ((a) through (e)), to the extent unpaid.

"***Transaction Tax Deductions***" means the aggregate amount of any Tax deductions relating to: (A) the payment prior to the Effective Time of any other costs or expenses incurred by any member of the Company Group in connection with the transactions contemplated hereby (including, for the avoidance of doubt, any amounts that would be Transaction Expenses but for the fact that they are not unpaid as of the Effective Time); and (B) any other items deductible for Tax purposes by any member of the Company Group and/or any of Subsidiaries of the Company Group attributable to the transactions contemplated hereby that are economically borne by the Seller; provided, that, with respect to success- based fees, seventy percent (70%) of success fees shall be treated as deductible in accordance with Revenue Procedure 2011-29, to the extent applicable.

"***Transactions***" means the transactions contemplated by the Transaction Documents, including the Pre-Closing Restructuring and the Mergers.

"***Transfer***" means to sell, convey, transfer, assign, novate, deliver, split or add or remove a party thereto.

"***Transition Services Agreement***" means the Transition Services Agreement to be entered into at the Closing, as may be mutually agreed upon in writing between the Parties pursuant to Section 5.14(a).

Index of Defined Terms.

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1.2 Interpretation. Except where expressly stated otherwise in this Agreement, references: (a) to the Recitals, Articles, Sections, Exhibits or Schedules are to a Recital, Article or Section of, or Exhibit or Schedule to, this

Agreement; (b) to any agreement (including this Agreement) or Contract are to the agreement or Contract as amended, modified, supplemented or replaced from time to time in accordance with the terms thereof (provided, that this clause (b) shall not apply with respect to the representations and warranties of the Company set forth in Section 3.8(a)); (c) to any statute, rule or regulation shall be deemed to refer to such statute, rule or regulation as amended from time to time and to any rules or regulations promulgated thereunder; provided that for purposes of any representations and warranties contained in this Agreement that are made as of a specific date or dates, references to any statute, rule or regulation shall be deemed to refer to such statute, rule or regulation, as amended (and, in the case of statutes, any rules and regulations promulgated under such statutes), in each case, as of such date; (d) to any Person include any successor to that Person or permitted assigns of that Person; and (e) to this Agreement are to this Agreement and the Exhibits and Schedules to it, taken as a whole. The table of contents and headings contained herein are for reference purposes only and do not limit or otherwise affect any of the provisions of this Agreement. Whenever the words "include," "includes" or "including" are used in this Agreement, they shall be deemed to be followed by the words "without limitation." Whenever the words "herein" or "hereunder" or "hereof" and similar words are used in this Agreement, they shall be deemed to refer to this Agreement as a whole and not to any specific Section, unless otherwise indicated. The word "or" is used in the inclusive sense (and/or). The use of "extent" in the phrase "to the extent" means the degree to which a subject or other thing extends, and such phrase does not mean simply "if." The terms herein defined in the singular shall have a comparable meaning when used in the plural, and vice versa. References to "day" or "days" refer to calendar days. The masculine, feminine and neuter genders used herein shall include each other gender. The terms "dollars" and "$" means dollars of the United States of America. Any reference to "beneficial ownership", including "beneficial owner" and "beneficially owns," shall be determined in accordance with Section 13(d) of the Exchange Act and the rules and regulations promulgated thereunder.

ARTICLE 2
THE MERGERS

2.1 The Mergers.

(a) At the Effective Time, Merger Sub I shall merge with and into Holdco2. Following the Effective Time, the separate existence of Merger Sub I shall cease and Holdco2 shall continue as the surviving corporation of the First Merger (the "Surviving Corporation").

(b) At the Closing, the Parties shall cause the Certificate of Merger in the form of Exhibit C-1 (the "First Certificate of Merger") to be properly executed and filed with the Secretary of State of the State of Delaware and shall make all other filings or recordings required under the DGCL in order to give effect to the First Merger. The First Merger shall become effective on the date and time at which the First Certificate of Merger is accepted for filing by the Secretary of State of the State of Delaware on the Closing Date or at such later date or time as is agreed by Acquirer and Holdco2 and specified in the First Certificate of Merger (the time the First Merger becomes effective being referred to herein as the "Effective Time").

(c) The First Merger shall have the effects set forth in Section 251 of the DGCL. Without limiting the generality of the foregoing, and subject thereto, at the Effective Time, all of the assets, properties, rights, privileges, powers and franchises Holdco2 and Merger Sub I shall vest in the Surviving Corporation and all Liabilities, obligations and duties of each of Holdco2 and Merger Sub I shall become the Liabilities, obligations and duties of the Surviving Corporation, in each case, in accordance with the DGCL.

(d) At the Effective Time:

(i) the Governing Documents of Merger Sub I shall be the Governing Documents of the Surviving Corporation, in each case, until thereafter changed or amended as provided therein or by applicable Law; and

(ii) the directors and officers of Merger Sub I immediately prior to the Effective Time shall be the initial directors and officers of the Surviving Corporation, each to hold office in accordance with the Governing Documents of the Surviving Corporation until such director's or officer's successor is duly elected or appointed and qualified, or until the earlier of their death, resignation or removal.

(e) Immediately following the First Merger, the Surviving Corporation shall be merged with and into Merger Sub II in accordance with the provisions of the DGCL and the Delaware Limited Liability Company Act. Merger Sub II shall be the surviving company resulting from the Second Merger (the "Surviving Entity") and shall continue its existence as a limited liability company under the laws of Delaware and succeed to and assume all the rights and obligations of the Surviving Corporation in accordance with the DGCL and the Delaware Limited Liability Company Act. Upon the consummation of the Second Merger, the separate corporate existence of the Surviving Corporation shall terminate. The Second Merger shall (i) be consummated pursuant to the terms of this Agreement and (ii) become effective as of the date and time at which the Certificate of Merger attached hereto as Exhibit C-2 (the "Second Certificate of Merger") is accepted for filing by the Secretary of State of the State of Delaware on the Closing Date or at such later date or time specified in the Second Certificate of Merger (the time the Second Merger becomes effective being referred to herein as the "Second Merger Effective Time").

(f) At the Second Merger Effective Time, the Governing Documents of Merger Sub II shall be the Governing Documents of the Surviving Entity, in each case, until thereafter changed or amended as provided therein or by applicable Law.

2.2 Closing. The consummation of the Mergers (the "***Closing***") shall take place remotely by electronic exchange of documents and signatures at a date and time to be agreed by Acquirer and the Company, which date shall, unless otherwise agreed by Acquirer and the Company, be no later than the third Business Day following the date on which all of the conditions set forth in Article 6 have been satisfied or waived (other than those conditions that, by their terms, are intended to be satisfied at the Closing, but subject to the satisfaction or waiver of those conditions. The date on which the Closing occurs is sometimes referred to herein as the "***Closing Date***."

2.3 Closing Deliveries.

(a) Certain Deliverables. Not less than five days prior to the Closing Date, the Company shall deliver to Acquirer the Estimated Closing Statement, including supporting calculations and documentation for the estimates set forth therein.

(b) Company Group Closing Deliveries. At the Closing, the Company Group and Seller, as applicable, shall deliver or cause to be delivered to Acquirer each of the following:

(i) a certificate, dated as of the Closing Date and executed on behalf of Holdco2 by its Chief Executive Officer, to the effect that each of the conditions set forth in Section 6.3(a) and Section 6.3(d) have been satisfied;

(ii) a certificate, dated as of the Closing Date and executed on behalf of Holdco2 by its Secretary, certifying (A) the certificate of incorporation of Holdco2 (the "Certificate of Incorporation") in effect as of the Closing, (B) the bylaws of Holdco2 (the "Bylaws") in effect as of the Closing, and (C) the resolutions of the Holdco2 Board reflecting the Holdco2 Board Approval;

(iii) payoff letters or similar instruments in form and substance reasonably satisfactory to Acquirer with respect to all Closing Indebtedness for borrowed money (including, for the avoidance of doubt, under that certain Amended and Restated Credit Agreement, dated August 30, 2021, by and among BioReference Laboratories, Inc., certain of its subsidiaries, including the Company, and JPMorgan Chase Bank, N.A., only to the extent the Company Group and its assets have not been fully and irrevocably released from all obligations thereunder and any corresponding security interest arising thereunder has not been terminated prior to the Closing), which letters provide for the release of all Encumbrances relating to such Closing Indebtedness following satisfaction of the terms contained in such payoff letters (including the payment in full and discharge of all principal and accrued but unpaid interest and any premiums or other fees payable in connection with such Closing Indebtedness);

(iv) invoices from each Person that is entitled to any Transaction Expenses at Closing reflecting the total amount of Transaction Expenses that has been incurred and remains payable to such Person as of the Closing;

(v) the Written Consent and Shareholder Agreement, in each case executed by Seller;

(vi) the Shareholder Agreement executed by each of the Lock-Up Holders;

(vii) the Escrow Agreement, executed by Seller;

(viii) unless Acquirer provides written notice to Holdco2 no later than three Business Days prior to the Closing Date to the contrary, a resignation letter reasonably satisfactory to Acquirer executed by each director and officer of each member of the Company Group in office immediately prior to the Closing, in each case, effective as of, and contingent upon, the Effective Time;

(ix) a certificate from the Secretary of State of the States of Delaware and each other state or other jurisdiction in which any member of the Company Group is organized, dated within three Business Days prior to the Closing Date, certifying that such member of the Company Group is in good standing and that all applicable franchise and similar Taxes and fees of the Company and each applicable Subsidiary of the Company through and including the Closing Date have been paid;

(x) an IRS Form W-9 (Request for Taxpayer Number and Certification), duly executed by Seller (provided, that, if Seller to provide such form, Acquirer's only recourse shall be to withhold applicable Taxes with respect to Seller's proceeds in accordance with Section 2.8;

(xi) the First Certificate of Merger, executed by Holdco2;

(xii) evidence reasonably satisfactory to Acquirer of receipt of all consents, approvals, novations, amendments and terminations set forth on Schedule 2.3(b)(xiv); and

(xiii) a USB drive (or similar device) containing a copy of the contents of the Data Room.

(c) Acquirer Closing Deliveries. At the Closing, Acquirer shall deliver or cause to be delivered to Seller each of the following:

(i) a certificate, dated as of the Closing Date and executed on behalf of Acquirer by its Chief Executive Officer, to the effect that each of the conditions set forth in Section 6.2(a) and Section 6.2(c) have been satisfied;

(ii) a certificate, dated as of the Closing Date and executed on behalf of Acquirer by its Secretary, certifying (A) the certificate of incorporation of Acquirer in effect as of the Closing, (B) the bylaws of Acquirer in effect as of the Closing, and (C) the resolutions of the Acquirer Board approving the Transactions;

(iii) each Ancillary Agreement to which any Acquirer Party is a party that has not previously been delivered to the Holdco2 and Seller, executed and delivered by each Acquirer Party that is a party thereto; and

(iv) the Merger Consideration, as set forth in and in accordance with Section

2.5(a)(i).

2.4 Effect on Holdco2 Common Stock.

(a) Treatment of Holdco2 Common Stock. Upon the terms and subject to the conditions set forth herein, including Section 2.5(b), Section 2.6, Section 2.7, Section 2.8 and Article 8, at the Effective Time, by virtue of the First Merger and without any action on the part of any Party or any other Person, the shares of Holdco2 Common Stock issued and outstanding immediately prior to the Effective Time (other than Excluded Shares) shall be automatically converted into the right of Seller to receive: (A) the Merger Consideration and (B) if and only to the extent payable pursuant to Section 2.7, the Milestone Payments.

(b) Treasury Shares. At the Effective Time, all shares of Holdco2 Common Stock that are owned by the Company as treasury stock immediately prior to the Effective Time ("Excluded Shares") shall be cancelled and

extinguished without any conversion thereof or payment of any cash or other property or consideration therefor and shall cease to exist.

(c) Treatment of Merger Sub I Capital Stock. At the Effective Time, by virtue of the First Merger and without any action on the part of Acquirer, Merger Sub I or any other Person, each share of capital stock of Merger Sub I that is issued and outstanding immediately prior to the Effective Time shall be converted into and become one share of common stock of the Surviving Corporation (and the shares of the Surviving Corporation into which the shares of Merger Sub I capital stock are so converted shall be the only shares of the Surviving Corporation's capital stock that are issued and outstanding immediately after the Effective Time). From and after the Effective Time, each certificate evidencing ownership of a number of shares of Merger Sub I capital stock will evidence ownership of such number of shares of common stock of the Surviving Corporation.

(d) Treatment of Merger Sub II Membership Interests. At the Second Merger Effective Time, by virtue of the Second Merger and without any action on the part of Acquirer, Merger Sub II or any other Person, each share of common stock of the Surviving Corporation that is issued and outstanding immediately prior to the Second Merger Effective Time shall be cancelled and extinguished without any conversion thereof. At the Second Merger Effective Time, each membership interest of Merger Sub II that is issued and outstanding immediately prior to the Second Merger Effective Time will constitute a membership interest of the Surviving Entity (and the membership interests of the Surviving Entity shall be the only membership interests of the Surviving Entity issued and outstanding immediately after the Second Merger Effective Time).

(e) Adjustments. In the event of any stock split, reverse stock split, stock dividend (including any dividend or distribution of securities convertible into capital stock), reorganization, reclassification, combination, recapitalization or other like change with respect to the Holdco2 Common Stock occurring after the Agreement Date and prior to the Effective Time, all references herein to specified numbers of shares of any class or series affected thereby, and all calculations provided for that are based upon numbers of shares of any class or series (or trading prices therefor) affected thereby, shall be equitably adjusted to the extent necessary to provide the parties the same economic effect as contemplated by this Agreement prior to such stock split, reverse stock split, stock dividend, reorganization, reclassification, combination, recapitalization or other like change.

(f) Fractional Shares. No fraction of a share of Acquirer Stock will be issued in connection with the Transactions and in lieu thereof Seller will receive from Acquirer, an amount of cash equal to the product (rounded upwards to the nearest whole cent) of such fraction of a share Seller would otherwise receive and the Share Value.

(g) No Interest. Notwithstanding anything to the contrary contained herein, no interest shall accumulate on any cash payable in connection with the consummation of the Transactions.

2.5 Payment Procedures.

(a) Payment; Release of Claims.

(i) On the Closing Date, Acquirer shall pay and issue, as applicable, the Merger Consideration to Seller, in accordance with the wire and delivery instructions delivered in writing to Acquirer by Seller no less than three (3) Business Days prior to the Closing, less the Escrow Amount. Notwithstanding anything herein to the contrary, (A) all cash payments made under this Agreement in respect of the Total Merger Consideration shall be made in U.S. dollars and (B) any shares of Acquirer Stock issued by Acquirer in respect of the Total Merger Consideration shall be issued in the name of Seller.

(ii) Effective upon and only upon the consummation of the Closing, notwithstanding anything contained herein to the contrary, in consideration of the execution, delivery and performance by Acquirer, Merger Sub I and Merger Sub II of this Agreement, as of the Closing, Seller, on behalf of itself and its Affiliates (each, a "Releasing Party") hereby RELEASES, WAIVES, ACQUITS AND FOREVER DISCHARGES the Company Parties (each, a "Released Party"), from any and all Damages, liabilities, costs, expenses, claims, damages, actions, causes of action, or suits in law or equity, of whatever kind or nature that any Releasing Party ever had or may now have against any Released Party relating to the Company or its business and that have accrued or arisen prior to the Closing, including those based on any fact or circumstance arising from Seller's past or current

ownership or alleged ownership, as applicable, of any Holdco2 Common Stock (including any claims relating to actual or alleged breaches of fiduciary or other duties by the Company's directors, officers or stockholders), whether based on Contract or any applicable Law (including tort, statute, local ordinance, regulation or any comparable law) in any jurisdiction, including under California Civil Code Section 1542, which provides that "A GENERAL RELEASE DOES NOT EXTEND TO CLAIMS THAT THE CREDITOR OR RELEASING PARTY DOES NOT KNOW OR SUSPECT TO EXIST IN HIS OR HER FAVOR AT THE TIME OF EXECUTING THE RELEASE AND THAT, IF KNOWN BY HIM OR HER, WOULD HAVE MATERIALLY AFFECTED HIS OR HER SETTLEMENT WITH THE DEBTOR OR RELEASED PARTY."; provided that nothing in the foregoing release shall or be deemed to release any rights or obligations of any Released Party or Releasing Party (i) for indemnification or contribution, in any Releasing Party's capacity as an officer or director of the Company, under the DGCL, Section 5.12(b) any indemnification agreements to which the Releasing Party and the Company are parties that have been Delivered to Acquirer prior to the Agreement Date or the Company's Governing Documents; (ii) for amounts owed pursuant to, or other rights and obligations set forth in, this Agreement and any Ancillary Agreement; or (iii) any claim based on fraud or any other matter that cannot be released as a matter of law.

(b) Escrow Account. Notwithstanding anything to the contrary in the other provisions of this Article 2, at Closing, Acquirer shall withhold the Escrow Amount from the Merger Consideration payable to Seller pursuant to Section 2.4(a) and Section 2.5. On the Closing Date, Acquirer shall deposit the Escrow Amount with PNC Bank, National Association, a national banking association (or, if PNC Bank is unable or unwilling to act, another comparable escrow agent (the "Escrow Agent"), to be held in the Escrow Account, which shall be governed by this Agreement and the escrow agreement in customary form to be mutually agreed by the Parties acting reasonably prior to the Closing (the "Escrow Agreement"). Neither the Escrow Account (including any portion thereof) nor any beneficial interest therein may be pledged, subjected to any Encumbrance, sold, assigned or transferred by Seller or be taken or reached by any legal or equitable process in satisfaction of any debt or other Liability of Seller, in each case prior to the distribution of the Escrow Account to Seller in accordance with the applicable terms of this Agreement, except that Seller shall be entitled to assign Seller's rights to amounts held in the Escrow Account by operation of law.

2.6 Post-Closing Adjustment.

(a) Within 90 days after the Closing Date, Acquirer shall prepare and deliver, or cause to be prepared and delivered, to Seller a statement (the "Closing Statement"), setting forth its determination of the amount of Company Net Working Capital, prepared in accordance with the Company Net Working Capital Schedule (and any corresponding Closing Net Working Capital Shortfall or Closing Net Working Capital Surplus), Closing Indebtedness and Transaction Expenses that remained unpaid as of immediately prior to the Closing, and, based on the foregoing, its determination of the Cash Consideration, and the adjustment (if any) necessary to reconcile the amounts set forth in the Estimated Closing Statement to the Closing Statement in accordance with the terms and conditions of this Agreement. The Closing Statement shall be prepared in accordance with (i) the Accounting Standards and (ii) shall be based exclusively on the facts and circumstances as they shall have existed at the Measurement Time and shall exclude the effects of any event, act, information, decision, change in circumstances or similar development arising or occurring on (except with respect to Transaction Expenses) or after the Closing Date. The post-Closing purchase price adjustment as set forth in this Section 2.6 is not intended to permit the introduction of different accounting methods, policies, practices, procedures, conventions, categorizations, definitions, principles, judgments, assumptions, techniques or estimation methods with respect to financial statements, their classification or presentation or otherwise (including with respect to the nature of accounts, level of reserves or level of accruals) from the Accounting Standards.

(b) Unless Seller notifies Acquirer in writing (a "Notice of Objection") within 45 days after Acquirer's delivery of the Closing Statement (such 45-day period, the "Objection Period") that Seller disagrees with the Closing Statement, specifying the nature and amount of any dispute as to Company Net Working Capital (and any corresponding Closing Net Working Capital Shortfall or Closing Net Working Capital Surplus), Closing Indebtedness and Transaction Expenses that remained unpaid as of immediately prior to the Closing, in each case as set forth in the Closing Statement (each, a "Disputed Item"), the Closing Statement and the determinations set forth therein shall be final, binding and conclusive on the Parties. Following the delivery of the Closing Statement and for purposes of Seller's review of the Closing Statement and preparation of any Notice of Objection, Acquirer shall

afford Seller and its Representatives with reasonable access, during normal business hours and upon reasonable prior notice, to the personnel, properties, books and records of Acquirer and the Surviving Entity and to any other information reasonably requested for purposes of preparing and reviewing the calculations contemplated by this Section 2.6. Acquirer shall authorize its and the Surviving Entity's outside accountants to disclose to Seller and its Representatives work papers generated by such accountants in connection with preparing and reviewing the calculations specified in this Section 2.6; provided, that such accountants shall not be obligated to make any work papers available except in accordance with such accountants' disclosure procedures. Any Notice of Objection shall specify the basis for the objections set forth therein. Seller shall be deemed to have agreed with those items and amounts contained in the Closing Statement not disputed by Seller in a Notice of Objection.

(c) If Seller provides the Notice of Objection to Acquirer within the Objection Period, Seller and Acquirer shall, during the 30-day period following Acquirer's receipt of the Notice of Objection (such 30-day period, the "Resolution Period"), attempt in good faith to resolve each Disputed Item. During the Resolution Period, Seller shall afford Acquirer and its Representatives with reasonable access, during normal business hours and upon reasonable prior notice, to the personnel, properties, books and records of Seller and to any other information reasonably requested for purposes of preparing and reviewing the calculations contemplated by this Section 2.6. Seller shall authorize its outside accountants to disclose to Acquirer and its Representatives work papers generated by such accountants in connection with preparing and reviewing the calculations specified in this Section 2.6; provided, that such accountants shall not be obligated to make any work papers available except in accordance with such accountants' disclosure procedures. If Seller and Acquirer are unable to resolve all of the Disputed Items within the Resolution Period (the "Unresolved Items"), the Unresolved Items shall be submitted to a nationally recognized independent valuation, accounting or specialty firm to be mutually agreed upon by Seller and Acquirer, which accounting firm shall not have worked with Seller, the Company or Acquirer or any of their respective Affiliates in the preceding 12 months (such agreed firm being the "Independent Expert"). The Independent Expert shall be engaged pursuant to an engagement letter among Seller, Acquirer and the Independent Expert on terms and conditions consistent with this Section 2.6(c). The Independent Expert shall be instructed, pursuant to such engagement letter, to act as an expert and not as an arbitrator and to resolve only the Unresolved Items and not to otherwise investigate any matter independently. Seller and Acquirer each agree to furnish to the Independent Expert reasonable access to such individuals and such information, books and records as may be reasonably required by the Independent Expert to make its final determination (and any such information, books and records shall be provided to the other such Party prior to its submission or presentation to the Independent Expert). Seller and Acquirer shall also instruct the Independent Expert to render its reasoned written decision as promptly as practicable but in no event later than thirty (30) days from the date that information related to the unresolved objections is presented to the Independent Expert by Seller and Acquirer. With respect to each Unresolved Item, such decision shall be made based on the terms and conditions of this Agreement and shall not be in excess of the higher, nor less than the lower, of the amounts advocated by Acquirer in the Closing Statement or Seller in the Notice of Objection with respect to such Unresolved Item. Except as Seller and Acquirer may otherwise agree, all communications between Seller and Acquirer or any of their respective Representatives, on the one hand, and the Independent Expert, on the other hand, shall be in writing with copies simultaneously delivered to the other such Party. The resolution of Unresolved Items by the Independent Expert shall be final, binding and conclusive on the Parties (absent manifest error). All fees and expenses of the Independent Expert shall be borne on a proportionate basis by Acquirer, on the one hand, and Seller, on the other, based on the percentage which the portion of the contested amount not awarded in favor of Acquirer or Seller bears to the amount actually contested by such Person. For example, if Acquirer's calculations would have resulted in a $1,000,000 net payment to Acquirer, and Seller's calculations would have resulted in a $1,000,000 net payment to Seller and the Independent Expert's final determination as adopted pursuant to this Section 2.6(c) results in an aggregate net payment of $500,000 to Seller, then Acquirer, on the one hand, and Seller, on the other hand, shall pay 75% and 25%, respectively, of such fees and expenses.

(d) After the Cash Consideration has been finally determined in accordance with this Section 2.6 (the Cash Consideration as so determined being referred to herein as the "Final Cash Consideration"), the following payments shall be made on or prior to the third (3rd) Business Day immediately following such determination:

(i) If the Final Cash Consideration exceeds the Estimated Cash Consideration (the "Excess Amount"), then Acquirer shall pay, or cause to be paid, an amount in cash equal to the Excess Amount to Seller by wire transfer of immediately available funds to an account specified in writing by Seller; or

(ii) If the Estimated Cash Consideration exceeds the Final Cash Consideration (such excess, the "Shortfall Amount"), then Acquirer and Seller shall deliver joint written instructions to the Escrow Agent instructing the Escrow Agent to disburse to Acquirer, from the Escrow Account an amount in cash equal to the Shortfall Amount; provided, that, if the Shortfall Amount exceeds $2,500,000, then Acquirer may elect in writing to require that Seller pay, or cause to be paid, an amount in cash equal to the Shortfall Amount to Acquirer.

(e) For Tax purposes, any payments under this Section 2.6 shall be treated as an adjustment to the Merger Consideration.

2.7 Milestone Payments.

(a) Definitions.

(i) "Acquirer Capital Stock" means any and all shares, interests (including partnership interests), rights to purchase, warrants, options, participations or other equivalents of or interest in (however designated) equity of Acquirer, including Acquirer Stock and any preferred stock.

(ii) "Acquirer Change in Control" means the occurrence of any of the following events:

(i) any "person" (as such term is used in Sections 13(d)(3) of the Exchange Act), becomes the "beneficial owner" (as defined in Rules 13d 3 and 13d 5 under the Exchange Act), directly or indirectly, of more than 50% of the total voting power of the Acquirer Voting Stock ; provided that the consummation of any such transaction resulting in such person owning more than 50% of the total voting power of the Acquirer Voting Stock shall not be considered a Change of Control if (a) the Company becomes a direct or indirect wholly owned subsidiary of a holding company and (b) immediately following such transaction, (x) the direct or indirect holders of the Acquirer Voting Stock of the holding company are substantially the same as the holders of the Acquirer Voting Stock immediately prior to such transaction or (y) no person is the beneficial owner, directly or indirectly, of more than 50% of the Voting Stock of such holding company;

(ii) the adoption by the Board of Directors of a plan relating to the liquidation or dissolution of Acquirer; or

(iii) the merger or consolidation of Acquirer with or into another Person or the merger of another Person with or into Acquirer, or the sale of all or substantially all the assets of Acquirer (determined on a consolidated basis) to another Person other than a transaction following which beneficial owners of securities that represented 100% of the Acquirer Voting Stock immediately prior to such transaction (or other securities into which such securities are converted as part of such merger or consolidation transaction) beneficially own directly or indirectly at least a majority of the voting power of the Voting Stock of the surviving Person or any direct or indirect parent company of the surviving Person in such merger or consolidation transaction immediately after such transaction.

(iii) "Acquirer Voting Stock" means all classes of Acquirer Capital Stock then outstanding and normally entitled (without regard to the occurrence of any contingency) to vote in the election of directors, managers or trustees thereof.

(iv) "Company Group Revenue" means the Business' recorded net revenue related to laboratory services performed or test results reported in the applicable period (including international and decentralized net revenue), plus the Business' recorded net biopharma revenue generated from the Company Databases, calculated in accordance with the Accounting Standards utilized in the Financial Statements (consistently

applied throughout the applicable period) and as set forth on the Milestone Financial Statements for such period, provided that Company Group Revenue shall be subject to adjustment based on information available following the expiration of the applicable period through the delivery of a Milestone Event Notice for the applicable period, including as applicable to the reconciliation of cash collected to revenue recognized.

(v) "First Milestone Period" means the period of time commencing on January 1, 2022 and ending at 11:59 p.m. Eastern time on December 31, 2022.

(vi) "FY2022 Company Group Revenue" means the Company Group Revenue for the First Milestone Period.

(vii) "FY2023 Company Group Revenue" means the Company Group Revenue for the Second Milestone Period.

(viii) "Milestone Financial Statements" means a report prepared by Acquirer reflecting the Company Group Revenue during the First Milestone Period and the Second Milestone Period, as applicable.

(ix) "Second Milestone Period" means the period of time commencing on January 1, 2023 and ending at 11:59 p.m. Eastern time on December 31, 2023.

(b) Milestone Events. With respect to each milestone event set forth in the table below (each, a "Milestone Event"), Acquirer shall pay the corresponding milestone payment set forth in the table below (each, a "Milestone Payment") following the first achievement of such milestone event by the Business, in each case subject to the terms and conditions set forth in this Section 2.7:

#	Milestone Event	Milestone Payment
1.	FY2022 Company Group Revenue equal to or above $163 million	$112.5 million
2.	FY2023 Company Group Revenue equal to or above $219 million	$37.5 million

Notwithstanding anything herein to the contrary, 80% of the Milestone Payment for the First Milestone Period or the Second Milestone Period, as applicable, shall become payable in respect of such period if the Company Group achieves 90% of the applicable Milestone Event revenue target for such period set forth in the table above, which amount will scale on a linear basis up to 100% of the applicable Milestone Payment at 100% of the applicable revenue target set forth in the table above. Solely for purposes of illustration: if the Business achieves Company Group Revenue of $154.85 million for the First Milestone Period (i.e. 95% of target), then Acquirer shall pay to Seller a Milestone Payment equal to $101.25 million (i.e. 90% of the target Milestone Payment).

(c) Payment of Milestone Payments. On or prior to the later of (x) the thirtieth (30th) day immediately following Acquirer's receipt of its executed audit report from its independent registered public company accounting firm (or, if Acquirer is then not subject to the reporting requirements under Section 13(a) or 15(d) of the Exchange Act, its independent auditor) and (y) April 30th, for each of the fiscal years ending December 31, 2022 and December 31, 2023, Acquirer shall deliver to Seller a notice (a "Milestone Event Notice"), containing (i) the Milestone Financial Statements for the applicable period, (ii) a statement whether and to what extent a Milestone Event was achieved during such fiscal year, (iii) if greater than zero but less than the full amount of the Milestone Payment is payable in respect of the applicable period, Acquirer's calculation (in accordance with this Agreement) of the Milestone Payment due, (iv) the payment date for the applicable Milestone Payment, which will be within five (5) days of the date of such Milestone Event Notice (such date, the "Milestone Payment Date") and (v) the specific amounts of cash and shares of Acquirer Stock to be paid and issued, respectively, to Seller (in each case in accordance with the immediately succeeding sentence). Each Milestone Payment shall be satisfied through the payment and issuance of a combination of cash and shares of Acquirer Stock (valued at the Share Value), with such mix to be determined in Acquirer's sole discretion; provided that such allocation shall be determined such that the aggregate amount of cash included in the Total Merger Consideration remains consistent with the Intended Tax Treatment. The maximum aggregate amount of Milestone Payments that may become due and payable by Acquirer pursuant to this Section 2.7 will in no event exceed $150,000,000.

(d) Acknowledgments. Seller acknowledges and agrees that the Company Group Revenue levels for the Milestone Events shall not be construed as representing an estimate or projection of anticipated results or sales of any Company Products and that such Milestone Events are merely intended to define Acquirer's Milestone Payment obligations if such revenue levels are achieved. Seller further acknowledges and agrees that (i) nothing in this Section 2.7(d) is intended, or shall be construed, to require Acquirer to develop, commercialize or otherwise exploit a specific Company Product and (ii) nothing in this Section 2.7(d) is intended, or shall be construed, as restricting such business or imposing on Acquirer the duty to develop, commercialize or otherwise exploit any Company Product for which Milestone Payments are payable hereunder to the exclusion of, or in preference to, any other product or in any way other than in accordance with its normal commercial practices; provided that Acquirer will not, and cause its Subsidiaries not to, take any action in bad faith the purpose of which is to reduce or avoid payment of any Milestone Payment. Except as set forth in this Section 2.7(d), Acquirer shall have no other diligence obligations, express or implied, with respect to the Company Products.

(e) Milestone Payments Not a Security. The Parties acknowledge and agree, and acknowledge and agree, that (i) the right to receive any Milestone Payments is solely a contractual right and does not, in and of itself, constitute an equity ownership interest in Acquirer or any other Person, (ii) Seller has no rights as a security holder of Acquirer or any other Person merely as a result of their right to receive the Milestone Payments and (iii) no interest is payable as additional consideration with respect to any Milestone Payment.

(f) Acknowledgment. Each of the Company Parties and Seller acknowledges that the Milestone Payments are subject to numerous factors outside the control of Acquirer, (ii) there is no assurance that any Milestone Event will be achieved, (iii) neither Acquirer nor its Affiliates owe, by virtue of their obligations under this Section 2.7, a fiduciary duty or any implied duties to Seller and (iv) the parties intend that the express provisions of this Agreement shall set forth the only obligations that apply to their relationship with respect to the Milestone Payments.

(g) Operation of the Company Group Following Closing Date. Following the Closing Date and through the end of the Second Milestone Period, Acquirer shall use its Commercially Reasonable Efforts to operate the Business in the Ordinary Course of Business and otherwise in accordance with the business plan and presumptions underlying the Pre-Closing Budget and provide the Business with capital to continue operations in the Ordinary Course of Business in order to achieve the Milestone Events. Acquirer shall not take any action in bad faith the purpose of which is to reduce or avoid payment of any Milestone Payment. As used in this Section 2.7(g), "Commercially Reasonable Efforts" means carrying out those obligations and tasks that comprise a commercially reasonable level of effort and expenditure of capital and resources (including appropriate allocation of resources) that Acquirer in good faith in the exercise of its reasonable business judgment.

(h) Acceleration of Milestone Payment. Notwithstanding anything to the contrary contained herein: if both (x) an Acquirer Change in Control shall have occurred at any time on or prior to the end of the Second Milestone Period and (y) FY2022 Company Group Revenue is equal to or above $163 million, such that the full $112.5 million Milestone Payment is earned in respect of Milestone Event #1, then Milestone Event #2 shall automatically be deemed to have been achieved and Acquirer shall pay, or shall cause to be paid, to Seller the full $37.5 million Milestone Payment owing in respect of Milestone Event #2 on or prior to the later of (A) the third (3rd) Business Day immediately following such Acquirer Change in Control and (B) the Milestone Payment Date for Milestone Event #1. Upon such accelerated payment of the $37.5 million Milestone Payment owing in respect of Milestone Event #2 in accordance with this Section 2.7(h), Acquirer shall have no further obligations under this Section 2.7.

2.8 Withholding Rights. Notwithstanding anything herein to the contrary, each of Acquirer, Holdco2, the Company, the Surviving Entity and their respective agents shall be entitled to deduct and withhold from any consideration otherwise payable pursuant to this Agreement any amounts required to be deducted and withheld therefrom under applicable Law on account of Taxes ("***Applicable Withholding Law***"). Notwithstanding the foregoing, if a party paying consideration determines that an amount is required to be deducted and withheld with respect to any amounts payable, at least five (5) days prior to the date the applicable payment is scheduled to be made, the party making the payment shall provide the recipient with written notice of its intent to deduct and withhold, which notice shall include a copy of the calculation of the amount to be deducted and withheld and a

reference to the applicable provision of Law pursuant to which such deduction and withholding is required, and the party making the payment shall reasonably cooperate with the recipient to eliminate or reduce the basis for and amount of such deduction or withholding (including providing the recipient with a reasonable opportunity to provide forms or other evidence that would exempt such amounts. from withholding). Amounts so deducted or withheld shall be treated for all purposes of this Agreement as having been paid hereunder to the Person in respect of which such withholding was made. Acquirer, Holdco2, the Company, the Surviving Entity or their respective paying agent, as applicable, shall timely remit any amounts withheld or deducted pursuant to this Section to the applicable Tax Authority.

2.9 Dispute Resolution.

(a) In the event that Seller disputes (i) the purported occurrence or non-occurrence of any Milestone Event, (ii) the payment of any Milestone Payment, or (iii) any indemnification claim or setoff under Article 8 then Seller shall provide written notice to Acquirer (the "Dispute Notice") specifying the amount disputed and the basis for the dispute. Acquirer and Seller shall thereafter attempt to resolve the dispute as set forth in this Section 2.9(a).

(b) Seller and Acquirer shall attempt to resolve any dispute set forth in a Dispute Notice promptly by negotiation in good faith between an officer of Seller, on the one hand, and an officer of Acquirer, on the other, in each case who has authority to settle the dispute (subject to any limitations set by the board of directors or other governing body to which such officer reports). Each Party shall give the other Party involved written notice of any dispute not so resolved within thirty (30) days following Seller's delivery of the Dispute Notice. Within ten (10) Business Days following delivery of such notice, the Party receiving notice shall submit to the other a written response thereto. The notice and the response shall include: (i) a statement of each Party's position(s) regarding the matter(s) in dispute, and (ii) the name and title of the officer who will represent Seller and Acquirer and any other Person who will accompany that officer.

(c) Within ten (10) Business Days following delivery of a Dispute Notice, the designated officers of Acquirer and Seller shall meet at a mutually agreed time and place, and thereafter, as often as they reasonably deem necessary, to attempt to resolve the dispute. All negotiations conducted pursuant to this Section 2.9(a) (and any of the Parties' submissions in contemplation hereof) shall be kept confidential by the Parties and shall be treated by the Parties and their representatives as compromise and settlement negotiations under the Federal Rules of Evidence and any similar state rules.

(d) If Seller and Acquirer are unable to resolve any dispute arising out of this Agreement in accordance with provisions (a), (b) and (c) of this Section 2.9 within thirty (30) days after delivery of any Dispute Notice, then, subject to Section 2.9(e), Acquirer and Seller shall be entitled to submit such dispute for final adjudication to the applicable court sitting in the State of Delaware in accordance with Section 9.4.

(e) Notwithstanding Section 2.9(d), any dispute with respect to (i) the purported occurrence or non-occurrence of any Milestone Event or (ii) the payment of any Milestone Payment that shall not have been resolved by Seller and Acquirer in accordance with provisions (a), (b) and (c) of this Section 2.9 within thirty (30) days after delivery of any Dispute Notice shall be submitted to the Independent Expert. The Independent Expert shall be engaged pursuant to an engagement letter among Seller, Acquirer and the Independent Expert on terms and conditions consistent with this Section 2.9(e). The Independent Expert shall be instructed, pursuant to such engagement letter, to act as an expert and not as an arbitrator and to resolve only the items contained in the applicable Dispute Notice that shall not have been resolved between Seller and the Acquirer (the "Milestone Unresolved Items") and not to otherwise investigate any matter independently. Seller and Acquirer each agree to furnish to the Independent Expert reasonable access to such individuals and such information, books and records as may be reasonably required by the Independent Expert to make its final determination (and any such information, books and records shall be provided to the other such Party prior to its submission or presentation to the Independent Expert). Seller and Acquirer shall also instruct the Independent Expert to render its reasoned written decision as promptly as practicable but in no event later than thirty (30) days from the date that information related to the unresolved objections is presented to the Independent Expert by Seller and Acquirer. With respect to each Milestone Unresolved Item, such decision shall be made based on the terms and conditions of this Agreement and shall not be in excess of the higher, nor less than the lower, of the amounts advocated by Acquirer in the Milestone Event Notice

or Seller in the Dispute Notice with respect to such Milestone Unresolved Item. Except as Seller and Acquirer may otherwise agree, all communications between Seller and Acquirer or any of their respective Representatives, on the one hand, and the Independent Expert, on the other hand, shall be in writing with copies simultaneously delivered to the other such Party. The resolution of Milestone Unresolved Items by the Independent Expert shall be final, binding and conclusive on the Parties (absent manifest error). All fees and expenses of the Independent Expert shall be borne on a proportionate basis by Acquirer, on the one hand, and Seller, on the other, based on the percentage which the portion of the contested amount not awarded in favor of Acquirer or Seller bears to the amount actually contested by such Person.

ARTICLE 3
REPRESENTATIONS AND WARRANTIES OF THE COMPANY PARTIES AND SELLER

Each of the Company Parties and Seller hereby represents and warrants to the Acquirer Parties as follows, with each such representation and warranty subject to the exceptions set forth in the Company Disclosure Schedules (it being understood that the Company Disclosure Schedules shall be arranged in sections corresponding to the sections and subsections contained in this Article 3, and no disclosure made in any particular section of the Company Disclosure Schedules shall be deemed to be made in any other section of the Company Disclosure Schedules unless expressly made therein (by cross-reference or otherwise) or to the extent it is reasonably apparent from a reading of the text of the disclosure that such disclosure is applicable to such other sections and subsections of the Company Disclosure Schedules).

3.1 Organization of Seller and the Company Group.

(a) Each Company Party is an entity duly organized and validly existing and in good standing under the Laws of the jurisdiction of its incorporation or formation with the requisite corporate power and corporate authority to conduct its business as it is presently being conducted, to own, lease or operate, as applicable, its assets and properties, and to perform all of its obligations under its Contracts. Each of the Company Parties is duly qualified to do business as a foreign entity and is duly qualified to do business and in good standing (if such concept is applicable in the relevant jurisdiction) in each jurisdiction where the character of its assets and properties owned, leased or operated or the nature of its activities make such qualification necessary, except where the failure to be so qualified or in good standing would not have a Material Adverse Effect. Other than in connection with the Pre-Closing Restructuring, neither Seller nor any of the Company Parties has ever approved or commenced any Proceeding or made any election contemplating the dissolution or liquidation of any of the Company Parties or the winding up or cessation of the business or affairs of any of the Company Parties. Other than in connection with the Pre-Closing Restructuring, there are no entities that have been merged into or that otherwise are predecessors to any of the Company Parties. True, complete and correct copies of the Governing Documents of each of the Company Parties, as amended and in effect as of the Agreement Date, have been Delivered to Acquirer. No Company Party is in violation of its Governing Documents.

(b) Holdco2 has been organized solely for the purpose of entering into the Transaction Documents and the Ancillary Agreements to which it is a party and consummating the Pre-Closing Restructuring, the Mergers and the other Transactions, and has not engaged in any activities or business, other than those incident or related to or incurred in connection with its formation, the Pre-Closing Restructuring or the negotiation, preparation or execution of the Transaction Documents, the performance of its covenants or agreements in the Transaction Documents to which it is a party or any Ancillary Agreement or the consummation of the Transactions.

3.2 Subsidiaries.

(a) Each Subsidiary of Holdco2 and the Company is either a corporation or limited liability company duly organized and validly existing and in good standing under the Laws of the jurisdiction of its incorporation or formation with the requisite corporate power and corporate authority to conduct its business as it is presently being conducted, to own, lease or operate, as applicable, its assets and properties, and to perform all of its obligations under its Contracts. Each Subsidiary of Holdco2 and the Company is duly qualified to do business as a foreign corporation and is duly qualified to do business and in good standing (if such concept is applicable in the relevant jurisdiction) in each jurisdiction where the character of its assets and properties owned, leased or operated or the

nature of its activities make such qualification necessary, except where the failure to be so qualified or in good standing would not have a Material Adverse Effect.

(b) Section 3.2(b) of the Company Disclosure Schedule accurately lists the equity interests, whether direct or indirect, held by each of Holdco2 and the Company in each of its Subsidiaries, including such ownership after giving effect to the Pre-Closing Restructuring (collectively, the "Subsidiary Ownership Interests"), as well as the names of any other Persons who hold equity interests in such Subsidiaries and the ownership interests held by any such Persons, including such ownership after giving effect to the Pre-Closing Restructuring. The Subsidiary Ownership Interests are (or will be at Closing) duly authorized, validly issued, fully paid and non-assessable and are free of any Encumbrances, outstanding subscriptions, preemptive rights or "put" or "call" rights created by statute, the Governing Documents of any Subsidiary of Holdco2 or the Company or any Contract to which any Subsidiary of Holdco2 or the Company is a party or by which such Subsidiary or any of its assets is bound. Other than the Subsidiary Ownership Interests, there are no options, warrants or rights of any kind to acquire securities or other ownership interests in any of the Subsidiaries of Holdco2 or the Company, or any interest convertible into or exchangeable or exercisable for, any equity or similar interest in, any of the Subsidiaries of Holdco2 or the Company.

(c) True, complete and correct copies of the Governing Documents of each Subsidiary of Holdco2 and the Company (as of the Agreement Date), as amended and in effect as of the Agreement Date, have been Delivered to Acquirer. No such Subsidiary of Holdco2 or the Company is in violation of its Governing Documents.

(d) Section 3.2(d) of the Company Disclosure Schedule sets forth a true and complete list of all Contracts (x) to which Detect Genomix, Seller or any member of the Company Group is a party or by which any such party, or any of their respective assets, is bound and (y) that pertain to Detect Genomix and the operation of its business. Detect Genomix has not engaged in any activities or business, other than those incident or related to or incurred in connection with its formation or the negotiation, preparation or execution of the Contracts set forth on Section 3.2(c) of the Company Disclosure Schedule.

3.3 Authorization.

(a) Each of the Company Parties and Seller has all requisite corporate power and authority, and has taken all corporate action necessary, to execute, deliver and perform its obligations under the Transaction Documents and to consummate the Transactions. Each of the Seller Board and the Holdco2 Board, at a meeting duly called and held at which all directors were present, duly and unanimously adopted resolutions (i) approving and declaring advisable this Agreement, the Ancillary Agreements, the Mergers and the other transactions contemplated hereby and thereby, (ii) determining that the Merger Consideration is fair to the sole stockholder of Holdco2 and declaring that this Agreement, the Ancillary Agreements, the Merger and the other Transactions are in the best interests of Holdco2's stockholder, (iii) adopting this Agreement and the Ancillary Agreements, (iv) authorizing Seller and Holdco2 to enter into this Agreement and to consummate the Mergers and the other Transactions, on the terms and subject to the conditions set forth in this Agreement and the Ancillary Agreements, (v) in the case of the Holdco2 Board, (A) directing that the Mergers and this Agreement and the Ancillary Agreements be submitted to the stockholder of Holdco2 for a vote for adopting this Agreement and the Ancillary Agreements and approving the Mergers and (B) recommending that the Holdco2 stockholder votes to approve and adopt this Agreement and the Ancillary Agreements and approve the Merger and (vi) in the case of the Seller Board, authorizing Seller as the sole stockholder of Holdco2 to vote for the adoption of this Agreement and the Ancillary Agreements and approval of the Mergers (the "Holdco2 Board Approval" and the "Seller Board Approval"). No Takeover Statute or similar statute or regulation applies or purports to apply to the Company with respect to the Mergers, this Agreement or any other Transaction. This Agreement and the Ancillary Agreements to which the Company Parties or Seller is a party have been duly executed and delivered by the Company Parties and Seller, as applicable, and, assuming the due authorization, execution and delivery hereof and thereof by the other parties hereto and thereto, constitute the legal, valid and binding obligations of the Company Parties and Seller, as applicable, enforceable against the Company Parties and Seller, as applicable, in accordance with their respective terms, except as enforcement may be limited by applicable bankruptcy, insolvency, reorganization, moratorium and other laws affecting creditors' rights generally and by general principles of equity, regardless of whether enforcement is sought in a Proceeding at law or in equity (the "Enforceability Exceptions").

(b) The only vote of holders of any class or series of Holdco2 Common Stock or other equity securities necessary to approve and adopt this Agreement, the Ancillary Agreements, the Merger and the other transactions contemplated hereby and thereby is the affirmative vote of Seller (the "Holdco2 Stockholder Approval"). No vote of the holders of any class or series of capital stock of Seller is necessary to approve and adopt this Agreement, the Ancillary Agreements, the Merger and the other Transactions.

3.4 Capitalization.

(a) The total number of authorized, issued and outstanding shares of capital stock of Holdco2 consists of 1,000 shares of Holdco2 Common Stock, all of which are issued and outstanding as of the Agreement Date. The total number of authorized, issued and outstanding shares of capital stock of the Company consists of 100 shares of common stock, par value $0.01, of the Company, all of which are issued and outstanding as of the Agreement Date. As of the Agreement Date, BioReference owns all right, title and interest in and to, all of the shares of outstanding capital stock of the Company free and clear of all Encumbrances. As of the Closing, Holdco2 will own all right, title and interest in and to, all of the shares of outstanding capital stock or other equity interests of the Company free and clear of all Encumbrances. There are no other issued and outstanding shares of capital stock or other securities of Holdco2 and no outstanding commitments or Contracts to issue any shares of capital stock or other securities of Holdco2.

(b) (i) There are no preemptive or other outstanding rights, options, warrants, conversion rights, stock appreciation rights, redemption rights, repurchase rights, Contracts or securities under which Seller or Holdco2 is or may become obligated to issue or sell, or giving any Person a right to subscribe for or acquire any shares of the capital stock or other voting securities of Holdco2 or the Company and (ii) the outstanding capital stock or other voting securities of each of Holdco2 and the Company is not subject to any voting trust agreement or other Contract restricting the voting, dividend rights or disposition of such capital stock or other voting securities of Holdco2 or the Company, as applicable, except in each case as set forth in this Agreement.

3.5 Title to and Sufficiency of Real and Tangible Properties and Assets.

(a) Each member of the Company Group has good, valid and marketable title to or, in the case of leased tangible property assets and tangible properties or assets held under license, a good and valid leasehold or license interest in, all of their respective material tangible properties and assets. Each member of the Company Group holds title to all material tangible property and assets which it purports to own, free and clear of any Encumbrances other than Permitted Encumbrances. The tangible assets and personal property owned or leased by the Company Group and currently being used in the Business are, in all material respects, in good operating condition and repair, normal wear and tear excepted, and are useable in the Ordinary Course of Business.

(b) The tangible assets and properties owned by or licenses entered into by the Company Group for same constitute all of the tangible assets and properties that are necessary to conduct and operate the Business as currently conducted by the Company Group as of the Agreement Date, without the material breach or violation of any Contracts. Except as set forth on Section 3.5(b) of the Company Disclosure Schedules, neither Seller nor its Affiliates (but excluding the members of the Company Group) own or license to the Company Group any tangible property that are necessary for the Company Group to conduct, operate or continue the conduct and operation of the Business. Except as set forth on Section 3.5(b) of the Company Disclosure Schedules, there are no Contracts to which members of the Company Group are not the sole counterparties (other than Third Parties) (i) from which the Business or any member of the Company Group generates any revenue, (ii) that are material to the Business, or (iii) that are primarily used by the Company Group or in the conduct of the Business (the Contracts under clause (i), "Seller Revenue Contracts" and the Contracts under clauses (i), (ii) or (iii), collectively, "Seller Contracts").

(c) Except as set forth in Section 3.5 of the Company Disclosure Schedules, no member of the Company Group owns or has ever owned, any real property or interest in real property. Section 3.5 of the Company Disclosure Schedules lists all interests in real property leased, subleased or otherwise used or occupied by a member of the Company Group (each, a "Leased Property"), including the address of the property and the name and address of the landlord. Holdco2 has Delivered complete copies of all documents in Holdco2's possession relating to the use or occupancy of such Leased Property, including all leases, subleases, offers to lease or agreements to lease, lease

guarantees, tenant estoppels, subordinations, non-disturbance, operating agreements and attornment agreements (with any amendments or modifications related thereto, collectively, the "Leases"). With respect to the Leased Property, the applicable member of the Company Group has a valid leasehold interest in the leasehold estate relating thereto, free and clear of any Encumbrance, easement, covenant or other restriction applicable to such Leased Property which would reasonably be expected to materially impair the current uses or the occupancy by the applicable member of the Company Group of such Leased Property. No member of the Company Group has received written notice that it is in default of any of the Leases, nor has any member of the Company Group sent written notice to any other party to any of the Leases that such other party is in default thereof, in each case, except as would not reasonably be likely to result in material liability to such member of the Company Group.

3.6 Environmental Laws and Regulations. The Company Group and all facilities or real property currently owned, leased or operated by the Company Group, are now and, since such time as the Company Group has owned, leased or operated the facilities or real property, have been in compliance in all material respects with all applicable Environmental Laws. No member of the Company Group has, since the Company Group has owned, leased or operated the facilities or real property, received from any Governmental Authority any notice or demand letter alleging that any member of the Company Group is in violation of any Environmental Law, and no member of the Company Group is subject to any Order of any Governmental Authority imposing liability or obligations relating to any Environmental Law. There has been no release by any member of the Company Group, or for which any member of the Company Group would reasonably be expected to be liable by Contract or by operation of Law, of any Hazardous Substance at, under, from or to any facility or real property currently or formerly owned, leased or operated by any member of the Company Group. No member of the Company Group has assumed, undertaken or otherwise become subject to any liability of another Person relating to Environmental Laws.

3.7 Absence of Certain Activities or Changes. Since June 30, 2021, (a) the Company Group has conducted its operations in the Ordinary Course of Business (except as required by any COVID-19 Response), (b) there has been no Material Adverse Effect, and (c) no member of the Company Group has taken any action which would require the consent of Acquirer pursuant to Section 5.1 if taken during the Pre-Closing Period.

3.8 Company Contracts.

(a) Section 3.8(a) of the Company Disclosure Schedules sets forth, as of the Agreement Date, a complete and correct list of each of the following Contracts: (x) which are Seller Contracts, (y) to which any member of the Company Group is a party or (z) by which any member of the Company Group's properties or assets are bound as of the Agreement Date:

(i) any customer, supplier or payor Contract under which a member of the Company Group has made or received payments in any calendar year period since January 1, 2019 that are material in amount, which for purposes of this subsection shall be supplier Contracts in an amount of $500,000 or more per year, customer Contracts in an amount of $400,000 or more per year or payer Contracts in an amount of $100,000 or more per year, which shall include the contracts identified in Section 3.8(a)(ii);

(ii) any Contract with a (A) Top Customer, (B) Top Supplier or (C) Top Payor;

(iii) any distributor, referral or similar agreement;

(iv) (A) any joint venture, partnership or limited liability company Contract, (B) any Contract that involves a sharing of revenues, profits, cash flows, expenses or losses with other Persons, (C) any Contract that involves the payment by any member of the Company Group of royalties to any other Person and (D) any Contracts providing for payment of amounts calculated based upon the revenues or income of any member of the Company Group, earnouts, milestones, royalties or contingent payments (I) by or (II) to any member of the Company Group;

(v) all material Contracts that relate to research, development, manufacturing and/or commercialization of Company Products other than Contracts with suppliers, payers, customers and distributors or referral or similar agreements;

(vi) any agreement or Contract providing for the payment of compensation or benefits (including any accelerated vesting) upon any termination of employment or service, or in connection with the Transactions, with any current or former employees under which any member of the Company Group has any actual or potential Liability;

(vii) any Contract (A) pursuant to which any other Person is granted exclusive rights or that requires any member of the Company Group to deal exclusively with any Persons, (B) containing a "most-favored-party," best pricing or other term or provision by which any Person is, or could become, entitled to any benefit, right or privilege which, under the terms of such Contract, must be at least as favorable to such Person as those offered to another Person, (C) that limits or would limit the freedom of any member of the Company Group or any of their successors or assigns or their respective Affiliates (including Acquirer, the Surviving Entity and their respective Affiliates after Closing) to engage or participate, or compete with any other Person, in any line of business, market or geographic area, or to make use of any Intellectual Property, (D) containing any "take or pay," minimum commitments or similar provisions or provisions to purchase goods or services from a sole source other than reagent agreements entered into in the Ordinary Course of Business that include minimum purchase obligations solely as a condition to maintaining preferential pricing conditions for such reagent, (E) in which the any member of the Company Group grants rights of first refusal or first offer, right of negotiation or similar preferential rights to, any Person, or (F) that would, by its terms apply, or purport to apply, to the business of any acquirer of any member of the Company Group or the business of Acquirer following the Closing;

(viii) all Company IP Contracts (other than employee invention assignments on Company's form, Contracts that are Company IP Contracts solely because they contain licenses of Commercial Software, confidentiality obligations, licenses for feedback or incidental non-exclusive trademark licenses limited solely for the purpose of identifying the Company, any of its Subsidiaries or any counterparty as a participant in a health insurance program, a participating health insurer or service provider);

(ix) any and all Seller Contracts concerning Intellectual Property or IT Assets to which a member of the Company Group is a beneficiary or by which such member, or any of its properties or assets, may be bound, including, as applicable, all (i) licenses of Intellectual Property to any third party, licenses of Intellectual Property by any third party, (iii) other Seller Contracts relating to the transfer, development, maintenance or use of Intellectual Property, including data, or IT Assets and (iv) consents, settlements, and Orders governing the use, validity or enforceability of Intellectual Property or IT Assets ("Seller IP Contracts"), other than Contracts that are Seller IP Contracts solely because they contain licenses of Commercial Software, confidentiality obligations, licenses for feedback, incidental non- exclusive trademark licenses solely for the purpose of identifying a member of the Company Group or any counterparty as a participant in a health insurance program, a participating health insurer or service provider;

(x) any Contract providing for the development of any software, technology or Intellectual Property, independently or jointly, either by or for a member of the Company Group (other than employee invention assignment agreements with employees of a member of the Company Group on the Company's or any Subsidiary of the Company's respective standard form of agreement, copies of which have been Delivered to Acquirer);

(xi) any confidentiality, secrecy or non-disclosure Contract other than any such Contract entered into by a member of the Company Group in the Ordinary Course of Business;

(xii) (A) any settlement agreement with respect to any Proceeding, (B) any settlement or similar Contract restricting in any respect the operations or conduct of the Business, as currently conducted or as proposed to be conducted, of a member of the Company Group (or the Acquirer or its Affiliates after the Closing), and (C) any settlement or similar Contract with a Governmental Authority;

(xiii) any Contract to which a member of the Company Group is a party or by which it or any of its properties or assets is bound as of the Agreement Date with any labor union or any collective bargaining agreement or similar Contract with its employees;

(xiv) any Contract related to Indebtedness;

(xv) any Contract to which a member of the Company Group is a party or by which it or any of its properties or assets is bound as of the Agreement Date for capital expenditures in excess of $150,000 individually or in the aggregate;

(xvi) any Contract pursuant to which a member of the Company Group is a lessor or lessee of any machinery, equipment, motor vehicles, office furniture, fixtures or other personal property involving expenditures in excess of $500,000 in any calendar year;

(xvii) any Contract pursuant to which a member of the Company Group has acquired a business or entity, or substantially all of the assets of a business or entity, whether by way of merger, consolidation, purchase of stock, purchase of assets, license or otherwise, or any Contract pursuant to which it has any equity or equity-linked interest or other material ownership interest in any other Person;

(xviii) all Contracts (i) that would require consent, (ii) that would require or permit a member of the Company Group (or any successor) or an acquirer of any member of the Company Group to make any payment to another Person, (iii) that would be subject to modification or termination that contain any clause that would trigger adverse consequences for Acquirer, (v) pursuant to which rights of any third party would be triggered or become exercisable, (vi) under which any other consequence, result or effect arises, in each case, by virtue of the change in control resulting from the completion of the Transactions, including the Pre-Closing Restructuring, or in connection with or as a result of the execution of this Agreement or the consummation of the Transactions, including the Pre-Closing Restructuring, either alone or in combination with any other event;

(xix) (A) any Contract to which a member of the Company Group is a party or by which it or any of its properties or assets is bound as of the Agreement Date with a Related Party, (B) any Contract for or relating to the employment or service of any member of the Company Group's employees with the title of Senior Director or any more senior title which is not terminable by the Company Group on less than 30 days' notice and without severance and (C) any other type of Contract with any member of the Company Group's employees with the title of Senior Director or any more senior title, except for Company Benefit Plans or Seller Benefit Plans applicable to Company Group employees;

(xx) any Contract providing for indemnification to any director, officer, member, manager, employee, trustee or fiduciary of the Company Group;

(xxi) any Contract with any Governmental Authority, including any Contract relating to the grant, incentive, benefit, qualification or subsidy from any Governmental Authority, any Permit that is required for the conduct of the Business as currently conducted and as proposed to be conducted, or for a member of the Company Group holding of its assets, or any Contract with a government prime contractor, or higher-tier government subcontractor, including any indefinite delivery/indefinite quantity contract, firm-fixed-price contract, schedule contract, blanket purchase agreement, or task or delivery order (a "Government Contract");

(xxii) any Contract between any member of the Company Group on the one side and any of Seller or its Affiliates on the other side;

(xxiii) all Contracts with non-employee health care professionals who provide services to or on behalf of a member of the Company Group; and

(xxiv) all Company Data Agreements.

(b) All Contracts required to be listed in Section 3.8(a) of the Company Disclosure Schedules are referred to as the "Company Contracts." True, complete and correct copies of all written Company Contracts and summaries of all material oral Contracts that constitute Company Contracts, in each case, including all amendments thereto and waivers thereunder, have been Delivered to Acquirer.

(c) Each Company Contract is existing, in full force and effect and is legal, valid, binding and enforceable against the applicable member of the Company Group and, to the Knowledge of the Company, each other party thereto, in accordance with their respective terms except as enforcement may be limited by the

Enforceability Exceptions. No member of the Company Group, and in the case of Seller Contracts, neither the Seller nor any of its Affiliates, shall be, as a result of the execution and delivery or effectiveness of this Agreement or the performance of Holdco2's obligations under this Agreement (including the Merger), and Company Group, in the case of Seller Contracts, Seller and its Affiliates, and, to the Knowledge of the Company, no other party is, in material Default under any Company Contract. No written notice of any claim of material Default under, or termination of, a Company Contract has been made or received by a member of the Company Group, Seller or Seller Affiliate. No member of the Company Group, and in the case of Seller Contracts, neither the Seller nor any of its Affiliates, have waived any of its material rights under any Company Contract.

3.9 Noncontravention; Restrictions on Business.

(a) The execution, delivery and performance by the Company of and the Company's compliance with this Agreement and consummation by the Company of the Transactions do not and will not (i) violate the Governing Documents of any member of the Company Group, (ii) assuming any consents and approvals referred to in Section 3.9(b) are duly obtained, conflict with or constitute a material Default under any Laws, Orders or Permits applicable to a member of the Company Group or (iii) conflict with, give rise to or result in a material Default under any material Company Contract, other than those Contracts listed in Section 3.9(a) of the Company Disclosure Schedules, or result in the creation of any Encumbrance (other than a Permitted Encumbrance) on any of the properties, assets, Holdco2 Common Stock or other equity securities of the Company.

(b) Other than (x) the filing of the First Certificate of Merger and Second Certificate of Merger and (y) such filings and notifications as may be required to be made by the Company Group in connection with the Transactions under the HSR Act and other applicable Antitrust Laws and the expiration or early termination of the applicable waiting period under the HSR Act and other applicable Antitrust Laws, no consent, approval, Order or authorization of, or registration, declaration or filing with, any Governmental Authority or any other Person (including any Institutional Review Board, Privacy Board or Ethics Committee for any clinical trial being conducted by or on behalf of a member of the Company Group) is required to be made, obtained or given by a member of the Company Group in connection with the execution, delivery and performance by the Company of this Agreement or the consummation by the Company of the Transactions.

3.10 Financial Statements and Operating Budget.

(a) Seller has Delivered to Acquirer the unaudited consolidated financial statements of the Company for the fiscal years ended December 31, 2019 and 2020 (including, in each case, consolidated balance sheets, statements of operations and statements of cash flows, collectively, the "Financial Statements"), which are included on Section 3.10(a) of the Company Disclosure Schedules. The Financial Statements (i) are derived from and in accordance with the books and records of the Company, (ii) fairly present, in all material respects, the consolidated financial condition of the Company at the dates therein indicated and the consolidated results of operations and cash flows of the Company for the periods therein specified, and (iii) were prepared in accordance with the Accounting Standards applied on a consistent basis throughout the periods involved. When delivered to Acquirer, the Required Financial Statements (i) will be derived from and in accordance with the books and records of the Company, (ii) fairly present, in all material respects, the consolidated financial condition of the Company at the dates therein indicated and the consolidated results of operations and cash flows of the Company for the periods therein specified, and (iii) will be prepared in accordance with the Accounting Standards applied on a consistent basis throughout the periods involved, except, in the case of any unaudited interim financial statements, for the omission of footnotes and normal, immaterial year-end adjustments.

(b) Except as set forth in Section 3.10(b) of the Company Disclosure Schedules, no member of the Company Group has applied for or accepted any loan or other benefit made available by the CARES Act.

(c) Section 3.10(c) of the Company Disclosure Schedules sets forth a true, correct and complete list of all Indebtedness for borrowed money of the Company Group as of the Agreement Date, including, for each such item, the Contract governing such item and the interest rate, maturity date, any assets securing such instrument and any prepayment or other penalties payable in connection with the repayment of such instrument at the Closing.

(d) The Company Group has established and maintain a system of internal accounting controls sufficient to provide reasonable assurances (i) that transactions, receipts and expenditures of the Company Group are being executed and made only in accordance with appropriate authorizations of management and the applicable board of directors and (ii) that transactions are recorded as necessary to permit preparation of financial statements in conformity with the Accounting Standards. No member of the Company Group or, to the Knowledge of the Company, its independent auditors or any current employee, consultant or director of a member of the Company Group has identified or been made aware of any fraud, whether or not material, that involves a member of the Company Group's management or other current or former employees, consultants or directors of any member of the Company Group who have a role in the preparation of financial statements or the internal accounting controls utilized by the Company Group, or any claim or allegation regarding any of the foregoing. No member of the Company Group has received and the Company has no Knowledge of any material written complaint, allegation, assertion or claim, in each case, regarding deficient accounting or auditing practices, procedures, methodologies or methods of the Company Group or its internal accounting controls or any material inaccuracy in the financial statements of the Company Group. There are no significant deficiencies or material weaknesses in the design or operation of the Company Group's internal controls that would reasonably be expected to adversely affect the Company Group's ability to record, process, summarize and report financial data. There has been no change in the Company Group's accounting policies since January 1, 2017, except as described in the Financial Statements.

(e) Except as set forth in Section 3.10(e) of the Company Disclosure Schedules, the accounts receivable of the Company Group (collectively, the "Accounts Receivable") as reflected on the Company Balance Sheet and as will be reflected in the Estimated Closing Statement arose in the Ordinary Course of Business and represent bona fide claims against debtors for sales and other charges, and have been collected or are collectible in the book amounts thereof within one-hundred and fifty (150) days following the applicable invoice date, less an amount not in excess of the allowance for doubtful accounts provided for in the Company Balance Sheet or in the Estimated Closing Statement, as the case may be. Allowances for doubtful accounts have been prepared in accordance with Accounting Standards consistently applied. To the Knowledge of the Company, none of the Accounts Receivable is subject to any claim of offset, recoupment, set-off or counter-claim. Except as set forth in Section 3.10(e) of the Company Disclosure Schedules, no Person has any Encumbrance on any Accounts Receivable, and no agreement for deduction or discount has been made with respect to any such Accounts Receivable. Section 3.10(e) of the Company Disclosure Schedule sets forth, as of the Agreement Date, an aging of the Accounts Receivable in the aggregate.

3.11 Liabilities. The Company Group does not have any Liabilities of any nature other than (a) those set forth or adequately provided for in the balance sheet included in the Financial Statements as of September 30, 2021 (such date, the "Company Balance Sheet Date" and such balance sheet, the "Company Balance Sheet"), (b) those incurred in the conduct of the Company's business since the Company Balance Sheet Date in the Ordinary Course of Business and do not result from any material breach of Contract or violation of Law and (c) those incurred by the Company Group in connection with the execution of this Agreement. Except for Liabilities reflected in the Financial Statements, no member of the Company Group has any material off-balance sheet Liability of any nature to any Third Parties or entities, the purpose or effect of which is to defer, postpone, reduce or otherwise avoid or adjust the recording of expenses incurred by the Company Group. All reserves that are set forth in or reflected in the Company Balance Sheet have been established in accordance with the Accounting Standards consistently applied. Without limiting the generality of the foregoing, no member of the Company Group currently guarantees any debt or other obligation of any other Person.

3.12 Taxes. Except as provided in Section 3.12 of the Company Disclosure Schedules:

(a) Each member of the Company Group, and any consolidated, combined, unitary or aggregate group composed of members of the Company Group for Tax purposes, has timely filed all federal income Tax Returns and other material Tax Returns it is required to have filed. All Tax Returns filed by or with respect to any member of the Company Group are accurate, complete and correct in all material respects.

(b) Each member of the Company Group has paid in full all material Taxes required to have been paid. All Taxes due in connection with the operations of each member of the Company Group until the Closing Date have been paid in full. No member of the Company Group has any Liability for Taxes in excess of the amounts so

paid, except for Taxes which are not yet due and payable or Taxes of other members of the Parent Group which shall be paid by other members of the Parent Group.

(c) The Company Balance Sheet reflects all Liabilities for unpaid Taxes of the Company Group for periods (or portions of periods) through the Company Balance Sheet Date, except for Taxes of other members of the Parent Group which shall be paid by other members of the Parent Group. The Company Group does not have any Liability for unpaid Taxes accruing after the Company Balance Sheet Date except for Taxes arising in the Ordinary Course of Business subsequent to the Company Balance Sheet Date and Taxes of other members of the Parent Group which shall be paid by other members of the Parent Group. The Company Group has no Liability for Pre-Closing Taxes that is not included in the calculation of Closing Indebtedness except for Taxes of other members of the Parent Group which shall be paid by other members of the Parent Group.

(d) Within the last five (5) years, no claim has been made by any Governmental Authority in any jurisdiction where a member of the Company Group does not file Tax Returns that such member is or may be subject to Tax by that jurisdiction.

(e) Section 3.12(e) of the Company Disclosure Schedules sets forth a complete and accurate listing of (i) all types of Taxes paid, and all types of Tax Returns filed, by or on behalf of each member of the Company Group and (ii) all of the jurisdictions in which each member of the Company Group files such Tax Returns.

(f) No extensions or waivers of statutes of limitations with respect to the Tax Returns have been given by or requested from the Company or any of its Subsidiaries (except for extensions to file Tax Returns that are granted automatically under applicable Law).

(g) There is (i) no past or pending audit of, or Tax controversy associated with, any Tax Return of a member of the Company Group that has been or is being conducted by a Tax Authority which has not been fully settled or resolved and (ii) no other procedure, proceeding or contest of any refund or deficiency in respect of Taxes pending or on appeal with any Governmental Authority.

(h) All deficiencies asserted or assessments made against any member of the Company Group as a result of any examinations by any Tax Authority have been fully paid.

(i) There are no Encumbrances for Taxes upon the assets of any member of the Company Group other than Encumbrances arising by operation of Law for Taxes not yet due and payable.

(j) The Company Group has collected and remitted all sales, use, value added, ad valorem, personal property and similar Taxes ("Sales Taxes") with respect to sales made or services provided and, for all sales or provision of services that are exempt from Sales Taxes and that were made without charging or remitting Sales Taxes, the Company Group has received and retained any required Tax exemption certificates or other documentation qualifying such sale or provision of services as exempt.

(k) Except as provided in Section 3.12(k) of the Company Disclosure Schedules, no member of the Company Group is party to or bound by any Tax indemnity, Tax sharing, Tax allocation or similar agreement, and no member of the Company Group has any Liability or potential Liability to any Third Party under any such agreement.

(l) No member of the Company Group is party to and has not requested any closing agreement (as described in Section 7121 of the Code or any corresponding, analogous, or similar provision under any state, local or foreign Law related to Taxes), offer in compromise, technical advice memoranda, private letter ruling or other similar agreement with any Tax Authority.

(m) No member of the Company Group has ever entered into any "listed transaction" as defined in Treasury Regulations Section 1.6011-4(b) or any similar provision under state, local or foreign law. Each member of the Company Group has disclosed on its U.S. federal income Tax Returns all positions taken therein that could give rise to a "substantial understatement of income tax" within the meaning of Section 6662 of the Code (or any comparable, analogous or similar provision under any state, local or foreign Law related to Taxes).

(n) HoldCo has (i) at all times since its formation been a "C corporation" within the meaning of Section 1361(a)(2) of the Code; (ii) except for being a member of the Parent Group, never been a member of an affiliated group of corporations, within the meaning of Section 1504 of the Code (or any predecessor provision or comparable provision of state, local or foreign Law), or a member of a combined, consolidated or unitary group for state, local or foreign Tax purposes; and (iii) except for Taxes of other members of the Parent Group which shall be paid by other members of the Parent Group, no Liability for Taxes of any Person under Treasury Regulations Section 1.1502-6 (or any corresponding provision of state, local or foreign Law related to income Taxes), as transferee or successor, by Contract or otherwise.

(o) No member of the Company Group has ever been a United States real property holding corporation within the meaning of Section 897(c)(2) of the Code.

(p) No member of the Company Group is a party to any joint venture, partnership or other arrangement or Contract that could reasonably be expected to be treated as a partnership for Tax purposes.

(q) Except as provided in Section 3.12(p) of the Company Disclosure Schedules, no member of the Company Group is a "United States shareholder" within the meaning of Section 951(b) of the Code with respect to any "controlled foreign corporation" within the meaning of Section 957(a) of the Code or "deferred foreign income corporation" within the meaning of Section 965(d)(1) of the Code. No member of the Company Group is subject to Tax in any jurisdiction other than the jurisdiction in which it is formed or organized by virtue of having employees, a permanent establishment or any other place of business in such jurisdiction.

(r) No member of the Company Group owns any equity interest in an entity that is or, at any time when the Company Group owned such interest, was treated as a passive foreign investment company within the meaning of Section 1297(a) of the Code with respect to such member of the Company Group.

(s) No member of the Company Group has ever been a "distributing corporation" or a "controlled corporation" in connection with a distribution described in Section 355 of the Code.

(t) Each member of the Company Group has withheld and paid all material Taxes required to be withheld in connection with any amounts paid or owing to any employee, creditor, independent contractor or other Third Party.

(u) No member of the Company Group (i) has agreed, or is required, to make any adjustment under Section 481(a) of the Code by reason of a change in accounting method or otherwise for a Pre-Closing Tax Period; (ii) has made an election, or is required, to treat any of its assets as owned by another Person pursuant to the provisions of former Section 168(f) of the Code or as tax-exempt bond financed property or tax-exempt use property within the meaning of Section 168 of the Code; (iii) has acquired, or owns, any assets that directly or indirectly secure any debt the interest on which is tax exempt under Section 103(a) of the Code; or (iv) has made any of the foregoing elections, or is required to apply any of the foregoing rules, under any comparable state or local Law related to Taxes.

(v) No member of the Company Group will be required to include in a Post-Closing Tax Period taxable income attributable to income that accrued (for purposes of financial statements) in a Pre-Closing Tax Period but was not recognized for Tax purposes in any Pre-Closing Tax Period as a result of (i) the installment method of accounting, the completed contract method of accounting, the long-term contract method of accounting, or the cash method of accounting, (ii) any prepaid amount received or paid in a Pre-Closing Tax Period, (iii) any deferred intercompany transaction in a Pre-Closing Tax Period or excess loss account, (iv) a change in method of accounting or Section 481 of the Code in a Pre-Closing Tax Period, (v) except with respect to MGT Canada, any inclusion under Section 951(a) or Section 951A of the Code, (vi) any gain recognition agreement entered into in a Pre-Closing Tax Period, (vii) any transaction under which previously utilized Tax losses or credits may be recaptured (including a dual consolidated loss or an excess loss account), (viii) Section 1400Z-2(a)(1)(A) of the Code, or (ix) any comparable provisions of state or local Tax law, domestic or foreign, or for any other reason. The Company Group has not made an election pursuant to Section 965(h) of the Code to pay the net tax liability under Section 965 of the Code in installments.

(w) No member of the Company Group has applied for and not yet received a ruling or determination from a Tax Authority regarding a past or prospective transaction.

(x) Each member of the Company Group has (i) to the extent deferred, properly complied in all respects with applicable Law in order to defer the amount of the employer's share of any "applicable employment taxes" under Section 2302 of the CARES Act, and (ii) to the extent applicable, eligible, and claimed, properly complied in all material respects with applicable Law and duly accounted for any available Tax credits under Sections 7001 through 7004 of the Families First Coronavirus Response Act and Section 2301 of the CARES Act, and (iii) not deferred any payroll Tax obligations (including those imposed by Sections 3101(a) and 3201 of the Code) (for example, by a failure to timely withhold, deposit or remit such amounts in accordance with the applicable provisions of the Code and the Treasury Regulations) pursuant to or in connection with any U.S. presidential memorandum or executive order, and (iv) not sought a PPP Loan.

(y) No event has occurred with respect to a Company Benefit Plan that would be treated by Section 409A(b) of the Code as a transfer of property for purposes of Section 83 of the Code. No member of the Company Group is under any obligation to gross up any Taxes under Section 409A of the Code.

(z) Except as set forth on Section 3.12(z) of the Company Disclosure Schedule, there is no agreement, plan, arrangement or other Contract covering any current or former employee or other service provider of a member of the Company Group to which a member of the Company Group or any of their ERISA Affiliate is a party or by which a member of the Company Group or any of its ERISA Affiliates or their assets are bound that, considered individually or considered collectively with any other such agreements, plans, arrangements or other Contracts, will, or would reasonably be expected to, as a result of the Transactions (whether alone or upon the occurrence of any additional or subsequent events), give rise directly or indirectly to the payment of any amount that would reasonably be expected to be non-deductible under Section 162 of the Code (or any corresponding or similar provision of state, local or foreign Tax law) or, disregarding any arrangements implemented by or at the direction of Acquirer, be characterized as a "parachute payment" within the meaning of Section 280G of the Code (or any corresponding or similar provision of state, local or foreign Tax law).

(aa) Notwithstanding anything to the contrary in this Agreement, (x) this Section 3.12 and Section 3.18 set forth the sole and exclusive representations and warranties regarding Tax matters of the Company Group, (y) Seller, members of the Company Group and their Affiliates are not making, and shall not be construed to have made, any representation or warranty as to the amount of, or Acquirer's or any other Person's ability to utilize, any net operating loss, tax credit, tax basis or other Tax attribute in any taxable period (or portion thereof) beginning after the Closing Date and (z) none of the representations in this Section 3.12 (except for subsections (l), (n), (t), (u) and (w) of this Section 3.12) may be relied upon or form a basis to claim indemnification for or relating to Taxes for any taxable period (or portion thereof) beginning after the Closing Date.

3.13 Compliance with Law.

(a) The operation of the business of each member of the Company Group has been conducted in material compliance with all Laws and Orders applicable to such member or its business and all Permits required for the operation of its business, properties and assets. Except as set forth in Section 3.13(a) of the Company Disclosure Schedule, no member of the Company Group has received any written notice to the effect that, or otherwise been advised in writing that it is not in material compliance with any such Laws, Orders or Permits.

(b) No member of the Company Group, nor any of the officers or directors of a member of the Company Group has, directly or indirectly, (i) taken any action in violation of any Law relating to anticorruption matters, including the FCPA, or (ii) offered, paid, given, promised to pay or give, or authorized the payment or gift of anything of value, directly or indirectly, to any Public Official, for purposes of (A) influencing any act or decision of any Public Official in his or her official capacity, (B) inducing such Public Official to do or fail to do any act in violation of his or her lawful duty, (C) securing any improper advantage or (D) inducing such Public Official to use his or her influence with a Governmental Authority, or commercial enterprise owned or controlled by any Governmental Authority (including state-owned or controlled veterinary or medical facilities), in order to assist the Company or any Person related to the Company, in obtaining or retaining business. None of the Representatives of

the Company or any of its Subsidiaries are themselves Public Officials. There have been no false or fictitious entries made in the books or records of the Company or any of its Subsidiaries relating to any payment that the FCPA prohibits, and neither the Company nor any of its Subsidiaries has established or maintained a secret or unrecorded fund for use in making any such payments.

(c) No member of the Company Group, nor any of the officers or directors of a member of the Company Group has, directly or indirectly, taken any action in violation of any Law relating to export control, trade or economic sanctions, or antiboycott, in the U.S. or any other jurisdiction, including: the Arms Export Control Act (22 U.S.C.A. § 2278), the Export Administration Act (50 U.S.C. App. §§ 2401-2420), the International Traffic in Arms Regulations (22 C.F.R. 120-130), the Export Administration Regulations (15 C.F.R. 730 et seq.), the Office of Foreign Assets Control Regulations (31 C.F.R. Chapter V), the Customs Laws of the United States (19 U.S.C. § 1 et seq.), the International Emergency Economic Powers Act (50 U.S.C. § 1701-1706), the U.S. Commerce Department antiboycott regulations (15 C.F.R. 560), the U.S. Treasury Department antiboycott requirements (26 U.S.C. § 999), any other export control regulations issued by the agencies listed in Part 730 of the Export Administration Regulations, or any Law outside of the United States of a similar nature. No member of the Company Group or any of their respective Representatives is listed on the U.S. Office of Foreign Assets Control "Specifically Designated Nationals and Blocked Persons" or any other similar list.

3.14 Permits. Section 3.14 of the Company Disclosure Schedules sets forth a complete and correct list of all material Permits used by the Company Group in the operation of the Business, all of which are valid and in full force and effect. Complete and correct copies of such Permits have been Delivered to Acquirer. Each member of the Company Group has all Permits required in the operation of the Business, and such Permits are in full force and effect and are owned by the applicable member of the Company Group free and clear of all Encumbrances except Permitted Encumbrances, except for such Permits which the failure to hold would not be reasonably likely to be material to the applicable member of the Company Group. No member of the Company Group is in material Default, or has received any written notice of any claim of material Default, with respect to any such Permit. No suspension or cancellation of any such Permits is pending or, to the Company's Knowledge, threatened.

3.15 Regulatory Matters.

(a) Except as set forth in Section 3.15(a) of the Company Disclosure Schedules, each member of the Company Group is, and since inception each member of the Company Group has been, in material compliance with all applicable Health Care Laws. Except as set forth in Section 3.15(a) of the Company Disclosure Schedules, no member of the Company Group has received any notice or other communication from any Governmental Authority alleging any violation of any Health Care Law with respect to such activities. Except as set forth in Section 3.15(a) of the Company Disclosure Schedules, no member of the Company Group has received any notice or other written communication from any applicable Governmental Authority alleging any violation of any Health Care Law.

(b) Section 3.15(b) of the Company Disclosure Schedules sets forth a complete and correct list of all products that are being researched or under development by or on behalf of any member of the Company Group as of the Agreement Date. All Company Products are in material compliance with all applicable requirements under the Health Care Laws, including all requirements relating to research, storing, testing, record-keeping, reporting, import and export. Except as set forth in Section 3.15(b) of the Company Disclosure Schedules, no member of the Company Group has received any notice or other communication from the FDA or any other Governmental Authority alleging any violation of such requirements.

(c) All studies performed in connection with or as the basis for any Regulatory Permit or Regulatory Approval required for any Company Product either (i) have been conducted in accordance, in all material respects, with applicable requirements or (ii) have employed in all material respects the procedures and controls generally used by qualified experts. No member of the Company Group has received any notice or other written communication from an applicable Governmental Authority requiring the termination or suspension or material modification of any study with respect to any Company Products. No member of the Company Group collected, maintained, altered, or reported data from any study performed in connection with or as the basis for any Regulatory Permit, Regulatory Approval required for the Company Products in a manner that, if such data were reported to the

FDA or another Regulatory Authority, would be or would result in an untrue statement of material fact or fraudulent statement to the FDA or any other Regulatory Authority.

(d) All clinical trials conducted by or on behalf of any member of the Company Group have been conducted in compliance in all material respects with all applicable Laws. No clinical trial conducted by or on behalf of any member of the Company Group has been terminated or suspended prior to completion primarily for safety reasons. No applicable Governmental Authority, clinical investigator who has participated or is participating in, or Institutional Review Board that has or has had jurisdiction over, a clinical trial conducted by or on behalf of any member of the Company Group has commenced, or threatened to initiate, any action to place a clinical hold order on, or otherwise terminate, delay or suspend, any ongoing clinical investigation conducted by or on behalf of any member of the Company Group.

(e) Holdco2 has Delivered to Acquirer true, complete and correct copies of all material Regulatory Documentation in its possession or control related to the Company Products. Each applicable member of the Company Group has filed with the applicable Regulatory Authority all required filings. All such filings were in material compliance with all applicable Laws when filed, and no deficiencies have been asserted in writing by any applicable Regulatory Authority with respect to any such filings.

(f) The Company has no Knowledge of any fact that would reasonably be expected to materially impact, limit, or alter any existing Regulatory Permit or Regulatory Approval for any Company Product in any applicable jurisdiction.

(g) No member of the Company Group is a party to any corporate integrity agreement, deferred prosecution agreement, consent decree, settlement order or similar agreement with or imposed by any Governmental Authority, and no such action is pending as of the date hereof. No member of the Company Group is subject to any material enforcement, regulatory or administrative proceedings against or affecting the Company or any of its Subsidiaries relating to or arising under any Health Care Law and no such enforcement, regulatory or administrative proceeding has been threatened. No member of the Company Group has made and is not in the process of making any voluntary self-disclosure to any Governmental Program or Governmental Authority, including any voluntary self-disclosures to the Centers for Medicare & Medicaid Services ("CMS").

(h) All applications, information and other data and conclusions derived therefrom provided to an applicable Regulatory Authority with respect to the Company Products, when submitted by the applicable member of the Company Group, and to the Knowledge of the Company to a Regulatory Authority with respect to the Company Products, were true, complete, and correct in all material respects as of the date of submission by or on behalf of such member of the Company Group. No member of the Company Group: (i) has (A) been placed under or otherwise made subject to or (B) committed an act, made a statement, or failed to make a statement that, at the time such disclosure was made, would reasonably be expected to provide a basis for an applicable Governmental Authority to invoke its Application Integrity Policy "Fraud, Untrue Statements of Material Facts, Bribery, and Illegal Gratuities," set forth in 56 Fed. Reg. 46191 (September 10, 1991) or any similar policy; (ii) has been charged with or convicted of any criminal offense relating to the delivery of an item or service under any Governmental Program; (iii) has been subject to, or convicted of any crime or engaged in any conduct that would reasonably be expected to result in, disqualification, debarment, deregistration, exclusion, or suspension from participation in any Governmental Program, or otherwise under 42 U.S.C. Section 1320a-7b(f), 21 U.S.C. Section 335a or any similar Law; (iv) has had a civil monetary penalty assessed against it, him or her under Section 1128A of the Social Security Act, codified at Title 42, Chapter 7, of the United States Code; (v) is currently listed on the United States General Services Administration published list of parties excluded from federal procurement programs and non-procurement programs; or (vi) to the Knowledge of the Company, is the target or subject of any current or potential investigation relating to any Governmental Program-related offense.

(i) Each member of the Company Group has operated and currently are in material compliance with the Clinical Laboratory Improvement Amendments of 1998 ("CLIA"), all applicable rules and regulations of all Governmental Authorities engaged in regulation of clinical laboratories or biohazardous materials, and all Regulatory Permits. No member of the Company Group has received written notice from any such governmental agencies or bodies requiring the termination, suspension, clinical hold or material modification of any tests, studies

or trials conducted by or on behalf of any member of the Company Group. No suspension, revocation, termination, sanction, corrective action or limitation of any currently existing CLIA certification or accreditation of any member of the Company Group is pending or threatened. Section 3.15(i) of the Company Disclosure Schedules sets forth a complete and correct list of (i) all Regulatory Permits and Regulatory Approvals used in the operation of the Company Group's business or otherwise held by any member of the Company Group and (ii) all laboratory developed tests developed or offered by or on behalf of any member of the Company Group.

(j) (x) Each member of the Company Group has in effect all Regulatory Permits required by any applicable Regulatory Authority to permit the conduct of its business as currently conducted, (y) all of such Regulatory Permits and Regulatory Approvals are in full force and effect and (z) each member of the Company Group is in compliance with, and is not in default under, any such Regulatory Permit or Regulatory Authorization.

(k) Except as set forth on Section 3.15(k) of the Company Disclosure Schedules, no member of the Company Group has (i) received advance payments ("Medicare Advance Payments") from CMS pursuant to the Accelerated and Advance Payment Program (the "Medicare Advance Payment Program") or (ii) received proceeds from funds appropriated in the Public Health and Social Services Emergency Fund for relief under Division B of Public Law 116-127 ("HHS Grants"). Each member of the Company Group has deployed any such proceeds in compliance in all material respects with all applicable Laws governing the HHS Grants and have maintained accounting records associated with the HHS Grants in material compliance with all the terms and conditions of all applicable CARES Act relief programs.

3.16 Litigation. Except as set forth in Section 3.16 of the Company Disclosure Schedules, there is no, and since January 1, 2019 there has not been any, Proceeding (a) pending or, to the Company's Knowledge, threatened against or affecting any member of the Company Group or their business, (b) pending or, to the Company's Knowledge, threatened against any Person whose Liability any member of the Company Group has retained or assumed, either contractually or by operation of Law, or (c) pending or, to the Company's Knowledge, threatened against any stockholder, officer, director or employee of any member of the Company Group in connection with such stockholder's, officer's, director's or employee's relationship with, or actions taken on behalf of, such member of the Company Group. No member of the Company Group is a party to or named in, and none of its properties or assets are subject to, any Order.

3.17 Employment Matters.

(a) Section 3.17(a) of the Company Disclosure Schedules contains a complete and correct list of each employee of each member of the Company Group and each employee of Seller or any of its Subsidiaries who, as of the Agreement Date, is expected to become an employee of a member of the Company Group prior to the Closing Date (collectively, the "In-Scope Employees"), including for each such employee: name, job title, date of hire, work location and employee entity. As soon as practicable following the Agreement Date, the Company shall provide to Acquirer each In-Scope Employee's classification status under the Fair Labor Standards Act, full time or part time status and immigration status. Seller has provided to counsel to Acquirer, on an outside counsel only basis, a true and correct list of the following for each In-Scope Employee: annual base salary or wage, annual target incentive or bonus compensation for the current fiscal year and the prior fiscal year, and accrued paid time off. To the Company's Knowledge, no Key Employee is a party to, or is otherwise bound by, any agreement or arrangement with any Third Party, including any confidentiality or non-competition agreement, that adversely affects or restricts the performance of such employee's duties for the applicable member of the Company Group. To the Company's Knowledge, no In-Scope Employee has provided written notice to terminate his or her relationship with his or her employing member of the Company Group. To the Company's Knowledge, each employee of each member of the Company Group is (i) a citizen or lawful permanent resident of the jurisdiction in which such employee resides, or (ii) an alien authorized to work in the jurisdiction in which such employee resides either specifically for the Company or for any other employer in such jurisdiction. Except as set forth in Section 3.17(a) of the Company Disclosure Schedules, each member of the Company Group has completed a Form I-9 (Employment Eligibility Verification) for each of their employees. No employee of any member of the Company Group has a principal place of employment outside the United States or is subject to the labor and employment laws of any country other than the United States. Except as set forth in Section 3.17(a) of the Company Disclosure Schedules, the employment of each of the employees of each member of the Company Group is "at will" and no member of the Company Group

has any obligation to provide any particular form or period of notice prior to terminating the employment of any of its employees. As of the Agreement Date, no member of the Company Group has (i) entered into any Contract that obligates or purports to obligate Acquirer to make an offer of employment to any present or former employee or consultant of any member of the Company Group or (ii) promised or otherwise provided any assurances (contingent or otherwise) to any present or former employee or consultant of any member of the Company Group of any terms or conditions of employment with Acquirer following the Effective Time.

(b) No member of the Company Group has, and no member of the Company Group would reasonably be expected to have, any Liability with respect to any Taxes (or the withholding thereof) in connection with any independent contractor, consultant or other non-employee service provider of the Company Group (or who served in such capacity since January 1, 2017 (collectively, "Contractors")). To the Company's Knowledge, no Contractor is a party to, or is otherwise bound by, any agreement or arrangement with any Third Party, including any confidentiality or non-competition agreement, that in any way adversely affects or restricts the performance of such Contractor's duties for any member of the Company Group. No current Contractor used by any member of the Company Group has provided written notice to terminate his, her or its relationship with any member of the Company Group. Each member of the Company Group has properly classified each Contractor ever retained by the Company as an "independent contractor" pursuant to the Code and other applicable Laws.

(c) No member of the Company Group has, at any time, been a party to or had any obligations under a collective bargaining, works council or similar agreement, in each case in respect of the Business. No member of the Company Group has experienced at any time, nor to the Company's Knowledge, is there now threatened, any walkout, union activity, work stoppage, any effort to organize or other similar occurrence or any attempt to organize or represent the labor force of such member of the Company Group or strike. No union or other collective bargaining unit or employee organizing entity has been certified or recognized by a member of the Company Group as representing any of its employees.

(d) All members of the Company Group are in compliance in all material respects with all Laws relating to labor and employment, including with respect to employment practices, worker classification, wages and hours, duration of work, overtime, collective bargaining, discrimination, leaves of absence, immigration, civil rights, safety and health, workers' compensation, pay equity, the collection and payment of withholding and social security Taxes, and other employment-related Taxes. Each member of the Company Group has, or will have no later than the Closing Date, paid all accrued salaries, bonuses, commissions, wages, severance and accrued vacation pay of the employees due to be paid through the Closing Date. No member of the Company Group has committed any unfair labor practice in connection with the conduct of the Business. There are no Proceedings pending or, to the Company's Knowledge, threatened between any member of the Company Group, on the one hand, and any of such member's current employees or independent contractors or former employees or independent contractors, on the other. No review, complaint or Proceeding by any Governmental Authority or current or former employee or Contractor with respect to any member of the Company Group in relation to the employment or engagement of any individual is pending or, to the Company's Knowledge, threatened, nor has any member of the Company Group received any notice from any Governmental Authority indicating an intention to conduct the same in the future. No member of the Company Group is liable for any payment to any trust or other fund or to any Governmental Authority, with respect to unemployment compensation benefits, social security or other benefits or obligations for employees (other than routine payments to be made in the normal course of business and consistently with past practice). No member of the Company Group has any obligations under COBRA with respect to any former employees or qualifying beneficiaries thereunder.

(e) The Company has Delivered to Acquirer true and correct copies of each of the following with respect to each member of the Company Group, in each case that are currently used in the Business and solely if the Company or such member of the Company Group has a standard form: (i) all forms of offer letters, (ii) all forms of employment agreements and severance agreements, (iii) all forms of services agreements and agreements with current consultants and/or advisory board members and (iv) all forms of confidentiality, non-competition or inventions agreements between current and former employees/consultants and the Company Group.

(f) In the past two years, (i) no member of the Company Group has effectuated a "plant closing" (as defined in the Worker Adjustment Retraining Notification Act of 1988, as amended (the "WARN Act")), or any

similar state or local law, affecting any site of employment or one or more facilities or operating units within any site of employment or facility of its business, (ii) there has not occurred a "mass layoff" (as defined in the WARN Act) affecting any site of employment or facility of the Company or any of its Subsidiaries and (iii) no member of the Company Group has been affected by any transaction or engaged in layoffs or employment terminations sufficient in number to trigger application of any similar state, local or foreign law or regulation.

(g) No allegations of sexual harassment or sexual misconduct have been made to any member of the Company Group against any director, officer or other employee of any member of the Company Group and, to the Company's Knowledge, there have not been any such allegations. There are no disciplinary actions pending against any of the employees of any member of the Company Group.

3.18 Employee Benefit Plans.

(a) Section 3.18(a) of the Company Disclosure Schedules contains a complete and correct list, as of the date hereof, of each Benefit Plan maintained or sponsored by any member of the Company Group (each, a "Company Benefit Plan") and each Benefit Plan contributed to or required to be contributed to by a member of the Company Group, but which is not sponsored by a member of the Company Group (each, a " Seller Benefit Plan" and collectively, the "Seller Benefit Plans"); provided, that Company Benefit Plans that are independent contractor agreements with independent contractors whose annual compensation is less than $100,000 are not required to be listed in Section 3.18(a) of the Company Disclosure Schedules. No Company Benefit Plan is subject to any Laws other than those of the United States or any state, county or municipality in the United States. No member of the Company Group has or would reasonably be expected to have any Liability under any Benefit Plan maintained, contributed to or required to be contributed to by any ERISA Affiliate of the Company or any of its Subsidiaries other than the Seller Benefit Plans.

(b) With respect to each Company Benefit Plan, the Company has Delivered to Acquirer an accurate and complete copy of: (i) the current plan document, as amended through the Agreement Date, or a written summary of any unwritten Company Benefit Plan, (ii) the current summary plan description (if required) and any material modifications thereto, (iii) any annual reports on Forms 5500 to the extent applicable, (iv) material contracts including trust agreements, insurance contracts, and administrative services agreements, (v) the most recent determination or opinion letters for any plan intended to be qualified under Section 401(a) of the Code and (vi) any material correspondence with the Department of Labor, Internal Revenue Service or any other Governmental Authority regarding the plan in the past twelve (12) months.

(c) On or prior to the Closing Date, each applicable member of the Company Group shall have made all contributions required to be made to or with respect to each Company Benefit Plan and each Seller Benefit Plan by the Company Group on or prior to the Closing Date or accrued any such amounts in accordance with the past custom and practice of each member of the Company Group. No Company Benefit Plan is intended to include a Code Section 401(k) arrangement.

(d) There has been no amendment to, written interpretation or announcement (whether or not written) by the any member of the Company Group or any ERISA Affiliate relating to, or change in participation or coverage under, any Company Benefit Plan that would materially increase the expense of maintaining such Company Benefit Plan above the level of expense incurred with respect to such Company Benefit Plan for the most recent full fiscal year included in the Financial Statements.

(e) Each Company Benefit Plan has been, since January 1, 2017, in all material respects, established, maintained and administered in accordance with its terms and with all provisions of ERISA, the Code and other applicable Laws. No actions, investigations, suits or claims with respect to any Company Benefit Plan or, to the extent relating to the Company Group or any of their current and former employees, Seller Benefit Plan are pending or, to the Company's Knowledge, threatened, in each case excluding routine claims for benefits. No employee of any member of the Company Group is a "leased employee" within the meaning of Section 414(n) of the Code. The Company Group is in compliance in all material respects with the Patient Protection and Affordable Care Act and the Health Care and Education Reconciliation Act of 2010. With respect to each Company Benefit Plan in the past three (3) years, (i) no lien has been imposed under the Code, ERISA or any other applicable law, and (ii) no member

of the Company Group has made any filing in respect of such Company Benefit Plan under the Employee Plans Compliance Resolution System, the Department of Labor Delinquent Filer Program or any other voluntary correction program. No Company Benefit Plan is sponsored by a human resources and benefits outsourcing entity or professional employer organization.

(f) Each Company Benefit Plan and Seller Benefit Plan that is intended to be qualified within the meaning of Section 401(a) of the Code is so qualified and has received a favorable determination letter from the IRS (or, if such plan is a prototype or volume submitter plan document, such prototype or volume submitter plan document has received a favorable opinion from the IRS that the form meets the tax qualification requirements and the applicable member of the Company Group or Parent Group is entitled to rely on such favorable opinion) to the effect that such Company Benefit Plan or Seller Benefit Plan satisfies the requirements of Section 401(a) of the Code in form and that its related trust is exempt from taxation under Section 501(a) of the Code.

(g) No member of the Company Group has any obligation to provide post-retirement or post-termination medical or life insurance benefits to any current or former employee, officer, Contractor, or director, or any dependent or beneficiary thereof, other than as required under the Consolidated Omnibus Budget Reconciliation Act of 1985, as amended ("COBRA") or similar state law for which the covered individual pays the full cost of coverage. There has been no "prohibited transaction" (within the meaning of Section 406 of ERISA and Section 4975 of the Code and not exempt under Section 408 of ERISA and regulatory guidance thereunder) with respect to any Company Benefit Plan. No member of the Company Group or any ERISA Affiliate is subject to Liability or penalty under Sections 4967 through 4980 of the Code or Title I of ERISA with respect to any Company Benefit Plans. No member of the Company Group or any of its ERISA Affiliates sponsors, maintains or contributes or is obligated to contribute to, or has incurred any liability with respect to any plan subject to Title IV of ERISA or Section 412 of the Code. No Company Benefit Plan is (i) any "multiemployer plan" within the meaning of Section 4001(a)(3) or 3(37) of ERISA, (ii) any "multiple employer plan" within the meaning of Section 4063 or 4064 of ERISA, (iii) any "multiple employer welfare arrangement" within the meaning of Section 3(40) of ERISA or (iv) any health or other welfare arrangement that is self-insured. No Company Benefit Plan is or has ever been, or currently funds or has ever been funded by, a "voluntary employees' beneficiary association" within the meaning of Section 501(c)(9) of the Code or other funding arrangement for the provision of welfare benefits. Each Company Benefit Plan that provides health, life or other welfare or welfare-type benefits is fully insured by a third-party insurance company. No member of the Company Group sponsors or maintains any self-funded employee benefit plans providing for health or welfare benefits, including any plan to which a stop-loss policy applies.

(h) Neither the execution and delivery of this Agreement nor the consummation of the Transactions will (either alone or in combination with another event): (i) result in any payment becoming due, or increase the amount of any compensation due, to any current or former employee or Contractor of a member of the Company Group; (ii) increase any benefits otherwise payable under any Company Benefit Plan; (iii) result in the acceleration of the time of payment or vesting of any such compensation or benefits; (iv) result in the triggering or imposition of any restrictions or limitations on the rights of the Company or any of its Subsidiaries to amend or terminate any Company Benefit Plan; or (v) entitle the recipient of any payment or benefit to receive a "gross up" payment for any income or other taxes that might be owed with respect to such payment or benefit.

3.19 Intellectual Property.

(a) Section 3.19(a) of the Company Disclosure Schedules accurately and completely sets forth as of the Agreement Date: all (i) Registered Company IP, (ii) material unregistered Trademarks included in the Company Owned IP, (iii) material Software included in the Company Owned IP, (v) other Company Owned IP that is material to the Company Group or its business as currently conducted other than Trade Secrets, and (v) Company IP that is licensed exclusively to a member of the Company Group. For each item of Registered Company IP, Section 3.19(a) of the Company Disclosure Schedules indicates, as applicable, the legal (and record) owner(s) thereof and, if jointly-owned, all joint-owners of such Intellectual Property, the countries and jurisdictions in which such Intellectual Property is registered or in which an application for the same has been filed, the registration or application number, the filing, registration, and expiration dates thereof (as applicable), in the case of unregistered Trademarks, countries of use and approximate dates of first use. All Registered Company IP is subsisting and in full force and effect and, except as set forth in Section 3.19(a) of the Company Disclosure Schedules, to the Knowledge of the Company, the

registrations forming part of the Registered Company IP are valid and enforceable. The Company Group does not own any patents or patent applications and Seller and its Affiliates do not own or control any patents or patent applications relating to the Business. Section 3.19(a) of the Company Disclosure Schedules also accurately and completely sets forth as of the Agreement Date all Domain Names registered by or used or held for use for the Business by any member of the Company Group, Seller or any Seller Affiliate, including the applicable registrar and expiration date. All of the Domain Names listed in Section 3.19(a) of the Company Disclosure Schedules are registered solely by the applicable member of the Company Group and are active and all registration fees, renewals or other actions necessary on or before the Agreement Date to maintain such registrations active have been paid, filed and taken. All use of such Domain Names complies with and has complied in all material respects with all terms and conditions, terms of use, terms of service and other Contracts with the applicable registrar for such Domain Names.

(b) To the Knowledge of the Company, the Company Group has sufficient rights to use the Company IP and the Company IT Assets in the manner used by the Company Group in connection with the operation of its Business as currently conducted. The Company IP and Company IT Assets includes all material Intellectual Property and IT Assets, respectively, used or held for use in connection with the operation of the Business as currently conducted, and, to the Knowledge of the Company, there are no other items of Intellectual Property or IT Assets that are material to or necessary for the operation of the Company Group's Business as currently conducted, or for the continued operation of the Company Group's Business immediately after the Closing in substantially the same manner as currently conducted. Except as set forth in Section 3.19(b) of the Company Disclosure Schedules, the Company Group is the sole and exclusive owner of all right, title and interest in and to each item of Company Owned IP and each IT Asset owned or purported to be owned by the Company Group, free and clear of all Encumbrances and licenses other than Permitted Encumbrances, or any obligation to grant any of the foregoing. The Company Group has a license to use the Company Licensed IP in connection with the operation of its Business as currently conducted and proposed to be conducted, subject only to the terms of the applicable Company IP Contracts, and, to the Knowledge of the Company, such licenses are valid.

(c) Except as set forth on Section 3.19(c) of the Company Disclosure Schedules, no member of the Company Group has assigned, transferred, conveyed, or granted any license with respect to (other than licenses granted to Company Group customers in the Ordinary Course of Business), or authorized the retention of any rights in or joint ownership of, any Company Owned IP or any IT Asset owned or purported to be owned by the Company Group or other Intellectual Property that would have been Company Owned IP or IT Asset owned by the Company Group but for such assignment, transfer, conveyance to third parties or, caused or permitted any Encumbrance to attach to any Company Owned IP or IT Asset owned by the Company Group. Except as set forth on Section 3.19(c) of the Company Disclosure Schedule, no Person other than a member of the Company Group has any proprietary, commercial, joint ownership, royalty or other interest in the Company Owned IP or the goodwill, if any, associated therewith.

(d) No member of the Company Group has entered into any Contracts with any other Person (i) that materially limit or restrict use or require any payments for use of the Company Owned IP, the Company Licensed IP (other than the obligations or restrictions expressly contained in the agreement granting such member of the Company Group a license under such Intellectual Property) or Company Products by a member of the Company Group, (ii) pursuant to which any Person other than a member of the Company Group has been granted or retains the right to bring any infringement or other enforcement actions with respect to, or otherwise to enforce, any of the Company Owned IP, (iii) pursuant to which any Person has been granted or retains the right to defend any claim of infringement, misappropriation or other violation arising from the practice or other Exploitation of any of the Company Owned IP or pursuant to which any member of the Company Group expressly agrees to indemnify any Person against any such claim or pursuant to which any member of the Company Group has assumed any existing or potential Liability of another Person for any infringement, misappropriation or other violation of Intellectual Property or similar claim (other than indemnification obligations under Contracts with customers and service providers of the Company Group and Company IP Contracts entered into in the Ordinary Course of Business), or (iv) pursuant to which any Person has been granted or retains the right to control the prosecution of any applications or registrations for Company Owned IP.

(e) Except as set forth on Section 3.19(e) of the Company Disclosure Schedules, all necessary registration, maintenance and renewal fees and other payments that have become due in connection with the Registered Company IP have been timely paid in full, with the understanding that "timely" includes payment during a grace period, extension period, further processing period, reinstatement period, or any other time period, payment during which will not allow such Registered Company IP to lapse, be cancelled or otherwise be deemed abandoned or lost. All necessary documents, recordations, certificates and other materials in connection with Registered Company IP required to be filed on or before the Agreement Date have been timely filed with the relevant patent, copyright, trademark or other authorities in the United States or foreign jurisdictions, as the case may be, for the purposes of maintaining such Registered Company IP registered in such jurisdiction. Except as set forth on Section 3.19(e) of the Company Disclosure Schedules, there are no actions that must be taken by any member of the Company Group within ninety (90) days of the Agreement Date that, if not taken, will result in the loss or delay of any Registered Company IP, including the payment of any registration, maintenance or renewal fees or the filing of any responses to U.S. Patent and Trademark Office (or equivalent authority) actions, documents, applications or certificates for the purposes of obtaining, maintaining, perfecting or preserving or renewing any Registered Company IP.

(f) Except as set forth on Section 3.19(f) of the Company Disclosure Schedules, since January 1, 2017, no member of the Company Group is, or has been, subject to any proceeding or outstanding decree, Order, judgment, injunction, settlement, action, investigation, opposition, interference, reexamination, cancellation, lawsuit, hearing, investigation, complaint, arbitration, mediation, demand, inquiries or requests for documents or any other Intellectual Property dispute, disagreement, or claim, whether brought by a third party or by a member of the Company Group (including, with respect to Trademarks, invalidity, nullity, opposition, cancelation, concurrent use or similar proceeding), whether by subpoena or informal letter, or any Order restricting the any member of the Company Group's rights in, to and under any Company IP or Company Product, or the validity, enforceability, use, right to use, ownership, registration, right to register, priority, duration, scope or effectiveness of any Company IP or triggering any additional payment obligations with respect to any such Company IP (collectively, "IP Dispute"), nor has any IP Dispute been threatened against any member of the Company Group challenging the legality, validity, enforceability or ownership of any Company IP or Company Product. To the Knowledge of the Company, no circumstances or grounds exist that would give rise to an IP Dispute. Except as set forth on Section 3.19(f) of the Company Disclosure Schedules, no member of the Company Group has sent any notice of any IP Dispute.

(g) None of the Company Owned IP, or to the Knowledge of the Company, any Company Licensed IP, has been adjudged invalid or unenforceable, in whole or in part, and, except as set forth on Section 3.19(g) of the Company Disclosure Schedules, to the Knowledge of the Company, no facts or circumstances exist that would render any registrations forming part of the Registered Company IP invalid or unenforceable.

(h) Except as set forth in Section 3.19(h) of the Company Disclosure Schedules, in each case in which a member of the Company Group has acquired any material Intellectual Property that it purports to own from any Third Party (including any contractor or consultant) other than, in the case of Copyrights, by operation of law, such member of the Company Group obtained a written assignment, which, to the Knowledge of the Company, is valid and enforceable and sufficient to irrevocably transfer all of such Third Party's rights in such Intellectual Property to the member of the Company Group and, to the maximum extent provided for by, and in accordance with, applicable laws, for each registration or registration application for Intellectual Property assigned by a Third Party to a member of the Company Group, the applicable member of the Company Group has recorded each such assignment with the relevant Governmental Authority, including, as applicable, the U.S. Patent and Trademark Office, the U.S. Copyright Office, or their respective equivalents in any relevant foreign jurisdiction, as the case may be.

(i) The Company IT Assets perform in a manner that is sufficient for the Company Group to conduct its Business as currently conducted. The Company IT Assets have not materially malfunctioned or failed since January 1, 2017 and do not, to the Knowledge of the Company, contain any viruses, worms, trojan horses, bugs, faults or other devices, errors, contaminants or effects that (i) significantly disrupt or adversely affect the functionality of any Company IT Asset, except as disclosed in their documentation or (ii) enable or assist any Person to access without authorization any Company IT Asset. The Company Group has implemented commercially reasonable backup, security and disaster recovery technology consistent with current industry practices for comparable businesses and have taken commercially reasonable actions consistent with current industry practices

for comparable businesses to protect the confidentiality, integrity and security of the Company IT Assets and all information and transactions stored or contained on Company IT Assets. To the Knowledge of the Company, no Person has gained unauthorized access to any Company IT Asset. Section 3.19(i) of the Company Disclosure Schedules sets forth an accurate and complete list and description of all material Company IT Assets other than licenses for Commercial Software. All Company IT Assets are (A) owned by a member of the Company Group, or (B) currently in the public domain or otherwise available to the Company Group without the approval or consent of any Person or (C) to the Knowledge of the Company, licensed or otherwise used by the Company Group pursuant to terms of valid, binding written agreements with third parties, or are provided by Seller or its Affiliates for use by the Company Group under a Seller IP Contract.

(j) Except as set forth in Section 3.19(j) of the Company Disclosure Schedules, no Public Software forms part of, is incorporated into or has been distributed, used or compiled with, in whole or in part, any Company Software or any Software included in the Company IT Assets that are distributed by the Company Group to Third Parties.

(k) Each member of the Company Group is in material compliance with the terms and conditions of all licenses for the Public Software that such member of the Company Group has licensed from a Third Party that forms part of, has been used in connection with the development of, is incorporated into used or compiled with, in whole or in part, any Company Software and any Software included in the Company IT Assets. Except as set forth in Section 3.19(k) of the Company Disclosure Schedules, the Company Group does not use, incorporate or distribute Public Software in a manner that, (A) requires or purports to require the licensing, disclosure or distribution of any source code (other than source code that is a part of such Public Software) of any Company Software or any Software included in the Company IT Assets or of Company Owned IP, to licensees or any other Person, (B) prohibits or limits the receipt of consideration in connection with licensing, sublicensing or distributing any Company Software or other Software included in the Company IT Assets, (C) except as specifically permitted by Law, allows any Person to decompile, disassemble or otherwise reverse-engineer any Company Software other Software included in the Company IT Assets or (D) requires the licensing of Company Software or any other Software included in the Company IT Assets to any other Person for the purpose of making derivative works.

(l) Each member of the Company Group, the Company Products, the operation of the Company's Business as currently conducted, and the use of the Company IP and Company IT Assets in connection the conduct of the Business as currently conducted, has not infringed, misappropriated or otherwise violated and will not infringe, misappropriate, or otherwise violate the Intellectual Property rights of any Third Party, Seller or its Affiliates, provided that the foregoing representation is made to the Knowledge of the Company with respect to Third Party Patents. There is no Proceeding pending, asserted or threatened against any member of the Company Group concerning any of the foregoing, nor, except as set forth in Section 3.19(l) of the Company Disclosure Schedules, has any member of the Company Group and, to the Knowledge of the Company, any licensor of any Company Licensed IP, since January 1, 2017, received any notification (including any invitation to take a license) that a license under any other Person's Intellectual Property is or may be required or alleging that the Company Group or such licensor (solely with respect to such Company Licensed IP) has infringed, misappropriated or otherwise violated any Person's Intellectual Property rights. The Company Group, Seller and its Affiliates are not aware of any facts or circumstances which could lead or give rise to any such claim or assertion of infringement, misappropriation or other violation of Intellectual Property. No Person is, to the Knowledge of the Company, engaging, or, except as set forth in Section 3.19(l) of the Company Disclosure Schedules, has engaged, in any activity that infringes, misappropriates or otherwise violates any Company IP, and there is no Proceeding pending, asserted or threatened by a member of the Company Group against any other Person concerning any of the foregoing. No member of the Company Group has received or requested any opinion of counsel, verbal or written, regarding the validity or enforceability of Company IP or any Intellectual Property of a Third Party or regarding the infringement of any Intellectual Property of any Third Party.

(m) To the Knowledge of the Company, no current or former Company Employee, consultant, advisor or independent contractor of any member of the Company Group is in default or breach of any term of any employment agreement, non-disclosure agreement, assignment of invention agreement or similar agreement relating to the protection, ownership, development, use or transfer of Company IP or any other Intellectual Property. Except as set forth in Section 3.19(m) of the Company Disclosure Schedules, the Company Group has obtained from all

current and former Company Employees, consultants, advisors and independent contractors practice, creation or development of any Company Owned IP (any such Person, an "Author"), through a written assignment, unencumbered and unrestricted exclusive ownership of all right, title and interest in and to such Company Owned IP and the Company Group has obtained the waiver of all non-assignable rights from such Authors. To the Knowledge of the Company, none of the current or former Company Employees, consultants, advisors and independent contractors is or was, at the time services were provided to the Company Group party to any Contract with any Person other than a member of the Company Group which requires such Company Employee, consultant, advisor or independent contractor to (i) assign any interest in any Intellectual Property that is used or held for use in the conduct of the business of the Company Group as it is currently conducted or proposed to be conducted by the Company Group, to any Person other than a member of the Company Group, or (ii) keep confidential any Trade Secrets of any Person other than a member of the Company Group.

(n) The Company Group has taken commercially reasonable steps to maintain the confidentiality and otherwise protect its rights in all Trade Secrets and other confidential or non-public information or data used or held for use in connection with the operation of the Business("Confidential Information"). To the Knowledge of the Company, all disclosure of Confidential Information by or on behalf of a member of the Company Group to any Third Party, including any Company Employee or other Person, has been subject to a binding obligation of confidentiality on the part of such Third Party and to the Knowledge of the Company, no such Third Party has breached such obligation. All use, disclosure or appropriation by or on behalf of a member of the Company Group of Confidential Information not owned a member of the Company Group has been in compliance with any applicable legal obligations of the Company Group to the owner of such Confidential Information. To the Knowledge of the Company: (i) no former or current Company Employee, consultant, advisor, independent contractor or agent of any member of the Company Group has misappropriated any Trade Secrets of any other Person in the course of performance as a former or current Company Employee, consultant, advisor, independent contractor or agent of any member of the Company Group and (ii) no Company Employee, independent contractor or agent of any member of the Company Group, is in default or breach of any term of any Contract relating in any way to the protection, ownership, development, use or transfer of the Company IP or any other Intellectual Property.

(o) There are no Contracts pursuant to which (i) any member of the Company Group grants any Third Party, Seller or its Affiliates exclusive rights under any Company IP or (ii) any member of the Company Group grants to a Third Party, Seller or its Affiliates a right to grant sublicenses to Third Parties with respect to any Company Owned IP.

(p) Immediately following the Closing, the Company Group (including, as applicable, the Surviving Entity) will have all of the rights of the Company Group under the Company IP and the Company IP Contracts, and to use the Company IT Assets, to the same extent the applicable member of the Company Group would have had immediately prior to the Closing if the Transactions had not occurred, and without the payment of any additional amounts or consideration other than ongoing fees, royalties or payments that the Company would otherwise be required to pay. Except as set forth in Section 3.19(p) of the Company Disclosure Schedules, there are no royalties, honoraria, fees, milestone or other payments payable by any member of the Company Group to any Person (other than salaries payable to Company Employees not contingent on or related to use of their work product and fees payable under licenses for Commercial Software) as a result of the ownership, use, possession, license-in, license-out, sale, marketing, advertising or disposition of any Company IP by a member of the Company Group, and the execution and delivery of this Agreement and consummation of the Transactions will not result in any such royalties, honoraria, fees or other payments being payable by Acquirer, provided, however, that no representation is made with respect to any such payments becoming payable by Acquirer or its Affiliates based on the respective Contracts of Acquirer and its Affiliates (other than the Company Group) or other obligations or any acts or omissions to act by Acquirer or its Affiliates (other than the Company Group), and provided further that the foregoing representations are made to the Knowledge of the Company with respect to any payments required based on infringement of Third Party Patents. None of the execution and delivery of this Agreement, the consummation of the Transactions, or the performance by the Company Parties of their respective obligations hereunder will result in (i) any increase in or acceleration of royalties or other payments payable by a member of the Company Group, Acquirer or its Affiliates in respect of any Company IP; (ii) reduction of any royalties or other payments the Company Group, or Acquirer or any of its Affiliates would otherwise be entitled to in respect of any Company IP;

(iii) the creation of any Encumbrance on any Company Owned IP or Intellectual Property that is owned by or licensed to the Acquirer or any of its Affiliates prior to the Closing; (iv) Acquirer or any of its Affiliates being bound by or subject to any non- compete or licensing obligation, covenant not to sue or other restriction on the operation or scope of its business, or in the grant or obligation to grant by Acquirer, any of its Affiliates or the Company Group to any Person of any rights with respect to any Intellectual Property, which Acquirer or its Affiliates were not bound by or subject to prior to the Closing; (v) the modification, cancellation, termination, or suspension of any Company IP Contract; or (vi) the creation or enhancement of the right to do or cause any of the foregoing for any non-Company Group party to any such Contracts, except in each case arising from any Contract or other obligation or any acts or omissions to act of Acquirer or any of its Affiliates (other than the Company Group) and except, in each case, as may occur with respect to the modification or termination of a Seller Contract that is replaced by a new Company IP Contract entered into by the Company to replace a Seller Contract in accordance with Section 5.7(b),

(q) Except as set forth in Section 3.19(q) of the Company Disclosure Schedules, none of the Company Owned IP was developed by or on behalf of, or using grants or any other subsidies of, any Governmental Authority or any university, and no government funding, facilities, faculty or students of a university, college, other educational institution or research center was used in the development of Company Owned IP that has resulted in any such Governmental Authority or any university, faculty or students of a university, college, other educational institution or research center, or any other third party, to acquire or to have a right to acquire any right, title or interest in such Company Owned IP. To the Knowledge of the Company, no current or former Company Employee, consultant, advisor or independent contractor of a member of the Company Group, who was involved in, or who contributed to, the creation or development of any Company Owned IP, has performed services for a Governmental Authority, university, college, or other educational institution or research center during a period of time during which such employee, consultant or contractor was also performing services with respect to development of such Company Owned IP for the applicable member of the Company Group.

3.20 Privacy, Data and Data Security.

(a) The Company Group's data, privacy and security practices conform, and at all times have conformed, to all of the Company Privacy Commitments, Privacy Laws and Company Data Agreements in all material respects. The execution, delivery and performance of this Agreement will not cause, constitute, or result in a breach or violation of any Privacy Laws, Company Privacy Commitments, or any Company Data Agreements by the members of the Company Group, provided, however, that no representation is made with respect to any acts or omissions by Acquirer or its Affiliates (other than the Company Group) with respect to any Company Data. Copies of all current Company Privacy Policies have been Delivered to Acquirer and such copies are true, correct and complete. To the Knowledge of the Company, the Company Group has, and, except as may be affected by notices, consents, waivers or new Contracts described in Section 5.7, the Company Group will have, all rights and consents necessary to collect and Process all Company Data and confidential information collected and Processed by them in the Business of the Company Group. The Company Group is not subject to the European Union General Data Protection Regulation.

(b) The Company Group has established and maintains commercially reasonable technical, physical and organizational controls, policies, procedures, safeguards, measures and security systems, plans and technologies with respect to Processing and security of Personal Data required under applicable data security requirements under applicable Privacy Laws, Company Data Agreements and Company Privacy Commitments. The Company Group and, to the Knowledge of the Company, its data processors have taken commercially reasonable steps to ensure that all employees or other Persons with the right to access Company Data are under obligations of confidentiality with respect to such data.

(c) Except as set forth in Section 3.20(c) of the Company Disclosure Schedules, no member of the Company Group has received or become subject to and, to the Knowledge of the Company, there is no circumstance (including any circumstance arising as the result of an audit or inspection carried out by any Governmental Authority) that would reasonably be expected to give rise to, any Proceeding, Order, notice, communication, warrant, regulatory opinion, settlement, audit result or allegation from a Governmental Authority or any other Person: (i) alleging or confirming non-compliance with or breach of a relevant requirement of Privacy Laws or Company Privacy Commitments, (ii) requiring or requesting any member of the Company Group to amend, rectify,

cease Processing, de-combine, permanently anonymize, block or delete any Company Data (other than pursuant to a valid data subject request in the ordinary course of business), (iii) permitting or mandating relevant Governmental Authorities to investigate, requisition information from, or enter the premises of, a member of the Company Group or (iv) claiming compensation from the Company Group based on a violation of Privacy Laws or Company Privacy Commitments or relating to the Company Group's Processing of Personal Data.

(d) Where any member of the Company Group uses a data processor other than Seller or its Affiliates to Process Personal Data, there is in existence a written Contract between the Company and each such data processor that complies with the requirements of all Privacy Laws and Company Privacy Commitments. To the Knowledge of the Company, the data processors of the Company Group are in material compliance with Privacy Laws and Company Privacy Commitments with respect to their Processing activities on behalf of the Company Group. To the Knowledge of the Company, such data processors have not breached any such Company Data Agreements pertaining to Personal Data Processed by such Persons on behalf of any member of the Company Group. True, correct and complete copies of all material Company Data Agreements have been Delivered to Acquirer. To the Knowledge of the Company, no member of the Company Group is under investigation by any Governmental Authority for a violation of HIPAA or applicable HIPAA regulations. Each applicable member of the Company Group has entered into "business associate contracts" whether as a "covered entity" or as a "business associate" (as described in 45 C.F.R. § 164.504(e)) to the extent required pursuant to HIPAA and in compliance with all applicable Privacy Laws and is not in breach of any business associate contract.

(e) Except as set forth in Section 3.20(e) of the Company Disclosure Schedules, to the Knowledge of the Company, no material breach (including as defined under 45 C.F.R. § 164.402), security incident (including as defined under 45 C.F.R. § 164.304), unauthorized access or violation of any data security policy in relation to Company Data, Company Databases, or Confidential Information has occurred or is threatened, and there has been no actual or threatened unauthorized or illegal Processing of, or accidental or unlawful destruction, loss or alteration of, any Company Data. To the Knowledge of the Company, no circumstance has arisen in which: (A) applicable Laws (including Privacy Laws) would require the Company or any of its Subsidiaries to notify a Governmental Authority of a data security breach or security incident or (B) applicable guidance or codes of practice promulgated under applicable Laws (including Privacy Laws) would recommend any member of the Company Group to notify a Governmental Authority of a data security breach.

(f) To the Knowledge of the Company, the Company Group has valid and subsisting contractual rights to Process or have Processed for the Company Group all Company-Licensed Data and all Personal Data Processed by or for the Company Group in connection with the conduct of the Business in the manner that it is currently Processed.

(g) To the Knowledge of the Company, any Third Party who has provided Personal Data to a member of the Company Group has done so in compliance with applicable Privacy Laws, including providing notice and obtaining consent required under such applicable Privacy Laws.

(h) The Company Group owns all right, title and interest in and to each element of Company-Owned Data and Company Databases or otherwise has all rights, permissions, consents and authorizations required to Process such Company-Owned Data and the data in Company Databases in the Business in the manner currently Processed by the Company Group, all of which rights shall survive unchanged, and without any change in the terms and conditions under which the Company Group has such rights, following the execution and delivery of this Agreement and the consummation of the Transactions except as may be affected by notices, consents, waivers or new Contracts described in Section 5.7.

(i) Section 3.20(e) of the Company Disclosure Schedules sets forth a true, correct and complete list and description of Company Databases.

3.21 Transactions with Certain Persons. Except as set forth in Section 3.21(a)of the Company Disclosure Schedules, no Related Party has or has had at any time since January 1, 2019, either directly or indirectly, any material interest, financial or otherwise, in: (a) any Person which purchases from or sells, provides, licenses or furnishes to any member of the Company Group any goods, services property, technology, Intellectual Property or

other property rights or (b) any Contract to which a member of the Company Group is a party. To the Company's Knowledge, no event has occurred that has resulted in, or would reasonably be expected to result in, any claim by any employee, officer, director, stockholder or agent of any member of the Company Group for indemnification or advancement of expenses related thereto pursuant to (i) the terms of the Governing Documents of any member of the Company Group, (ii) any indemnification agreement or other Contract between a member of the Company Group and any such employee, officer, director, stockholder or agent or (iii) any applicable Laws. No amounts are owed to or by a member of the Company Group to or from any Related Party except for compensation and reimbursement of expenses.

3.22 Insurance. Section 3.22 of the Company Disclosure Schedules sets forth a complete and correct list of all material insurance policies of the Company Group currently in force and effect. True, complete and correct copies of such insurance policies have been Delivered to Acquirer. Except as set forth in Section 3.22 of the Company Disclosure Schedules, there is no material claim pending under any such policies. All such insurance policies insure the applicable member of the Company Group in reasonably sufficient amounts against normal risks usually insured against by Persons operating similar businesses or properties of similar size in the localities where such businesses or properties are located, and are sufficient for compliance in all material respects with applicable Law and for compliance with applicable obligations under any material Contract of such member of the Company Group. No member of the Company Group has any self-insurance or co-insurance programs. All premiums due and payable under all such policies have been paid and no member of the Company Group is in material Default under any provision of any such insurance policy and no member of the Company Group has received any written notice of threatened termination, cancellation or nonrenewal of any such insurance.

3.23 No Brokers. Except as set forth in Section 3.23 of the Company Disclosure Schedules, no member of the Company Group or any of its Representatives has entered into any Contract with any broker, finder or similar agent or any Person which will result in an obligation of Acquirer, any member of the Company Group, or any of their respective Affiliates to pay any finder's fee, brokerage fees or commission or similar payment in connection with the Transactions.

3.24 Books and Records. The Company Group has made and kept true, complete and correct copies of its books and records and accounts, which set forth in reasonable detail and accurately and fairly reflect the activities of each member of the Company Group. The books, records and accounts of each member of the Company Group have been maintained in accordance with reasonable business practices on a basis consistent with prior years.

3.25 Bank Accounts. Section 3.25 of the Company Disclosure Schedules contains a complete and correct list of all bank accounts maintained by the Company Group, including each account number and the name and address of each bank and the name of each Person who has signature power with respect to each such account or power of attorney to act on behalf of any member of the Company Group. Holdco2 has Delivered to Acquirer true, complete and correct copies of all statements with respect to such bank accounts received by a member of the Company Group.

3.26 Customers, Suppliers and Third Party Payors.

(a) Section 3.26(a) of the Company Disclosure Schedules sets forth a list of Payor Parties that generated in excess of $100,000 of revenue for the Business during the 12-month period ended December 31, 2021 (such parties, "Top Payors"), together with the revenue amount derived from each such Top Payor for such 12-month period. Except as set forth in Section 3.26(a) of the Company Disclosure Schedules, no member of the Company Group or Seller currently has or has since January 1, 2017 had any material disputes with any Payor Party related to the Business. Except as set forth in Section 3.26(a) of the Company Disclosure Schedules, no member of the Company Group or Seller has received written notice from any Payor Party that such Payor Party shall not continue its relationship with the Company Group or, to the extent applicable to the Business, Seller, after the Closing or that such Top Payor intends to terminate or materially modify an existing Contract with any member of the Company Group or Seller, as applicable. For purposes of this Section 3.26(a), a "material dispute" means any alleged overpayments, erroneous payments or underpayments, which, individually or in the aggregate, exceed 10% of annual payor revenue or $150,000, whichever is less.

(b) Section 3.26(b)of the Company Disclosure Schedules sets forth a list of customers (other than Payor Parties) that generated in excess of $400,000 of revenue for the Business during the 12- month period ended December 31, 2021 (the "Top Customers"), together with the revenue amount derived from each such Top Customer for such 12-month period. No member of the Company Group has outstanding material disputes with any Top Customer. No member of the Company Group or Seller has received written notice from any Top Customer that such Top Customer shall not continue as a customer of the Company Group after the Closing or that such Top Customer intends to terminate or materially modify an existing Contract with the applicable member of the Company Group.

(c) Section 3.26(a) of the Company Disclosure Schedules sets forth a a list of suppliers or providers of services to the Company Group that generated in excess of $500,000 in expenditures by the Business during the 12-month period ending on December 31, 2021 (the "Top Suppliers"), together with the amount paid to each such Top Supplier for such 12-month period. No member of the Company Group has outstanding material disputes with any Top Supplier. No member or the Company Group or Seller has received written notice from any Top Supplier that such Top Supplier shall not continue as a supplier or service provider of the Company Group after the Closing or that such Top Supplier intends to terminate or materially modify an existing Contract with it's the applicable member of the Company Group.

3.27 Inventory. The inventories shown on the Company Balance Sheet (net of any reserve on the Company Balance Sheet) or thereafter acquired by the Company Group, consisted of items of a quantity and quality usable or salable in the Ordinary Course of. Business. Since the Company Balance Sheet Date, the Company Group has continued to maintain inventories in the Ordinary Course of. Business. No member of the Company Group has received written, or to the Knowledge of the Company, oral notice that it will experience in the foreseeable future any difficulty in obtaining, in the desired quantity and quality and at a reasonable price and upon reasonable terms and conditions, the raw materials, supplies or component products required for the manufacture, assembly or production of its products.

3.28 No Additional Representations. THE COMPANY ACKNOWLEDGES AND AGREES THAT, EXCEPT AS EXPRESSLY SET FORTH IN ARTICLE 4, NO ACQUIRER PARTY, NO REPRESENTATIVE OF ANY ACQUIRER PARTY OR ANY OTHER PERSON MAKES ANY REPRESENTATION OR WARRANTY, EXPRESSED OR IMPLIED, AT LAW OR IN EQUITY, WITH RESPECT TO THIS AGREEMENT, THE TRANSACTIONS CONTEMPLATED HEREBY, INCLUDING THE MERGERS, THE ACQUIRER PARTIES (OR ANY OF THEM), OR ANY INFORMATION PROVIDED OR MADE AVAILABLE TO THE COMPANY OR ITS REPRESENTATIVES IN CONNECTION WITH THE TRANSACTIONS CONTEMPLATED HEREBY (INCLUDING ANY FORECASTS, PROJECTIONS, ESTIMATES OR BUSINESS PLANS), AND ALL OTHER SUCH REPRESENTATIONS OR WARRANTIES ARE HEREBY EXPRESSLY DISCLAIMED.

ARTICLE 4
REPRESENTATIONS AND WARRANTIES OF THE ACQUIRER PARTIES

The Acquirer Parties hereby represent and warrant to Seller as follows, with each such representation and warranty subject to (x) the exceptions set forth in the Acquirer Disclosure Schedules (it being understood that the Acquirer Disclosure Schedules shall be arranged in sections corresponding to the sections and subsections contained in this Article 4, and no disclosure made in any particular section of the Acquirer Disclosure Schedules shall be deemed to be made in any other section of the Acquirer Disclosure Schedules unless expressly made therein (by cross-reference or otherwise) or to the extent it is reasonably apparent from a reading of the text of the disclosure that such disclosure is applicable to such other sections and subsections of the Acquirer Disclosure Schedules) and (y) matters disclosed in the SEC Reports filed with the SEC prior to the Agreement Date (to the extent the qualifying nature of the matters disclosed and the disclosure thereof is readily apparent from the disclosure thereof in such SEC Reports), excluding disclosures contained in sections entitled "Forward-Looking Statements" and "Risk Factors" (and any similarly titled sections) and any other disclosures contained in the SEC Reports to the extent they are of a predictive or cautionary nature or related to forward-looking statements; provided, that, none of the qualifications contained in clauses (x) and (y) of the immediately preceding sentence shall apply to the representations and warranties contained in Section 4.3.

4.1 Organization of Acquirer Parties. Each Acquirer Party is either a corporation or limited liability company duly organized and validly existing and in good standing under the Laws of the jurisdiction of its incorporation or formation, with the requisite corporate or limited liability company power and authority to conduct its business as it is presently being conducted, to own, lease or operate, as applicable, its assets and properties, and to perform all of its obligations under its Contracts.

4.2 Authorization.

(a) Each Acquirer Party has all requisite corporate or limited liability company power and authority, and, except for the Acquirer Stockholder Approval, has taken all corporate or limited liability company action necessary, to execute, deliver and perform its obligations under this Agreement and the Ancillary Agreements and to consummate the transactions contemplated to be consummated by it hereby and thereby. This Agreement and the Ancillary Agreements to which an Acquirer Party is a party have been duly executed and delivered by each Acquirer Party thereto and, assuming the due authorization, execution and delivery hereof and thereof by the other parties hereto and thereto, constitute the legal, valid and binding obligation of each Acquirer Party thereto, enforceable against such Acquirer Party in accordance with their respective terms, except as enforcement may be limited by the Enforceability Exceptions.

(b) The Acquirer Stockholder Approval is the only vote of the holders of any voting securities of Acquirer under any Law, the rules and regulations of Nasdaq, and Acquirer's certificate of incorporation and bylaws necessary to approve the Transactions.

4.3 Capitalization.

(a) The authorized capital stock of Acquirer consists of 380,000,000 shares of common stock, par value of $0.0001 per share and 1,000,000 shares of preferred stock, par value of $0.0001 per share. As of December 31, 2021, 242,578,824 shares of Acquirer common stock were issued and outstanding, and no shares of Acquirer's preferred stock were issued and outstanding. As of December 31, 2021, Acquirer had reserved 33,354,727 shares of Acquirer's common stock for issuance upon the exercise of outstanding common stock options, 12,600,859 shares of Acquirer's common stock for issuance upon the vesting of restricted stock units, 21,994,972 shares of Acquirer's common stock for issuance upon conversion of Acquirer's outstanding warrants, and 15,434,321 shares of Acquirer's common stock were available for issuance under Acquirer's 2021 Equity Incentive Plan. There are no options, warrants, convertible securities or other rights or Contracts pursuant to which Acquirer is obligated to issue or sell any of its securities, other than this Agreement, the Ancillary Documents, Acquirer's employee stock purchase plan, Acquirer's equity incentive plans and awards thereunder, inducement awards granted by Acquirer and Acquirer's outstanding warrants, the SPAC Merger Agreement and Acquirer is not a party to any Contract pursuant to which it is obligated to register any of its securities under the Securities Act (other than the Ancillary Documents, the SPAC Merger Agreement and the registration rights agreement and subscription agreements entered into with investors in connection with the SPAC Merger Agreement) or with respect to the voting of any securities issued by Acquirer.

(b) The shares of Acquirer Stock to be issued in accordance with this Agreement will, upon such issuance, be duly authorized, validly issued, fully paid and non-assessable, free of statutory or contractual pre-emptive rights and free of any Encumbrances (other than this Agreement and restrictions on transfer under the Securities Act and applicable U.S. state securities laws). Subject to the accuracy of Seller's representations set forth herein and in the Ancillary Agreements, the offer, sale and issuance of the shares of Acquirer Stock as contemplated by this Agreement are exempt from the registration requirements of the Securities Act.

(c) The equity securities of each of Merger Sub I and Merger Sub II (i) have been duly authorized and validly issued and are fully paid and nonassessable, (ii) were issued in compliance in all material respects with applicable Law, and (iii) were not issued in breach or violation of any preemptive rights or Contract to which Acquirer is a party or bound. All of the outstanding equity securities of Merger Sub I and Merger Sub II are owned by Acquirer free of any Encumbrances (other than this Agreement and restrictions on transfer under the Securities Act and applicable U.S. state securities laws). Neither Merger Sub I nor Merger Sub II has any Subsidiaries or owns, directly or indirectly, any equity securities in any Person.

4.4 Noncontravention.

(a) The execution, delivery and performance by each Acquirer Party and each Acquirer Party's compliance with this Agreement and consummation by each Acquirer Party of the Transactions do not and will not (i) violate the Governing Documents of Acquirer, Merger Sub, (ii) violate any loan or credit agreement, guarantee, note, bond, mortgage, indenture, lease or other agreement, permit, franchise or license to which, as of the date of this Agreement, Acquirer is a party or by which Acquirer's properties or assets are bound, (iii) violate any statute or any judgment, order, rule or regulation of any court or governmental agency, taxing authority or regulatory body, domestic or foreign, having jurisdiction over Acquirer or any of its properties or (iv) assuming any consents and approvals referred to in Section 4.4(b) are duly obtained, conflict with or constitute a Default under any Laws, Orders or Permits applicable to the Acquirer Parties, except, in the case of clauses (i) and (iv) for any such violation or Default which would not materially affect the Acquirer Parties' ability to perform any of their respective obligations hereunder or consummate the Transactions, and, in the case of clauses (ii) and (iii), for Defaults or violations that have not had and would not reasonably be expected to have, individually or in the aggregate, a Material Adverse Effect.

(b) Other than the filing of the Certificate of Merger for the Merger, filings with the SEC and Nasdaq and such filings and notifications as may be required to be made by Acquirer in connection with the Transactions under the HSR Act or other applicable Antitrust Laws and the expiration or early termination of the applicable waiting period under the HSR Act or other applicable Antitrust Laws, no consent, approval, Order or authorization of, or registration, declaration, or filing with, any Governmental Authority or any other Person is required to be made, obtained or given by any Acquirer Party in connection with the execution, delivery and performance by each Acquirer Party of this Agreement or the consummation by each Acquirer Party of the Transactions.

4.5 Compliance with Laws. Each Acquirer Party is in compliance with all applicable laws and has not received any written communication from a governmental entity that alleges that Acquirer is not in compliance with or is in default or violation of any applicable law, except where such non-compliance, default or violation would not, individually or in the aggregate, be reasonably likely to have a Material Adverse Effect.

4.6 Securities Law Matters.

(a) The issued and outstanding shares of Acquirer Stock are registered pursuant to Section 12(b) of the Exchange Act, and are listed for trading on Nasdaq under the symbol "SMFR". There is no suit, action, proceeding or investigation pending or, to the Knowledge of Acquirer, threatened against Acquirer by Nasdaq or the SEC with respect to any intention by such entity to deregister the Acquirer Stock or prohibit or terminate the listing of the Acquirer Stock on Nasdaq, excluding, for the purposes of clarity, the customary ongoing review by Nasdaq of the Acquirer's listing of additional shares application in connection with the Transactions. Acquirer has taken no action that is designed to terminate or is reasonably expected to result in the termination of the registration of the Acquirer Stock under the Exchange Act or the listing of the Acquirer Stock on Nasdaq and is in compliance in all material respects with the listing requirements of Nasdaq.

(b) Each report, statement and form (including exhibits and other information incorporated therein) filed by Acquirer with the SEC under Sections 13(a), 14(a) or 15(d) of the Exchange Act or filed pursuant to the Securities Act since July 22, 2021 (the "SEC Reports") when filed complied in all material respects with the requirements of the Securities Act and the Exchange Act and the rules and regulations of the SEC promulgated thereunder. None of the SEC Reports filed under the Exchange Act (except to the extent that information contained in any SEC Report has been superseded by a later timely filed SEC Report) contained, when filed, any untrue statement of a material fact or omitted to state a material fact required to be stated therein or necessary to make the statements therein not misleading, in the case of any SEC Report that is a registration statement, or included, when filed, any untrue statement of a material fact or omitted to state a material fact necessary in order to make the statements therein, in light of the circumstances under which they were made, not misleading, in the case of all other SEC Reports. Acquirer has timely filed each SEC Report that Acquirer was required to file with the SEC since July 22, 2021. There are no material outstanding or unresolved comments in comment letters from the SEC staff with respect to any of Acquirer's SEC Reports. In addition, Acquirer has made available to Seller (including via the SEC's EDGAR system) a copy of the SEC Reports since July 22, 2021. Except as disclosed in the SEC Reports,

each of the Sema4 Financial Statements (including, in each case, any notes thereto) contained in the SEC Reports was prepared in accordance with U.S. generally accepted accounting principles applied on a consistent basis throughout the periods indicated (except as may be indicated in the notes thereto or, in the case of unaudited statements, as permitted by Form 10-Q of the SEC), each complied in all material respects with the rules and regulations of the SEC with respect thereto as in effect at the time of filing and each fairly presents, in all material respects, the financial position, results of operations and cash flows of Acquirer or Mount Sinai Genomics, Inc. d/b/a Sema4 ("Legacy Sema4"), as applicable, as at the respective dates thereof and for the respective periods indicated therein. For purposes of this Section 4.6(b), the "Sema4 Financial Statements" means, to the extent contained in the SEC Reports, (i) the audited balance sheets of Legacy Sema4 as of December 31, 2020 and 2019, the related statements of operations and comprehensive loss, redeemable convertible preferred stock and stockholders' deficit and cash flows for each of the three years in the period ended December 31, 2020, and the related notes, (ii) the unaudited condensed financial statements of Legacy Sema4 as of March 31, 2021 and for the three months ended March 31, 2021 and 2020 and the related notes, (iii) the unaudited condensed financial statements of Legacy Sema4 as of June 30, 2021 and for the three and six months ended June 30, 2021 and 2020 and the related notes, and (iv) the unaudited condensed consolidated financial statements of Acquirer as of September 30, 2021 and for the three months and nine months ended September 30, 2021 and 2020 and the related notes.

4.7 No Proceedings. Except for such matters as have not had and would not reasonably be expected to have, individually or in the aggregate, a Material Adverse Effect, there is no (i) investigation, action, suit, claim or other proceeding, in each case by or before any Governmental Authority pending, or, to the Knowledge of Acquirer, threatened against any Acquirer Party or (ii) judgment, decree, injunction, ruling or order of any governmental entity outstanding against any Acquirer Party.

4.8 No Brokers. No Acquirer Party has entered into any Contract with any broker, finder or similar agent or any Person which will result in Seller being obligated to pay any finder's fee, brokerage fees or commission or similar payment in connection with the Transactions.

4.9 No Insolvency Proceedings. Neither Acquirer nor any of its subsidiaries has taken any steps to seek protection pursuant to any law or statute relating to bankruptcy, insolvency, reorganization, receivership, liquidation, administration or winding up or failed to pay its debts when due, nor does Acquirer or any subsidiary have any knowledge or reason to believe that any of their respective creditors intend to initiate involuntary bankruptcy proceedings or seek to commence an administration.

4.10 Not an Investment Company. Acquirer is not, and immediately after the consummation of the Transactions, will not be, an "investment company" within the meaning of the Investment Company Act of 1940, as amended.

4.11 Anti-Corruption Laws. There has been no action taken by Acquirer, or, to the Knowledge of Acquirer, any officer, director, equityholder, manager, employee, agent or representative of Acquirer, in each case, acting on behalf of Acquirer, in violation of any applicable Anti-Corruption Laws (as herein defined), (i) Acquirer has not been convicted of violating any Anti-Corruption Laws or subjected to any investigation by a Governmental Authority for violation of any applicable Anti-Corruption Laws, (ii) Acquirer has not conducted or initiated any internal investigation or made a voluntary, directed, or involuntary disclosure to any Governmental Authority regarding any alleged act or omission arising under or relating to any noncompliance with any Anti-Corruption Laws and (iii) Acquirer has not received any written notice or citation from a Governmental Authority for any actual or potential noncompliance with any applicable Anti-Corruption Laws. As used herein, "***Anti-Corruption Laws***" means any applicable laws relating to corruption and bribery, including the U.S. Foreign Corrupt Practices Act of 1977 (as amended), the UK Bribery Act 2010, and any similar law that prohibits bribery or corruption.

4.12 Taxes. Except as provided in Section 4.12 of the Acquirer Disclosure Schedules:

(a) Each member of the Acquirer Group, and any consolidated, combined, unitary or aggregate group composed of members of the Acquirer Group for Tax purposes, has timely filed all federal income Tax Returns and other material Tax Returns it is required to have filed. All Tax Returns filed by or with respect to any member of the Acquirer Group are accurate, complete and correct in all material respects.

(b) Each member of the Acquirer Group has paid in full all material Taxes required to have been paid. All Taxes due in connection with the operations of each member of the Acquirer Group until the Closing Date have been paid in full. No member of the Acquirer Group has any Liability for Taxes in excess of the amounts so paid, except for Taxes which are not yet due and payable.

(c) The balance sheet of Acquirer dated September 30, 2021 set forth in the SEC Documents included reflects all Liabilities for unpaid Taxes of the Acquirer Group for periods (or portions of periods) through such date. The Acquirer Group does not have any Liability for unpaid Taxes accruing after such date except for Taxes arising in the Ordinary Course of Business subsequent to such date.

(d) Within the last five (5) years, no claim has been made by any Governmental Authority in any jurisdiction where a member of the Acquirer Group does not file Tax Returns that such member is or may be subject to Tax by that jurisdiction.

(e) No extensions or waivers of statutes of limitations with respect to the Tax Returns have been given by or requested from the Acquirer Group (except for extensions to file Tax Returns that are granted automatically under applicable Law).

(f) There is (i) no past or pending audit of, or Tax controversy associated with, any Tax Return of a member of the Acquirer Group that has been or is being conducted by a Tax Authority which has not been fully settled or resolved and (ii) no other procedure, proceeding or contest of any refund or deficiency in respect of Taxes pending or on appeal with any Governmental Authority.

(g) All deficiencies asserted or assessments made against any member of the Acquirer Group as a result of any examinations by any Tax Authority have been fully paid.

(h) There are no Encumbrances for Taxes upon the assets of any member of the Acquirer Group other than Encumbrances arising by operation of Law for Taxes not yet due and payable.

(i) The Acquirer Group has collected and remitted all Sales Taxes with respect to sales made or services provided and, for all sales or provision of services that are exempt from Sales Taxes and that were made without charging or remitting Sales Taxes, the Acquirer Group has received and retained any required Tax exemption certificates or other documentation qualifying such sale or provision of services as exempt.

(j) No member of the Acquirer Group is party to or bound by any Tax indemnity, Tax sharing, Tax allocation or similar agreement, and no member of the Acquirer Group has any Liability or potential Liability to any Third Party under any such agreement.

(k) No member of the Acquirer Group is party to and has not requested any closing agreement (as described in Section 7121 of the Code or any corresponding, analogous, or similar provision under any state, local or foreign Law related to Taxes), offer in compromise, technical advice memoranda, private letter ruling or other similar agreement with any Tax Authority.

(l) No member of the Acquirer Group has ever entered into any "listed transaction" as defined in Treasury Regulations Section 1.6011 4(b) or any similar provision under state, local or foreign law. Each member of the Acquirer Group has disclosed on its U.S. federal income Tax Returns all positions taken therein that could give rise to a "substantial understatement of income tax" within the meaning of Section 6662 of the Code (or any comparable, analogous or similar provision under any state, local or foreign Law related to Taxes).

(m) Acquirer has (i) except for being a member of the Acquirer Group, never been a member of an affiliated group of corporations, within the meaning of Section 1504 of the Code (or any predecessor provision or comparable provision of state, local or foreign Law), or a member of a combined, consolidated or unitary group for state, local or foreign Tax purposes; and (ii) no Liability for Taxes of any Person under Treasury Regulations Section 1.1502-6 (or any corresponding provision of state, local or foreign Law related to income Taxes), as transferee or successor, by Contract or otherwise.

(n) No member of the Acquirer Group is subject to Tax in any jurisdiction other than the jurisdiction in which it is formed or organized by virtue of having employees, a permanent establishment or any other place of business in such jurisdiction.

(o) No member of the Acquirer Group has ever been a "distributing corporation" or a "controlled corporation" in connection with a distribution described in Section 355 of the Code.

(p) Each member of the Acquirer Group has withheld and paid all material Taxes required to be withheld in connection with any amounts paid or owing to any employee, creditor, independent contractor or other Third Party.

(q) No member of the Acquirer Group (i) has agreed, or is required, to make any adjustment under Section 481(a) of the Code by reason of a change in accounting method or otherwise for a Pre-Closing Tax Period; (ii) has made an election, or is required, to treat any of its assets as owned by another Person pursuant to the provisions of former Section 168(f) of the Code or as tax-exempt bond financed property or tax-exempt use property within the meaning of Section 168 of the Code; (iii) has acquired, or owns, any assets that directly or indirectly secure any debt the interest on which is tax exempt under Section 103(a) of the Code; or (iv) has made any of the foregoing elections, or is required to apply any of the foregoing rules, under any comparable state or local Law related to Taxes.

(r) No member of the Acquirer Group will be required to include in a Post-Closing Tax Period taxable income attributable to income that accrued (for purposes of financial statements) in a Pre-Closing Tax Period but was not recognized for Tax purposes in any Pre-Closing Tax Period as a result of (i) the installment method of accounting, the completed contract method of accounting, the long-term contract method of accounting, or the cash method of accounting, (ii) any prepaid amount received or paid in a Pre-Closing Tax Period, (iii) any deferred intercompany transaction in a Pre-Closing Tax Period or excess loss account, (iv) a change in method of accounting or Section 481 of the Code in a Pre-Closing Tax Period, (v) any inclusion under Section 951(a) or Section 951A of the Code, (vi) any gain recognition agreement entered into in a Pre-Closing Tax Period, (vii) any transaction under which previously utilized Tax losses or credits may be recaptured (including a dual consolidated loss or an excess loss account), (viii) Section 1400Z-2(a)(1)(A) of the Code, or (ix) any comparable provisions of state or local Tax law, domestic or foreign, or for any other reason. The Acquirer Group has not made an election pursuant to Section 965(h) of the Code to pay the net tax liability under Section 965 of the Code in installments.

(s) No member of the Acquirer Group has applied for and not yet received a ruling or determination from a Tax Authority regarding a past or prospective transaction.

(t) (x) Each member of the Acquirer Group has (i) to the extent deferred, properly complied in all respects with applicable Law in order to defer the amount of the employer's share of any "applicable employment taxes" under Section 2302 of the CARES Act, and (ii) to the extent applicable, eligible, and claimed, properly complied in all material respects with applicable Law and duly accounted for any available Tax credits under Sections 7001 through 7004 of the Families First Coronavirus Response Act and Section 2301 of the CARES Act, and (iii) not deferred any payroll Tax obligations (including those imposed by Sections 3101(a) and 3201 of the Code) (for example, by a failure to timely withhold, deposit or remit such amounts in accordance with the applicable provisions of the Code and the Treasury Regulations) pursuant to or in connection with any U.S. presidential memorandum or executive order, and (iv) not sought a PPP Loan.

(u) Each such nonqualified deferred compensation plan to which the Company or any of its Subsidiaries is a party complies with the requirements of paragraphs (2), (3) and (4) of Section 409A(a) of the Code by its terms and has been operated in accordance with such requirements. No event has occurred that would be treated by Section 409A(b) of the Code as a transfer of property for purposes of Section 83 of the Code. No member of the Acquirer Group is under any obligation to gross up any Taxes under Section 409A of the Code or otherwise.

4.13Environmental Laws and Regulations. Acquirer and all facilities or real property currently owned, leased or operated by Acquirer, are now and, since such time as Acquirer has owned, leased or operated the facilities or real property, have been in compliance in all material respects with all applicable Environmental Laws. Acquirer has not, since Acquirer has owned, leased or operated the facilities or real property, received from any Governmental

Authority any notice or demand letter alleging that Acquirer is in violation of any Environmental Law, and Acquirer is not subject to any Order of any Governmental Authority imposing liability or obligations relating to any Environmental Law, in each case except as is not, and would not reasonably be expected to be, material to Acquirer and its Subsidiaries, taken as a whole. There has been no release by Acquirer, or for which Acquirer would reasonably be expected to be liable by Contract or by operation of Law, of any Hazardous Substance at, under, from or to any facility or real property currently or formerly owned, leased or operated by Acquirer, in each case except as is not, and would not reasonably be expected to be, material to Acquirer and its Subsidiaries, taken as a whole. Acquirer has not assumed, undertaken or otherwise become subject to any liability of another Person relating to Environmental Laws, except as is not, and would not reasonably be expected to be, material to Acquirer and its Subsidiaries, taken as a whole.

4.14Litigation. Except as set forth in Section 4.13 of the Acquirer Disclosure Schedules or as is not, and would not reasonably be expected to be, material to Acquirer and its Subsidiaries, taken as a whole, there is no, and since July 22, 2021 there has not been any, Proceeding (a) pending or, to the Acquirer's Knowledge, threatened against or affecting Acquirer, (b) pending or, to the Acquirer's Knowledge, threatened against any Person whose Liability either Acquirer has retained or assumed, either contractually or by operation of Law, or (c) pending or, to the Acquirer's Knowledge, threatened against any stockholder, officer, director or employee of Acquirer in connection with such stockholder's, officer's, director's or employee's relationship with, or actions taken on behalf of, Acquirer. Acquirer is not a party to or named in, and none of its properties or assets are subject to, any Order that is material to Acquirer and its Subsidiaries, taken as a whole.

4.15Merger Sub Activities. Merger Sub I and Merger Sub II were organized solely for the purpose of entering into this Agreement and the Ancillary Agreements and consummating the Merger and the other Transactions and thereby, and have not engaged in any activities or business, other than those incident or related to or incurred in connection with its formation or the negotiation, preparation or execution of this Agreement or any Ancillary Agreements, the performance of its covenants or agreements in this Agreement or any Ancillary Agreement or the consummation of the transactions contemplated hereby or thereby.

4.16Additional Representations. EACH ACQUIRER PARTY ACKNOWLEDGES AND AGREES THAT, EXCEPT AS EXPRESSLY SET FORTH IN Article 3, NONE OF THE COMPANY, ANY REPRESENTATIVE OF THE COMPANY, SELLER OR ANY OTHER PERSON MAKES ANY REPRESENTATION OR WARRANTY, EXPRESSED OR IMPLIED, AT LAW OR IN EQUITY, WITH RESPECT TO THIS AGREEMENT, THE TRANSACTIONS CONTEMPLATED HEREBY, INCLUDING THE MERGER, THE COMPANY, OR ANY INFORMATION PROVIDED OR MADE AVAILABLE TO THE ACQUIRER PARTIES OR THEIR REPRESENTATIVES IN CONNECTION WITH THE TRANSACTIONS CONTEMPLATED HEREBY (INCLUDING ANY FORECASTS, PROJECTIONS, ESTIMATES, BUDGETS OR BUSINESS PLANS), AND ALL OTHER SUCH REPRESENTATIONS OR WARRANTIES ARE HEREBY EXPRESSLY DISCLAIMED.

ARTICLE 5
COVENANTS AND OTHER AGREEMENTS

5.1 Conduct of Business of the Company Group. During the period from the Agreement Date through the earlier of (x) the termination of this Agreement in accordance with its terms and (y) the Effective Time (the "***Pre-Closing Period***"), except (i) as set forth on Section 5.1 of the Company Disclosure Schedule or in the Pre-Closing Budget, (ii) to the extent necessary to comply with the Company Parties' obligations under this Agreement, including completion of the Pre-Closing Restructuring, (iii) as required by applicable Law, or (iv) with the prior written consent of Acquirer (such consent not to be unreasonably withheld, conditioned or delayed), (A) Seller and Holdco2 shall cause each member of the Company Group to, and each of the Company Parties shall, carry on its business in the Ordinary Course of Business and in compliance in all material respects with applicable Law and the Pre-Closing Budget, pay its debts and Taxes when due (subject to good faith disputes regarding such debts and Taxes), pay or perform other material obligations when due and use its commercially reasonable efforts to preserve intact its present business organizations, keep available the services of its present officers and key employees and preserve its present relationships with customers, suppliers, distributors, licensors and licensees and (B) neither

Seller or Holdco2 shall and each shall cause each member of the Company Group not to, and the Company Parties shall not:

(a) amend the Governing Documents of any member of the Company Group;

(b) acquire (by merger, consolidation or combination, or acquisition of stock or assets) any Person or division or assets (other than in the Ordinary Course of Business) thereof, or otherwise effect any merger, consolidation or reorganization of any member of the Company Group, or effect any conversion or restructuring of any equity or equity-linked interest, purchase any securities of, voting interests in or any assets of any Person, other than acquiring or purchasing equipment or supplies in the Ordinary Course of Business;

(c) split, combine or reclassify the outstanding shares of Holdco2 Common Stock nor enter into any agreement with respect to voting of any of Holdco2 Common Stock;

(d) declare, set aside or pay any dividend or other distribution, payable in cash, stock, property or otherwise, in respect of any Holdco2 Common Stock;

(e) purchase, redeem or otherwise acquire any shares of Holdco2 Common Stock or any securities convertible or exchangeable or exercisable for any shares of Holdco2 Common Stock;

(f) transfer, lease, license, guarantee, sell, mortgage, pledge, dispose of or encumber any material asset, except for (i) the incurrence of Permitted Encumbrances, (ii) non-exclusive licenses of the Company IP in the Ordinary Course of Business, (iii) sales or other dispositions of inventory and other assets in the Ordinary Course of Business, (iv) sales of obsolete or written off assets and (v) sales or dispositions for an amount less than $500,000 in the aggregate;

(g) incur any Indebtedness or issue any debt securities or warrants or other rights to acquire debt securities of any member of the Company Group or assume, guarantee or endorse, as an accommodation or otherwise, the obligations of any other person for Indebtedness or capital obligations, in the case of any of the foregoing, other than (i) incurrences of Indebtedness under the Pre-Closing Budget and (ii) the incurrence of Seller Debt;

(h) issue, sell, pledge, dispose of or encumber any shares of, or securities convertible into or exchangeable or exercisable for, or options, warrants, calls, commitments or rights of any kind to acquire, any shares of Holdco2 Common Stock;

(i) make any change in accounting methods, principles or practices (including for Tax purposes), except as required by the Accounting Standards or by applicable Law or a Governmental Authority;

(j) revalue any of its material assets except as required by the Accounting Standards;

(k) other than in the Ordinary Course of Business, enter into any Contract that would constitute a Company Contract if it had been in existence on the Agreement Date, or amend, modify or consent to the termination of any Company Contract or the applicable member of the Company Group's rights thereunder, or waive, release or assign any rights or claims thereunder;

(l) enter into, modify, amend or terminate any Contract, or waive, release, assign or fail to exercise or pursue any material rights or claims thereunder, other than in the Ordinary Course of Business, which if so entered into, modified, amended, terminated, waived, released, assigned, or not exercised or pursued would reasonably be expected to (i) adversely affect in any material respect any member of the Company Group; (ii) impair in any material respect the ability of any of the Company Parties or Seller to perform its obligations under this Agreement; or (iii) prevent or materially delay the consummation of the Mergers;

(m) make any loan, advance, capital contribution to, or investment in, any Person other than business expense advances to employees of any member of the Company Group in the Ordinary Course of Business;

(n) enter into any Contract to the extent consummation of the Transactions or compliance with the provisions of this Agreement would reasonably be expected to conflict with, or result in a violation or breach of, or default (with or without notice or lapse of time, or both) under, or give rise to a right of, or result in, termination, cancellation or acceleration of any obligation or to the loss of a benefit under, or result in the creation of any Encumbrance (other than Permitted Encumbrances) in or upon any of the properties or other assets (including Intellectual Property) of the any member of the Company Group under, or require Acquirer to license or transfer any Company IP or other material assets (other than Permitted Encumbrances) under such Contract;

(o) (i) abandon, disclaim, allow to lapse, dedicate to the public, sell, assign (in whole or in part), transfer, license, covenant not to sue, otherwise encumber or grant any right or interest (other than Permitted Encumbrances, but including any security interest) in, to or under any Company IP or Company IP Contract, including failing to perform or cause to be performed all applicable filings, recordings and other acts, or to pay or cause to be paid all required fees and Taxes, to maintain and protect its interest in the Company IP and Company IP Contracts, in each case other than Permitted Encumbrances; (ii) grant to any Third Party any license with respect to any Company IP, other than Permitted Encumbrances; (iii) disclose any confidential Company IP or Confidential Information to any Person, other than employees of the Company or any of its Subsidiaries, or in the Ordinary Course of Business, collaboration partners, that are subject to a confidentiality or non-disclosure covenant protecting against further disclosure thereof; (iv) fail to notify Acquirer promptly of any infringement, misappropriation or other violation of or conflict with any Company IP of which any member of the Company Group becomes aware, or fail to consult with Acquirer regarding and take such actions as Acquirer may reasonably request to protect such Company IP; or (v) fail to diligently prosecute any Company IP in the U.S. or in any non- U.S. jurisdiction material to the Company's business, or fail to exercise a right of renewal or extension under or with respect to any Company IP;

(p) enter into any Contract with any Related Parties;

(q) (i) adopt, enter into, terminate or amend any Company Benefit Plan (other than offer letters and independent contractor agreements in the Ordinary Course of Business to the extent not in contravention of Section 5.1(q)(iv)), or collective bargaining agreement, (ii) increase the compensation, bonus or fringe or other benefits provided by the Company Group to any Company Employee or independent contractor who is a natural person, other than (A) increases in base compensation in the Ordinary Course of Business and in accordance with the Company's third-party market study which do not total more than $3,000,000 of aggregate annual base compensation and which do not represent an increase of more than 4% for any Company Employee who has either annual base compensation of more than $250,000 or a title at or above the level of Senior Director, and (B) increases in base compensation in the Ordinary Course of Business for independent contractors who are natural persons whose annual compensation is less than $50,000, (iii) grant or pay any special bonus or special remuneration (cash, equity or otherwise) to any Company Employee or independent contractor who is a natural person, other than pursuant to an existing Company Benefit Plan in accordance with its terms as in effect as of the Agreement Date, (iv) hire any employee or engage or terminate (other than for cause) any (A) Company Employee who has either annual base compensation in excess of $250,000 or a title at or above the level of Senior Director or (B) independent contractor who is a natural person who has annual base compensation in excess of $100,000; provided that no such newly hired employee or newly engaged Contractor shall be provided with severance or termination pay, a sign-on bonus or special remuneration, or receive a commitment regarding equity-based incentive compensation without the prior written consent of Acquirer, or (v) transfer the employment of an In-Scope Employee from a member of the Company Group to Seller or any of its subsidiaries (other than a member of the Company Group), or transfer the employment of any individual who is not an In-Scope Employee from Seller or any of its subsidiaries (other than a member of the Company Group) to a member of the Company Group;

(r) grant any severance or termination pay (cash, equity or otherwise) to any Company Employee or Contractor or adopt any new severance plan, or amend or modify or alter in any material respect any severance plan, agreement or arrangement existing on the Agreement Date;

(s) (i) make or change any material Tax election, except to the extent required by applicable Law or in furtherance of the Pre-Closing Restructuring, (ii) adopt or change any Tax accounting method, (iii) agree or settle any material claim or assessment in respect of Taxes, (iv) file any material amendment to any material Tax Return,

(v) enter into any Tax allocation agreement, Tax sharing agreement, Tax indemnity agreement or closing agreement relating to any Tax, (vi) surrender any right to claim a material Tax refund or extend or waive the limitation period applicable to any claim or assessment in respect of Taxes, or (vii) take any other similar action relating to the filing of any Tax Return or the payment of any Tax; in the case of each of the immediately preceding clauses (i) through (vii), if such action would have the effect of increasing the Tax liability of Acquirer or its Affiliates for any period ending after the Closing Date or decreasing any Tax attribute of Holdco2 or the Company existing on the Closing Date;

(t) commence any material Proceeding;

(u) except for Proceedings with respect to which an insurer has the right to control the decision to settle, waive, release, assign, or compromise any claim, litigation, complaint, investigation or Proceeding, waive, release, assign, settle, pay, discharge or satisfy any Proceeding other than in the Ordinary Course of Business;

(v) make any capital expenditures or commitments, capital additions or capital improvements in excess of such amounts specified in the Pre-Closing Budget;

(w) fail to keep or cause to be kept the material existing insurance policies (or substantial equivalents) of any member of the Company Group as in force on the Agreement Date;

(x) employ or use any contractor or consultant that, to the Company's Knowledge, employs any Person that is: (A) debarred by the FDA, or excluded from participation in government programs (or subject to any similar sanction of any other applicable Governmental Authority); or (B) who is the subject of an FDA debarment investigation or Proceeding (or similar Proceeding of any other applicable Governmental Authority); or

(y) authorize, agree or enter into an agreement to do any of the foregoing. Notwithstanding anything to the contrary in this Section 5.1, Acquirer, Seller and the Company Parties acknowledge and agree that (x) nothing in this Agreement shall give Acquirer, directly or indirectly, the right to control or direct the Company's operations for purposes of the HSR Act prior to the expiration or termination of any applicable waiting period pursuant to the HSR Act, (y) no consent of Acquirer shall be required with respect to any matter set forth in this Agreement to the extent the requirement of such consent would violate any Antitrust Law, and (z) nothing in this Agreement shall prevent or limit the Pre-Closing Restructuring or the transactions contemplated thereby.

5.2 Acquisition Proposals.

(a) No Solicitation. Each of Seller and the Company Parties agrees that neither it nor any of its officers and directors shall, and that it shall use its reasonable best efforts to cause its employees, equityholders, controlled Affiliates, agents and Representatives (including any investment banker, attorney or accountant retained by it) not to (and shall not authorize any of them to) directly or indirectly: (i) solicit, initiate, encourage, facilitate, entertain, discuss or negotiate any offer or proposal for an Acquisition Proposal, or any of the foregoing which would be reasonably expected to lead to an Acquisition Proposal; (ii) engage in discussions with any Person with respect to any Acquisition Proposal, furnish to any Person any non-public information with respect to any Acquisition Proposal or take any other action relating to (or which would reasonably be expected to be used for the purpose of formulating an offer or proposal with respect to), or otherwise assist, cooperate with, facilitate or encourage any effort or attempt by any such Person with regard to, any Acquisition Proposal; (iii) approve, agree to, accept, endorse or recommend any Acquisition Proposal; (iv) enter into any letter of intent or similar document or any Contract, agreement or commitment contemplating or otherwise relating to any Acquisition Proposal; or (v) submit any Acquisition Proposal to the vote of the stockholder of any Company Party. Each of Seller and each Company Party will immediately (x) cease any and all existing activities, discussions or negotiations with any Third Parties conducted heretofore with respect to any Acquisition Proposal and (y) revoke or withdraw access of any Person (other than Acquirer, its Affiliates, agents and Representatives) to any data room (virtual or actual) containing any non-public information with respect to the Company Parties in connection with an Acquisition Proposal and request from each such Person the prompt return or destruction of all non-public information with respect to the Company Parties previously provided to such Person in connection with an Acquisition Proposal; provided, however, that nothing in this Section 5.2(a) shall preclude Seller or its Representatives from contacting any Person solely for the purpose of complying with the provisions of the first clause of this sentence.

(b) Notification of Unsolicited Acquisition Proposals. As promptly as practicable (and in any event within one Business Day) after receipt of any offer or proposal (formal or informal) relating to, or that would reasonably be expected to lead to, an Acquisition Proposal or any request for nonpublic information or inquiry related to or which would reasonably be expected to lead to an Acquisition Proposal, each of Seller, Holdco2 and the Company, as applicable, shall, provide Acquirer with written notice and the material details thereof, including the identity of the Person or group (within the meaning of Section 13(d)(3) of the Exchange Act) making any such Acquisition Proposal, request, inquiry or contact as well as a copy of any such Acquisition Proposal, indication, inquiry or request (or, where given orally to Seller, Holdco2 or the Company, a description of such Acquisition Proposal) and will keep Acquirer reasonably informed on a current basis of the status and details of any such offer or proposal and of any modifications to the terms thereof, provided, however, that this provision will not in any way be deemed to limit the obligations of Seller, Holdco2 or the Company and its respective Representatives set forth in Section 5.2(a).

(c) Acknowledgement. Each of Seller, the Company Parties and Acquirer acknowledge that this Section 5.2 was a significant inducement for Acquirer to enter into this Agreement.

5.3 Proxy Statement and Other SEC Filings; Acquirer Stockholder Meeting.

(a) As promptly as reasonably practicable following the date hereof (but in no event later than the 60th day immediately following the date hereof), Acquirer shall prepare (and Seller and the Company Parties shall provide reasonable assistance in connection therewith), and Acquirer shall file with the SEC, a proxy statement relating to the Acquirer Stockholder Approval and the nomination and appointment of the Specified Designees to the Acquirer Board for terms that expire no earlier than the end of the Second Milestone Period (the "Proxy Statement"). Acquirer shall use its reasonable best efforts to ensure that the Proxy Statement complies in all material respects with the applicable provisions of the Exchange Act. Acquirer shall use its reasonable best efforts to cause the Proxy Statement to be mailed to the holders of Acquirer Stock as promptly as practicable following the date on which Acquirer files with the SEC the Proxy Statement in definitive form, following confirmation from the staff of the SEC (whether orally or in writing) that the comment process with respect to the Proxy Statement, if any, has concluded. Acquirer shall promptly (and in any event within one Business Day) notify Seller upon the receipt of any comments from the SEC or any request from the SEC for amendments or supplements to the Proxy Statement, and shall, as promptly as practicable after receipt thereof, provide Seller with copies of all correspondences between it and its Representatives, on the one hand, and the SEC, on the other hand, and all written comments with respect to the Proxy Statement received from the SEC and advise Seller of any oral comments with respect to the Proxy Statement received from the SEC. Acquirer shall use its reasonable best efforts to respond as promptly as practicable to any comments received from the SEC with respect to the Proxy Statement. Notwithstanding the foregoing, prior to mailing in definitive form the Proxy Statement (or any amendment or supplement thereto), or responding to any comments received from the SEC with respect thereto, Acquirer shall provide Seller a reasonable opportunity to review and comment on such document or response (including the proposed final version of such document or response). Seller and the Company Parties shall reasonably cooperate to prepare appropriate responses thereto (and will provide each other with copies of any such responses given to the SEC) and make such modifications to the Proxy Statement as shall be reasonably appropriate.

(b) The Parties shall reasonably cooperate in preparing and filing with the SEC the Proxy Statement and any necessary amendments or supplements thereto. Seller and the Company Parties shall furnish all information concerning Seller, the Company Group and the Business (including any audited and unaudited financial statements of the Company Group that may be required under Regulation S-X), as required under applicable securities laws in connection with (i) the preparation, filing and distribution of the Proxy Statement and any necessary amendments or supplements thereto, (ii) the preparation and filing of a Current Report on Form 8-K reporting the Closing and any necessary amendments thereto (the "Closing 8-K") and (iii) the preparation, filing and distribution of any registration statement and related prospectus registering the resale of the shares of Acquirer Stock issued as the Stock Consideration and any necessary amendment or supplements thereto (the "Resale Registration Documents" and, together with the Proxy Statement and the Closing 8-K, the "Applicable SEC Filings"). Seller shall use its reasonable best efforts to obtain any necessary written consent of the auditor of the audited financial statements of the Company Group for the inclusion of its audit report on such audited financial statements in the Applicable SEC Filings for which such consent is required in order for such audit report to be included in such filing. Acquirer shall

not file or mail the Proxy Statement or any amendment or supplement thereto to stockholders without the written consent of Seller (such consent not to be unreasonably withheld, conditioned or delayed).

(c) The Proxy Statement shall state that the Acquirer Board has approved this Agreement and the Transactions, approved and declared advisable the issuance of shares of Acquirer Stock contemplated by this Agreement and include (i) the recommendation of the Acquirer Board to vote in favor thereof and (ii) the recommendation of the Acquirer Board to vote in favor of the appointment of the Specified Designees to the Acquirer Board for terms that expire no earlier than the end of the Second Milestone Period (the Acquirer Board recommendations described in this clause (ii) and the immediately preceding clause (i), collectively, the "Acquirer Board Recommendation") and (iii) any other proposal that the Acquirer Board reasonably deems necessary or advisable to consummate the Transactions. None of the Acquirer Board or any duly authorized committee thereof shall (i) fail to include in the Proxy Statement the Acquirer Board Recommendation or fail to make the Acquirer Board Recommendation; (ii) change, modify, withhold, qualify or withdraw, or resolve or propose publicly to change, modify, withhold, qualify or withdraw, in each case, in a manner adverse to Seller or the Company Parties, the Acquirer Board Recommendation; or (iii) fail to publicly reaffirm the Acquirer Board Recommendation, in each case, within 10 Business Days after any written request of Seller to do so.

(d) Acquirer shall advise Seller promptly after receiving oral or written notice of (i) any requirement that Acquirer supplement or amend the Proxy Statement (whether to correct a misstatement or omission to state a material fact or otherwise) or (ii) any oral or written request by the SEC for amendment of the Proxy Statement or SEC comments thereon or requests by the SEC for additional information. Acquirer shall promptly provide Seller with copies of any written communication from the SEC with respect to the Proxy Statement and Acquirer, Seller and the Company Parties shall cooperate to prepare appropriate responses thereto (and will provide each other with copies of any such responses given to the SEC) and make such modifications to the Proxy Statement as shall be reasonably appropriate.

(e) If, at any time prior to the Effective Time, any event or circumstance shall be discovered by a Party that should be set forth in an amendment or a supplement to the Proxy Statement so that any such document would not include any misstatement of a material fact or fail to state any material fact necessary to make the statements therein, in light of the circumstances under which they were made, not misleading, such Party shall promptly inform the other parties hereto and the Parties shall cause an appropriate amendment or supplement describing such information to be promptly filed with the SEC and, in the case of Acquirer to the extent required by Law, disseminated to stockholders.

(f) Each of Seller, the Company Parties and Acquirer shall use its reasonable best efforts to (i) cooperate with the other party to prepare pro forma financial statements that comply with the rules and regulations of the SEC to the extent required for the Applicable SEC Filings, including the requirements of Regulation S-X, and (ii) provide and make reasonably available upon reasonable notice the senior management employees of the other party to discuss the materials prepared and delivered pursuant to this Section 5.3(f).

(g) Acquirer shall take all lawful action to call, give notice of, convene and hold a meeting of its stockholders (the "Acquirer Stockholders' Meeting") as promptly as practicable following the date on which the SEC clears (whether orally or in writing) the Proxy Statement for the purpose of obtaining the Acquirer Stockholder Approval and approving the appointment of the Specified Designees to the Acquirer Board, which meeting shall be held not later than 35 days following the date on which the Proxy Statement is first mailed (or made available in accordance with Rule 14a-16 under the Exchange Act) to Acquirer's stockholders. Acquirer shall include in the Proxy Statement the Acquirer Board Recommendation and solicit and use its reasonable best efforts to obtain the Acquirer Stockholder Approval. If, on a date for which the Acquirer Stockholders' Meeting is scheduled, Acquirer shall have not received proxies representing a sufficient number of shares of outstanding Acquirer Stock to obtain the Acquirer Stockholder Approval, or if necessary to make or modify any disclosure contained in the Proxy Statement in order to comply with applicable Law (as determined in good faith by the Acquirer Board, after consultation with its outside legal counsel), irrespective of whether a quorum is present, Acquirer shall have the right to announce one or more successive postponements or adjournments of the Acquirer Stockholders' Meeting; provided that the Acquirer Stockholders' Meeting is not postponed or adjourned, in the aggregate, to a date that is

more than thirty (30) days after the date for which the Acquirer Stockholders' Meeting initially was scheduled (excluding, however, any adjournments or postponements required by applicable Law).

5.4 Confidentiality; Public Disclosure. The Parties acknowledge that Seller and Acquirer have previously executed the Confidentiality Agreement and that, effective as of the Closing, the Confidentiality Agreement shall terminate and shall be of no further force or effect with no surviving obligations. No Company Party or Seller, on the one hand, or any Acquirer Party, on the other hand, in each case, directly or indirectly through their respective Representatives or any other Person shall issue any press release or other public statement or announcement regarding this Agreement, the Ancillary Agreements or the Transactions without, in the case of a press release or statement by any Company Party or Seller, the consent (not to be unreasonably withheld, conditioned or delayed) of Acquirer, or, in the case of a press release or statement by any Acquirer Party, the consent (not to be unreasonably withheld, conditioned or delayed) of Seller. Notwithstanding anything to the contrary in the foregoing, a Party shall be permitted to disclose any and all terms to its financial, tax and legal advisors (each of whom is subject to a similar obligation of confidentiality), and to any Governmental Authority or administrative agency to the extent necessary or advisable in compliance with applicable Law and the rules of a national stock exchange on which such Party's capital stock is traded.

5.5 Access; Copy of VDR.

(a) Subject to applicable Law and upon reasonable notice, each of Seller and the Company Parties shall afford Acquirer and its employees, attorneys, accountants, consultants, Representatives and other advisors and agents reasonable access, during normal business hours during the Pre-Closing Period, to the Company Group's properties, books, contracts and records and appropriate individuals as Acquirer may reasonably request (including employees, attorneys, accountants, consultants and other professionals, in each case subject to applicable privilege), in each case concerning the business, properties and personnel of the Company Group, and during the Pre-Closing Period, each of Seller and the Company Parties shall reasonably promptly furnish to Acquirer such information concerning the business, properties and personnel of the Company Group as Acquirer may reasonably request; provided that each of Seller and the Company Parties may restrict the foregoing access to the extent that (i) any applicable Law requires such Party or its Subsidiaries to restrict or prohibit access to any such properties or information to Acquirer, (ii) such access would give rise to a risk of waiving any attorney-client privilege, work product doctrine or other applicable privilege applicable to such documents or information or (iii) such access would be in breach of any confidentiality obligation, commitment or provision by which Seller or any member of the Company Group, as applicable, is bound or affected as of the Agreement Date, which confidentiality obligation, commitment or provision shall be disclosed to Acquirer; provided, that Seller and the applicable Company Party: (x) will be entitled to withhold only such information that may not be provided without causing such waiver; and (y) at the request of Acquirer, will reasonably cooperate with Acquirer and use its commercially reasonable efforts to obtain the consent or waiver of any third party to the disclosure in full of all such information to Acquirer. With respect to the furnishing by Seller or the Company Parties of competitively sensitive information, outside antitrust counsel will be consulted prior to the exchange of such information, and such information shall not be exchanged to the extent such counsel to Seller or the applicable Company Party reasonably advises against such exchange. In addition, any information obtained from Seller or the Company Parties pursuant to the access contemplated by this Section 5.5 shall be subject to the Confidentiality Agreement. Any access to any of Seller's, or any member of the Company Group's facilities shall be subject to, as applicable, Seller's, or such member of the Company Group's reasonable security and health-related measures and the requirements of the applicable Leases, and shall not include the right to perform any invasive testing or soil, air and groundwater sampling, including, any environmental assessment.

(b) After the Closing, Seller agrees to provide, or cause to be provided, to Acquirer, the Surviving Entity or their designated Affiliate, as soon as reasonably practicable after written request therefor, reasonable access during normal business hours, to its and its Affiliates' employees (without unreasonable disruption of employment) and to such books, records, documents and files in the possession or under the control of the Seller or its Affiliates to Acquirer, the Surviving Entity or their designated Affiliate to the extent reasonably required by Acquirer or the Surviving Entity (i) in order to comply with reporting, disclosure, filing or other similar requirements imposed on Acquirer, the Surviving Entity or their respective Affiliates under applicable Laws or (ii) in connection with any Proceeding related to the Business; provided that Seller shall not be required to provide access to or disclose

information where such access or disclosure would violate any Law or agreement, or waive any attorney client or other similar privilege, and may redact information regarding itself or its Subsidiaries or otherwise not relating to Business, and, in the event such provision of information could reasonably be expected to violate any Law or agreement or waive any attorney client or other similar privilege, the Parties shall take all reasonable measures to permit the compliance with such obligations in a manner that avoids any such harm or consequence.

5.6 Regulatory Approval; Reasonable Best Efforts.

(a) Each of the Parties shall coordinate and cooperate with one another and shall each use reasonable best efforts to comply with, and shall each refrain from taking any action that would impede compliance with, applicable Laws, and as soon as reasonably practicable and advisable after the Agreement Date, each of the Parties shall make all filings, notices, petitions, statements, registrations, submissions of information, applications or submissions of other documents required by any Governmental Authority in connection with the Mergers and the other Transactions, including (i) Notification and Report Forms with the United States Federal Trade Commission (the "FTC") and the Antitrust Division of the United States Department of Justice ("DOJ") as required by the HSR Act (the "HSR Filings"), and (ii) any filings required under the Securities Act of 1933, as amended, the Securities Exchange Act of 1934, as amended, any applicable state or securities or "blue sky" laws and the securities laws of any foreign country, or any other applicable Law relating to the Mergers. Each Party will cause all documents that such Party is responsible for filing with any Governmental Authority under this Section 5.6 to comply in all material respects with all applicable Law.

(b) Acquirer agrees to use reasonable best efforts to promptly take any and all steps necessary to avoid or eliminate each and every impediment under the HSR Act and any other applicable Antitrust Law that may be asserted by any Governmental Authority or any other Person so as to enable the Parties to expeditiously close the Transactions. For the avoidance of doubt and notwithstanding anything else in this agreement, Acquirer shall not be required to (i) propose, negotiate, commit to or effect, by consent decree, hold, separate order, or otherwise, the sale, the divestiture or disposition of any of its assets, properties or businesses, including those of Affiliates, or of the assets, properties or businesses to be acquired by it pursuant to this Agreement, and (ii) otherwise taking or committing to take actions that after the Closing Date would limit Acquirer's or its Affiliates' freedom of action with respect to, or its or their ability to retain, one or more of the businesses, product lines or assets of the Company (the foregoing actions individual and in the aggregate being "Remedial Actions"), in each case, as may be required in order to avoid the entry of, or to effect the dissolution of, any preliminary or permanent injunction, in any Proceeding under the HSR Act or any other Antitrust Law, which would otherwise have the effect of preventing or delaying the Closing, unless such Remedial Actions would not, individually or in the aggregate, reasonably be expected to be materially detrimental to the benefits to be derived by Acquirer and its Affiliates as a result of the Mergers and the other Transactions. Further, Acquirer and its Affiliates shall not be obligated to contest, administratively or in court, any litigated Proceeding under the HSR Act or any other Antitrust Law seeking to enjoin the Mergers and the other Transactions, or to impose any Remedial Actions upon the Acquirer, Seller or the Company and their respective Affiliates.

(c) Each of the Parties shall work together and promptly supply the other with any information which may be required and reasonable assistance as the other may request in order to effectuate any filings or applications pursuant to Section 5.6. Except where prohibited by applicable Antitrust Laws relating to the exchange of information, and subject to the Confidentiality Agreement, each of Seller and the Company Parties, on one hand, and Acquirer, on the other, shall use commercially reasonable efforts to (i) consult with the other party prior to taking a position with respect to any such filing, (ii) permit the other party to review and discuss in advance, and consider in good faith, the views of the other in connection with any analyses, appearances, presentations, memoranda, briefs, white papers, arguments, opinions and proposals before making or submitting any of the foregoing to any Governmental Authority in connection with any investigations or Proceedings in connection with this Agreement or the Transactions (including under any antitrust or fair trade applicable Law), (iii) coordinate with the other Party in preparing and exchanging such information and (iv) promptly provide the other party (and its counsel) with copies of all filings, presentations or submissions (and a summary of any oral presentations) made by such party with any Governmental Authority in connection with this Agreement or the Transactions (though sensitive negotiation and deal valuation materials may be redacted); provided that the final determination as to the

strategy for dealing with the FTC, the DOJ or any other applicable Governmental Authority shall be made by Acquirer.

(d) Further, neither Party shall participate in any meeting or material discussion with any Governmental Authorities with respect to any such filings, applications, investigation, or other inquiry without giving the other party prior notice of the meeting or discussion and, to the extent permitted by the relevant Governmental Authority, the opportunity to attend and participate in such meeting or discussion (which, at the request of either Party, shall be limited to outside antitrust counsel only).

(e) Each of Acquirer and Seller shall equally split (i) all filing fees and local counsel fees payable in connection with the filings described in this Section, and (ii) all fees of economists and any other expert fees deemed advisable or necessary by counsel for the Parties in connection with compliance with a "second request" issued by the FTC or DOJ pursuant to the HSR Act, or to respond to any investigation of the agreements contemplated herein by a Governmental Authority prior to Closing. (with Holdco2's portion of such fees being included in Transaction Expenses).

5.7 Third-Party Consents; Notices; Seller Contracts.

(a) Promptly after the Agreement Date, following consultation with Acquirer, Seller or the applicable Company Party will send each notice and will use their respective commercially reasonable efforts to obtain all consents, waivers and approvals from all Persons that are necessary for the execution and delivery of, and the performance of its obligations pursuant to, this Agreement and the Ancillary Agreements, including under any Permit or Contract whereby the consummation of the Transactions would, in the absence of the Consent of a third party, constitute or give rise to (A) a breach of applicable Law or such Contract; (B) loss of any material rights or benefits under such Contract; or (C) an entitlement to accelerate, terminate, forfeit or dispose of such Contract. Such notices, consents, waivers and approvals will be in a form reasonably acceptable to Acquirer.

(b) With respect to the Seller Contracts, prior to the Closing Date, the Company shall use its commercially reasonable efforts to enter into new Contracts on substantially similar terms as the Seller Contracts with the respective Third Parties thereto, including such new Contracts with respect to the Seller Contracts to which Top Customers, Top Suppliers and Top Payors are parties (such new Contracts with Top Customers, Top Suppliers and Top Payors, "Required Closing Contracts"). If any Seller Contract is not Transferred on or prior to the Closing Date, Seller hereby agrees to use commercially reasonable efforts in cooperation with Acquirer to (i) implement arrangements (including subleasing, sublicensing or subcontracting) (A) to provide the underlying rights and benefits of the Company to Acquirer, the Surviving Entity and their designated Affiliates and (B) for the Surviving Entity or Acquirer or their designated Affiliate to assume all Company obligations thereunder and (ii) obtain any requisite Consent, substitution, novation, or amendment required to Transfer the portion of the Seller Contract attributable to the Business to Acquirer, the Surviving Entity, or their designated Affiliate.

5.8 Notice of Developments.

(a) During the Pre-Closing Period:

(i) Each of Acquirer, on the one hand, and Seller and the Company Parties, on the other, will promptly advise the other Party in writing of any event or circumstance that would reasonably be expected to result in any representation or warranty made by it in this Agreement becoming untrue or inaccurate in any material respect so as to cause the Closing conditions set forth in Section 6.1 or in Section 6.2 or Section 6.3, respectively, to fail to be satisfied.

(ii) Each of Acquirer, on the one hand, and Seller and the Company Parties, on the other, will promptly advise the other Party in writing of any event or circumstance that would reasonably be expected to result in the failure by it to comply with or satisfy any covenant, condition or agreement to be complied with or satisfied by it under this Agreement prior to the Effective Time in any respect so as to cause the Closing conditions set forth in Section 6.1 or in Section 6.2 or Section 6.3, respectively, to fail to be satisfied.

(iii) Seller or Holdco2, as applicable, will promptly advise Acquirer in writing of any change or event having, or which is reasonably likely to have, alone or in combination with other changes or events, a Material Adverse Effect with respect to the Company Group.

(iv) Seller or Holdco2, as applicable, will promptly advise Acquirer in writing of any Proceeding initiated by or against any member of the Company Group or, to the Company's Knowledge, any Proceeding threatened against any member of the Company Group, or brought or threatened against any director, officer, or equityholder of any member of the Company Group, in each case in its capacity as such (a "New Litigation Claim"), and notify Acquirer of ongoing material developments in any New Litigation Claim and consult in good faith with Acquirer regarding the conduct of the defense of any New Litigation Claim.

(v) Seller or Holdco2, as applicable, will promptly advise Acquirer in writing of any written notice from any Person (from which Acquirer and Seller shall have not previously determined to obtain consent), alleging that the consent of such Person is or may be required in connection with the Mergers.

(vi) Seller or Holdco2, as applicable, will deliver to Acquirer as soon as practicable, but in any event within three Business Days, of applicable Governmental Authority contact, copies of any associated correspondence. Neither the Seller, Holdco2 or any member of the Company Group shall have any further communication with such Applicable Government Authority without prior written notice to Acquirer.

(b) No notification pursuant to this Section 5.8 will be deemed to prevent or cure any breach of, or inaccuracy in, amend or supplement any Section of the Company Disclosure Schedules or the Acquirer Disclosure Schedules, or otherwise disclose an exception to, or affect in any manner, the representations, warranties, covenants or agreements of the Parties (or remedies with respect thereto) or the conditions to the obligations of the parties under this Agreement or the Ancillary Agreements.

5.9 Regulatory Matters. During the Pre-Closing Period, the Seller and the Company Parties shall use and shall cause their respective Affiliates to use commercially reasonable efforts to make available to Acquirer and its Representatives, as and to the extent requested by Acquirer, complete and accurate copies of all written correspondence between any member of the Company Group, on the one hand, and the applicable Regulatory Authorities, on the other, other than routine, non-material communications in the Ordinary Course of Business, that is or comes into the Seller's, its Affiliates' or the Company Group's possession or control during the Pre-Closing Period promptly after Seller or the Company Parties obtain such possession or control thereof, except to the extent any such material is immaterial to the Company Group. The Company Parties shall, and shall cause their respective Representatives to consult and reasonably cooperate with Acquirer, as and to the extent reasonably requested by Acquirer, and take into good faith consideration the views of Acquirer in connection with any clinical and preclinical trials and any regulatory filings, and any communications with any Regulatory Authority, in each case with respect to the Company Group, during the Pre-Closing Period.

5.10 Delivery of Financial Statements. During the Pre-Closing Period, Seller or Holdco2 will deliver to Acquirer, (a) not later than eight Business Days after the end of each calendar month, an unaudited consolidated balance sheet as of the end of such month and unaudited consolidated statements of operations and cash flows for such month; provided that the cash flow statements need only be included on a quarterly basis; and (b) on or before the fifth (5^{th}) Business Day prior to the Closing, audited consolidated financial statements, including consolidated balance sheets and consolidated statements of income, changes in stockholder equity, and cash flows, of the Company Group for the twelve (12) months ended December 31, 2021 prepared in accordance with the Accounting Standards (the "***Interim Financial Statements***"), and provide such additional supporting or related information as may be reasonably requested by Acquirer in respect of such Interim Financial Statements. Holdco2 covenants and agrees that such financial statements and the notes thereto, if any, will fairly present in all material respects the financial condition of the Company Group at the respective dates thereof and the results of its operations for the respective months then ended, and will be prepared in accordance with the books and records of the Company Group in conformity with the Accounting Standards, consistently applied with the Financial Statements, except for the omission of footnotes and normal, immaterial year-end adjustments.

5.11 Tax Matters.

(a) Cooperation. Without limiting any of the other provisions of this Section 5.11, the Parties shall cooperate fully, as and to the extent reasonably requested by any of them, in connection with the filing of Tax Returns and any audit, litigation or other Proceeding with respect to Taxes. In this regard, Acquirer shall retain all books and records with respect to Tax matters of the Company Group which are or may be pertinent to any Tax period beginning before the Closing Date until the expiration of the applicable statute of limitations and shall make them available to Seller in connection with any audit, litigation or other Proceeding relating to the Company Group or with respect to which the Company Group is relevant.

(b) Transfer Taxes. All transfer, documentary, sales, use, stamp, registration and other such Taxes, and any conveyance fees, recording charges and other fees and charges (including any penalties and interest) incurred in connection with consummation of the Transactions ("Transfer Taxes"), if any, shall be borne and paid fifty percent (50%) by Seller and fifty percent (50%) by Acquirer; provided that any Transfer Taxes incurred as a result of or in connection with the Pre-Closing Restructuring shall be borne and paid 100% by, and be the sole responsibility of, Seller. Seller or Acquirer (as required by applicable Law) shall prepare and timely file (or cause to be prepared and timely filed) at its own expense all Tax Returns required to be filed in respect of any such Taxes, provided, however, that Taxes relating to such Tax Returns shall be borne and paid by the Seller and Acquirer as provided in the preceding sentence.

(c) Straddle Periods. For purposes of determining the liability for Taxes (as well as any refund or credit with respect thereto) of or in respect of, or payable by, Holdco2 or the Company Group in respect of any Straddle Period, (i) the amount of any such Taxes based on or measured by income, sales, use, receipts, or other similar items of the Company Group that constitute a Tax in respect of a Pre-Closing Tax Period shall be determined based on an interim closing of the books as of the close of business on the Closing Date and (ii) the amount of any other Taxes of the Company Group for a Straddle Period that relate to and constitute a Tax in respect of a Pre-Closing Tax Period shall be deemed to be the amount of such Tax for the entire Straddle Period multiplied by a fraction the numerator of which is the number of days in the portion of the Straddle Period ending on the Closing Date and the denominator of which is the number of days in the entire Straddle Period. For purposes of determining the amount of Taxes attributable to the pre-Closing portion of any Straddle Periods under this Agreement, all applicable Transaction Tax Deductions shall be allocated to and deducted in the pre-Closing portion of any Straddle Period to the extent permitted by applicable Law on a "more likely than not" basis.

(d) Tax Returns. At the cost and expense of Seller, Seller or Parent shall prepare and file (or cause to be prepared and filed) all Tax Returns of or relating to the Company Group for any Pre- Closing Tax Period that are due after the Closing. Seller shall provide a copy of such Tax Return to Acquirer at least fifteen (15) days before the due date for filing such Tax Return (or as soon as reasonably practicable, if such due date is less than fifteen (15) days after the Closing Date) for Acquirer's review. Seller or Parent, as applicable, shall consider in good faith all reasonable written comments made by Acquirer with respect to such Tax Returns within five Business Days prior to the due date for filing such Tax Return. All such Tax Returns shall be timely filed as finally prepared by Seller. Tax Returns for any Pre-Closing Tax Periods and Straddle Periods shall include therein as deductions all Transaction Tax Deductions to the extent permitted by applicable Law on a "more likely than not" basis. Notwithstanding anything to the contrary in this Agreement, Seller, Parent and Subsidiaries of Parent shall not be required to provide any Person with any Tax Return or copy of any Tax Return of (i) Parent or any Subsidiary of Parent, or (ii) a consolidated, combined, affiliated or unitary group that includes Parent or any Subsidiary of Parent.

(e) Tax Proceedings. Acquirer shall inform Seller of the receipt by Acquirer or its Affiliates (including the Surviving Entity after the Closing) of notice of any deficiency, proposed adjustment, adjustment, assessment, audit, claim, inquiry, examination, suit, dispute or other proceeding relating to Taxes with respect to which Acquirer intends to seek indemnification under Article 8 (a "Tax Proceeding"). Seller shall not be relieved of its indemnification obligations hereunder if such notice is not delivered promptly except to the extent Seller is materially prejudiced thereby. Seller or Parent shall have the exclusive right to control, conduct and settle any Tax Proceeding. Seller or Parent shall keep Acquirer reasonably informed of all material developments of such Tax Proceeding. Notwithstanding anything in Article 8 to the contrary, this Section 5.11(d), and not Section 8.3, shall govern the conduct of Tax Proceedings.

(f) Tax Free Reorganization Matters. The Parties intend that, for United States federal income tax purposes, the Mergers will qualify as a Reorganization to which each of the Parties are to be parties under Section 368(b) of the Code and this Agreement is intended to be, and is adopted as, a plan of reorganization for purposes of Sections 354, 361 and 368 of the Code and within the meaning of Treasury Regulations Section 1.368-2(g) (the "Intended Tax Treatment"). The Mergers shall be reported by the Parties for all Tax and other purposes in accordance with the foregoing and will not take any position inconsistent with the Intended Tax Treatment, unless otherwise required by a Governmental Authority as a result of a "determination" within the meaning of Section 1313(a) of the Code. Notwithstanding any other provisions of this Agreement, the composition of payments under this Agreement shall be consistent with the qualification of the transactions contemplated hereby as a Reorganization, including the requirements of Treasury Regulations Section 1.368-1(e) and a minimum proprietary interest under such regulations of at least forty percent (40%), and adjustments shall be made to the composition of payments and satisfaction of indemnity claims as between Acquirer Stock, cash and any other items to the extent necessary to comply with the foregoing. The Parties shall consult and cooperate with each other in good faith for purposes of making any such adjustments. The parties covenant and agree that they will not take any actions before or after the Closing that would be reasonably expected to adversely affect the status of the Mergers as a Reorganization. The Parties shall cooperate with each other and their respective counsel to document and support the Tax treatment of transactions contemplated by this Agreement consistently with the Intended Tax Treatment, including providing factual support letters and customary tax representations to counsel for purposes of rendering any Tax opinions that may be provided by counsel. Each Party shall promptly notify the other Party in writing if, before the Closing Date, such Party knows or has reason to believe that the transactions contemplated by this Agreement may not qualify for the Intended Tax Treatment.

(g) Tax Refunds. All refunds of Taxes of any member of the Company Group for any Pre-Closing Tax Period (or portion of a Straddle Period ending on the Closing Date as determined in accordance with the same principles provided for in Section 5.11(c)) (whether in the form of cash received or a credit or offset against Taxes otherwise payable) shall be for the benefit of the Seller. To the extent that the Acquirer, any member of the Company Group, or any of their Affiliates receives a Tax refund that is for the benefit of the Sellers that was not included in the calculation of Company Net Working Capital, the Acquirer shall pay to the Seller the amount of such Tax refund (and interest received from the Governmental Authority with respect to such refund), net of out-of-pocket Taxes and reasonable professional fees and expenses incurred to obtain such. Tax refund. The amount due to the Seller shall be payable ten (10) days after receipt of the refund from the applicable Governmental Authority (or, if the Tax refund is in the form of a credit or offset, ten (10) days after the due date of the Tax Return claiming such credit. or offset). The Acquirer shall, and shall cause the members of the Company Group, to take all reasonable actions necessary, or requested by the Seller, to timely claim any Tax refunds that will give rise to a payment under this Section 5.11(g). Notwithstanding the foregoing, in the event it is subsequently determined that any Tax refund or Tax credit for which the Acquirer made a payment hereunder was improperly obtained or otherwise disallowed, the Seller shall pay to the Acquirer an amount equal to the amount such Tax refund or Tax credit so disallowed (not exceeding the amount of the applicable Tax refund or Tax credit for which Acquirer made a payment to the Seller Representative under this Section 5.11(g)) within ten (10) days after delivery of a written notice to the Seller of such determination or disallowance. Payments under this paragraph (g) shall be treated as adjustments to the Merger Consideration.

(h) Post-Closing Actions. Acquirer shall not permit the Company or any of its Affiliates to take any action on the Closing Date that could increase Seller's liability for Taxes or reduce the amount of any Tax refund or Tax credit of Seller. None of the Acquirer, the Company Group nor any of their respective Affiliates shall (or shall cause or permit any members of the Company Group or their Subsidiaries) to (i) file, amend, re-file or otherwise modify any Tax Return relating in whole or in part to the Company or any of its Subsidiaries, with respect to any Pre-Closing Tax Period, (ii) make any Tax election pursuant to Sections 336 or 338 of the Code in connection with the transactions contemplated hereby, or any other election that has retroactive effect to any Pre-Closing Tax Period of any member of the Company Group or their Subsidiaries or Affiliates, (iii) file any ruling or request with any taxing authority that relates to Taxes or Tax Returns of the Company or any of its Subsidiaries or their Affiliates for a Pre-Closing Tax Period, or (iv) enter into any voluntary disclosure with any taxing authority regarding any Tax or Tax Returns of the Company or any of its Subsidiaries for a Pre-Closing Tax Period (including any voluntary disclosure with a taxing authority with respect to filing Tax Returns or paying Taxes for any Pre-Closing Tax Period

in a jurisdiction that the Company did not previously file a Tax Return or pay Taxes), in each case, without the prior written consent of the Seller, which shall not be unreasonably withheld, delayed or conditioned.

5.12 Insurance; Indemnification of Directors and Officers.

(a) _____Insurance.

(i) _____Following the Closing and for the duration of the term of the Transition Services Agreement, with respect to claims for events or Damages related to the Company Products with respect to pre-Closing occurrences that are covered by Seller's occurrence-based third-party liability insurance policies (the "Available Insurance Policies"), subject in all cases to the terms and limitations of such policies (such claims, the "Valid Pre-Closing Claims"), (A) Acquirer may promptly notify Seller in writing of any matter that is reasonably expected to give rise to a Valid Pre-Closing Claim under any such Available Insurance Policy (provided that the failure to promptly notify Seller shall not relieve Seller from its obligations under clause (B), except to the extent that such failure invalidates the validity of any purportedly Valid Pre-Closing Claim), and (B) Seller shall, and shall cause its Affiliates to, (1) make Valid Pre-Closing Claims and reasonably pursue and seek to recover on such claims under the terms of the applicable Available Insurance Policies and (2) reasonably promptly deliver to Acquirer any insurance proceeds received with respect thereto (calculated net of reasonable expenses incurred in procuring such recovery and any increase in premiums or retroactive premium adjustments or chargebacks paid by or on behalf of Seller to the extent resulting from such claims, and taking into account the available coverage under each Available Insurance Policy, it being understood that such coverage shall first be available to satisfy other claims of Seller or its Affiliates that are pending under such policy at the time the claim for the benefit of Acquirer is made); provided that, unless otherwise deducted from the proceeds received by Acquirer, Acquirer shall pay (or reimburse Seller for), without duplication, any deductibles, retentions, loss-sensitive, self-insurance amounts or other costs, in each case, to the extent resulting from any Valid Pre-Closing Claim made by Seller or its Affiliates on behalf of any of Acquirer or the Company Group under such policies for Valid Pre-Closing Claims. For the avoidance of doubt, Acquirer shall be liable for all uninsured, uncovered, unavailable or uncollectible Damages associated with any such Valid Pre-Closing Claim. Following the Closing, if permitted under the applicable Available Insurance Policy, Seller hereby authorizes Acquirer and its Subsidiaries, under the direction and control of Seller, to notify, make and pursue Valid Pre-Closing Claims as contemplated by this Section 5.12(a)(i) under the Available Insurance Policies, subject to the payment and reimbursement provisions set forth in the prior sentence. Notwithstanding anything to the contrary herein, Seller shall not have any Liability or obligation to bring any Proceedings to obtain any insurance coverage for any Valid Pre-Closing Claim.

(ii) In connection with the pursuit of any Valid Pre-Closing Claim, Acquirer shall, and shall cause the Company Group to, fully cooperate with Seller in pursuing coverage for any Valid Pre-Closing Claim. If Acquirer or any of its Affiliates breach, or cause any member of Seller to breach, any terms or conditions of any Available Insurance Policies with respect to any Valid Pre-Closing Claim, Acquirer shall be solely responsible for, and shall bear the risk of any loss of coverage cause by such breach (and, in all events, the Acquirer shall bear the risk of any lack of coverage under the Available Insurance Policies). Acquirer shall, and shall cause the Company Group to, use commercially reasonable efforts to pursue rights of recovery against third parties with respect to claims7, Liabilities, occurrences, accidents, events, matters, Proceedings or Damages for which the Company Group has the ability to mitigate via contract or tort and shall cooperate with Seller with respect to the pursuit of such rights.

(b) Indemnification of Directors and Officers.

(i) Each of Acquirer, Seller and Holdco2 agree that all rights to indemnification, advancement of expenses and exculpation from liability for or in connection with acts or omissions occurring at any time prior to or on the Closing Date (including in connection with this Agreement and the Transactions), that now exist in favor of any Person who prior to or on the Closing Date is or was a current or former director, manager, officer or employee of any member of the Company Group, or who at the request of Seller, Holdco2 or any of their respective Affiliates served prior to or on the Closing Date as a director, officer, member, manager, employee, trustee or fiduciary of any other entity of any type (each a "D&O Indemnified Person"), including as provided in the Governing Documents of any member of the Company Group (an "Indemnity Agreement"), will survive the Closing

and will continue in full force and effect following the Closing Date. In furtherance (and not in limitation of) the foregoing, for the six (6) year period following the Closing Date, Acquirer will cause the Company Group to, and the Company Group will maintain in the Governing Documents of each applicable member of the Company Group provisions with respect to indemnification, advancement of expenses and exculpation from liability that in each such respect are at least as favorable to each D&O Indemnified Person as those contained in such member's Governing Documents as in effect on the date hereof, which provisions will not be amended, repealed or otherwise modified in any manner that would adversely affect the rights thereunder of any D&O Indemnified Person. Each Indemnity Agreement shall continue without termination, revocation, amendment or other modification that would adversely affect the rights thereunder of any D&O Indemnified Person, in each case in accordance with its terms.

(ii) If Acquirer or any member of the Company Group (or any of its successors or assigns) (A) consolidates with or merges into any other Person and is not the continuing or surviving corporation or entity of such consolidation or merger or (B) transfers all or substantially all of its properties and assets to any other Person (including by dissolution, liquidation, assignment for the benefit of creditors or similar action), then, and in each such case, proper provision will be made so that such other Person fully assumes the obligations set forth in this Section 5.12(b).

(iii) The provisions of this Section 5.12(b) shall survive the Closing. This Section 5.12(b) shall be for the irrevocable benefit of, and will be enforceable by, each D&O Indemnified Person and his or her respective heirs, executors, administrators, estates, successors and assigns, and each such Person will be an express intended third party beneficiary of this Agreement for such purposes. Acquirer will pay, or will cause the applicable member of the Company Group, as and when incurred by any Person referred to in the immediately preceding sentence, all fees, costs, charges and expenses (including attorneys' fees and expenses) incurred by such Person in enforcing such Person's rights under this Section 5.12(b). Notwithstanding anything in this Agreement to the contrary, the obligations under this Section 5.12(b) will not be terminated, revoked, modified or amended in any way so as to adversely affect any Person referred to in the second sentence of this Section 5.12(b)(iii) without the written consent of such Person. With respect to any right to indemnification or advancement for actual or claimed acts or omissions occurring prior to or on the Closing Date (including in connection with this Agreement and the Transactions), the applicable member of the Company Group will be the indemnitor of first resort, responsible for all such indemnification and advancement that any D&O Indemnified Person may otherwise have from any direct or indirect stockholder or equity holder of any of the members of the Company Group (or any Affiliate of such stockholder or equity holder).

(iv) Notwithstanding anything to the contrary contained in this Section 5.12(b), Seller's directors and officers insurance policies, in each case as in effect as of the Closing Date, shall be the first and primary recourse for any indemnification to which any D&O Indemnified Person may be entitled under this Section 5.12(b). For the six (6) year period following the Closing Date, Seller agrees to treat any such claim for indemnification against its directors and officers insurance policies as a Valid Pre-Closing Claim in accordance with Section 5.1(a).

5.13 Employee Matters.

(a) All Continuing Employees shall continue as employees of the Company Group as of and immediately following the Closing. For a period of at least one (1) year following the Closing Date, Acquirer shall cause to be provided to the Continuing Employees (i) base salary or wages, as applicable, and cash bonus opportunities (and excluding, for the avoidance of doubt, equity or equity-based bonus opportunities), in each case no less favorable than those provided to such Continuing Employees as of the Agreement Date and (ii) employee benefits that are no less favorable in the aggregate than those provided to the Continuing Employees as of the Agreement Date.

(b) As of the Closing Date, the Company Group shall cease to be participating employers in the Seller Benefit Plans that provide retirement, health or welfare benefits. With respect to each benefit plan, program, practice, policy or arrangement maintained by the Acquirer or any of its Affiliates (including the Company) following the Closing Date and in which any of the Continuing Employees participate (the "Acquirer Plans"), each Continuing Employee shall be credited with the same amount of service as was credited by the Company Group as

of the Closing under similar or comparable Company Benefit Plans (including for purposes of eligibility to participate, vesting, benefit accrual and eligibility to receive benefits), except to the extent such service credit would result in any duplication of benefits. Acquirer shall use commercially reasonable efforts to cause each applicable Acquirer Plan to waive, to the extent permitted by applicable Law, eligibility waiting periods, evidence of insurability requirements and pre-existing condition limitations. To the extent permitted by applicable Law and to the extent applicable in the plan year that contains the Closing Date, Acquirer shall use commercially reasonable efforts to give the Continuing Employees credit under the applicable Acquirer Plan for amounts paid prior to the Closing Date during the calendar year in which the Closing Date occurs under a corresponding benefit plan for purposes of applying deductibles, co-payments and out of pocket maximums, as though such amounts had been paid in accordance with the terms and conditions of the Acquirer Plan.

(c) Acquirer shall cause an Acquirer Plan that is intended to be tax qualified under Section 401(a) of the Code ("Acquirer 401(k) Plan") to permit Continuing Employees with account balances in a Seller Benefit Plan intended to be qualified under Section 401(a) of the Code ("Seller 401(k) Plan") to roll over their account balances, and shall use commercially reasonable efforts to include any loans, to such Acquirer 401(k) Plan. Seller shall provide a matching contribution under the Seller 401(k) Plan with respect to each Continuing Employee's accrued matching contribution under the Seller 401(k) Plan as of the Closing Date for the portion of the plan year that includes the Closing Date for compensation earned prior to the Closing Date by contributing the Accrued 2022 401(k) Match to the Seller 401(k) Plan.

(d) Prior to the Closing, the Company Group shall pay discretionary annual bonuses for the performance period ended December 31, 2021, as determined in Seller's sole discretion, and any commissions or other cash incentives with respect to performance periods ending on or before the Closing Date to the extent payable prior to the Closing in the Ordinary Course of Business. With respect to any other commissions or other cash incentives for performance periods ending on or after January 1, 2022 and on or before the Closing Date, Acquirer shall cause the Company Group to pay out the incentives thereunder in accordance with the terms thereof and consistent with past practice. With respect to performance periods in progress as of the Closing Date for any annual cash bonuses, commissions or other cash incentives, Acquirer shall cause the Company Group to maintain the terms of such programs in effect for the remainder of such performance periods and to pay out the incentives thereunder in accordance with such terms and consistent with past practice.

(e) Prior to the Closing, Seller may in its sole discretion accelerate the vesting of equity and equity based incentive awards held by Company Employees under Seller's equity incentive plans, and may in its sole discretion extend the exercise period of stock options held by Company Employees under Seller's equity incentive plans to the one (1) year anniversary of the Closing Date.

(f) Acquirer shall provide COBRA continuation coverage to each Continuing Employee who is an "M&A qualified beneficiary" (within the meaning of Treasury Regulation Section 54.4980B-9) in connection with the Transactions. Seller shall provide COBRA continuation coverage to each individual who is an M&A qualified beneficiary in connection with the Transactions and is not a Continuing Employee.

(g) As soon as practicable following the Agreement Date, Acquirer and the Company's Chief Executive Officer shall mutually consult regarding the terms of an equity and cash retention pool for the benefit of certain Company Employees.

(h) Prior to the Closing, the Company shall use its commercially reasonable efforts (which for the avoidance of doubt shall not require the Company to pay any consideration) to obtain executed confirmatory assignments of Intellectual Property, in form and substance reasonably satisfactory to Acquirer, from any Authors that have not previously executed such agreements.

(i) Nothing contained in this Section 5.13 shall, or shall be construed so as to,

(j) prevent or restrict in any way the right of Acquirer to terminate reassign, promote or demote any employee, consultant, director or other service provider (or to cause any of the foregoing actions) at any time following the Closing, or to change (or cause the change of) the title, powers, duties, responsibilities, functions, locations, or conditions of employment or service, to the extent not covered by this Section 5.13, of any such

employee, consultant, director or other service provider at any time following the Closing, (ii) constitute an amendment or modification of any Company Benefit Plan or other employee benefit plan, (iii) create any third-party rights in any such current or former employee, consultant, director or other service provider (including any beneficiary or dependent thereof) or (iv) except as set forth in Section 5.13(c)obligate Acquirer or any of its Affiliates to adopt or maintain any particular plan or program or other compensatory or benefits arrangement at any time or prevent Acquirer or any of its Affiliates from modifying or terminating any such plan, program or other compensatory or benefits arrangement at any time.

5.14Transition Services Agreement and Accounts Receivable.

(a) During the Pre-Closing Period, the Parties shall cooperate with each other and promptly negotiate and finalize the Transition Services Agreement covering the provision of certain transition services from Seller and its relevant Affiliates to the Company Group, acting reasonably and in good faith. In connection with the foregoing, Seller and Acquirer will take any other actions reasonably required to identify and define the services provided by Seller and its relevant Affiliates to the Company Group prior to Closing that are material to or reasonably necessary for the conduct of the Business following the Closing. The Transition Services Agreement shall cover transition services permitted under applicable Law and reasonably necessary for the conduct of Business by the Company Group following the Closing and provision that relate to the matters set forth in Schedule 5.14(a). All such transition services will be provided at Seller's cost, without markup or margin, in accordance with applicable Laws and at the same or better standard of service as such services were provided to the Company Group prior to Closing. Individual Transition Services Agreements shall be established for each jurisdiction other than the United States in which the applicable Business, service recipients or service providers are located or are organized, as mutually agreed by Seller and Acquirer, in substantially the form of the Transition Services Agreement.

(b) If, following the Closing, Seller or any of its Affiliates receive payment of a receivable that should have been paid to Company Group, Seller shall notify Acquirer and deliver such payment to Acquirer or its designee promptly following the receipt thereof. Acquirer may direct all relevant trade debtors to make payment on such receivables to Acquirer's specified address and/or account.

5.15Prohibited Activities.

(a) Seller shall not, and shall not permit or cause any of its controlled Affiliates to, at any time prior to four (4) years from the Closing, directly or indirectly, (i) solicit the employment or services (whether as an employee, consultant, independent contractor or otherwise) of any employee of the Company Group as of Closing or any Person who had been an employee of the Company Group within the twelve (12) month period immediately preceding the Closing, without Acquirer's prior written consent, or (ii) hire in any capacity (whether as an employee, consultant, independent contractor or otherwise) any Key Employee, unless such Person has been terminated by Acquirer or any of its Affiliates subsequent to the Closing and who has not been employed or engaged by the Company Group for a period of at least six (6) months prior to the date of such hire, without Acquirer's prior written consent. For purposes of this Section 5.15(a), the terms "solicit the employment or services" shall be deemed not to include generalized searches for employees through media advertisements of general circulation, employment search firms, open job fairs or otherwise.

(b) Seller shall not, and shall not permit, cause or encourage any of its controlled Affiliates to, for a period of four (4) years following the Closing, directly or indirectly, for Seller or on behalf of or in conjunction with any other Person (other than Acquirer and its Affiliates, including the Company Group) engage in the Business anywhere in the world.

5.16Subsidiary Compliance. Acquirer shall cause each Merger Sub to comply with all of such Merger Sub's obligations under or relating to this Agreement and, prior to the Closing, each of Seller, the Company and Holdco2 shall cause the Company Group to comply with all of the Company Group's obligations under or relating to this Agreement.

5.17Pre-Closing Restructuring. Seller and the Company Parties shall use their respective reasonable best efforts to, as soon as reasonably practicable following the Agreement Date, complete the Pre-Closing Restructuring in accordance with the steps set forth on Schedule D and obtain and deliver to Acquirer written confirmation from the

IRS (or other evidence reasonably satisfactory to Acquirer) stating that the Company will retain its EIN following completion of the Transactions.

ARTICLE 6
CONDITIONS TO THE MERGERS

6.1 Conditions to Obligations of Each Party to Effect the Merger. The respective obligations of each Party to consummate the Transactions shall be subject to the satisfaction or waiver in writing at or prior to the Closing of each of the following conditions:

(a) Stockholder Approval. The Holdco2 Stockholder Approval shall have been duly and validly obtained and the Acquirer Stockholder Approval shall have been duly and validly obtained.

(b) Illegality. No Order issued by any court of competent jurisdiction preventing the consummation of the Mergers shall be in effect, and no action shall have been taken by any Governmental Authority seeking the foregoing, and no Law or Order shall have been enacted or entered that makes the consummation of the Mergers illegal.

(c) Governmental Approvals. All filings with and approvals of any Governmental Authority required to be made or obtained prior to the Closing and in connection with the Mergers shall have been made or obtained and shall be in full force and effect, and the applicable waiting period under the HSR Act, including any extensions thereof agreed to by the parties and the relevant Governmental Authority, shall have expired or early termination of such waiting period shall have been granted by the applicable Governmental Authority (the "Antitrust Condition").

6.2 Additional Conditions to Obligations of Seller and the Company Group. The obligations of Seller and the Company Parties to consummate the Transactions shall be subject to the satisfaction or waiver at or prior to the Closing of each of the following conditions (it being understood and agreed that each such condition is solely for the benefit of Seller and the Company Parties and may be waived only by Seller (on behalf of itself and/or the Company Parties) in writing in its sole discretion without notice or Liability to any Person):

(a) Representations, Warranties and Covenants. The representations and warranties made by Acquirer herein shall be true and correct in all material respects (except for such representations and warranties that are qualified by their terms by a reference to materiality or Material Adverse Effect, which representations and warranties as so qualified shall be true and correct in all respects) on and as of the Agreement Date and on and as of the Closing Date as though such representations and warranties were made on and as of such dates (except for representations and warranties that address matters only as to a specified date or dates, which representations and warranties shall be true and correct with respect to such specified date or dates). Acquirer shall have performed and complied in all material respects with all covenants, agreements and obligations herein required to be performed and complied with by Acquirer at or prior to the Closing.

(b) Receipt of Closing Deliveries. Seller, the Company or Holdco2 shall have received each of the agreements, instruments, certificates and other documents set forth in Section 2.3(c) (other than clause (iv) thereof, which shall be delivered upon Closing as set forth in and in accordance with Section 2.5(a)(i)).

(c) No Material Adverse Effect. There shall not have occurred a Material Adverse Effect (substituting, in each case, "the Acquirer" for references to the Company Group or Company Parties) with respect to the Acquirer and its Subsidiaries (taken as a whole) that is continuing.

(d) Nasdaq Listing. The Stock Consideration issuable pursuant to this Agreement in connection with the Mergers (including pursuant to Section 2.7) shall have been approved for listing on Nasdaq (or any successor national securities exchange thereto), subject to official notice of issuance.

6.3 Additional Conditions to the Obligations of Acquirer. The obligations of Acquirer and the Merger Subs to consummate the Transactions shall be subject to the satisfaction or waiver at or prior to the Closing of each of the following conditions (it being understood and agreed that each such condition is solely for the benefit of Acquirer

and the Merger Subs and may be waived by Acquirer (on behalf of itself and/or Merger Sub) in writing in its sole discretion without notice or Liability to any Person):

(a) Representations, Warranties and Covenants. (i) The Company Fundamental Representations (other than those representations and warranties contained in Section 3.12 (Taxes)) shall be true and correct in all respects on and as of the Agreement Date and on and as of the Closing Date as though such representations and warranties were made on and as of such dates (except for representations and warranties that address matters only as to a specified date or dates, which representations and warranties shall be true and correct with respect to such specified date or dates); (ii) all other representations and warranties (including those contained in Section 3.12 (Taxes)) made by the Company Parties and Seller herein shall be true and correct in all material respects (except for such representations and warranties that are qualified by their terms by a reference to materiality or Material Adverse Effect, which representations and warranties as so qualified shall be true and correct in all respects) on and as of the Agreement Date and on and as of the Closing Date as though such representations and warranties were made on and as of such dates (except for representations and warranties that address matters only as to a specified date or dates, which representations and warranties shall be true and correct with respect to such specified date or dates); and (iii) each of Seller and the Company Parties shall have performed and complied in all material respects with all covenants, agreements and obligations herein required to be performed and complied with by Seller and the Company Parties, respectively, at or prior to the Closing.

(b) Receipt of Closing Deliveries. Acquirer shall have received each of the agreements, instruments, certificates and other documents set forth in Section 2.3(b).

(c) Injunctions or Restraints on Conduct of Business. No Order issued by any court of competent jurisdiction or other legal or regulatory restraint or prohibition materially limiting or restricting Acquirer's ownership, conduct or operation of the Business following the Closing shall be in effect, and no Proceeding seeking any of the foregoing shall be pending or threatened.

(d) No Material Adverse Effect. There shall not have occurred a Material Adverse Effect with respect to the Company Group (taken as a whole) that is continuing.

(e) Financial Statements. Holdco2 shall have delivered to Acquirer, on or prior to five days prior to the Closing, the Required Financial Statements; provided that, the financial statements required by Item 9.01(a) and (b) of Form 8-K shall not be a condition to the Closing if the 71-day grace period provided by Item 9.01(a)(3) of Form 8-K shall then be available to Acquirer.

(f) Completion of the Pre-Closing Restructuring. Prior to the Closing, Seller and the Company Parties shall have completed the Pre-Closing Restructuring in accordance with the steps set forth on Schedule D and Holdco2 shall have delivered to Acquirer written confirmation from the IRS (or other evidence reasonably satisfactory to Acquirer) stating that the Company will retain its EIN following completion of the Transactions (the "Pre-Closing Restructuring Condition").

(g) Key Employee. Katherine Stueland shall have remained continuously employed on a full-time basis with the Company through the Closing, Ms. Stueland's Key Employment Agreement shall continue to be in full force and effect and no action shall have been taken by Ms. Stueland to repudiate or rescind such agreement and Ms. Stueland shall, as of the Closing, be ready, willing and able to perform the duties contemplated by the Key Employment Agreement following the Closing.

(h) Required Closing Contracts. A member of the Company Group and the applicable Third Parties shall have entered into the Required Closing Contracts and delivered copies thereof to Acquirer (together with the condition set forth in Section 2.3(b)(xii), the "Required Consent Condition").

ARTICLE 7
TERMINATION

7.1 Termination. At any time prior to the Closing, this Agreement may be terminated and the Mergers abandoned by authorized action taken by the terminating Party or Parties, whether before or after the Holdco2 Stockholder Approval is obtained:

(a) by mutual written consent of Acquirer and Seller duly authorized by the Acquirer Board and the Seller Board, respectively;

(b) by either Acquirer or Seller, by written notice to the other, if the Closing shall not have occurred on or before August 14, 2022 or such other date that Acquirer and Seller may agree upon in writing (the "Termination Date"); provided that Acquirer or Seller may, by written notice to the other such Party, extend the Termination Date to October 14, 2022 if, as of the initial Termination Date, (A) any one or more of the Antitrust Condition, Pre-Closing Restructuring Condition and Required Consent Condition shall not have been satisfied and (B) all of the other conditions to the Closing set forth in Article 6 shall have been satisfied or waived (other than the conditions that, by their terms, are intended to be satisfied at the Closing, which conditions only need to be capable of being satisfied at the Closing); provided, further, that the right to terminate this Agreement under this Section 7.1(b) shall not be available to any party whose breach of any covenant, agreement or obligation hereunder will have been the principal cause of, or shall have directly resulted in, the failure of the Closing to occur on or before the Termination Date;

(c) by either Acquirer or Seller, by written notice to the other, if any Order of a Governmental Authority of competent authority preventing the consummation of the Mergers shall have become final and non-appealable;

(d) by Acquirer, by written notice to Seller, if (i) there shall have been an inaccuracy in any representation or warranty made by, or a breach of any covenant, agreement or obligation of, the Company Parties or Seller herein and such inaccuracy or breach shall not have been cured within 30 days after receipt by Seller of written notice from Acquirer of such inaccuracy or breach and, if not cured within such period and at or prior to the Closing, such inaccuracy or breach would result in the failure of any of the conditions set forth in Section 6.1 or Section 6.3 to be satisfied (provided that no such cure period shall be available or applicable to any such breach that by its nature cannot be cured); (ii) the Holdco2 Stockholder Approval is not obtained within seven (7) days following the execution of this Agreement; or

(e) by Seller, by written notice to Acquirer, if there shall have been an inaccuracy in any representation or warranty made by, or a breach of any covenant, agreement or obligation of, Acquirer or any of the Acquirer Parties herein and such inaccuracy or breach shall not have been cured within 30 days after receipt by Acquirer of written notice from Seller of such inaccuracy or breach and, if not cured within such period and at or prior to the Closing, such breach would result in the failure of any of the conditions set forth in Section 6.1 or Section 6.2 to be satisfied (provided that no such cure period shall be available or applicable to any such inaccuracy or breach that by its nature cannot be cured).

7.2 Effect of Termination. In the event of termination of this Agreement as provided in Section 7.1, this Agreement shall forthwith become void and there shall be no Liability on the part of the Parties or their respective officers, directors, stockholders or Affiliates; provided that (i) Section 5.4 (Confidentiality; Public Disclosure), this Section 7.2 (Effect of Termination), Article 9 (Miscellaneous) and any related definition provisions in or referenced in Article 1 (Definitions) and the Confidentiality Agreement shall remain in full force and effect and survive any termination of this Agreement and (ii) nothing herein shall relieve any party hereto from Liability in connection with any intentional misrepresentation made by, or a willful breach of any covenant, agreement or obligation of, such party herein.

ARTICLE 8
INDEMNIFICATION

8.1 Survival of Representations; Claims Period.

(a) The representations and warranties contained in Article 3 and Article 4 that are not Fundamental Representations shall survive the Closing until the date that is 12 months following the Closing Date and the Fundamental Representations shall survive until the expiration of the applicable statute of limitations. All of the covenants and other agreements of the Parties contained in this Agreement to be performed at or prior to the Closing shall survive until the date that is 12 months following the Closing Date and all other covenants and other agreements of the Parties contained in this Agreement shall survive until fully performed or fulfilled. The period during which an Acquirer Indemnified Party may assert a claim for indemnification in respect of any of the matters set forth in clauses (iii) through (vi) of Section 8.2(a) shall survive indefinitely, except for the Repayment Obligations Indemnity, which period shall expire on the date that is two years following the Closing Date.

(b) Any claim for indemnification under this Article 8 must be asserted by a Claim Notice within the applicable survival period contemplated by Section 8.1(a), and if such a Claim Notice is given within such applicable period, the survival period for such representation, warranty, covenant or other agreement solely with respect to such claim shall continue until the claim is fully resolved.

8.2 Indemnification.

(a) From and after the Closing, subject to the provisions of this Article 8, Seller shall indemnify, defend and hold harmless each Acquirer Party and each of its Affiliates (including, after the Closing, the Surviving Entity and the other members of the Company Group) and each Acquirer Party's Representatives (the "Acquirer Indemnified Parties") from and against any and all damages, claims, losses, costs, Liabilities, expenses or amounts paid in settlement, including interest, fines, penalties, reasonable attorneys' fees and expenses of investigation, defense, enforcement of this Agreement and remedial action (collectively, "Damages"), asserted against, suffered, sustained, accrued or incurred by such Acquirer Indemnified Party as a result of or relating to:

(i) the breach of, or any inaccuracy in, any representation or warranty of the Company Parties or Seller in this Agreement or the Transaction Certificates to be true and correct on the Agreement Date and as of the Closing Date as if made on and as of the Closing Date (except that any such representations and warranties which by their express terms are made solely as of an earlier date shall be true and correct as of such earlier date); provided that (x) all materiality qualifications (such as "material" and "Material Adverse Effect", other than the use of the word "Material" as part of any defined term) in such representations and warranties shall be disregarded for purposes of this Article 8 in determining the amount of Damages associated with a breach (but not, for the avoidance of doubt, for purposes of determining whether or not a breach has occurred) and (y) and with respect to the representations and warranties in Sections 3.19(b), 3.19(h), 3.19(i), 3.19(p), 3.20(a), 3.20(e), 3.20(f) and 3.20(g) all Knowledge qualifications (such as , "to the Knowledge of the Company") shall be disregarded for purposes of determining whether or not a breach has occurred);

(ii) any breach of or failure to perform any covenant or obligation of the Company or Seller under this Agreement;

(iii) any Liabilities not related to the Business;

(iv) any Indebtedness of the Company Group or Transaction Expenses to the extent not taken into account in the calculation of the Cash Consideration in accordance with this Agreement, as finally determined in accordance with Section 2.6;

(v) any Pre-Closing Taxes or

(vi) any matter set forth on Schedule 8.2(a)(vi).

(b) From and after the Closing, subject to the provisions of this Article 8, Acquirer shall indemnify, defend and hold harmless Seller and each of its Affiliates (excluding, after the Closing, the Surviving Entity and the

other members of the Company Group) and Seller and such Affiliates' respective Representatives (the "Seller Indemnified Parties" and together with the Acquirer Indemnified Parties, the "Indemnified Parties") from and against any and all Damages asserted against, suffered, sustained, accrued or incurred by such Seller Indemnified Party as a result of or relating to:

(i) the breach of, or any inaccuracy in, any representation or warranty of the Acquirer Parties in this Agreement or the Transaction Certificates to be true and correct on the Agreement Date and as of the Closing Date as if made on and as of the Closing Date (except that any such representations and warranties which by their express terms are made solely as of an earlier date shall be true and correct as of such earlier date), or in the case of a Third Party Claim, any allegation that, if true, would constitute or evidence such a breach of, or inaccuracy in, any such representation or warranty; provided that all materiality qualifications (such as "material" and "Material Adverse Effect", other than the use of the word "Material" as part of any defined term) in such representations and warranties shall be disregarded for purposes of this Article 8 in determining the amount of Damages associated with a breach (but not, for the avoidance of doubt, for purposes of determining whether or not a breach has occurred); or

(ii) any breach of or failure to perform any covenant or obligation of Company Parties or Seller under this Agreement.

(c) The term "Damages" as used in this Article 8 is not limited to Third Party Claims, but includes Damages incurred or sustained by an Indemnified Party in the absence of Third Party Claims, and payments by an Indemnified Party shall not be a condition precedent to recovery; provided that Damages shall only include punitive damages to the extent such Indemnified Party is actually determined to be liable by a final judgment of the highest court with jurisdiction over the matter to a Third Party for such Damages in connection with a Third Party Claim and such Damages are indemnifiable pursuant to this Article 8. "Damages" shall not include consequential damages (except to the extent such damages would be reasonably foreseeable).

(d) Other than with respect to any claim for Fraud, no Indemnified Party shall be required to show reliance on any representation, warranty, covenant or agreement in order for such Indemnified Party to be entitled to indemnification, compensation or reimbursement in accordance with this Article 8.

8.3 Notice of Claims.

(a) Any Indemnified Party seeking indemnification hereunder shall, within the relevant limitation period provided for in Section 8.1, give to the relevant indemnifying Party (the "Indemnifying Party") a notice (a "Claim Notice") describing in reasonable detail the facts giving rise to such claim for indemnification and shall include in such Claim Notice whether such claim relates to a claim by a Third Party against such Indemnified Party (a "Third Party Claim") and (if then known) the amount or the method of computation of the amount of such claim, and a reference to the provision of this Agreement or Transaction Certificate upon which such claim is based; provided, that a Claim Notice in respect of any Proceeding by or against a Third Party as to which indemnification shall be sought shall be given promptly after the Indemnified Party becomes aware that such Proceeding has been commenced; and provided, further, that failure to give such notice shall not affect such Indemnified Party's right to indemnification hereunder except to the extent the Indemnifying Party shall have been materially prejudiced by such failure.

(b) Except in the case of a Third Party Claim, the Indemnifying Party shall have twenty (20) Business Days following receipt of any Claim Notice pursuant hereto to (i) agree to such indemnification claims and the amount or method of determination set forth in the Claim Notice and satisfy such indemnification claim in accordance with Section 8.6 or (ii) to provide such Indemnified Party with notice that it disagrees with any such indemnification claim or the amount or method of determination set forth in the Claim Notice and thereafter comply with the dispute resolution provisions set forth in Section 2.9(a).

8.4 Third Party Claims.

(a) The Indemnifying Party shall have the right to conduct (at the Indemnifying Party's expense) the defense of a Third Party Claim with counsel reasonably satisfactory to the Indemnified Party, upon delivery of notice to such Indemnified Party (the "Defense Notice") within twenty (20) days after the Indemnifying Party's

receipt of the Claim Notice; provided that the Defense Notice shall specify the counsel the Indemnifying Party will appoint to defend such Third Party Claim. The Indemnified Party shall be entitled to be indemnified for the reasonable fees and expenses of counsel for any period during which the Indemnifying Party has not assumed the defense of any such Third Party Claim in accordance herewith. If the Indemnifying Party delivers a Defense Notice and thereby elects to conduct the defense of the Third Party Claim, (i) such Indemnified Party will reasonably cooperate with and make available to the Indemnifying Party such assistance and materials as the Indemnifying Party may reasonably request, all at the sole expense of the Indemnifying Party, (ii) the Indemnified Party shall have the right at its sole expense to participate in the defense (including any discussions or negotiations in connection with the settlement, adjustment or compromise) of such Third Party Claim assisted by counsel of its own choosing, (iii) the Indemnifying Party shall deliver to the Indemnified Party, reasonably in advance so as to provide the Indemnified Party a reasonable opportunity to review and comment, copies of all pleadings, notices, offers of settlement and communications with respect to such Third Party Claim to the extent that receipt of such documents does not affect any privilege relating to the Indemnifying Party, subject to execution by the Indemnified Party of the Indemnifying Party's (and, if required, such third party's) standard non-disclosure agreement if and to the extent that such materials contain confidential or proprietary information and (iv) the Indemnifying Party shall keep the Indemnified Party reasonably apprised of developments with respect to such Third Party Claim and the defense thereof, and shall consider, in good faith, any recommendations made by the Indemnified Party with respect thereto.

(b) Notwithstanding the foregoing, the Indemnifying Party shall not be entitled to control the defense of any Third Party Claim if: (i) such claim for indemnification is with respect to a Proceeding (A) by a Governmental Authority, (B) that would reasonably be expected to result in a Material Adverse Effect with respect to the Surviving Entity and the probable Damage with respect to such Third Party Claim exceed the amount for which the Indemnifying Party could be liable pursuant to this this Article 8, or (C) regarding material Company IP, (ii) the applicable Indemnified Party has been advised by counsel that a material conflict of interest exists between the Indemnifying Party and such Indemnified Party with respect to such Third Party Claim, (iii) the Indemnifying Party has failed to deliver the Defense Notice or is failing to adequately prosecute or defend such Third Party Claim, (iv) such Third Party Claim seeks an injunction or other equitable relief against such Indemnified Party, (v) the amount of such claim for indemnification exceeds the Merger Consideration or (vi) such Third Party Claim relates to the Repayment Obligations Indemnity. In the event of any of the foregoing circumstances where the Indemnified Party has nonetheless permitted the Indemnifying Party to control the defense of a Third Party Claim, the Indemnified Party shall be entitled to retain one counsel, at the expense of the Indemnifying Party; provided, that if in the reasonable opinion of counsel to the Indemnified Party, (A) there are legal defenses available to an Indemnified Party that are different from or additional to those available to the Indemnifying Party; or (B) there exists a conflict of interest between the Indemnifying Party and the Indemnified Party that cannot be waived, the Indemnifying Party shall be liable for the reasonable fees and expenses of one counsel to the Indemnified Party. If the Indemnifying Party elects not to compromise or defend such Third Party Claim or is not entitled to assume the defense under the terms of this Agreement, the Indemnified Party may pay, settle, compromise and defend such Third Party Claim and seek indemnification for any and all Damages to the extent indemnifiable pursuant to Section 8.2(a). If an Indemnified Party settles a Third Party Claim without the prior written consent of the applicable Indemnifying Party (such consent not to be unreasonably withheld, conditioned or delayed), such settlement shall not be determinative of the amount or existence of Damages for which the Indemnifying Party is liable hereunder; provided, that, in no event shall the Indemnifying Party be liable for any amount in excess of the Damages awarded or agreed upon with respect to such settlement, together with the reasonable expenses of defending such claim and pursuing recovery hereunder.

(c) The Indemnifying Party shall not, without the prior written consent of the applicable Indemnified Party: (i) settle a Third Party Claim or consent to the entry of any Proceeding which does not include an unconditional, duly authorized, fully executed and acknowledged written release by the claimant or plaintiff of the Indemnified Parties from all liability in respect of the Third Party Claim; (i) settle any Third Party Claim if the settlement imposes equitable remedies or other obligations on any Indemnified Party; or (iii) settle any Third Party Claim if the result is to admit civil or criminal liability or culpability on the part of any Indemnified Party that could give rise to criminal liability with respect to any Indemnified Party.

8.5 Limitations on Indemnity.

(a) Deductible; Liability Cap. With respect to any claim for indemnification pursuant to Section 8.2(a)(i), Section 8.2(a)(ii), Section 8.2(b)(i) or Section 8.2(b)(ii) (other than in respect of Fundamental Representations, covenants to be performed following the Closing or Fraud) (collectively, "General Claims"):

(i) the Indemnifying Party shall not be liable for, and no Indemnified Party shall have a right to deliver a Claim Notice in respect of, any such individual General Claim or series of such related General Claims arising out of the same or related facts and circumstances where the Damages are less than $25,000 ("De Minimis Claims"), and no De Minimis Claims shall be included in the calculation used to determine whether the Deductible shall have been satisfied;

(ii) the Indemnifying Party shall not be liable for any such General Claims (or series of related General Claims) unless and until the aggregate of all indemnifiable Damages that may be recovered from such Indemnifying Party pursuant to Section 8.2(a)(i) or Section 8.2(b)(i), as applicable, exceeds $5,565,000 (the "Deductible") and then such Indemnifying Party shall be liable only for those amount in excess of the Deductible; and

(iii) the maximum aggregate Liability of an Indemnifying Party with respect to General Claims shall not exceed an amount equal to the Escrow Amount.

(b) Maximum Liability Absent Fraud.

(i) Except in the case of (i) Fundamental Claims involving Third Party Claims and (ii) Fraud, no Indemnifying Party shall be liable under this Article 8 for an aggregate amount in excess of the actual amount of the Merger Consideration paid to Seller (it being agreed that, for purposes of calculating such amount, the shares of Acquirer Stock received by Seller shall be deemed to have a value equal to the Share Value); provided that, with respect to the Repayment Obligations Indemnity, Seller's maximum liability under this Article 8 shall not exceed an amount equal to $35,000,000.

(ii) In the case of (i) Fundamental Claims (other than the Repayment Obligations Indemnity, which shall be limited as set forth in Section 8.5(b)(i)) involving Third Party Claims or (ii) Fraud, no Indemnifying Party shall be liable under this Article 8 for an aggregate amount in excess of the actual amount of the Total Merger Consideration paid to Seller.

(c) Insurance Proceeds; Tax Benefits.

(i) The amount of any Damages suffered by any Indemnified Party shall be calculated after giving effect to any payments from insurance, indemnity, contribution or other similar sources of recovery, in each case net of any related costs and expenses of the Indemnified Party, including the aggregate cost of pursuing insurance claims, incremental increases in insurance premiums or other chargebacks, legal fees, costs of investigation and other related expenses (each, a "Net Payment"). If an Indemnified Party receives a Net Payment after receiving payment from an Indemnifying Party with respect to the same Damages, and as a result the Indemnified Party has recovered amounts in excess of the total amount of the Damages, then the Indemnified Party shall promptly reimburse the Indemnifying Party the amount of such excess. With respect to any indemnifiable Damages, if and to the extent required by applicable Law, an Indemnified Party shall use its commercially reasonable efforts to mitigate any Damages for which it seeks indemnity hereunder.

(ii) The amount of any Damages for which an indemnity is to be provided hereunder shall be reduced by the amount of any actual net reduction in Taxes paid by the Company Group, their Subsidiaries and Affiliates (including Acquirer and any parent corporation of a consolidated or combined group which any member of the Company Group and/or its Subsidiaries may become a member of) as a result of incurring such Damages to the extent such reduction in Taxes arises in the year in which such Damages are incurred or in the three (3) years immediately after the year in which such Damages are incurred, determined on a "with and without" basis. To the extent an Indemnified Party or any of its Affiliates realizes a greater Tax benefit with respect to particular Damages in the year the Damages are incurred or in the three (3) years immediately after the year in which such Damages

were incurred subsequent to a payment by the Indemnifying Party in respect of such Damages than was taken into account at the time of such payment, then such Indemnified Party shall promptly reimburse the Indemnifying Party for any such payment up to the amount of such greater Tax benefit.

8.6 Payment of Indemnification Claims; Release of Escrow Amount; Set-off.

(a) In the event a claim for indemnification under this Article 8 shall have been finally determined, the amount of the related Damages (after taking into account the limitations of Section 8.5):

(i) shall, in the case of a General Claim, not exceed the Escrow Amount and, subject to Section 8.6(b), the Acquirer Indemnified Parties' sole and exclusive recourse against Seller shall be against the Escrow Account (with any such recoveries satisfied 25% in cash and 75% in shares of Acquirer Stock (based on the Share Value)); and

(ii) may, in the case of any claim for indemnification under Section 8.2(a) or Section 8.2(b) (including in respect of Fundamental Representations and covenants to be performed following the Closing) that is not a General Claim (collectively, the "Fundamental Claims"), be satisfied: (A) in the case of claims against Seller: (1) against the Escrow Account, (2) by way of set-off against any Milestone Payment or (3) directly against Seller (it being agreed that, unless otherwise directed by Acquirer, Seller shall satisfy its portion of any such claim through a combination of cash payment and surrender to Acquirer of the number of shares of Acquirer Stock-based on the Share Value pro rata in proportion to the relative proportions of Stock Consideration and Cash Consideration) and (B) in the case of claims against Acquirer, directly against Acquirer.

Any claim, the Indemnifying Party's Liability therefor and the amount of the related Damages shall be "***finally determined***" when the parties to such claim have so determined by mutual written agreement or, if disputed, when a final and non-appealable Order of a court of competent jurisdiction shall have been entered concerning such matters.

(b) Notwithstanding anything to the contrary contained herein, the amounts that an Acquirer Indemnified Party recovers from the Escrow Account with respect to Fundamental Claims shall not reduce the amount that an Acquirer Indemnified Party may recover with respect to General Claims. By way of illustration and not limitation, assuming there are no other claims for indemnification, compensation or reimbursement, in the event that Damages resulting from a Fundamental Claim are first satisfied from the Escrow Account and such recovery fully depletes the Escrow Account, the maximum amount recoverable by an Acquirer Indemnified Party pursuant to a subsequent General Claim shall continue to be the Escrow Amount irrespective of the fact that the Escrow Account was used to satisfy such Fundamental Claim, such that the amount recoverable for such two claims would be the same regardless of the chronological order in which they were made.

(c) The Escrow Agent will hold the Escrow Amount in the Escrow Account until the Escrow Expiration Date. On or before the second (2nd) Business Day after the Escrow Expiration Date, Acquirer shall notify Seller in writing of the amount that Acquirer reasonably determines in good faith to be necessary to satisfy all pending claims for indemnification that have been asserted in any Claim Notice that was delivered to Seller at or prior to 11:59 p.m. Eastern time on the Escrow Expiration Date, but not resolved, at or prior to such time (each such claim a "Continuing Claim" and such amount, the "Unresolved Escrow Amount"). Within five Business Days following the Escrow Expiration Date, (i) Acquirer and Seller shall deliver a joint instruction to the Escrow Agent instructing the Escrow Agent to release and distribute to Seller (A) the amount then-remaining in the Escrow Account as of the Escrow Expiration Date, minus (B) an amount equal to the Unresolved Escrow Amount and (ii) Acquirer shall direct its transfer agent to remove any restrictive escrow legends from any shares of Acquirer Stock to be released from escrow to Seller.

(d) Following the Escrow Expiration Date, after resolution and payment of a Continuing Claim, (i) Acquirer and Seller shall deliver a joint instruction to the Escrow Agent instructing the Escrow Agent to release to Seller from the Escrow Account an amount in the aggregate equal to (A) the amount then-remaining in the Escrow Account as of the date of such resolution and payment, minus (B) the amounts then being held in the Escrow Account in respect of Continuing Claims that have not been resolved (which amounts will continue to be held as the Unresolved Escrow Amount) and (ii) Acquirer shall direct its transfer agent to remove any restrictive escrow legends from any shares of Acquirer Stock to be so released to Seller.

(e) If an amount has been claimed under a Claim Notice by an Acquirer Indemnified Party pursuant to Section 8.3(a) and finally determined, and if the Milestone Payments have not yet been fully paid pursuant to Article 2, Acquirer may set-off such finally determined amounts against any Milestone Payments not yet paid pursuant to Article 2, by deducting (i) cash on a dollar-for-dollar basis with respect to any portion of the Milestone Payments made in cash and/or (ii) by deducting a number of shares of Acquirer Stock equal to such finally determined amount divided by the Share Value with respect to Milestone Payments made in Acquirer Stock, subject to the limitations set forth in Section 8.5.

(f) Seller waives, and acknowledges and agrees that it shall not have and shall not exercise or assert (or attempt to exercise or assert), any right of contribution, right of indemnity or other right or remedy against any member of the Company Group for any indemnification claims asserted by any Acquirer Indemnified Party in connection with any indemnification obligation or any other Liability to which Seller may become subject under this Article 8, it being acknowledged and agreed that the representations, warranties, covenants and agreements of the Company Parties and Seller are solely for the benefit of Acquirer Indemnified Parties.

8.7 Remedies. Except as provided under Section 2.9, from and after the Closing, the remedies in this Article 8 shall be the sole and exclusive monetary remedies of the Indemnified Parties with respect to any breach of the Company Parties' and Seller's representations, warranties, covenants and agreements set forth in this Agreement or otherwise arising out of this Agreement, regardless of the theory or cause of action pled, except for the remedies of specific performance, injunction and other equitable relief; provided that no Party hereto shall be deemed to have waived any rights, claims, causes of action or remedies, and none of the limitations contained herein shall limit any recovery related thereto, in the case of a Party's Fraud or such rights, claims, causes of action or remedies may not be waived under applicable Law.

ARTICLE 9
MISCELLANEOUS

9.1 Assignment; Binding Effect. This Agreement and the rights and obligations of the Parties hereunder shall not be assignable or transferable by any Party (including in connection with a merger, consolidation, sale of substantially all of the assets of such Party or otherwise by operation of Law) without the prior written consent of (a) Acquirer, in the case of any such attempted assignment or transfer by Seller or any Company Party or (b) Seller, in the case of any such attempted assignment or transfer by any Acquirer Party. Any attempted assignment in violation of this Section 9.1 shall be null and void. Subject to the foregoing, this Agreement shall be binding upon and inure to the benefit of the Parties and their respective successors and permitted assigns.

9.2 Notices. All notices, demands, waivers and other communications pursuant to this Agreement will be in writing and will be deemed given if delivered personally or delivered by electronic mail or globally recognized express delivery service to the Parties at the addresses set forth below or to such other address as the Party to whom notice is to be given to the other Parties in writing in accordance herewith. Any such notice, demand, waiver or other communication will be deemed to have been delivered and received (a) in the case of personal delivery, on the date of such delivery, (b) in the case of electronic mail, on the date of sending if no automated notice of delivery failure is received by the sender, and (c) in the case of a globally recognized express delivery service, on the date on which receipt by the addressee is confirmed pursuant to the service's systems.

If to an Acquirer Party, or after the Closing, to any member of the Company Group:

Sema4 Holdings Corp.
333 Ludlow Street, North Tower, 8th Floor
Stamford, Connecticut 06902
Attention: General Counsel
Email: legal@sema4.com

with a copy (which shall not constitute notice) to:

Fenwick & West LLP
902 Broadway
New York, NY 10010
Email: eskerry@fenwick.com; vlupu@fenwick.com
Attention: Ethan A. Skerry; Victoria A. Lupu

If to Seller or, prior to Closing, the Company Parties, to: OPKO Health, Inc.

4400 Biscayne Blvd.
Miami, FL 33137
Attention: Steven D. Rubin
Email: srubin@opko.com

with a copy (which shall not constitute notice) to:

Greenberg Traurig, P.A.
333 S.E. 2nd St.
Suite 4400
Miami, FL 33131
Email: grossmanb@gtlaw.com; altmand@gtlaw.com
Attention: Robert L. Grossman; Drew M. Altman

9.3 Governing Law. This Agreement, any non-contractual rights or obligations arising out of or in connection with it, and all Disputes will be governed by, and enforced and construed in accordance with, the Laws of the State of Delaware, without regard to the conflict of laws rules of such state that would result in the application of the Laws of another jurisdiction.

9.4 Jurisdiction; Venue. Each of the Parties irrevocably consents to the exclusive jurisdiction and venue in the Delaware Court of Chancery within the State of Delaware (or, if the Delaware Court of Chancery declines to accept jurisdiction over a particular matter, any court of the United States located in the State of Delaware, or, if any such court of the United States located in the State of Delaware declines to accept jurisdiction over a particular matter, any state court located in the State of Delaware) in connection with any Dispute and agrees that process shall be served upon such Party in the manner set forth in Section 9.2, and that service in such manner shall constitute valid and sufficient service of process. Each Party waives and covenants not to assert or plead any objection that such Party might otherwise have to such jurisdiction, venue and process. Each Party hereby agrees not to commence any legal proceedings relating to or arising out of this Agreement or the Transactions in any jurisdiction or courts other than as provided herein.

9.5 WAIVER OF JURY TRIAL. EACH PARTY HEREBY IRREVOCABLY WAIVES, TO THE FULLEST EXTENT PERMITTED BY LAW, ANY RIGHT IT MAY HAVE TO A TRIAL BY JURY IN RESPECT TO ANY PROCEEDING DIRECTLY OR INDIRECTLY ARISING OUT OF, UNDER OR IN CONNECTION WITH THIS AGREEMENT, THE TRANSACTIONS CONTEMPLATED HEREBY OR DISPUTES RELATING HERETO. EACH PARTY (A) CERTIFIES THAT NO REPRESENTATIVE, AGENT OR ATTORNEY OF ANY OTHER PARTY HAS REPRESENTED, EXPRESSLY OR OTHERWISE, THAT SUCH OTHER PARTY WOULD NOT, IN THE EVENT OF A DISPUTE, SEEK TO ENFORCE THE FOREGOING WAIVER AND (B) ACKNOWLEDGES THAT IT AND THE OTHER PARTIES HAVE BEEN INDUCED TO ENTER INTO THIS AGREEMENT BY, AMONG OTHER THINGS, THE MUTUAL WAIVERS AND CERTIFICATIONS IN THIS SECTION 9.5.

9.6 Amendments and Waivers. This Agreement may be amended, modified, superseded or canceled and any of the terms, covenants, representations, warranties or conditions hereof may be waived only by an instrument in writing signed by Acquirer and Seller, or, in the case of a waiver, by or on behalf of the Party waiving compliance (which, in the case of a waiver of any obligation of Acquirer following the Closing, shall be Seller). No course of dealing between the Parties shall be effective to amend or waive any provision of this Agreement. The waiver by

any Party of any right hereunder or of the failure to perform or of a breach by any other Party shall not be deemed a waiver of any other right hereunder or of any other breach or failure by such other Party whether of a similar nature or otherwise.

9.7 Counterparts. This Agreement may be executed in any number of counterparts (including electronically), and each such counterpart hereof shall be deemed to be an original instrument, but all such counterparts together shall constitute but one agreement. Delivery of an executed counterpart of a signature page of this Agreement by electronic mail or other electronic transmission shall be effective as delivery of a manually executed original counterpart of this Agreement.

9.8 Severability. Any term or provision of this Agreement that is held by a court of competent jurisdiction or arbitrator to be invalid, void or unenforceable in any situation in any jurisdiction shall not affect the validity or enforceability of the remaining terms and provisions hereof or the validity or enforceability of the invalid, void or unenforceable term or provision in any other situation or in any other jurisdiction. If the final judgment of such court or arbitrator declares that any term or provision hereof is invalid, void or unenforceable, the Parties agree to (a) reduce the scope, duration, area or applicability of the term or provision, to delete specific words or phrases, and (b) replace any invalid, void or unenforceable term or provision with a term or provision that is valid and enforceable and that comes closest to expressing the original intention of the invalid or unenforceable term or provision.

9.9 Schedules; Exhibits. The Schedules and the Exhibits referenced in this Agreement are a material part hereof and shall be treated as if fully incorporated into the body of the Agreement.

9.10 No Third Party Beneficiaries. Nothing expressed or referred to in this Agreement will be construed to give any Person other than the Parties (and their successors and permitted assigns), the D&O Indemnified Persons pursuant to Section 5.12(b) and Indemnified Parties that are not Parties pursuant to Article 8 any legal or equitable right, remedy, or claim under or with respect to this Agreement or any provision of this Agreement.

9.11 Expenses. Except as otherwise provided herein, all fees and expenses incurred in connection with this Agreement and the Transactions, including fees and expenses of financial advisors, financial sponsors, legal counsel and other advisors, shall be paid by the Party incurring such expenses whether or not the Transactions are consummated.

9.12 No Strict Construction. The Parties have participated jointly in the negotiation and drafting of this Agreement. In the event an ambiguity or question of intent or interpretation arises, this Agreement shall be construed as if drafted jointly by the Parties, and no presumption or burden of proof shall arise favoring or disfavoring any Party by virtue of the authorship of any of the provisions of this Agreement.

9.13 Injunctive Relief; Specific Performance. The Parties hereby acknowledge that irreparable damage would occur in the event that any of the provisions of this Agreement were not performed in accordance with their specific terms or were otherwise breached and that the non-breaching Parties would not have any adequate remedy at law. Accordingly, each Party shall be entitled to an injunction or injunctions to prevent breaches or threatened breaches of this Agreement and to enforce specifically the terms and provisions of this Agreement, in addition to any and all other rights and remedies at law or in equity, and all such rights and remedies shall be cumulative. Any requirements for the securing or posting of any bond with such remedy are waived.

9.14 Further Assurances. Upon the reasonable request of Acquirer or Seller, each Party will, on and after the Closing Date, execute and deliver, or cause to be executed and delivered, to the other Party such other documents, assignments and other instruments or will take, or cause to be taken, all such further actions as may be reasonably required to effect and evidence the provisions of this Agreement and the Transactions.

9.15 Entire Agreement. This Agreement, together with the Ancillary Agreements, the Confidentiality Agreement and the other documents and instruments specifically referred to herein, all Exhibits and Schedules hereto (which are a material part hereof and shall be treated as if fully incorporated into the body of this Agreement), and the Company Disclosure Schedules and the Acquirer Disclosure Schedules, constitutes the entire agreement among the Parties pertaining to the subject matter hereof and supersedes all prior agreements, understandings, negotiations and discussions, whether oral or written, of the Parties.

9.16 Investigation and Non-Reliance. Each of Seller and the Company Parties, on one hand, and the Acquirer Parties, on the other, is a sophisticated seller or purchaser, as the case may be, and has made its own independent investigation, review and analysis regarding the other Party and the Transactions, which investigation, review and analysis were conducted by such Party together with its advisors, including legal counsel, that it has engaged for such purpose. No Party or any of their respective Affiliates or Representatives has made any representation or warranty, express or implied, as to the accuracy or completeness of any information concerning such Party made available in connection with any investigation of such Party, except as expressly set forth in this Agreement. No Party has relied and no Party is relying on any statement, representation or warranty, oral or written, express or implied, made by the other Party, or any their respective Affiliates or Representatives, except as expressly set forth in Article 3, Article 4 or any Transaction Certificates (or, with respect to Seller and the other Lock-Up Holders, the Shareholder Agreement). No Party or any of their respective Affiliates or Representatives shall have or be subject to any liability to any other Party or any other Person resulting from the distribution to any other Party, or such other Party's use of, any information, documents or materials made available to such Party in the Data Room. No Party or any of their respective Affiliates or Representatives is making, directly or indirectly, any representation or warranty with respect to any estimates, projections or forecasts involving the such Party or any other Person. Each Party acknowledges that there are inherent uncertainties in attempting to make such estimates, projections and forecasts and that it takes full responsibility for making its own evaluation of the adequacy and accuracy of any such estimates, projections or forecasts (including the reasonableness of the assumptions underlying any such estimates, projections and forecasts).

[remainder of page intentionally left blank]

IN WITNESS WHEREOF, the Parties have executed this Agreement or caused this Agreement to be duly executed by their respective officers thereunto duly authorized, all as of the date first above written.

GENEDX, INC.

By: /s/ Katherine Stueland
Name: Katherine Stueland
Title: President and Chief Executive Officer

GENEDX HOLDING 2, INC.

By: /s/ Steven D. Rubin
Name: Steven D. Rubin
Title: President

OPKO HEALTH, INC.

By: /s/ Steven D. Rubin
Name: Steven D. Rubin
Title: Executive Vice President, Administration

IN WITNESS WHEREOF, the Parties have executed this Agreement or caused this Agreement to be duly executed by their respective officers thereunto duly authorized, all as of the date first above written.

SEMA4 HOLDINGS CORP.

By: /s/ Eric Schadt
Name: Eric Schadt
Title: Chief Executive Officer

ORION MERGER SUB I, INC.

By: /s/ Eric Schadt
Name: Eric Schadt
Title: President

ORION MERGER SUB II, INC.

By: /s/ Eric Schadt
Name: Eric Schadt
Title: President

EXHIBIT A
Form of Shareholder Agreement

SHAREHOLDER AGREEMENT

[_____], 2022

Sema4 Holdings Corp.
333 Ludlow Street,
North Tower, 8th floor
Stamford, CT 06902

Ladies and Gentlemen:

This letter agreement (this "***Agreement***") relates to that certain Agreement and Plan of Merger, dated as of January 14, 2022 (as amended, restated, supplemented or modified from time to time, the "***Merger Agreement***"), by and among Sema4 Holdings Corp., a Delaware corporation ("***Acquirer***"), Orion Merger Sub I, Inc., a Delaware corporation, Orion Merger Sub II, LLC ("***Merger Sub I***"), a Delaware limited liability company ("***Merger Sub II***"), GeneDx, Inc, a New Jersey corporation, GeneDx Holding 2, Inc., a Delaware Corporation ("***Holdco2***"), and OPKO Health, Inc., a Delaware Corporation (the "***Seller***"), pursuant to which Merger Sub I will merge with and into Holdco2 (the "***First Merger***"), with Holdco2 surviving such merger, following which Holdco2 will merge with and into Merger Sub II (the "***Second Merger***" and, together with the First Merger, the "***Mergers***"), with Merger Sub II continuing on as the surviving entity (the "***Surviving Entity***") and a wholly owned subsidiary of Acquirer, on the terms and conditions set forth therein. Capitalized terms used and not otherwise defined herein are defined in the Merger Agreement and shall have the respective meanings given to such terms in the Merger Agreement.

1. In order to induce the Acquirer Parties to consummate the transactions contemplated by the Merger Agreement [1][and as a condition to any transaction in which the Seller would distribute or otherwise transfer shares of Acquirer Stock to the undersigned], the undersigned hereby agrees that[, with respect to the portion of the Merger Consideration distributed or otherwise transferred to the undersigned], from the Closing Date until: (a) in the case of the stock portion of the Merger Consideration issued at the Closing, the date that is one (1) year from the Closing Date, (b) if and to the extent earned, in the case of the stock portion of the first Milestone Payment, the date that is one (1) year from the date of issuance for such payment and (c) if and to the extent earned, in the case of the stock portion of the second Milestone Payment, the date that is six (6) months from the date of issuance of such stock (the period between the Closing Date and the date indicated in clause (a) or (b), as applicable, a "***Lock-Up Period***" and the shares to which such respective Lock-Up Period applies, the "***Lock-Up Shares***"), the undersigned will not (i) offer, sell, contract to sell, pledge or otherwise dispose of, directly or indirectly, any Lock-Up Shares, (ii) enter into a transaction which would have the same effect, or (iii) enter into any swap, hedge or other arrangement that transfers, in whole or in part, any of the economic consequences of ownership of such Lock-Up Shares, whether any such aforementioned transaction is to be settled by delivery of such Lock-Up Shares, in cash or otherwise, or publicly disclose the intention to make any such offer, sale, pledge or disposition, or to enter into any such transaction, swap, hedge or other arrangement (collectively, clauses (i) through (iii), the "***Restricted Actions***").

2. Following the termination of any applicable Lock-Up Period (such date, the "***Lock-Up Termination Date***") and for so long as the undersigned is the record or beneficial owner of at least 5% of the issued and outstanding Acquirer Stock, the undersigned hereby agrees that during any consecutive ninety (90) day period following the applicable Lock-Up Termination Date, the undersigned shall not, without the prior written consent of Acquirer (such consent not to be unreasonably, withheld, conditioned or delayed), take any Restricted Action that would result in the sale or other disposition of Lock-Up Shares in an amount that exceeds 25% of the total number of shares of Acquirer Stock [2][received by the undersigned in the Mergers][distributed or otherwise transferred to the undersigned by Seller], except as part of a marketed sale process for which one lead Bookrunner (as defined herein) has been selected by Acquirer in its sole discretion (such discretion to be exercised reasonably). For purposes of this Section 2, a "Bookrunner" shall mean a securities dealer who either (a) purchases the applicable securities as principal in an underwritten, registered

[1] Bracketed language to be included for OPKO stockholders.
[2] Bracketed language for each of OPKO and its stockholders.

direct or other public offering registered under the Securities Act and not solely as part of such dealer's market-making activities or (b) acts as placement agent in a private placement or offering of the applicable securities.

3. For the avoidance of doubt, none of the restrictions set forth in Section 1 or Section 2 of this Agreement shall apply to: (a) any shares of Acquirer Stock purchased by the undersigned in the open market or in any private sale transaction or otherwise or in any public or private capital raising transaction of Acquirer or otherwise, other than the Lock-up Shares; or (b) the inclusion of any Lock-Up Shares (but not the subsequent sale or transfer of such Lock-Up Shares) as part of the Initial Shelf (as defined below) or any other Registration Statement (as defined below) filed pursuant to Section 8(a) of this Agreement. For the avoidance of any doubt, the parties hereto acknowledge and agree that the undersigned shall retain all of its rights as a stockholder of Acquirer during the applicable Lock-up Period, including, without limitation, the right to vote, and to receive any dividends and distributions in respect of, the Lock-Up Shares, subject to the terms of this Agreement.

4. The undersigned hereby authorizes Acquirer during the applicable Lock-Up Period to cause its transfer agent for the Lock-Up Shares to decline to transfer, and to note stop transfer restrictions on the stock register and other records relating to the Lock-Up Shares for which the undersigned is the record holder.

5. Notwithstanding the foregoing, the undersigned may sell or otherwise transfer the Lock-Up Shares during the undersigned's lifetime or on death (or, if the undersigned is not a natural person, during its existence) (a) if the undersigned is not a natural person, to its managers, partners (direct or indirect), members or other direct or indirect equity holders until the Lock-Up Shares come to be held by a natural person or to any of its other Affiliates or any subsidiary, employee, officer, director, investment fund controlling, controlled, managing or managed by or under common control with the undersigned or Affiliates of the undersigned (including, for the avoidance of doubt, where the undersigned is a partnership, to its general partner or a successor partnership or fund, or any other funds managed by such partnership), to the immediate family members (for purposes of this Agreement, "***immediate family***" shall mean any relationship by blood, current or former marriage, domestic partnership or adoption, not more remote than first cousin) of the undersigned, (c) to a partnership, limited liability company or other entity of which the undersigned and the immediate family members of the undersigned are the legal and beneficial owner of all of the outstanding equity securities or similar interests, (d) to a family trust, foundation or partnership established for the direct or indirect benefit of the undersigned, its equity holders or any of their respective immediate family members, or if the undersigned is a trust, to a trustor or beneficiary of the trust or to the estate of a beneficiary of such trust, (e) to a charitable foundation controlled by the undersigned, its Affiliates, partners, members or other direct or indirect equityholders or any of their respective immediate family members, (f) by will or intestacy, (g) by operation of law or pursuant to an order of a court (including a qualified domestic order, divorce settlement, divorce decree or separation agreement) or regulatory agency or (h) pursuant to a bona fide third-party tender offer, merger, consolidation or other similar transaction that is approved by the Acquirer Board and made to all holders of Acquirer's capital stock involving an Acquirer Change in Control; provided that in the event that such tender offer, merger, consolidation or other similar transaction is not completed, the undersigned's Lock-Up Shares shall remain subject to the provisions of this Agreement; provided, however, that in the case of each of clauses (a) through (g), any such sale or transfer shall be conditioned upon entry by such transferees into a written agreement, addressed to Acquirer, agreeing to be bound by these transfer restrictions and the other terms and conditions of this Agreement; and provided, further, for the avoidance of doubt, that nothing contained herein shall limit or restrict the admission of new managers, partners, members or other direct or indirect equityholders in, or the increase or decrease in the ownership interests of any managers, partners, members or other direct or indirect equity holders of, any entity holding any of the Lock-Up Shares.

6. For so long as the undersigned remains the record or beneficial owner of at least five percent (5%) of the outstanding Acquirer Stock, the undersigned agrees to vote all of his, her or its Lock-Up Shares, from time to time and at all times, in whatever manner is recommended by the Acquirer Board.

7. The undersigned agrees that, for a period of twelve (12) months from the Closing Date (the "***Standstill Period***"), neither the undersigned nor any of its Affiliates or subsidiaries will, directly or indirectly, without the prior written consent of the Acquirer Board or Acquirer's chief executive officer:

(a) acquire or agree, offer, seek or propose to acquire, or cause to be acquired, ownership (including any voting right or beneficial ownership as defined in Rule 13d-3 under the Exchange Act) of any voting securities of Acquirer or any of its subsidiaries or any option, forward contract, swap or other position with a value derived from voting securities of Acquirer or any of its subsidiaries or conveying the right to acquire or vote securities of Acquirer or any of its subsidiaries, or any ownership of any of the assets or businesses of Acquirer or any of its subsidiaries, or any rights or options to acquire any such ownership (including from a third party);

(b) make, or in any way participate in, any "solicitation" (as such terms is defined in Rule 14a- 1 under the Exchange Act, including any otherwise exempt solicitation pursuant to Rule 14a-2(b) under the Exchange Act) to vote or seek to advise or influence in any manner whatsoever any Person with respect to the voting of any securities of Acquirer or any of its subsidiaries;

(c) form, join, or in any way participate in a "group" (within the meaning of Section 13(d)(3) of the Exchange Act) with respect to any voting securities of Acquirer or any of its subsidiaries, other than any "group" to which it already belongs as of the date of this Agreement;

(d) arrange, or in any way participate in, any financing for the purchase of any voting securities or securities convertible or exchangeable into or exercisable for any voting securities or assets of Acquirer or any of its subsidiaries;

(e) propose, alone or with others, to Acquirer or any of its stockholders any merger, business combination, tender or exchange offer, restructuring, recapitalization, liquidation of or other transaction with or involving Acquirer or any of its subsidiaries or otherwise act, whether alone or with others, to seek to control, change or influence the management, board of directors or policies of Acquirer, or nominate any person as a director of Acquirer, or propose any matter to be voted upon by the stockholders of Acquirer;

(f) solicit or provide any material non-public information to any Person with respect to a merger, business combination, tender or exchange offer, restructuring, recapitalization, liquidation of or other transaction with or involving Acquirer or any of its subsidiaries or any other acquisition of Acquirer or any of its subsidiaries, any acquisition of voting securities of or all or any portion of the assets of Acquirer or any of its subsidiaries, or any other similar transaction;

(g) advise, assist or knowingly encourage any other Person in connection with any of the foregoing;

(h) enter into any discussions, negotiations, arrangements or understandings with any third party with respect to, any of the foregoing, or announce an intention to do so;

(i) take any action that would reasonably be expected to require Acquirer to make a public announcement regarding any of the types of matters set forth in this Section 7; or

(j) disclose any intention, plan or arrangement inconsistent with the foregoing. Notwithstanding anything to the contrary in this Section 7, nothing shall prevent a private communication to the Acquirer Board or Acquirer's chief executive officer which does not require public disclosure by Acquirer (whether under applicable law or under the rules of its securities exchange, but other than in a proxy statement or Schedule 14d-9 with respect to a Transaction following execution of a definitive agreement between the Parties).

8. Registration Rights.

(a) Acquirer agrees that, as soon as practicable, but in no event later than thirty (30) calendar days after the Closing Date (the "Filing Date"), Acquirer will file with the SEC (at Acquirer's sole cost and expense) a registration statement registering the resale of the Registrable Securities (as defined below) held by the Holders (as defined below) from time to time as permitted by Rule 415 under the Securities Act (or any successor or similar provision adopted by the SEC then in effect) (the "Initial Shelf" and any registration statement that covers the

Registrable Securities pursuant to the provisions of this Agreement, including the prospectus included in such registration statement, amendments (including post-effective amendments) and supplements to such registration statement, and all exhibits to and all material incorporated by reference in such registration statement, a "Registration Statement"), and Acquirer shall use its commercially reasonable efforts to cause the Initial Shelf to be declared effective as soon as practicable after the filing thereof, but no later than the earlier of (i) the 60th calendar day (or 90th calendar day if the SEC notifies Acquirer that it will "review" the Initial Shelf) following the Closing and (ii) the fifth (5th) Business Day after the date Acquirer is notified (orally or in writing, whichever is earlier) by the SEC that the Initial Shelf will not be "reviewed" or will not be subject to further review (such earlier date, the "Effectiveness Date"); provided that if the SEC is closed for operations due to a government shutdown or otherwise, the Effectiveness Date shall be extended by the same amount of days that the SEC remains closed for operations. Without limiting the foregoing, as soon as practicable, but in no event later than three (3) Business Days, following the resolution or clearance of all SEC comments or, if applicable, following notification by the SEC that the Initial Shelf or any amendment thereto will not be subject to review, Acquirer shall file a request for acceleration of effectiveness of such Registration Statement (to the extent required, by declaration or ordering of effectiveness, of such Registration Statement or amendment thereto by the SEC) to a time and date not later than two (2) Business Days after the submission of such request. The Initial Shelf filed with the SEC pursuant shall be on Form S-1 or such other form of registration statement as is then available to effect a registration for resale of the Registrable Securities, provided, that Acquirer shall file, within thirty (30) days of such time as Form S-3 is available for the Initial Shelf, a post- effective amendment to the Initial Shelf then in effect, or otherwise file a Registration Statement on Form S-3, registering the Registrable Securities held by the Holders for resale on Form S-3 (provided that Acquirer shall use commercially reasonable efforts to maintain the effectiveness of the Initial Shelf then in effect until such time as a Registration Statement (or post-effective amendment) on Form S-3 covering such Registrable Securities has been declared effective by the SEC). Notwithstanding anything else in this Agreement, Acquirer's obligations to include the applicable Registrable Securities of a Holder in a Registration Statement are contingent upon such Holder furnishing in writing to Acquirer such information regarding such Holder, the securities of Acquirer held by such Holder, the intended method of disposition of the applicable Registrable Securities and such other information as shall be reasonably requested by Acquirer to effect the registration of the applicable Registrable Securities on or prior to the third (3rd) Business Day prior to the first anticipated filing date of such Registration Statement, provided that the request by Acquirer shall be made not less than ten (10) Business Days prior to the first anticipated filing date of such Registration Statement. The Holders shall execute such documents in connection with such registration as Acquirer may reasonably request that are customary of a selling stockholder in similar situations; provided that under no circumstances shall a Holder be required to sign any type of additional lock-up agreement. Any failure by Acquirer to file the Initial Shelf by the Filing Date or for the Initial Shelf to be declared effective by the Effectiveness Date shall not otherwise relieve Acquirer of its obligations to file or effect the Initial Shelf as set forth above in this Section 8(a). In no event shall a Holder be identified as a statutory underwriter in a Registration Statement unless requested by the SEC; provided that, if the SEC requests that a Holder be identified as a statutory underwriter in a Registration Statement, such Holder will have an option, in its sole and absolute discretion, to withdraw the applicable Registrable Securities from such Registration Statement. Notwithstanding the foregoing, if the SEC prevents Acquirer from including any or all of the shares proposed to be registered under any single Registration Statement filed pursuant to this Section 8(a) due to limitations on the use of Rule 415 of the Securities Act for the resale of the applicable Registrable Securities by the applicable stockholders or otherwise, Acquirer agrees to promptly (i) inform each of the Holders thereof and use its commercially reasonable efforts to file amendments to such Registration Statement as required by the SEC and (ii) as soon as practicable but in no event later than the twentieth (20th) calendar day following the first date on which such Registrable Securities may then be included in a registration statement, file an additional Registration Statement (a "New Registration Statement"), on Form S-3, or if Form S-3 is not then available to Acquirer for such Registration Statement, on such other form available to register for resale the Registrable Securities held by the Holders as a secondary offering; provided, however, that prior to filing such amendment or New Registration Statement, Acquirer shall be obligated to use its commercially reasonable efforts to advocate with the SEC for the registration of all of the Registrable Securities in accordance with any publicly- available written or oral guidance, comments, requirements or requests of the SEC staff (the "SEC Guidance"), including without limitation, the Manual of Publicly Available Telephone Interpretations D.29. The Holders shall have the right to participate or have their respective legal counsel participate in any meetings or discussions with the SEC regarding the SEC's position and to comment or have their respective counsel comment on any written submission made to the SEC with respect thereto. No such written submission shall

be made to the SEC to which any such Holder's counsel reasonably objects. Notwithstanding any other provision of this Agreement, if any SEC Guidance sets forth a limitation of the number of Registrable Securities permitted to be registered on a particular Registration Statement as a secondary offering, unless otherwise directed in writing by a Holder as to its Registrable Securities directing the inclusion of less than such Holder's pro rata amount, the number of Registrable Securities to be registered on such Registration Statement will be reduced on a pro rata basis based on the total number of Registrable Securities held by the Holders. Acquirer will use its commercially reasonable efforts to cause the Initial Shelf to remain effective, and to be supplemented and amended to the extent necessary to ensure that the Initial Shelf is available or, if not available, that another Registration Statement is available at all times, for the public resale of all the Registrable Securities held by the Holders until all such Registrable Securities have ceased to be Registrable Securities. Acquirer will provide all customary and commercially reasonable cooperation necessary to enable the Holders to resell Registrable Securities pursuant to a Registration Statement or Rule 144 under the Securities Act ("Rule 144"), as applicable, qualify the Registrable Securities for listing on the primary stock exchange on which the Acquirer Stock is then listed, update or amend a Registration Statement as necessary to include Registrable Securities and provide customary notice to holders of Registrable Securities. "Holders" shall mean (i) the undersigned, (ii) [Seller][any 5% Insider (as defined below)] [3]that is entering into a separate shareholder agreement with Acquirer on the date hereof with registration rights that are substantially similar to the registration rights set forth in this Section 8 (an "Other Shareholder Agreement") and (iii) any 5% Insider who hereafter becomes a party to this Agreement or such Other Shareholder Agreement pursuant to Section 8(r) hereof or the corresponding section of such Other Shareholder Agreement, as applicable. "Registrable Securities" shall mean, as of any date of determination, (a) the Lock-Up Shares held by the undersigned, (b) the Lock- Up Shares held by any other Holder, and (c) any other equity security of Acquirer issued or issuable with respect to the Lock-Up Shares referred to in clause (a) or (b) by way of share split, dividend, distribution, recapitalization, merger, exchange, replacement or similar event or otherwise. As to any particular Registrable Securities, once issued, such securities shall cease to be Registrable Securities at the earliest of: (A) when a Registration Statement with respect to the sale of such securities shall have become effective under the Securities Act and such securities shall have been sold, transferred, disposed of or exchanged in accordance with such Registration Statement; (B) the date all Registrable Securities held by such Holder may be sold without restriction under Rule 144, including without limitation, any volume and manner of sale restrictions which may be applicable to Affiliates under Rule 144, and without the requirement for Acquirer to be in compliance with the current public information required under Rule 144; (C) such securities have been otherwise transferred, new certificates for such securities not bearing a legend restricting further transfer shall have been delivered by Acquirer and subsequent public distribution of such securities shall not require registration under the Securities Act; or (D) such securities have been sold to, or through, a broker, dealer or underwriter in a public distribution or other public securities transaction.

(b) At any time and from time to time following the effectiveness of the Initial Shelf and following the expiration of any applicable Lock-up Period, any Holder may request to sell all or a portion of its Registrable Securities in a underwritten offering that is registered pursuant to a shelf registration statement under the Securities Act on Form S-3 pursuant to Rule 415, including by way of an underwritten offering, block sale or other distribution plan (a "Shelf Underwritten Offering"); provided that such Holder(s) reasonably expects to sell Registrable Securities yielding aggregate gross proceeds in excess of $50,000,000 from such Shelf Underwritten Offering (such amount of Registrable Securities, the "Minimum Amount"). All requests for a Shelf Underwritten Offering shall be made by giving written notice to Acquirer (the "Shelf Take Down Notice"). Each Shelf Take Down Notice shall specify the approximate number of Registrable Securities proposed to be sold in the Shelf Underwritten Offering and the expected price range (net of underwriting discounts and commissions) of such Shelf Underwritten Offering. Acquirer shall, subject to Section 8(c) (the "MNPI Provisions"), give written notice of such requested Shelf Underwritten Offering to all other Holders of Registrable Securities (the "Company Shelf Takedown Notice") and, subject to the provisions of Section 8(e), shall include in such Shelf Underwritten Offering all Registrable Securities with respect to which Acquirer has received written requests for inclusion therein, within five (5) calendar days after sending the Company Shelf Takedown Notice. Acquirer shall enter into an underwriting agreement in a form as is customary in underwritten offerings of securities by the Company with the managing underwriter or underwriters selected by the Holders holding a majority-in-interest of the Registrable Securities to be included in such Shelf Underwritten Offering after consultation with, and approval (which shall not be unreasonably withheld, conditioned

[3] Bracketed alternative language to be included for either OPKO or OPKO stockholders, as applicable.

or delayed) by, Acquirer and shall take all such other reasonable actions as are requested by the managing underwriter or underwriters in order to expedite or facilitate the disposition of such Registrable Securities; provided, that, notwithstanding the foregoing, the selection of one lead Bookrunner in such Shelf Underwritten Offering shall be in the sole discretion of Acquirer (such discretion to be exercised reasonably) to the extent Section 2 is applicable. In connection with any Shelf Underwritten Offering contemplated by this Section 8(b), subject to Section 8(l) and Section 8(p), the underwriting agreement into which each Holder and Acquirer shall enter shall contain such representations, covenants, indemnities and other rights and obligations of Acquirer and the selling stockholders as are customary in underwritten offerings of securities by Acquirer. The Holders may demand not more than two (2) Shelf Underwritten Offerings pursuant to this Section 8(b) in any 12-month period. At least ten (10) Business Days prior to the first anticipated filing date of a Registration Statement pursuant to Sections 8(a), 8(b), 8(d) and 8(g), Acquirer shall use reasonable efforts to notify each Holder in writing (which may be by email) of the information reasonably necessary about the Holder to include such Holder's Registrable Securities in such Registration Statement.

(c) Notwithstanding anything in this Agreement or any Other Shareholder Agreement to the contrary, Acquirer will not provide any material, nonpublic information to any Holder without the prior written consent of such Holder, and in the event that Acquirer believes that a notice or communication required by this Agreement or any Other Shareholder Agreement to be delivered to any Holder contains material, nonpublic information relating to Acquirer, its securities, any of its Affiliates or any other Person, Acquirer shall so indicate to such Holder prior to delivery of such notice or communication, and such indication shall provide such Holder the means to refuse to receive such notice or communication. No Holder nor any of its Affiliates or representatives shall have any duty of trust or confidence with respect to, or obligation not to trade in any securities while aware of, any material, nonpublic information provided to such Holder, Affiliate or representative in violation of this Section 8(c). Notwithstanding the foregoing, to the extent Acquirer reasonably and in good faith determines that it is necessary to disclose material non- public information to a Holder in order to comply with its obligations hereunder (a "Necessary Disclosure"), Acquirer shall inform counsel to such Holder to the extent such counsel has been identified in writing to Acquirer in advance of such determination without disclosing the applicable material non- public information, and Acquirer and such counsel on behalf of the applicable Holder shall endeavor to agree upon a process for making such Necessary Disclosure to the applicable Holder or its representatives that is mutually acceptable to such Holder and Acquirer (an "Agreed Disclosure Process"). Thereafter, Acquirer shall be permitted to make such Necessary Disclosure (only) in accordance with the Agreed Disclosure Process.

(d) Subject to the provisions of Section 8(f) and Section 8(m) hereof, and provided that Acquirer does not have an effective Registration Statement pursuant to Section 8(a) outstanding covering all of the Registrable Securities held by the Holders, following the expiration of any applicable Lock-up Period, Holders of at least a majority in interest of the then-outstanding number of Registrable Securities held by the Holders (a "Demanding Holder") may make a written demand for registration of all or part of their Registrable Securities, which written demand shall describe the amount and type of securities to be included in such registration and the intended method(s) of distribution thereof (such written demand a "Demand Registration"). Subject to the MNPI Provisions, Acquirer shall, within five (5) calendar days of Acquirer's receipt of the Demand Registration, notify, in writing all other Holders of Registrable Securities of such demand, and each Holder of Registrable Securities who thereafter wishes to include all or a portion of such Holder's Registrable Securities in a registration pursuant to a Demand Registration (each such Holder that includes all or a portion of such Holder's Registrable Securities in such registration, a "Requesting Holder") shall so notify Acquirer, in writing, within five (5) calendar days after the receipt by the Holder of the notice from Acquirer. Upon receipt by Acquirer of any such written notification from a Requesting Holder(s) to Acquirer, subject to Section 8(e) below, such Requesting Holder(s) shall be entitled to have their Registrable Securities included in a Registration Statement pursuant to a Demand Registration and Acquirer shall effect, as soon thereafter as practicable, but not more than sixty (60) calendar days immediately after Acquirer's receipt of the Demand Registration, the registration of all Registrable Securities requested by the Demanding Holders and Requesting Holders pursuant to such Demand Registration. Under no circumstances shall Acquirer be obligated to effect more than an aggregate of three (3) registrations pursuant to a Demand Registration by the Holders under this Section 8(d) with respect to any or all Registrable Securities. Notwithstanding the foregoing, (i) Acquirer shall not be required to give effect to a Demand Registration from a Demanding Holder if Acquirer has registered Registrable Securities pursuant to a Demand Registration (which has become effective) from

such Demanding Holder in the preceding one hundred and twenty (120) days, and (ii) Acquirer's obligations with respect to any Demand Registration shall be deemed satisfied so long as the Registration Statement filed pursuant to Section 8(a) includes all of such Demanding Holder's Registrable Securities and is effective. Subject to the provisions of Sections 8(e) and Section 8(m) hereof, if a majority-in-interest of the Demanding Holders so advise Acquirer as part of their Demand Registration that the offering of the Registrable Securities pursuant to such Demand Registration shall be in the form of an underwritten offering, then the right of such Demanding Holder or Requesting Holder (if any) to include its Registrable Securities in such registration shall be conditioned upon such Holder's participation in such underwritten offering and the inclusion of such Holder's Registrable Securities in such underwritten offering to the extent provided herein. All such Holders proposing to distribute their Registrable Securities through an underwritten offering under this Section 8(d), subject to Section 8(l) and Section 8(p), shall enter into an underwriting agreement in customary form with Acquirer and the underwriter(s) selected for such underwritten offering by a majority- in-interest of the Demanding Holders initiating the Demand Registration after consultation with, and approval by, Acquirer (which shall not be unreasonably withheld, conditioned or delayed); provided, that, notwithstanding the foregoing, the selection of one lead Bookrunner in such underwritten offering shall be in the sole discretion of Acquirer (such discretion to be exercised reasonably) to the extent Section 2 is applicable.

(e) If a Demand Registration is to be an underwritten offering and the managing underwriter or underwriters, in good faith, advises Acquirer, the Demanding Holders and the Requesting Holders (if any) in writing that, in its opinion, the dollar amount or number of Registrable Securities that the Demanding Holders and the Requesting Holders (if any) desire to sell, taken together with all other Acquirer Stock or other equity securities that Acquirer desires to sell for its own account and the Acquirer Stock, if any, as to which a registration has been requested pursuant to separate written contractual piggy-back registration rights held by any other stockholders of Acquirer who desire to sell, exceeds the maximum dollar amount or maximum number of equity securities that can be sold in such underwritten offering without adversely affecting the proposed offering price, the timing, the distribution method, or the probability of success of such offering (such maximum dollar amount or maximum number of such securities, as applicable, the "Maximum Number of Securities"), then Acquirer shall include in such underwritten offering, as follows:

(i) first, the Registrable Securities of the Demanding Holders and the Requesting Holders (if any) (pro rata based on the respective number of Registrable Securities held by each Demanding Holder and Requesting Holder (if any) and the aggregate number of Registrable Securities held by the Demanding Holders and Requesting Holders) that can be sold without exceeding the Maximum Number of Securities;

(ii) second, to the extent that the Maximum Number of Securities has not been reached under the foregoing clause (i), the Acquirer Stock of holders exercising their piggy-back registration rights pursuant to Section 2.3 of that certain Amended and Restated Registration Rights Agreement, dated as of July 22, 2021, by and among Acquirer and the other parties thereto (the "***July 2021 Registration Rights Agreement***"), which can be sold without exceeding the Maximum Number of Securities;

(iii) third, to the extent that the Maximum Number of Securities has not been reached under the foregoing clauses (i) and (ii), the Acquirer Stock or other equity securities that Acquirer desires to sell for its own account, which can be sold without exceeding the Maximum Number of Securities;

(iv) fourth, to the extent that the Maximum Number of Securities has not been reached under the foregoing clauses (i), (ii) and (iii), the Registrable Securities of Holders (pro rata, based on the respective number of Registrable Securities held by each Holder) exercising their rights to register their Registrable Securities pursuant to Section 8(g) hereof, without exceeding the Maximum Number of Securities; and

(v) fifth, to the extent that the Maximum Number of Securities has not been reached under the foregoing clauses (i), (ii), (iii) and (iv), the Acquirer Stock or other equity securities of other Persons or entities that Acquirer is obligated to register in a registration pursuant to separate written contractual arrangements with such Persons and that can be sold without exceeding the Maximum Number of Securities.

(f) A Demanding Holder or a Requesting Holder shall have the right to withdraw all or a portion of its Registrable Securities included in a Demand Registration pursuant to Section 8(d) or a Shelf Underwritten Offering pursuant to Section 8(b) for any or no reason whatsoever upon written notification to Acquirer and the underwriter or underwriters (if any) of its intention to so withdraw (a) in the case of a Demand Registration not involving an underwritten offering, one (1) Business Day prior to the effectiveness of the applicable Registration Statement or (b) in the case of any Demand Registration involving an underwritten offering or any Shelf Underwritten Offering, prior to the pricing of such underwritten offering or Shelf Underwritten Offering; provided, however, that upon withdrawal by a majority-in-interest of the Demanding Holders initiating a Demand Registration (or in the case of a Shelf Underwritten Offering, withdrawal of an amount of Registrable Securities included by the Holders in such Shelf Underwritten Offering, in their capacity as Demanding Holders, being less than the Minimum Amount), Acquirer shall cease all efforts to secure effectiveness of the applicable Registration Statement or complete the underwritten offering, as applicable. For the avoidance of doubt, any Demand Registration withdrawn pursuant to this Section 8(f) shall be counted toward the aggregate number of Demand Registrations Acquirer is obligated to effect pursuant to Section 8(d) unless (A) (1) the Demanding Holders reimburse Acquirer for all of its out-of-pocket costs and expenses incurred in connection with any such withdrawn Demand Registration incurred through the date of such withdrawal and (2) such revocation or withdrawal shall have been made prior to the commencement of any marketing efforts or "road shows" by Acquirer or the underwriters in connection with such Demand Registration, or (B) such withdrawal or revocation occurs following the issuance by Acquirer of a Suspension Notice (as defined below). Notwithstanding anything to the contrary in this Agreement or any Other Shareholder Agreement, Acquirer shall be responsible for the Registration Expenses (as defined below) incurred by it in connection with a registration pursuant to a Demand Registration or a Shelf Underwritten Offering prior to its withdrawal under this Section 8(f).

(g) If Acquirer proposes to file a registration statement under the Securities Act with respect to an offering of equity securities, or securities or other obligations exercisable or exchangeable for, or convertible into equity securities, for its own account or for the account of stockholders of Acquirer (or by Acquirer and by the stockholders of Acquirer including, without limitation, pursuant to Section 8(d) hereof), other than a registration statement (a) filed in connection with any employee stock option or other benefit plan, (b) for an exchange offer or offering of securities solely to Acquirer's existing stockholders, (c) for an offering solely of debt that is convertible into equity securities of Acquirer, (d) for a dividend reinvestment plan, (e) for any issuances of securities in connection with a transaction involving a merger, consolidation, sale, exchange, issuance, transfer, reorganization or other extraordinary transaction between Acquirer or any of its Affiliates and any third party, or (f) filed pursuant to Section 8(a), then, subject to the MNPI Provisions, Acquirer shall give written notice of such proposed filing to all of the Holders of Registrable Securities as soon as practicable but not less than twenty (20) calendar days before the anticipated filing date of such registration statement, which notice shall (i) describe the amount and type of securities to be included in such offering, the intended method(s) of distribution (including whether such registration will be pursuant to a shelf registration statement), and the proposed price and name of the proposed managing underwriter or underwriters, if any, in such offering, (ii) describe such Holders' rights under this Section 8(g), and (iii) offer to all of the Holders of Registrable Securities the opportunity to register the sale of such number of Registrable Securities as such Holders may request in writing within five (5) calendar days after receipt of such written notice (such registration, a "Piggyback Registration"). Acquirer shall, in good faith, cause such Registrable Securities identified in a Holder's response noticed described in the foregoing sentence to be included in such Piggyback Registration and shall use its commercially reasonable efforts to cause the managing underwriter or underwriters of a proposed underwritten offering, if any, to permit the Registrable Securities requested by the Holders pursuant to this Section 8(g) to be included in a Piggyback Registration on the same terms and conditions as any similar securities of Acquirer or the Acquirer stockholder(s) for whose account the registration statement is to be filed included in such registration and to permit the sale or other disposition of such Registrable Securities in accordance with the intended method(s) of distribution thereof. All such Holders proposing to distribute their Registrable Securities through an underwritten offering under this Section 8(g), subject to Section 8(l) and Section 8(p), shall enter into an underwriting agreement in customary form with the underwriter(s) selected for such underwritten offering by Acquirer. For purposes of clarity, any registration effected pursuant to Section 8(g) hereof shall not be counted as a registration pursuant to a Demand Registration effected under Section 8(d) hereof or a Shelf Underwritten Offering effected under Section 8(b). Any Holder of Registrable Securities shall have the right to withdraw all or any portion of its Registrable Securities in a Piggyback Registration for any or no reason whatsoever upon written notification to Acquirer and the underwriter or underwriters (if any) of his, her or its intention to

withdraw such Registrable Securities from such Piggyback Registration (a) in the case of a Piggyback Registration not involving an underwritten offering or Shelf Underwritten Offering, one (1) Business Day prior to the effectiveness of the applicable Registration Statement or (b) in the case of any Piggyback Registration involving an underwritten offering or any Shelf Underwritten Offering, two (2) Business Days prior to the pricing of such underwritten offering or Shelf Underwritten Offering. Acquirer (whether on its own good-faith determination or as the result of a request for withdrawal by Persons pursuant to separate written contractual obligations) may withdraw a Registration Statement filed with the SEC in connection with a Piggyback Registration at any time prior to the effectiveness of such Registration Statement.

(h) If the managing underwriter or underwriters in an underwritten registration that is to be a Piggyback Registration, in good faith, advises Acquirer and the Holders of Registrable Securities participating in the Piggyback Registration in writing that, in its opinion, the dollar amount or number of the Acquirer Stock that Acquirer desires to sell, taken together with (a) the Acquirer Stock, if any, as to which registration has been demanded pursuant to separate written contractual arrangements with Persons or entities other than the Holders of Registrable Securities hereunder, (b) the Registrable Securities as to which registration has been requested pursuant to Section 8(g) hereof, and (c) the Acquirer Stock, if any, as to which registration has been requested pursuant to separate written contractual piggy-back registration rights of other stockholders of Acquirer, exceeds the Maximum Number of Securities, then:

(i) if the registration is undertaken for Acquirer's account, Acquirer shall include in any such registration (a) first, the Acquirer Stock or other equity securities that Acquirer desires to sell, which can be sold without exceeding the Maximum Number of Securities; (b) second, to the extent that the Maximum Number of Securities has not been reached under the foregoing clause (a), the Acquirer Stock of holders exercising their piggy-back registration rights pursuant to Section 2.3 of the July 2021 Registration Rights Agreement, which can be sold without exceeding the Maximum Number of Securities; (c) third, to the extent that the Maximum Number of Securities has not been reached under the foregoing clauses (a) and (b), the Registrable Securities of Holders exercising their rights to register their Registrable Securities pursuant to Section 8(g) hereof (pro rata, based on the respective number of Registrable Securities held by each Holder), which can be sold without exceeding the Maximum Number of Securities and (d) fourth, to the extent that the Maximum Number of Securities has not been reached under the foregoing clauses (a),(b) and (c), the Acquirer Stock, if any, as to which registration has been requested pursuant to any other written contractual piggy-back registration rights of other stockholders of Acquirer, which can be sold without exceeding the Maximum Number of Securities; and

(ii) if the registration is pursuant to a request by Persons or entities other than the Holders of Registrable Securities, then Acquirer shall include in any such registration (a) first, the Acquirer Stock or other equity securities, if any, of such requesting Persons or entities, other than the Holders of Registrable Securities, which can be sold without exceeding the Maximum Number of Securities; (b) second, to the extent that the Maximum Number of Securities has not been reached under the foregoing clause (a), the Acquirer Stock of holders exercising their piggy-back registration rights pursuant to Section 2.3 of the July 2021 Registration Rights Agreement, which can be sold without exceeding the Maximum Number of Securities; (c) third, to the extent that the Maximum Number of Securities has not been reached under the foregoing clauses (a) and (b), the Acquirer Stock or other equity securities that Acquirer desires to sell for its own account, which can be sold without exceeding the Maximum Number of Securities; (d) fourth, to the extent that the Maximum Number of Securities has not been reached under the foregoing clauses (a), (b) and (c), the Registrable Securities of Holders exercising their rights to register their Registrable Securities pursuant to Section 8(g) hereof (pro rata, based on the respective number of Registrable Securities held by each Holder), which can be sold without exceeding the Maximum Number of Securities; and (e) fifth, to the extent that the Maximum Number of Securities has not been reached under the foregoing clauses (a), (b), (c) and (d), the Acquirer Stock or other equity securities for the account of other Persons or entities that Acquirer is obligated to register pursuant to other separate written contractual arrangements with such Persons or entities, which can be sold without exceeding the Maximum Number of Securities.

(i) Notwithstanding any other provision of this Agreement, but subject to the restrictions set forth in Section 1 or Section 2 of this Agreement and subject to Section 8(m), if a Demanding Holder desires to effect an offering or sale of Registrable Securities by any Holder on a block trade or underwritten basis (whether firm commitment or otherwise) effected pursuant to a Registration Statement without substantial marketing efforts prior to pricing, including, without limitation, a same day trade, overnight trade or similar transaction (a "Block Trade") (x) with a total offering price reasonably expected to exceed the Minimum Amount or (y) including all remaining Registrable Securities held by the Demanding Holder, then notwithstanding the time periods provided for in Section 8(b), such Demanding Holder shall notify Acquirer of the Block Trade at least five (5) Business Days prior to the day such offering is to commence and Acquirer shall as expeditiously as possible use its commercially reasonable efforts to facilitate such Block Trade; provided that the Demanding Holders wishing to engage in the Block Trade shall use commercially reasonable efforts to work with Acquirer and any underwriters or placement agents or sales agents prior to making such request in order to facilitate preparation of the registration statement, prospectus and other offering documentation related to the Block Trade. Prior to the filing of the applicable "red herring" prospectus or prospectus supplement used in connection with a Block Trade, any Demanding Holders shall have the right to submit a withdrawal notice to Acquirer and the underwriter or underwriters or placement agents or sales agents (if any) of their intention to withdraw from such Block Trade.

(j) In the case of the registration, qualification, exemption or compliance effected by Acquirer pursuant to this Agreement, Acquirer shall, upon reasonable request, inform the Holders as to the status of such registration, qualification, exemption and compliance. At its expense Acquirer shall:

(i) except for such times as Acquirer is permitted hereunder to suspend the use of the prospectus forming part of a Registration Statement or as otherwise provided in this Section 8, use its commercially reasonable efforts to keep such registration, and any qualification, exemption or compliance under state securities laws which Acquirer determines to obtain, continuously effective with respect to the Holders, and to keep the applicable Registration Statement or any subsequent shelf registration statement free of any material misstatements or omissions, until all Registrable Securities covered by such Registration Statement have been sold;

(ii) prepare and file with the SEC such amendments and post-effective amendments to the Registration Statement, and such supplements to the Prospectus, as may be reasonably requested by a majority in interest of the applicable Holders of Registrable Securities registered on such Registration Statement or any underwriter of Registrable Securities or as may be required by the rules, regulations or instructions applicable to the registration form used by the SEC or by the Securities Act or rules and regulations thereunder to keep the Registration Statement effective until all Registrable Securities covered by such Registration Statement are sold in accordance with the intended plan of distribution set forth in such Registration Statement or supplement to the prospectus;

(iii) advise the Holders, as promptly as practicable but in any event, within two Business Days:

(1) when a Registration Statement or any amendment thereto has been filed with the SEC and when such Registration Statement or any post-effective amendment thereto has become effective;

(2) of the issuance by the SEC of any stop order suspending the effectiveness of any Registration Statement or the initiation of any proceedings for such purpose;

(3) of the receipt by Acquirer of any notification with respect to the suspension of the qualification of the Registrable Securities included therein for sale in any jurisdiction or the initiation or threatening of any proceeding for such purpose; and

(4) subject to the provisions in this Agreement, of the occurrence of any event that requires the making of any changes in any Registration Statement or prospectus included therein so that, as of such date, the statements therein are not misleading and do not omit to state a material fact required to be stated therein or necessary to make the statements therein (and in the case of a prospectus, in the light of the circumstances under which they were made) not misleading;

(iv) use its commercially reasonable efforts to obtain the withdrawal of any order suspending the effectiveness of any Registration Statement as soon as reasonably practicable;

(v) upon the occurrence of any event contemplated in Section 8(j)(ii)(4), except for such times as Acquirer is permitted hereunder to suspend, and has suspended, the use of a prospectus forming part of a Registration Statement, Acquirer shall use its commercially reasonable efforts to as soon as reasonably practicable prepare a post-effective amendment to such Registration Statement or a supplement to the related prospectus, or file any other required document so that, as thereafter delivered to purchasers of the Registrable Securities included therein, such prospectus will not include any untrue statement of a material fact or omit to state any material fact necessary to make the statements therein, in the light of the circumstances under which they were made, not misleading;

(vi) use its commercially reasonable efforts to (1) register or qualify the Registrable Securities covered by any Registration Statement under such securities or "blue sky" laws of such jurisdictions in the United States as the Holders of Registrable Securities included in such Registration Statement (in light of their intended plan of distribution) may request and to keep such registration or qualification in effect for so long as such Registration Statement remains in effect and (2) take such action necessary to cause such Registrable Securities covered by a Registration Statement to be registered with or approved by such other governmental authorities or securities exchanges, including the applicable Nasdaq Stock Market or such other primary securities exchange or market, if any, on which the Acquirer Stock has been listed no later than the effective date of the applicable Registration Statement on which such Registrable Securities are registered;

(vii)use its commercially reasonable efforts to take all other steps reasonably necessary to effect the registration of the Lock-Up Shares contemplated hereby and, for so long as the undersigned holds Lock-Up Shares, to enable the undersigned to sell the Lock-Up Shares under Rule 144;

(viii) provide a transfer agent and registrar for all such Registrable Securities no later than the effective date of any Registration Statement;

(ix) at least five (5) Business Days (or, in the case of a Block Trade, at least one (1) calendar day) prior to the filing of any Registration Statement or prospectus or any amendment or supplement to such Registration Statement or prospectus, furnish a copy thereof to each seller of such Registrable Securities or its counsel, including, without limitation, providing, upon request of a Holder, copies promptly upon receipt of any comment letters received with respect to any such Registration Statement or prospectus;

(x) permit a representative of a majority-in-interest of the Holders, the underwriters, if any, and any attorney or accountant retained by such Holders or underwriter to participate, at each such Person's own expense, in the preparation of any Registration Statement and cause Acquirer's officers, directors and employees to supply all information reasonably requested by any such representative, underwriter, attorney or accountant in connection with the registration; provided, however, that, if requested by Acquirer, such representatives or underwriters shall be required to enter into a confidentiality agreement, in form and substance reasonably satisfactory to Acquirer, prior to the release or disclosure of any such information;

(xi) obtain a "cold comfort" letter (including a bring-down letter dated as of the date the Registrable Securities are delivered for sale pursuant to such registration) from Acquirer's independent registered public accountants in the event of an underwritten offering that the participating Holders may rely on, in customary form and covering such matters of the type customarily covered by "comfort" letters as the managing underwriter may reasonably request, and reasonably satisfactory to a majority-in-interest of the participating Holders and any underwriter;

(xii)on the date the Registrable Securities are delivered for sale pursuant to a registration, obtain an opinion and negative assurance letter, dated such date, of counsel representing Acquirer for the purposes of such registration, addressed to the Holders, the placement agent or sales agent, if any, and the underwriters, if any, covering such legal matters with respect to the registration in respect of which such opinion is being given as the Holders, placement agent, sales agent, or underwriter may reasonably request and as are

customarily included in such opinions and negative assurance letters, and reasonably satisfactory to a majority in interest of the participating Holders and any underwriter;

(xiii) in the event of any underwritten offering, enter into and perform its obligations under an underwriting agreement, in usual and customary form, with the managing underwriter of such offering;

(xiv) otherwise use its commercially reasonable efforts to comply with all applicable rules and regulations of the SEC, and to make available to its security holders, as soon as reasonably practicable, an earnings statement covering the period of at least twelve (12) months, beginning with the first day of Acquirer's first full calendar quarter after the effective date of the Registration Statement which satisfies the provisions of Section 11(a) of the Securities Act and the rules and regulations thereunder, including Rule 158 thereunder (or any successor rule promulgated thereafter by the SEC);

(xv) if the registration involves the registration of Registrable Securities involving gross proceeds in excess of $50,000,000, use its reasonable efforts to make available senior executives of Acquirer to participate in customary "road show" presentations that may be reasonably requested by a majority-in-interest of the participating Holders or the underwriter in any underwritten offering;

(xvi) cooperate with each Holder that holds Registrable Securities being offered and the underwriter in any underwritten offering with respect to an applicable Registration Statement, if any, to facilitate the timely (i) preparation and delivery of certificates (not bearing any restrictive legends) representing Registrable Securities that have been offered and sold pursuant to such Registration Statement, and enable such certificates to be registered in such names and in such denominations or amounts, as the case may be, or (ii) crediting of the Registrable Securities that have been offered and sold pursuant to a Registration Statement to the applicable account (or accounts) with The Depository Trust Company ("DTC") through its Deposit/Withdrawal At Custodian ("DWAC") system, in any such case as such Holder or underwriter, if any, may reasonably request;

(xvii) for so long as this Agreement remains effective, use reasonable best effects to (a) cause the Acquirer Stock to be eligible for clearing through DTC, through its DWAC system; (b) be eligible and participating in the Direct Registration System (DRS) of DTC with respect to the Acquirer Stock; and (c) ensure that the transfer agent for the Acquirer Stock is a participant in, and that the Acquirer Stock is eligible for transfer pursuant to, DTC's Fast Automated Securities Transfer Program (or successor thereto);

(xviii) use its commercially reasonable efforts to make and keep public information available, as those terms are understood and defined in Rule 144, and, without limiting the foregoing, as long as any Holder shall own Registrable Securities (without taking into account the exclusion of the definition of such term contained in clause (iv) thereof), Acquirer, at all times while it shall be a reporting company under the Exchange Act, covenants to file timely all reports required to be filed by Acquirer after the Closing Date pursuant to Sections 13 or 15(d) of the Exchange Act and to promptly furnish the Holders with true and complete copies of all such filings upon request; and

(xix) otherwise, in good faith, cooperate reasonably with, and take such customary actions as may reasonably be requested by the Holders in connection with a registration.

(k) Except as otherwise provided herein, the Registration Expenses (as defined below) of all registrations pursuant to this Agreement shall be borne by Acquirer. It is acknowledged by the Holders that the Holders shall bear all incremental selling expenses relating to the sale of Registrable Securities, such as underwriters' commissions and discounts, brokerage fees and, other than as set forth in the definition of "Registration Expenses," all reasonable fees and expenses of any legal counsel representing the Holders except as otherwise provided herein. "Registration Expenses" shall mean the out-of-pocket expenses of a registration, including, without limitation, the following: (a) all registration, qualification and filing fees (including fees with respect to filings required to be made with the Financial Industry Regulatory Authority, Inc.) and any securities exchange on which the Acquirer Stock is then listed; (b) fees and expenses of compliance with securities or blue sky laws (including reasonable fees and disbursements of counsel for the underwriters in connection with blue sky qualifications of Registrable Securities); (c) printing, messenger, telephone and delivery expenses; (d) reasonable

fees and disbursements of counsel for Acquirer; (e) reasonable fees and disbursements of all independent registered public accountants of Acquirer incurred specifically in connection with such registration; and (f) reasonable fees and expenses of one (1) legal counsel selected by the Demanding Holders, not to exceed $75,000.

(l) No Person may participate in any underwritten offering for equity securities of Acquirer pursuant to a registration initiated by Acquirer hereunder unless such Person (a) agrees to sell such Person's securities on the basis provided in any underwriting arrangements approved by Acquirer and (b) completes and executes all customary questionnaires, powers of attorney, indemnities, lock-up agreements, underwriting agreements and other customary documents as may be reasonably required under the terms of such underwriting arrangements. In connection with any underwritten offering of equity securities of Acquirer (other than a Block Trade), each Holder participating in the underwritten offering pursuant to the terms of this Agreement agrees that it shall not transfer any shares of Acquirer Stock or other equity securities of Acquirer (other than those included in such offering pursuant to this Agreement), without the prior written consent of Acquirer, during the 90-day period beginning on the date of pricing of such offering or such shorter period during which Acquirer agrees not to conduct an underwritten primary offering of Acquirer Stock, except in the event the underwriters managing the offering otherwise agree by written consent. Each Holder participating in the underwritten offering agrees to execute a customary lock-up agreement in favor of the underwriters to such effect (in each case on substantially the same terms and conditions as all such Holders). The immediately foregoing shall in no way limit the restrictions of undersigned's Lock-Up Shares pursuant to the applicable Lock-Up Period.

(m) If (a) during the period starting with the date sixty (60) days prior to Acquirer's good-faith estimate of the date of the filing of, and ending on a date one hundred and twenty (120) days after the effective date of, a Registration Statement in respect of an Acquirer initiated underwritten registration of its securities Acquirer receives a Demand Registration, and provided that Acquirer has delivered written notice to the Holders prior to receipt of a Demand Registration pursuant to Section 8(d) and it continues to actively employ, in good faith, all reasonable efforts to cause the applicable Acquirer-initiated registration statement to become effective, (b) the Holders have requested an underwritten registration and Acquirer and the Holders are unable to obtain the commitment of the underwriters to firmly underwrite the offer, or (c) in the good faith judgment of the Acquirer Board such registration would be seriously detrimental to Acquirer and the Acquirer Board concludes as a result that it is essential to defer the filing of such Registration Statement at such time, then in each case, Acquirer shall furnish to such Holders a certificate signed by the Chairman of the Acquirer Board stating that in the good-faith judgment of the Acquirer Board it would be seriously detrimental to Acquirer for a Registration Statement with respect to such Demand Registration to be filed in the near future and that it is therefore essential to defer the filing of such Registration Statement, Acquirer shall have the right to defer such filing for a period of not more than sixty (60) calendar days. For the avoidance of doubt, the foregoing ability to defer the filing of a Registration Statement shall not apply to Acquirer's obligation to file the Initial Shelf pursuant to Section 8(a). Notwithstanding anything to the contrary in this Agreement, Acquirer may, subject to the MNPI Provisions and upon prompt written notice (a "Suspension Notice") of such action to the Holders no later than three (3) Business Days from the date of such Suspension Event (as defined below), delay the filing or postpone the effectiveness of the Registration Statement, and from time to time to require the Holders not to sell under the Registration Statement or to suspend the effectiveness thereof, if (i) such filing, effectiveness or sales would require the inclusion in such Registration Statement of financial statements that are unavailable to Acquirer for reasons beyond Acquirer's control or (ii) the negotiation or consummation of a transaction by Acquirer or its subsidiaries is pending or an event has occurred, which negotiation, consummation or event, the Acquirer Board reasonably believes would require additional disclosure by Acquirer in the Registration Statement of material information that Acquirer has a bona fide business purpose for keeping confidential and the non-disclosure of which in the Registration Statement would be expected, in the reasonable determination of the Acquirer Board would be expected to cause the Registration Statement to fail to comply with applicable disclosure requirements (each such circumstance, a "Suspension Event"); provided that Acquirer may not delay or suspend the Registration Statement on more than forty-five (45) consecutive calendar days, determined in good faith by the Acquirer Board to be necessary for such purpose; provided further that Acquirer shall not defer its obligations pursuant to this Section 8(m) more than twice during any twelve (12)-month period; provided further, that in no event shall Acquirer be entitled to delay or defer the filing or effectiveness of the Initial Shelf pursuant to this Section 8(m). Upon receipt of any Suspension Notice during the period that any Registration Statement is effective or if as a result of a Suspension Event any Registration Statement or related

prospectus contains any untrue statement of a material fact or omits to state any material fact required to be stated therein or necessary to make the statements therein, in light of the circumstances under which they were made (in the case of the prospectus) not misleading, the undersigned and each other Holder agrees that (i) it will immediately discontinue offers and sales of the Registrable Securities under such Registration Statement (excluding, for the avoidance of doubt, sales conducted pursuant to Rule 144) until such Holder receives copies of a supplemental or amended prospectus (which Acquirer agrees to promptly prepare) that corrects the misstatement(s) or omission(s) referred to above and receives notice that any post-effective amendment has become effective or unless otherwise notified by Acquirer that it may resume such offers and sales, provided, for the avoidance of doubt, that the foregoing shall not restrict or otherwise affect the consummation of any sale pursuant to a contract entered into, or order placed, by any Holder prior to delivery of the Suspension Notice and (ii) it will maintain the confidentiality of any information included in such Suspension Notice unless otherwise required by law or subpoena. If so directed by Acquirer, each Holder will deliver to Acquirer or, in such Holder's sole discretion destroy, all copies of the prospectus covering the Registrable Securities in such Holder's possession; provided that this obligation to deliver or destroy all copies of the prospectus covering the Registrable Securities shall not apply (A) to the extent such Holder is required to retain a copy of such prospectus (1) in order to comply with applicable legal, regulatory, self-regulatory or professional requirements or (2) in accordance with a bona fide pre-existing document retention policy or (B) to copies stored electronically on archival servers as a result of automatic data back-up. Acquirer shall immediately notify the Holders of the expiration of any period during which it exercised its rights under this Section 8(m).

(n) A Holder may deliver written notice (an "Opt-Out Notice") to Acquirer requesting that such Holder not receive notices from Acquirer otherwise required by this Section 8; provided that Holder may later revoke any such Opt-Out Notice in writing. Following receipt of an Opt-Out Notice from a Holder (unless subsequently revoked), (i) Acquirer shall not deliver any such notices to such Holder and such Holder shall no longer be entitled to the rights associated with any such notice and (ii) each time prior to such Holder's intended use of an effective Registration Statement, such Holder will notify Acquirer in writing at least two (2) Business Days in advance of such intended use, and if a notice of a Suspension Event was previously delivered (or would have been delivered but for the provisions of this Section 8(n)) and the related suspension period remains in effect, Acquirer will so notify such Holder, within one (1) Business Day of such Holder's notification to Acquirer, by delivering to such Holder a copy of such Suspension Notice, and thereafter will provide such Holder with the related notice of the conclusion of such Suspension Event promptly following its availability.

(o) Other than with respect to any contractual restriction applicable to any Holder pursuant to this Agreement or any Other Shareholder Agreement, the stock certificates evidencing the Registrable Securities (and/or book entries representing the Registrable Securities) held by each Holder shall not contain or be subject to any legend restricting the transfer thereof (and the Registrable Securities shall not be subject to any stop transfer or similar instructions or notations): (A) while a Registration Statement covering the sale or resale of such securities is effective under the Securities Act, if such Holder provides paperwork to the effect that it has sold such securities and will distribute or transfer such securities pursuant to such Registration Statement and the plan of distribution set forth therein or Rule 144, or (B) if such Holder provides customary paperwork to the effect that it has sold such shares pursuant to Rule 144, or (C) if such Registrable Securities are eligible for sale under Rule 144 (including Rule 144(i)) as set forth in customary non-affiliate paperwork provided by such Holder and such non-affiliate Holder agrees to sell or transfer such Registrable Securities pursuant to Rule 144 or pursuant to a Registration Statement and the plan of distribution set forth therein or (D) if such legend is not required under applicable requirements of the Securities Act (including judicial interpretations and pronouncements issued by the staff of the SEC) as determined in good faith by counsel to Acquirer or set forth in a legal opinion delivered by nationally recognized counsel to the Holder (collectively, the "Unrestricted Conditions"). Acquirer agrees that at such time as any of the Unrestricted Conditions is met or such legend is otherwise no longer required it will, no later than two (2) Business Days following the delivery by a Holder to Acquirer or Acquirer's transfer agent of a certificate representing any Registrable Securities, issued with a restrictive legend, (or, in the case of Registrable Securities represented by book entries, delivery by a Holder to Acquirer or Acquirer's transfer agent of a legend removal request) deliver or cause to be delivered to such Holder a certificate or, at the request of such Holder, deliver or cause to be delivered such Registrable Securities to such Holder by crediting the account of such Holder's prime broker with DTC through its DWAC system, in each case, free from all restrictive and other legends and stop transfer or similar instructions or

notations. If any of the Unrestricted Conditions is met at the time of issuance of any Registrable Securities, then such securities shall be issued free of all legends.

(p) Indemnification.

(i) Acquirer shall, notwithstanding the termination of this Agreement, indemnify and hold harmless, to the extent permitted by law, each Holder and its respective directors, officers, employees, agents, trustees, partners, members, managers, stockholders, investment advisors and sub-advisors, each Person who controls such Holder (within the meaning of the Securities Act or the Exchange Act) and each Affiliate of such Holder from and against any and all losses, claims, damages, liabilities, costs and expenses (including, without limitation, any reasonable attorneys' fees and expenses incurred in connection with defending or investigating any such action or claim) (collectively, "Losses") that arise out of or are caused by any untrue or alleged untrue statement of material fact contained in any Registration Statement (or incorporated by reference therein), prospectus included in any Registration Statement ("Prospectus") or preliminary Prospectus or any amendment thereof or supplement thereto or document incorporated by reference therein or any omission or alleged omission of a material fact required to be stated therein or necessary to make the statements therein, in light of the circumstances under which they were made, not misleading, except insofar as the same are caused by or contained in any information furnished in writing to Acquirer by or on behalf of such Holder expressly for use therein. Acquirer shall notify each Holder promptly of the institution, threat or assertion (to Acquirer's knowledge) of any proceeding arising from or in connection with a Registration Statement on which such Holder's Registrable Securities are registered; provided that the indemnification contained in this Section 8(p) shall not apply to amounts paid in settlement of any Losses if such settlement is effected without the consent of Acquirer (which consent shall not be unreasonably withheld, conditioned or delayed), nor shall Acquirer be liable for any Losses to the extent they arise out of or are based upon a violation which occurs in connection with any offers or sales effected by or on behalf of such Holder in violation of this Agreement.

(ii) In connection with any Registration Statement in which any Holder is participating, such Holder shall furnish to Acquirer in writing such information as Acquirer reasonably requests for use in connection with any such Registration Statement or Prospectus. In connection with any Registration Statement in which any Holder is participating, such Holder agrees to indemnify and hold harmless, to the extent permitted by law, Acquirer, its directors and officers and agents and employees and each Person or entity who controls Acquirer (within the meaning of Section 15 of the Securities Act) against any Losses, resulting from or arising out of any untrue or alleged untrue statement of material fact contained in the Registration Statement, Prospectus or preliminary Prospectus or any amendment thereof or supplement thereto or any omission or alleged omission of a material fact required to be stated therein or necessary to make the statements therein in light of the circumstances under which they were made, not misleading, but only to the extent that such untrue statement or omission is contained (or not contained in the case of an omission) in and are based on any information or affidavit so furnished in writing by or on behalf of such Holder expressly for use therein; provided that in no event shall the aggregate liability of a Holder (including, for the avoidance of doubt, under Section 8(p)(v)) be greater in amount than the dollar amount of the net proceeds received by such Holder from the sale of its Registrable Securities pursuant to such Registration Statement giving rise to such indemnification obligation.

(iii) Any Person entitled to indemnification herein shall (A) give prompt written notice to the indemnifying party of any claim with respect to which it seeks indemnification (provided that the failure to give prompt notice shall not impair any Person's right to indemnification hereunder to the extent such failure has not materially prejudiced the indemnifying party in defending such claim) and (B) unless in such indemnified party's reasonable judgment a conflict of interest between such indemnified and indemnifying parties may exist with respect to such claim. permit such indemnifying party to assume the defense of such claim with counsel reasonably satisfactory to the indemnified party. If such defense is assumed, the indemnifying party shall not be subject to any liability for any settlement made by the indemnified party without its consent (which consent shall not be unreasonably withheld, conditioned or delayed). An indemnifying party who is not entitled to, or elects not to, assume the defense of a claim shall not be obligated to pay the fees and expenses of more than one counsel (plus local counsel) for all parties indemnified by such indemnifying party with respect to such claim, unless in the reasonable judgment of legal counsel to any indemnified party a conflict of interest may exist between such indemnified party and any other of such indemnified parties with respect to such claim. No indemnifying party shall,

without the consent of the indemnified party, consent to the entry of any judgment or enter into any settlement which cannot be settled in all respects by the payment of money (and such money is so paid by the indemnifying party pursuant to the terms of such settlement) or which settlement does not include as an unconditional term thereof the giving by the claimant or plaintiff to such indemnified party of a release from all liability in respect to such claim or litigation or includes any admission as to fault or culpability or failure to act on the part of an indemnified party.

(iv) The indemnification provided under this Agreement shall remain in full force and effect regardless of any investigation made by or on behalf of the indemnified party or any officer, director, employee, agent, affiliate or controlling Person of such indemnified party and shall survive the transfer of the Lock-Up Shares.

(v) If the indemnification provided under this Section 8(p) from the indemnifying party is unavailable or insufficient to hold harmless an indemnified party in respect of any Losses referred to herein, then the indemnifying party, in lieu of indemnifying the indemnified party, shall contribute to the amount paid or payable by the indemnified party as a result of such Losses in such proportion as is appropriate to reflect the relative fault of the indemnifying party and the indemnified party, as well as any other relevant equitable considerations. The relative fault of the indemnifying party and indemnified party shall be determined by reference to, among other things, whether any action in question, including any untrue or alleged untrue statement of a material fact or omission or alleged omission to state a material fact, was made by (or not made by, in the case of an omission), or relates to information supplied by (or not supplied by, in the case of an omission), such indemnifying party or indemnified party, and the indemnifying party's and indemnified party's relative intent, knowledge, access to information and opportunity to correct or prevent such action and the benefits received by the such indemnifying party or indemnified party; provided, however, that the liability of any Holder under this Section 8(p)(v) shall be limited to the amount of the net proceeds received by such Holder from the sale of Registrable Securities in such offering giving rise to such liability. The amount paid or payable by a party as a result of the Losses or other liabilities referred to above shall be deemed to include, subject to the limitations set forth in Section 8(p)(i), 8(p)(ii), and 8(p)(iii), any legal or other fees, charges or expenses reasonably incurred by such party in connection with any investigation or proceeding. No Person guilty of fraudulent misrepresentation (within the meaning of Section 11(f) of the Securities Act) shall be entitled to contribution pursuant to this Section 8(p)(v) from any Person who was not guilty of such fraudulent misrepresentation.

(q) The undersigned agrees that each New Holder (as defined in the July 2021 Registration Rights Agreement) shall have piggyback registration rights in respect of any Registration Statement that is filed pursuant to this Section 8, pursuant to and in accordance with Section 5.6 of the July 2021 Registration Rights Agreement, and that the provisions of the Registration Rights Agreement shall apply, mutatis mutandis, to the exercise of any such piggyback registration rights by any such New Holder in respect of any such Registration Statement.

(r) The rights, duties and obligations of the undersigned under this Section 8 may be freely assigned or delegated by the undersigned to a 5% Insider; provided, however, that if any such assignment or delegation occurs during a Lock-Up Period, such 5% Insider must enter into a written agreement with Acquirer agreeing to be bound by the provisions of this Agreement in accordance with Section 5 of this Agreement and shall thereafter be a "Holder" for purposes of this Section 8. For purposes of this Agreement, a "5% Insider" means any stockholder of Seller that is both the record or beneficial owner of at least 5% of the outstanding shares of common stock of Seller and an insider (non-institutional) stockholder of Seller.

9. The undersigned represents and warrants that it (i) is a "qualified institutional buyer" (as defined in Rule 144A under the Securities Act) or an institutional "accredited investor" (within the meaning of Rule 501(a) under the Securities Act) satisfying the applicable requirements set forth on Schedule A, (ii) is acquiring the Lock-Up Shares only for its own account and not for the account of others, and (iii) is not acquiring the Lock-Up Shares with a view to, or for offer or sale in connection with, any distribution thereof in violation of the Securities Act or any other securities laws of the United States or any other applicable jurisdiction (and shall provide the requested information on Schedule A following the signature page hereto). The undersigned is not an entity formed for the specific purpose of acquiring the Lock-Up Shares, unless such newly formed entity is an entity in which all of the equity owners are "accredited investors" (within the meaning of Rule 501(a) under the Securities Act).

10. The undersigned understands that the Lock-Up Shares are being offered in a transaction not involving any public offering within the meaning of the Securities Act and that the Lock-Up Shares have not been registered under the Securities Act or any other securities laws of the United States or any other jurisdiction. The undersigned understands that it is acquiring its entire beneficial ownership interest in the Lock-Up Shares for the undersigned's own account for investment purposes only and not with a view to any distribution of the Lock-Up Shares in any manner that would violate the securities laws of the United States or any other applicable jurisdiction. The undersigned understands that the Lock-Up Shares may not be resold, transferred, pledged or otherwise disposed of by the undersigned absent an effective registration statement under the Securities Act, except (i) to Acquirer or a subsidiary thereof, (ii) pursuant to offers and sales that occur in an "offshore transaction" within the meaning of Regulation S under the Securities Act, (iii) pursuant to Rule 144 under the Securities Act, provided that all of the applicable conditions thereof (including those set out in Rule 144(i) which are applicable to Acquirer) have been met, or (iv) pursuant to another applicable exemption from the registration requirements of the Securities Act, including pursuant to a private sale effected under Section 4(a)(7) of the Securities Act or applicable formal or informal SEC interpretation or guidance, such as a so-called "4(a)(1) and a half" sale, and that any certificates or book- entry records representing the Lock-Up Shares shall contain a legend to such effect. The undersigned understands and agrees that the Lock-Up Shares will be subject to the foregoing restrictions and, as a result, the undersigned may not be able to readily resell the Lock-Up Shares and may be required to bear the financial risk of an investment in the Lock-Up Shares for an indefinite period of time. The undersigned understands that it has been advised to consult legal counsel prior to making any offer, resale, pledge or transfer of any of the Lock-Up Shares. By making the representations in this Section 10, the undersigned does not agree to hold any of the Lock-Up Shares for any minimum or other specific term and reserves the right to assign, transfer or otherwise dispose of any of the Lock-Up Shares at any time in accordance with or pursuant to a registration statement or an exemption under the Securities Act; provided, however, that the Lock-Up Shares shall be subject to the restrictions set forth in Section 1 and Section 2 of this Agreement.

11. The undersigned hereby represents and warrants that the undersigned has full power and authority to enter into this Agreement and that this Agreement constitutes the legal, valid and binding obligation of the undersigned, enforceable in accordance with its terms. Any obligations of the undersigned shall be binding upon the successors and permitted assigns of the undersigned from and after the Closing Date.

12. This Agreement constitutes the entire agreement and understanding of the parties hereto in respect of the subject matter hereof and supersedes all prior understandings, agreements, or representations by or among the parties hereto, written or oral, to the extent they relate in any way to the subject matter hereof. This Agreement may not be changed, amended, modified or waived (other than to correct a typographical error) as to any particular provision, except by a written instrument executed by all parties hereto.

13. Except as provided in Sections 5 and 8 hereof, this Agreement and the rights and obligations of the parties hereunder shall not be assignable or transferable by any party hereto (including in connection with a merger, consolidation, sale of substantially all of the assets of such party or otherwise by operation of Law) without the prior written consent of (a) Acquirer, in the case of any such attempted assignment or transfer by the undersigned, or (b) the undersigned, in the case of any such attempted assignment or transfer by Acquirer. Any attempted assignment in violation of this Section 13 shall be null and void. Subject to the foregoing, this Agreement shall be binding upon and inure to the benefit of Acquirer and the undersigned and their respective successors and permitted assigns.

14. This Agreement, any non-contractual rights or obligations arising out of or in connection with it, and all Disputes will be governed by, and enforced and construed in accordance with, the Laws of the State of Delaware, without regard to the conflict of laws rules of such state that would result in the application of the Laws of another jurisdiction.

15. EACH PARTY HEREBY IRREVOCABLY WAIVES, TO THE FULLEST EXTENT PERMITTED BY LAW, ANY RIGHT IT MAY HAVE TO A TRIAL BY JURY IN RESPECT TO ANY PROCEEDING DIRECTLY OR INDIRECTLY ARISING OUT OF, UNDER OR IN CONNECTION WITH THIS AGREEMENT, THE TRANSACTIONS CONTEMPLATED HEREBY OR DISPUTES RELATING HERETO. EACH PARTY (A) CERTIFIES THAT NO REPRESENTATIVE, AGENT OR ATTORNEY OF ANY OTHER PARTY HAS REPRESENTED, EXPRESSLY OR OTHERWISE, THAT SUCH OTHER PARTY WOULD NOT, IN THE

EVENT OF A DISPUTE, SEEK TO ENFORCE THE FOREGOING WAIVER AND (B) ACKNOWLEDGES THAT IT AND THE OTHER PARTIES HAVE BEEN INDUCED TO ENTER INTO THIS AGREEMENT BY, AMONG OTHER THINGS, THE MUTUAL WAIVERS AND CERTIFICATIONS IN THIS SECTION 15.

16. Any term or provision of this Agreement that is held by a court of competent jurisdiction or arbitrator to be invalid, void or unenforceable in any situation in any jurisdiction shall not affect the validity or enforceability of the remaining terms and provisions hereof or the validity or enforceability of the invalid, void or unenforceable term or provision in any other situation or in any other jurisdiction. If the final judgment of such court or arbitrator declares that any term or provision hereof is invalid, void or unenforceable, the parties hereto agree to (a) reduce the scope, duration, area or applicability of the term or provision, to delete specific words or phrases, and (b) replace any invalid, void or unenforceable term or provision with a term or provision that is valid and enforceable and that comes closest to expressing the original intention of the invalid or unenforceable term or provision.

17. This Agreement may be executed in any number of counterparts (including electronically), and each such counterpart hereof shall be deemed to be an original instrument, but all such counterparts together shall constitute but one agreement. Delivery of an executed counterpart of a signature page of this Agreement by electronic mail or other electronic transmission shall be effective as delivery of a manually executed original counterpart of this Agreement.

18. All notices, demands, waivers and other communications pursuant to this Agreement will be in writing and will be deemed given if delivered personally or delivered by electronic mail or globally recognized express delivery service to the parties hereto at the addresses set forth on the signature page hereto or to such other address as the party to whom notice is to be given to the other parties hereto in writing in accordance herewith. Any such notice, demand, waiver or other communication will be deemed to have been delivered and received (a) in the case of personal delivery, on the date of such delivery, (b) in the case of electronic mail, on the date of sending if no automated notice of delivery failure is received by the sender, and (c) in the case of a globally recognized express delivery service, on the date on which receipt by the addressee is confirmed pursuant to the service's systems.

19. This Agreement shall become effective on the Closing Date. This Agreement and the obligations of each party hereunder shall automatically terminate upon any termination of the Merger Agreement.

[Signature on the following page]

Very truly
yours,
By: _____

Name:
Title:

Address: _____
_____
_____

Email:

_____Accepted and Agreed:

ACQUIRER
SEMA4 HOLDINGS CORP.
By:

_____
Name:
Title:

Address: 333 Ludlow Street,
North Tower, 8th floor
Stamford, CT 06902
Email:

SCHEDULE A
ELIGIBILITY REPRESENTATIONS OF THE UNDERSIGNED

A QUALIFIED INSTITUTIONAL BUYER STATUS

. (Please check the applicable subparagraphs):

1. • We are a "qualified institutional buyer" (as defined in Rule 144A under the Securities Act (a "QIB")).

2. • We are subscribing for the Lock-Up Shares as a fiduciary or agent for one or more investor accounts, and each owner of such account is a QIB.

*** OR ***

B. INSTITUTIONAL ACCREDITED INVESTOR STATUS

. (Please check each of the following subparagraphs):

1. • We are an "accredited investor" (within the meaning of Rule 501(a) under the Securities Act) or an entity in which all of the equity holders are accredited investors within the meaning of Rule 501(a) under the Securities Act and have marked and initialed the appropriate box on the following page indicating the provision under which we qualify as an "accredited investor".

2. • We are not a natural person.

*** AND ***

C. AFFILIATE STATUS

. (Please check the applicable box)
THE UNDERSIGNED:

☐ is:

☐ is not:

an "affiliate" (as defined in Rule 144 under the Securities Act) of the Acquirer or acting on behalf of an affiliate of the Acquirer.

FINRA Rule 4512(c) states that an "institutional account" shall mean any person who comes within any of the below listed categories. The undersigned has indicated, by marking and initialing the appropriate box below, the provision(s) below which apply to the undersigned and under which the undersigned accordingly qualifies as an "institutional account."

- a bank, savings and loan association, insurance company or registered investment company;
- an investment adviser registered either with the SEC under Section 203 of the Investment Advisers Act or with a state securities commission (or any agency or office performing like functions); or
- any other person (whether a natural person, corporation, partnership, trust or otherwise) with total assets of at least $50 million.

This page should be completed by the undersigned and constitutes a part of the Shareholder Agreement.

Schedule A-1

Rule 501(a), in relevant part, states that an "accredited investor" shall mean any person who comes within any of the below listed categories, or who the Acquirer reasonably believes comes within any of the below listed categories, at the time of the sale of the securities to that person. The undersigned has indicated, by marking and initialing the appropriate box below, the provision(s) below that apply to the undersigned and under which the undersigned accordingly qualifies as an "accredited investor."

- Any bank as defined in section 3(a)(2) of the Securities Act, or any savings and loan association or other institution as defined in section 3(a)(5)(A) of the Securities Act whether acting in its individual or fiduciary capacity;

- Any broker or dealer registered pursuant to section 15 of the Exchange Act;

- An investment adviser registered pursuant to section 203 of the Investment Advisers Act of 1940 or registered pursuant to the laws of a state;

- An investment adviser relying on the exemption from registering with the Securities and Exchange Commission under section 203(l) or (m) of the Investment Advisers Act of 1940;

- Any insurance company as defined in section 2(a)(13) of the Securities Act;

- Any investment company registered under the Investment Company Act of 1940 or a business development company as defined in section 2(a)(48) of the Securities Act;

- Any Small Business Investment Company licensed by the U.S. Small Business Administration under section 301(c) or (d) of the Small Business Investment Act of 1958;

- A Rural Business Investment Company as defined in section 384A of the Consolidated Farm and Rural Development Act;

- Any plan established and maintained by a state, its political subdivisions, or any agency or instrumentality of a state or its political subdivisions, for the benefit of its employees, if such plan has total assets in excess of $5,000,000;

- Any employee benefit plan within the meaning of the Employee Retirement Income Security Act of 1974 if the investment decision is made by a plan fiduciary, as defined in section 3(21) of such Act, which is either a bank, savings and loan association, insurance company, or registered investment adviser, or if the employee benefit plan has total assets in excess of $5,000,000 or, if a self-directed plan, with investment decisions made solely by persons that are accredited investors;

- Any private business development company as defined in section 202(a)(22) of the Investment Advisers Act of 1940;

- Any organization described in section 501(c)(3) of the Internal Revenue Code, corporation, Massachusetts or similar business trust, partnership or limited liability company, not formed for the specific purpose of acquiring the securities offered, with total assets in excess of $5,000,000;

This page should be completed by the undersigned and constitutes a part of the Shareholder Agreement.

Schedule A-2

- Any trust, with total assets in excess of $5,000,000, not formed for the specific purpose of acquiring the securities offered, whose purchase is directed by a sophisticated person as described in Rule 506(b)(2)(ii) of the Securities Act;

- An entity, of a type not listed in any of the foregoing paragraphs, not formed for the specific purpose of acquiring the securities offered, owning investments in excess of $5,000,000;

- A "family office," as defined in rule 202(a)(11)(G)-1 under the Investment Advisers Act of 1940 (17 CFR 275.202(a)(11)(G)-1): (i) with assets under management in excess of $5,000,000, (ii) that is not formed for the specific purpose of acquiring the securities offered, and (iii) whose prospective investment is directed by a person who has such knowledge and experience in financial and business matters that such family office is capable of evaluating the merits and risks of the prospective investment;

- A "family client," as defined in rule 202(a)(11)(G)-1 under the Investment Advisers Act of 1940 (17 CFR 275.202(a)(11)(G)-1), of a family office meeting the requirements in the foregoing paragraph and whose prospective investment in the issuer is directed by such family office pursuant to clause (iii) in the foregoing paragraph;

- Any natural person whose individual net worth, or joint net worth with that person's spouse, at the time of his purchase exceeds $1,000,000. For purposes of calculating a natural person's net worth: (a) the person's primary residence must not be included as an asset; (b) indebtedness secured by the person's primary residence up to the estimated fair market value of the primary residence must not be included as a liability (except that if the amount of such indebtedness outstanding at the time of calculation exceeds the amount outstanding 60 days before such time, other than as a result of the acquisition of the primary residence, the amount of such excess must be included as a liability); and (c) indebtedness that is secured by the person's primary residence in excess of the estimated fair market value of the residence must be included as a liability;

- Any natural person who had an individual income in excess of $200,000 in each of the two most recent years or joint income with that person's spouse in excess of $300,000 in each of those years and has a reasonable expectation of reaching the same income level in the current year; or

- Any entity in which all of the equity owners are accredited investors meeting one or more of the above tests.

EXHIBIT B
Form of Support Agreement

STOCKHOLDER SUPPORT AGREEMENT

This Stockholder Support Agreement (this "***Agreement***") is dated as of January 14, 2022, by and among Sema4 Holdings Corp., a Delaware corporation ("***Acquirer***"), OPKO Health, Inc., a Delaware corporation (the "***Seller***") and the Person set forth on Schedule I hereto ("***Stockholder***"). Capitalized terms used but not defined herein shall have the respective meanings ascribed to such terms in the Merger Agreement (as defined below).

WHEREAS, as of the date hereof, Stockholder is the holder of record and/or beneficial owner (as defined in Rule 13d-3 of the Exchange Act) of the shares of Acquirer Stock set forth opposite its name on Schedule I attached hereto (all such shares of Acquirer Stock, together with any additional shares or other voting securities of Acquirer of which such Stockholder acquires record or beneficial ownership after the date of this Agreement, by any means, such Stockholder's "***Shares***");

WHEREAS, contemporaneously with the execution and delivery of this Agreement, Acquirer, Orion Merger Sub I, a Delaware corporation ("***Merger Sub I***"), Orion Merger Sub II, LLC, a Delaware limited liability company ("***Merger Sub II***"), GeneDx, Inc., a New Jersey corporation ("***Company***"), GeneDx Holding 2, Inc., a Delaware corporation ("***Holdco2***"), and Seller have entered into an Agreement and Plan of Merger and Reorganization (as amended or modified from time to time, the "***Merger Agreement***"), dated as of the date hereof, pursuant to which, among other transactions, on the Closing Date but following consummation of the Pre-Closing Restructuring, Merger Sub I will merge with and into Holdco2 (the "***First Merger***"), with Holdco2 as the surviving corporation in the First Merger and Merger Sub I will merge with and into HoldCo2 (the "***First Merger***"), with HoldCo2 as the surviving corporation in the First Merger, and immediately after the consummation of the First Merger, as part of the same overall transaction, Holdco2, as the surviving corporation in the First Merger, will merge with and into Merger Sub II (the "***Second Merger***" and, together with the First Merger, the "***Mergers***"), with Merger Sub II as the surviving corporation and the direct owner of all of the equity interests in GeneDx Delaware LLC.

WHEREAS, on or prior to the date hereof, Acquirer entered into subscription agreements (the "***Subscription Agreements***" with the PIPE Investors pursuant to which, and on the terms and subject to the conditions of which, such PIPE Investors have agreed to purchase from Acquirer shares of Acquirer Stock for an aggregate purchase price equal to the PIPE Investment Amount, such purchases to be consummated prior to or substantially concurrently with the Closing (the "***PIPE Investment***," and, together with the other transactions contemplated by the Merger Agreement, the "***Transactions***").

WHEREAS, as an inducement to Seller and Acquirer to enter into the Merger Agreement and to consummate the Transactions, the parties hereto desire to agree to certain matters as set forth herein.

NOW, THEREFORE, in consideration of the foregoing and the mutual agreements contained herein, and intending to be legally bound hereby, the parties hereto hereby agree as follows:

ARTICLE I
STOCKHOLDER SUPPORT AGREEMENT; COVENANTS

Section 1.1 No Transfer. Stockholder agrees that during the term of this Agreement, Stockholder shall not, directly or indirectly, (a) sell, assign, transfer (including by operation of law), swap, convert, lien, pledge, gift, dispose of or otherwise encumber (including by merger (including by conversion into securities or other consideration), by tendering into any tender or exchange offer, by testamentary disposition, by operation of Law or otherwise, or by divesting itself (pursuant to contract or otherwise) of any rights as a stockholder of Stockholder's Shares, including, without limitation, the right to vote such Shares) (collectively, a "***Transfer***") or enter into any contract or option with respect to the Transfer of, (i) any of such Stockholder's Shares (the "Restricted Amount"), (b) publicly announce to do any of the foregoing or (c) take any action that would make any representation or warranty of such Stockholder contained herein untrue or incorrect or which would have the effect of preventing or disabling Stockholder from performing his, her or its obligations under this Agreement in any material respect; provided that the foregoing shall not prohibit (W) for all purposes of this Section 1(a) from and after the date of the Acquirer Stockholders' Meeting at which the Requisite Vote is obtained, the Stockholder and its affiliates shall be permitted to Transfer (and enter into any Contract or option with respect to any such Transfer), 100% of the Restricted Amount (such maximum aggregate amount of shares, the "Transferrable Amount"), it being understood

and agreed, for the avoidance of doubt, that prior to the date of such Acquirer Stockholders' Meeting the Stockholder shall not enter into any Contract or option with respect to any such Transfer or publicly disclose, or take any action, that would reasonably be expected to require public disclosure of any intent or plan by Stockholder to engage in any such Transfer (provided that the foregoing shall not restrict the Stockholder from disclosing (including in any filing required by law to be made with the SEC) the existence of this Agreement or the rights of the Stockholder to Transfer Shares in accordance with this Agreement), (X) the transfer of any of the Shares by Stockholder to any managers, partners, members or other direct or indirect equity holders or affiliates of Stockholder (which, for the avoidance of doubt, shall include any investment fund or managed account that is managed on a discretionary basis by the same investment manager as Stockholder) or to any of its or their officers, directors or employees, but only if any such transferee shall execute a joinder or other instrument agreeing to be bound by the provisions of this Agreement, (Y) any pledge of the Shares in connection with a bona fide margin agreement or grant of a security interest in some or all of the Shares to a financial institution that is an "accredited investor" as defined in Rule 501(a) under the Securities Act, or (Z) any hedging or other transactions, including without limitation any short sales or purchases or sales of "derivative" securities based on securities issued by Acquirer, that do not result in the transfer of any of the Shares or the disposition of voting power in respect thereof prior to the termination of this Agreement. Stockholder hereby covenants and agrees that such Stockholder shall not (i) enter into any voting agreement or voting trust with respect to any of such Stockholder's Shares that is inconsistent with such Stockholder's obligations pursuant to this Agreement, grant a proxy or power of attorney with respect to any of such Stockholder's Shares that is inconsistent with such Stockholder's obligations pursuant to this Agreement or (iii) enter into any agreement or undertaking that is otherwise inconsistent with, or would interfere with, or prohibit or prevent such Stockholder from satisfying its obligations pursuant to this Agreement. In furtherance of the agreements set forth in this Agreement, Stockholder hereby authorizes Acquirer or its counsel to instruct its transfer agent to put in place a stop transfer order with respect to the Restricted Amount except with respect to Transfers of Shares permitted hereby.

Section 1.2 Agreement to Vote. Stockholder hereby unconditionally and irrevocably agrees that, at any meeting of the stockholders of Acquirer however called or at any adjournment thereof, or in any other circumstance that the vote, consent or other approval of the stockholders of Acquirer is sought (the "***Requisite Vote***"), such Stockholder shall (i) appear at such meeting or otherwise cause all of such Stockholder's Shares to be counted present thereat for purposes of calculating a quorum and (ii) vote or cause to be voted (or duly and promptly execute and deliver, or cause to be duly and promptly executed and delivered, an action by written consent which written consent shall be delivered promptly, and in any event within three Business Days, after Acquirer, as applicable requests such delivery), all of such Stockholder's Shares:

(a) to approve the issuance of the Stock Consideration pursuant to the Merger Agreement and the issuance of the shares of Acquirer Stock pursuant to the Subscription Agreements;

(b) to approve the appointment of the Specified Designees to the Acquirer Board for terms that expire no earlier than the end of the Second Milestone Period;

(c) to approve an amendment to the Company's current Third Amended and Restated Certificate of Incorporation to increase the authorized shares of Acquirer Stock from 380,000,000 to 1,000,000,000;

(d) to approve any other proposal included in the Proxy Statement that is recommended by the Acquirer Board as necessary to consummate the Transactions;

(e) to approve any proposal that is recommended by the Acquirer Board to adjourn the meeting to a later date, if there are not sufficient affirmative votes (in person or by proxy) to obtain the requested approvals on the date on which such meeting is held; and

(f) against any and all other proposals that could reasonably be expected to delay or impair the ability of Acquirer to consummate the Transactions.

Nothing in this Agreement limits or restricts any Affiliate or designee of Stockholder who serves as a member of the Acquirer Board in acting or voting in his or her capacity as a director of Acquirer and exercising his or her fiduciary duties and responsibilities, it being understood that this Agreement applies to Stockholder solely in its

capacity as a stockholder of Acquirer and does not apply to any such Affiliate or designee's actions, judgments or decisions as a director of Acquirer, and such actions (or failures to act) shall not be deemed to constitute a breach of this Agreement.

Section 1.3 Proxy.

(a) Solely in furtherance of Section 1.2 of this Agreement and subject to termination as provided in Section 3.1 of this Agreement, Stockholder (i) hereby irrevocably grants to, and appoints, Acquirer or any individual designated by Acquirer as the Stockholder's agent, irrevocable proxy and attorney-in-fact (with full power of substitution and resubstitution) to vote the Shares, provide written consents, express consent or otherwise utilize voting power as indicated in Section 1.2 of this Agreement; provided, however, that Stockholder's grant of the proxy contemplated by this Section 1.3(a) shall be effective if, and only if, Stockholder has not delivered to the Secretary of Acquirer at least five Business Days prior to such meeting a duly executed proxy card previously approved by Acquirer voting Stockholder's Shares in the manner specified in Section 1.2 or in the event such proxy card has been thereafter modified or revoked or otherwise fails to provide evidence of Stockholder's compliance with its obligations under Section 1.2 in form and substance reasonably acceptable to Acquirer, (ii) hereby affirms that the irrevocable proxy set forth in this Section 1.3, if it becomes effective pursuant to clause (i), is given in connection with the execution of the Merger Agreement, and that such irrevocable proxy is given to secure the performance of the duties of Stockholder under this Agreement and (iii) hereby (a) affirms that the irrevocable proxy is coupled with an interest and (b) affirms that such irrevocable proxy, if it becomes effective pursuant to clause (i), is executed and intended to be irrevocable in accordance with the provisions of Section 212(e) of the General Corporation Law of the State of Delaware.

(b) Stockholder hereby represents that all proxies, powers of attorney, instructions or other requests given by Stockholder prior to the execution of this Agreement in respect of the voting of Stockholder's Shares, if any, are not irrevocable and Stockholder hereby revokes (or causes to be revoked) any and all previous proxies, powers of attorney, instructions or other requests with respect to Stockholder's Shares. The vote, if any, of the proxy holder pursuant to the proxy set forth in this Section 1.3 shall control the outcome, and be determinative, of any conflict between the vote by the proxy holder of the Shares and a vote by a Stockholder of the Shares. Stockholder shall provide evidence to Acquirer in connection with the actions of the Stockholder under or relating to this Section 1.3 as Acquirer shall reasonably request.

Section 1.4 No Challenges. Stockholder agrees not to commence, join in, facilitate, assist or knowingly encourage, and agrees to take all actions reasonably necessary to opt out of any class in any class action with respect to, any claim, derivative or otherwise, against Acquirer or any of its respective successors or directors challenging the validity of, or seeking to enjoin the operation of, any provision of this Agreement.

Section 1.5 No Ownership Interest. Nothing contained in this Agreement shall be deemed to vest in the Acquirer Parties any direct or indirect ownership or incidence of ownership of or with respect to any Shares, except as expressly provided herein. All rights, ownership and economic benefits of and relating to the Shares shall remain vested in and belong to Stockholder, and neither Acquirer nor Merger Subs shall have any authority to direct Stockholder in the voting or disposition of any of the Shares, except as otherwise provided herein.

Section 1.6 No Inconsistent Agreement. Stockholder hereby represents and covenants that such Stockholder has not entered into, shall not enter into and is not otherwise bound by, any agreement that would restrict, limit or interfere with the performance of such Stockholder's obligations hereunder.

Section 1.7 Consent to Disclosure. Stockholder hereby consents to the publication and disclosure required by applicable securities Laws or the SEC or any other securities authorities, any other documents or communications provided by Acquirer to any Governmental Authority of such Stockholder's identity and beneficial ownership of Shares and the nature of such Stockholder's commitments, arrangements and understandings under and relating to this Agreement and, if deemed appropriate by Acquirer, a form of this Agreement. Stockholder will promptly provide any information reasonably requested by Acquirer that is necessary for any regulatory application or filing made or approval sought in connection with the Transactions (including filings with the SEC). The Acquirer shall provide Stockholder with a reasonable opportunity to review and comment on any disclosure made in accordance

with Section 1.7 and shall consider in good faith any comments of Stockholder, and the Acquirer shall not make any substantive revision to information regarding Stockholder that is provided by Stockholder for inclusion in any filing with the SEC without Stockholder's approval, which shall not be unreasonably withheld, delayed or conditioned.

ARTICLE II
REPRESENTATIONS AND WARRANTIES

Section 2.1 Representations and Warranties of the Stockholder. Stockholder represents and warrants as of the date hereof to Acquirer as follows:

(a) Organization; Due Authorization. If such Stockholder is not a natural person, it is duly organized, validly existing and in good standing under the Laws of the jurisdiction in which it is incorporated, formed, organized or constituted, and the execution, delivery and performance of this Agreement and the consummation of the transactions contemplated hereby are within such Stockholder's corporate, limited liability company or organizational powers and have been duly authorized by all necessary corporate, limited liability company or organizational actions on the part of such Stockholder. If such Stockholder is a natural person, such Stockholder has full legal capacity, right and authority to execute and deliver this Agreement and to perform his or her obligations hereunder. This Agreement has been duly executed and delivered by such Stockholder and, assuming due authorization, execution and delivery by the other parties to this Agreement, this Agreement constitutes a legally valid and binding obligation of such Stockholder, enforceable against such Stockholder in accordance with the terms hereof (except as enforceability may be limited by bankruptcy Laws, other similar Laws affecting creditors' rights and general principles of equity affecting the availability of specific performance and other equitable remedies). If this Agreement is being executed in a representative or fiduciary capacity, the Person signing this Agreement has full power and authority to enter into this Agreement on behalf of the applicable Stockholder.

(b) Ownership. Such Stockholder is the record and/or beneficial owner (as defined in Rule 13d-3 of the Exchange Act) of, and has good title to, all of such Stockholder's Shares, and there exist no encumbrances or any other limitation or restriction (including any restriction on the right to vote, sell or otherwise dispose of such Shares (other than transfer restrictions under the Securities Act)) affecting any such Shares, other than encumbrances pursuant to (i) this Agreement, (ii) the certificate of incorporation of Acquirer, (iii) the Merger Agreement, (iv) pursuant to any existing lock-up agreement, (v) any applicable securities Laws or (vi) that would not prevent, enjoin or delay in any manner Stockholder's performance of its obligations under this Agreement. Such Stockholder's Shares are the only equity securities in Acquirer owned of record or beneficially by such Stockholder on the date of this Agreement, and none of such Stockholder's Shares are subject to any proxy, voting trust or other agreement or arrangement with respect to the voting of such Shares, except as provided hereunder and under the certificate of incorporation of Acquirer or as noted on Schedule I. Such Stockholder does not hold or own any rights to acquire (directly or indirectly) any equity securities of Acquirer or any equity securities convertible into, or which can be exchanged for, equity securities of Acquirer other than warrants issued by the Acquirer prior to the date of this Agreement or earn-out shares issuable pursuant to the Agreement and Plan of Merger by and among Acquirer, S-IV Sub, Inc. and Mount Sinai Genomics, Inc. dated as of February 9, 2021, as amended.

(c) No Conflicts. The execution and delivery of this Agreement by such Stockholder does not, and the performance by such Stockholder of his, her or its obligations hereunder will not, (i) if such Stockholder is not an individual, conflict with or result in a violation of the organizational documents of such Stockholder or (ii) require any consent or approval that has not been given or other action that has not been taken by any Person (including under any Contract binding upon such Stockholder or such Stockholder's Shares) to the extent such consent, approval or other action would prevent, enjoin or materially delay the performance by such Stockholder of its, his or her obligations under this Agreement.

(d) Litigation. There are no Proceedings pending against such Stockholder, or to the knowledge of such Stockholder threatened against such Stockholder, before (or, in the case of threatened Proceedings, that would be before) any arbitrator or any Governmental Authority, which in any manner challenges or seeks to prevent, enjoin or materially delay the performance by such Stockholder of its, his or her obligations under this Agreement.

(e) Brokerage Fees. No broker, finder, investment banker or other Person is entitled to any brokerage fee, finders' fee or other commission in connection with the transactions contemplated by the Merger Agreement based upon arrangements made by such Stockholder, for which Acquirer or any of its Affiliates may become liable.

(f) Acknowledgment. Such Stockholder understands and acknowledges that Seller and Acquirer are entering into the Merger Agreement in reliance upon such Stockholder's execution, delivery and performance of this Agreement.

ARTICLE III
MISCELLANEOUS

Section 3.1 Termination. All of the provisions this Agreement (and the proxy granted hereunder) shall terminate and be of no further force or effect upon the earlier of (a) the Effective Time, (b) such date and time as the Merger Agreement shall be terminated in accordance with Section 7.1 thereof (the earlier of clause (a) and (b) being the "Expiration Time") and (c) the written agreement of Acquirer, Seller and Stockholder to terminate the provisions of this Agreement. Stockholder shall also have the right to terminate this Agreement (and the proxy granted hereunder) by written notice to Acquirer if the Transactions have not been consummated by the Outside Date (as defined in the Subscription Agreements). Upon any termination of this Agreement, all obligations of Acquirer and Stockholder under this Agreement will terminate, without any liability or other obligation on the part of any party hereto to any person or entity in respect hereof or the transactions contemplated hereby, and no party hereto shall have any claim against another (and no person or entity shall have any rights against such party), whether under contract, tort or otherwise, with respect to the subject matter hereof; provided, however, that the termination of the provisions of this Agreement shall not relieve any party hereto from liability arising in respect of any willful breach of the provisions of this Agreement prior to such termination. Stockholder's obligations under Section 1.2 and 1.3 shall cease to apply, and the proxy granted under Section 1.3 shall terminate, in the event that the Merger Agreement is amended, modified, supplemented or waived in a manner that (A) increases the Stock Consideration, otherwise materially changes the form, or otherwise materially increases the amount, of the consideration payable by Acquirer pursuant to the Merger Agreement, (B) changes the definition of Specified Designees or (C) is otherwise materially adverse to Stockholder, unless Stockholder has consented to such amendment, modification, supplement or waiver in writing (which consent will not be unreasonably withheld, delayed or conditioned if so requested by Acquirer). This ARTICLE III shall survive the termination of this Agreement.

Section 3.2 Other Agreements. Acquirer represents and warrants to Stockholder that it has obtained a binding support agreement or commitment from the stockholders listed in Schedule II (each a "***Supporting Stockholder***") in respect of the Requisite Vote with substantially the same commitment and terms, including restrictions on transfer as noted in such Schedule, set forth in this Agreement (each a "***Supporting Stockholder Voting Commitment***"). Acquirer shall not agree to any amendment, waiver, termination or modification of a material term of a Supporting Stockholder Voting Commitment without offering the same amendment, waiver, termination or modification to Stockholder. The obligations of each Supporting Stockholder under any Supporting Stockholder Voting Commitment are several and not joint with the obligations of any other Supporting Stockholder, and no Supporting Stockholder shall be responsible in any way for the performance of the obligations of any other Supporting Stockholder under any Supporting Stockholder Voting Commitment. Nothing contained herein or in any other Supporting Stockholder Voting Commitment , and no action taken by any Supporting Stockholder pursuant hereto or thereto, shall be deemed to constitute the Supporting Stockholders and Stockholder as, and Acquirer acknowledges that the Supporting Stockholders and Stockholder do not so constitute, a partnership, an association, a joint venture or any other kind of entity, or create a presumption that the Supporting Stockholders and Stockholder are in any way acting in concert or as a group, and no party hereto will assert any such claim with respect to such obligations or the transactions contemplated hereby or by the Supporting Stockholder Voting Commitments. Acquirer acknowledges and Stockholder confirms that it has independently participated in the negotiation of the transaction contemplated hereby with the advice of its own counsel and advisors. Stockholder shall be entitled to independently protect and enforce its rights, including, without limitation, the rights arising out of this Agreement, and shall not seek, nor shall it be necessary for, any Supporting Stockholder to be joined as an additional party in any proceeding for such purpose.

Section 3.3 Injunctive Relief; Specific Performance. The parties hereto agree that irreparable damage would occur if any provision of this Agreement were not performed in accordance with the terms hereof, and, accordingly, that the parties hereto shall, to the fullest extent permitted by Law, be entitled to an injunction or injunctions to prevent breaches of this Agreement or to enforce specifically the performance of the terms and provisions hereof in the Court of Chancery of the State of Delaware or, if that court does not have jurisdiction, any federal court located in the State of Delaware or any other Delaware State Court without proof of actual damages or otherwise, in addition to any other remedy to which they are entitled at law or in equity as expressly permitted in this Agreement. To the fullest extent permitted by applicable Law, each of the parties hereto hereby further waives (a) any defense in any Proceeding for specific performance that a remedy at law would be adequate and (b) any requirement under any Law to post security or a bond as a prerequisite to obtaining equitable relief. Each of the parties hereto hereby acknowledges and agrees that it may be difficult to prove damages with reasonable certainty, that it may be difficult to procure suitable substitute performance, and that injunctive relief and/or specific performance will not cause an undue hardship to the parties hereto. Each of the parties hereto hereby further acknowledges that the existence of any other remedy contemplated by this Agreement does not diminish the availability of specific performance of the obligations hereunder or any other injunctive relief. Each party hereto hereby further agrees that in the event of any action by any other party for specific performance or injunctive relief, such party will not assert that a remedy at law or other remedy would be adequate or that specific performance or injunctive relief in respect of such breach or violation should not be available on the grounds that money damages are adequate or any other grounds

Section 3.4 Governing Law; Jurisdiction; Waiver of Jury Trial. This Agreement shall be governed by, and construed in accordance with, the Laws of the State of Delaware applicable to contracts executed in and to be performed in that State. Any Proceeding arising out of or relating to this Agreement or the transactions contemplated hereby shall, to the fullest extent permitted by applicable Law, be heard and determined exclusively in the Court of Chancery of the State of Delaware; provided, that if jurisdiction is not available in such court, then any such legal Proceeding may be brought in any federal court located in the State of Delaware or any other Delaware state court. To the fullest extent permitted by applicable Law, the parties hereto hereby (i) irrevocably submit to the exclusive jurisdiction of the aforesaid courts for themselves and with respect to their respective properties for the purpose of any Proceeding arising out of or relating to this Agreement or the transactions contemplated hereby brought by any party hereto, and (ii) agree not to commence any such Proceeding except in the courts described above in Delaware, other than any Proceeding in any court of competent jurisdiction to enforce any judgment, decree or award rendered by any such court in Delaware as described herein. To the fullest extent permitted by applicable Law, each of the parties hereto further agrees that notice as provided herein shall constitute sufficient service of process and the parties hereto further waive any argument that such service is insufficient. To the fullest extent permitted by applicable Law, each of the parties hereto hereby irrevocably and unconditionally waives, and agrees not to assert, by way of motion or as a defense, counterclaim or otherwise, in any Proceeding arising out of or relating to this Agreement or the transactions contemplated hereby, (x) any claim that such party is not personally subject to the jurisdiction of the courts in Delaware as described herein for any reason, (y) that such party or such party's property is exempt or immune from jurisdiction of any such court or from any legal process commenced in such courts (whether through service of notice, attachment prior to judgment, attachment in aid of execution of judgment, execution of judgment or otherwise) and (z) that (A) the Proceeding in any such court is brought in an inconvenient forum, (B) the venue of such Proceeding is improper or (C) this Agreement or the transactions contemplated hereby, or the subject matter hereof, may not be enforced in or by such courts. EACH PARTY HERETO HEREBY IRREVOCABLY AND UNCONDITIONALLY WAIVES, TO THE FULLEST EXTENT PERMITTED BY APPLICABLE LAW, ANY AND ALL RIGHT TO A TRIAL BY JURY IN ANY PROCEEDING DIRECTLY OR INDIRECTLY ARISING OUT OF OR RELATED TO THIS AGREEMENT OR THE TRANSACTIONS CONTEMPLATED HEREBY. EACH PARTY HERETO CERTIFIES AND ACKNOWLEDGES THAT (I) NO REPRESENTATIVE, AGENT OR ATTORNEY OF ANY OTHER PARTY HAS REPRESENTED, EXPRESSLY OR OTHERWISE, THAT SUCH PARTY WOULD NOT, IN THE EVENT OF LITIGATION, SEEK TO ENFORCE EITHER OF SUCH WAIVERS, (II) IT UNDERSTANDS AND HAS CONSIDERED THE IMPLICATIONS OF SUCH WAIVERS, (III) IT MAKES SUCH WAIVERS VOLUNTARILY AND (IV) IT HAS BEEN INDUCED TO ENTER INTO THIS AGREEMENT, BY, AMONG OTHER THINGS, THE MUTUAL WAIVER AND CERTIFICATIONS IN THIS SECTION.

Section 3.5 Assignment. This Agreement and all of the provisions hereof will be binding upon and inure to the benefit of the parties hereto and their respective heirs, successors and permitted assigns. Except by a Stockholder in connection with a transfer of Shares permitted by Section 1.1 herein, neither this Agreement nor any of the rights, interests or obligations hereunder will be assigned (including by operation of Law) without the prior written consent of the parties hereto.

Section 3.6 Amendment; Waiver; Severability. This Agreement may not be amended, changed, supplemented, waived or otherwise modified or terminated, except upon the execution and delivery of a written agreement executed by the parties to this Agreement. If any term or other provision of this Agreement is invalid, illegal or incapable of being enforced by any rule of law, or public policy, all other conditions and provisions of this Agreement shall nevertheless remain in full force and effect so long as the economic or legal substance of the transactions contemplated hereby is not affected in any manner materially adverse to any party. Upon such determination that any term or other provision is invalid, illegal or incapable of being enforced, the parties hereto shall negotiate in good faith to modify this Agreement so as to effect the original intent of the parties as closely as possible in a mutually acceptable manner in order that the transactions contemplated hereby be consummated as originally contemplated to the fullest extent possible.

Section 3.7 Notices. All notices and other communications among the parties hereto shall be in writing and shall be deemed to have been duly given (a) when delivered in person, (b) when delivered after posting in the United States mail having been sent registered or certified mail return receipt requested, postage prepaid, (c) when delivered by FedEx or other nationally recognized overnight delivery service or (d) when e-mailed during normal business hours (and otherwise as of the immediately following Business Day), addressed as follows:

If to Acquirer:

Sema4 Holdings Corp.
333 Ludlow Street, North Tower, 8th Floor
Stamford, Connecticut 06902
Attention: General Counsel
Email: legal@sema4.com
with a copy to (which will not constitute notice):

Fenwick & West LLP

902 Broadway
New York, NY 10010
Email: eskerry@fenwick.com; vlupu@fenwick.com
Attention: Ethan A. Skerry; Victoria A. Lupu

If to Seller:

OPKO Health, Inc.
4400 Biscayne Blvd.
Miami, FL 33137
Attention: Steven D. Rubin
Email: srubin@opko.com
with a copy (which will not constitute notice) to:

Greenberg Traurig, P.A.

333 S.E. 2nd St.

Suite 4400
Miami, FL 33131
Email: grossmanb@gtlaw.com; altmand@gtlaw.com
Attention: Robert L. Grossman; Drew M. Altman

If to Stockholder:

To such Stockholder's address set forth in Schedule I (with a copy (which will not constitute notice) as provided thereon, if any.

Notwithstanding the foregoing, in the event notice is delivered pursuant to this Section 3.7 by a means other than email, such party shall email such notice within one (1) Business Day of delivery of such notice by such other means.

Section 3.8 Counterparts. This Agreement may be executed in two or more counterparts (any of which may be delivered by electronic transmission), each of which shall constitute an original, and all of which taken together shall constitute one and the same instrument.

Section 3.9 Entire Agreement. This Agreement and the agreements referenced herein constitute the entire agreement and understanding of the parties hereto in respect of the subject matter hereof and supersede all prior understandings, agreements or representations by or among the parties hereto to the extent they relate in any way to the subject matter hereof.

Section 3.10 Third Party Beneficiaries. This Agreement is not intended to confer upon any person other than the parties hereto (and their respective successors and permitted assigns) any rights (legal, equitable or otherwise) or remedies, whether as third-party beneficiaries or otherwise.

Section 3.11 Expenses. Except as otherwise expressly provided in this Agreement or the Merger Agreement, all costs and expenses incurred in connection with this Agreement and the transactions contemplated hereby shall be paid by the party incurring such costs or expenses.

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IN WITNESS WHEREOF, the Stockholder, Seller and Acquirer have each caused this Stockholder Support Agreement to be duly executed as of the date first written above.

STOCKHOLDER:

[NAME]

By: _____
Name:
Title:

[Signature Page to Stockholder Support Agreement]

IN WITNESS WHEREOF, the Stockholder, Seller and Acquirer have each caused this Stockholder Support Agreement to be duly executed as of the date first written above.

ACQUIRER:

SEMA4 HOLDINGS CORP.

By: _____

Name:

Title:

[Signature Page to Stockholder Support Agreement]

SELLER:

OPKO HEALTH, INC.

By: _____

Name:

Title:

[Signature Page to Stockholder Support Agreement]

EXHIBIT C-1
Form of First Certificate of Merger

CERTIFICATE OF MERGER
FOR THE MERGER OF
ORION MERGER SUB I, INC.
WITH AND INTO
GENEDX HOLDING 2, INC.

[●], 2022

Pursuant to Section 251 of the
General Corporation Law of the State of Delaware

GeneDx Holding 2, Inc., a Delaware corporation (the "***Company***"), hereby certifies:

FIRST: The name and state of incorporation of each of the constituent corporations are as follows: Name: GeneDx Holding 2, Inc. State of Incorporation: Delaware

Name: Orion Merger Sub I, Inc. State of Incorporation: Delaware

SECOND: An Agreement and Plan of Merger and Reorganization (as amended from time to time in accordance with its terms, the "**Merger Agreement**") has been approved, adopted, executed and acknowledged by the Company and by Orion Merger Sub I, Inc., a Delaware corporation, ("**Merger Sub I**") in accordance with Section 251 [(and, with respect to [], by the written consent of its stockholder(s) in accordance with Section 228)]1[4] of the General Corporation Law of the State of Delaware (**DGCL**").

THIRD: The name of the surviving corporation of the Merger shall be GeneDx Holding 2, Inc., which shall continue its existence as the surviving corporation under the name GeneDx Holding 2, Inc. (the "**Surviving Corporation**").

FOURTH: Upon the effectiveness of the filing of this Certificate of Merger, the Certificate of Incorporation of the Company, as amended to date, shall be amended and restated to read in its entirety by reason of the Merger herein certified as set forth in Exhibit A attached hereto and shall continue as the amended and restated Certificate of Incorporation of the Surviving Corporation until further amended in accordance with the provisions of the DGCL.

FIFTH: The executed Merger Agreement is on file at an office of the Surviving Corporation, at 333 Ludlow Street, North Tower, 8th Floor, Stamford, Connecticut, 06902.

SIXTH: A copy of the executed Merger Agreement will be furnished by the Surviving Corporation, on request and without cost, to any stockholder of any constituent corporation.

SEVENTH: The Merger shall become effective immediately upon filing of this Certificate of Merger with the Secretary of State of the State of Delaware in accordance with the provisions of Sections 103 and 251(c) of the DGCL.

[***Remainder of Page Intentionally Left Blank***]

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[4] To be included for each constituent corporation whose stockholders approve the merger by written consent.

IN WITNESS WHEREOF, GeneDx Holding 2, Inc. has caused this Certificate of Merger to be executed and acknowledged in its corporate name by its duly authorized officer as of the date first above written.

GENEDX HOLDING 2, INC.

By: _____
Name: _____
Title: _____

[SIGNATURE PAGE TO FIRST CERTIFICATE OF MERGER]

EXHIBIT A

AMENDED AND RESTATED CERTIFICATE OF INCORPORATION OF GENEDX HOLDING 2, INC.

ARTICLE I: NAME

The name of the corporation is **GeneDx Holding 2, Inc.** (the "***Corporation***").

ARTICLE II: AGENT FOR SERVICE OF PROCESS

The address of the registered office of the Corporation in the State of Delaware is 1209 Orange Street, City of Wilmington, County of New Castle, Delaware 19801. The name of its registered agent at such address is The Corporation Trust Company.

ARTICLE III: PURPOSE

The purpose of the Corporation is to engage in any lawful act or activity for which a corporation may be organized under the General Corporation Law of the State of Delaware (the "***DGCL***").

ARTICLE IV: AUTHORIZED STOCK

The total number of shares of stock that the Corporation has authority to issue is 100 shares, all of which shall be common stock, $0.0001 par value per share.

ARTICLE V: AMENDMENT OF BYLAWS

The board of directors of the Corporation shall have the power to adopt, amend or repeal bylaws of the corporation.

ARTICLE VI: VOTE BY BALLOT

Election of directors need not be by written ballot unless the bylaws of the Corporation shall so provide.

ARTICLE VII: DIRECTOR LIABILITY

To the fullest extent permitted by law, no director of the Corporation shall be personally liable for monetary damages for breach of fiduciary duty as a director. Without limiting the effect of the preceding sentence, if the DGCL is hereafter amended to authorize the further elimination or limitation of the liability of a director, then the liability of a director of the Corporation shall be eliminated or limited to the fullest extent permitted by the DGCL, as so amended.

Neither any amendment nor repeal of this Article VII, nor the adoption of any provision of this Certificate of Incorporation inconsistent with this Article VII, shall eliminate, reduce or otherwise adversely affect any limitation on the personal liability of a director of the Corporation existing at the time of such amendment, repeal or adoption of such an inconsistent provision.

EXHIBIT C-2
Form of Second Certificate of Merge

CERTIFICATE OF MERGER
FOR THE MERGER OF
GENEDX HOLDING 2, INC.
WITH AND INTO
ORION MERGER SUB II, LLC

[●], 2022

Pursuant to Section 264 of the
General Corporation Law of the State of Delaware
and Section 18-209 of the Delaware Limited Liability Company Act

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The undersigned limited liability company, duly formed and existing under and by virtue of the Delaware Limited Liability Company Act, does hereby certify that:

FIRST: The name, jurisdiction of formation or organization and type of entity of each of the constituent entities which is to merge are as follows:

Name	**Jurisdiction of Formation or Organization**	**Type of Entity**
GeneDx Holding 2, Inc.	Delaware	Corporation
Orion Merger Sub II, LLC	Delaware	Limited Liability Company

SECOND: An Agreement and Plan of Merger and Reorganization (as amended from time to time in accordance with its terms, the "Merger Agreement"), has been approved, adopted, certified, executed and acknowledged by Orion Merger Sub II, LLC, a Delaware limited liability company ("Merger Sub II"), and GeneDx Holding 2, Inc., a Delaware corporation ("Company"), in accordance with the provisions of § 18-209 of the Delaware Limited Liability Company Act and in accordance with the provisions of § 264 (and by the consent of the Company's stockholders in accordance with the provisions of Section 228) of the General Corporation Law of the State of Delaware.

THIRD: The name of the surviving limited liability company is Orion Merger Sub II, LLC which shall continue its existence as said surviving limited liability company under the name "GeneDx Holding 2, LLC" upon the effectiveness of the Merger (the "Surviving Entity").

FOURTH: Pursuant to § 18-209(c)(4) of the Delaware Limited Liability Company Act, the first paragraph of the Certificate of Formation Merger Sub II, relating to the name of Merger Sub II, is hereby amended to read in its entirety as follows: "The name of the limited liability company is GeneDx Holding 2, LLC." The Certificate of Formation of Merger Sub II, as amended by the immediately preceding sentence, shall continue to be the Certificate of Formation of the Surviving Entity until amended or changed pursuant to the provisions of the Delaware Limited Liability Company Act.

FIFTH: The executed Merger Agreement is on file at an office and place of business of the Surviving Entity, at 333 Ludlow Street, North Tower, 8th Floor, Stamford, Connecticut, 06902.

SIXTH: A copy of the executed Merger Agreement will be furnished by the Surviving Entity, on request and without cost, to any member of Merger Sub II or any stockholder of the Company.

SEVENTH: The Merger shall become effective upon filing of this Certificate of Merger with the Secretary of State of the State of Delaware.

[Remainder of Page Intentionally Left Blank]

IN WITNESS WHEREOF, Merger Sub II has caused this Certificate of Merger to be executed by its duly authorized person as of the date first above written.

ORION MERGER SUB II, LLC

By: _____
Name: Eric Schadt
Title: Authorized Person

[SIGNATURE PAGE TO SECOND CERTIFICATE OF MERGER]

ANNEX B

CERTIFICATE OF AMENDMENT
TO
THIRD AMENDED AND RESTATED CERTIFICATE OF INCORPORATION

THE UNDERSIGNED, being a duly appointed officer of Sema4 Holdings Corp. (the "Corporation"), a corporation organized and existing under and by virtue of the Delaware General Corporation Law of the State of Delaware (the "DGCL"), for the purpose of amending the Corporation's Third Amended and Restated Certificate of Incorporation, as amended to the date hereof (the "Certificate of Incorporation"), hereby certifies, pursuant to Sections 242 and 103 of the DGCL, as follows:

FIRST: The name of the Corporation is Sema4 Holdings Corp.

SECOND: The amendment to the Certificate of Incorporation set forth below was duly adopted in accordance with the provisions of Section 228 and 242 of the DGCL.

THIRD: The Certificate of Incorporation is hereby amended by striking out Section 1 of Article IV thereof, and by substituting in lieu thereof, the following new Section 1:

"1. Total Authorized. The total number of shares of all classes of stock that the Corporation has authority to issue is 1,001,000,000 shares, consisting of two classes: 1,000,000,000 shares of Class A Common Stock, $0.0001 par value per share (the "Common Stock"); and 1,000,000 shares of Preferred Stock, $0.0001 par value per share ("Preferred Stock")."

IN WITNESS WHEREOF, the undersigned has made and signed this Certificate of Amendment this [ ] day of [ ], 2022 and affirms the statements contained herein as true under penalty of perjury.

Sema4 Holdings Corp.

By: _____
Name: Daniel Clark
Title: Secretary

ANNEX C

200 West Street | New York, NY 10282-2198
Tel: 212-902-1000 | Fax: 212-902-3000

Goldman Sachs

PERSONAL AND CONFIDENTIAL

January 14, 2022

Board of Directors
Sema4 Holdings Corp.
333 Ludlow Street, North Tower, 8th Floor
Stamford, Connecticut 06902

Ladies and Gentlemen:

You have requested our opinion as to the fairness from a financial point of view to Sema4 Holdings Corp., a Delaware corporation (the "Company"), of the (i) $150 million in cash, as adjusted pursuant to Section 2.6 of the Agreement (as defined below) for any net working capital surplus or shortfall, certain indebtedness of Target (as defined below) and HoldCo2 (as defined below) and their subsidiaries as of the closing date and certain transaction expenses not paid prior to closing (collectively, the "Adjustments"), (ii) 80 million shares of Class A common stock, par value $0.0001 per share ("Company Common Stock"), of the Company and (iii) up to $150 million of contingent payments (each, a "Contingent Payment," and, collectively, the "Contingent Payments"), payable in cash or shares of Company Common Stock, based upon achievement of 2022 and 2023 revenue milestones, with the Contingent Payment based on the 2023 revenue milestone subject to potential acceleration in a change of control (collectively, the "Consideration") to be paid to acquire all of the issued and outstanding shares of capital stock of GeneDx, Inc. (or its successor, the "Target"), from OPKO Health, Inc. (the "Seller"), pursuant to the Agreement and Plan of Merger and Reorganization, dated as of January 14, 2022 (the "Agreement"), by and among the Company; the Target; the Seller, GeneDx Holding 2 ("HoldCo2"), which, immediately prior to closing, will be a wholly owned subsidiary of the Seller and own 100% of the capital stock of the Target; Orion Merger Sub I, a wholly owned subsidiary of the Company ("Merger Sub I"); and Orion Merger Sub II, a wholly owned subsidiary of the Company ("Merger Sub II"), under which Merger Sub I will merge with and into HoldCo2, and then HoldCo2 will merge with and into Merger Sub II.

Goldman Sachs & Co. LLC and its affiliates are engaged in advisory, underwriting and financing, principal investing, sales and trading, research, investment management and other financial and non-financial activities and services for various persons and entities. Goldman Sachs & Co. LLC and its affiliates and employees, and funds or other entities they manage or in which they invest or have other economic interests or with which they co-invest, may at any time purchase, sell, hold or vote long or short positions and investments in securities, derivatives, loans, commodities, currencies, credit default swaps and other financial instruments of the Company, the Seller and any of their respective affiliates and third parties, including the Icahn School of Medicine at Mount Sinai ("ISMMS"), a significant shareholder of the Company, and affiliates of Phillip Frost, a significant shareholder of the Seller, or any currency or commodity that may be involved in the transaction contemplated by the Agreement (the "Transaction"). We have acted as financial advisor to the Company in connection with, and have participated in certain of the negotiations leading to, the Transaction. We expect to receive fees for our services in connection with the Transaction, contingent upon consummation of the Transaction, and the Company has agreed to reimburse certain of our expenses arising, and indemnify us against certain liabilities that may arise, out of our engagement. We have provided certain financial advisory and/or underwriting services to the Company and/or its affiliates from time to time for which our Investment Banking Division has received, and may receive, compensation, including having acted as financial advisor to the Company in its de-SPAC transaction with CM Life Sciences, Inc. and as placement

agent in its July 2020 Series C private placement. We also have provided certain financial advisory and/or underwriting services to ISMMS and/or its affiliates (collectively, "Mount Sinai") from time to time for which our Investment Banking Division has received, and may receive, compensation, including having acted as co-manager in a 2020 $400 million fixed rate debt offering by Mount Sinai Health System, an affiliate of ISMMS. We may also in the future provide financial advisory and/or underwriting services to the Company, the Seller, Mount Sinai or Phillip Frost and their respective affiliates for which our Investment Banking Division may receive compensation.

In connection with this opinion, we have reviewed, among other things, the Agreement; the Company's Registration Statement on Form S-1, including the prospectus contained therein dated August 12, 2021; certain Quarterly Reports on Form 10-Q of the Company; certain other communications from the Company and the Seller to their respective shareholders; certain publicly available research analyst reports for the Company and the Seller; audited financial statements for the Target for the two fiscal years ended December 31, 2020; unaudited financial statements for the Target for the twelve month period ended December 31, 2021; certain internal financial analyses and forecasts for the Target as prepared by the Seller; certain internal financial analyses and forecasts for the Company and certain internal financial analyses and forecasts for the Target, in each case, as prepared by the management of the Company and approved for our use by the Company (the "Forecasts"), including operating synergies projected to result from the Transaction, as prepared by the management of the Company and approved for our use by the Company (the "Synergies"); and certain estimates as to the amount of the Adjustments and the Contingent Payments, in each case, as prepared by the management of the Company and approved for our use by the Company (the "Estimates"). We have also held discussions with members of the senior managements of the Company, the Target and the Seller regarding their assessment of the strategic rationale for, and the potential benefits of, the Transaction and the past and current business operations, financial condition and future prospects of the Target and the Company; reviewed the reported price and trading activity for the Company Common Stock; compared certain financial information for the Target and certain financial and stock market information for the Company with similar financial and stock market information for certain other companies the securities of which are publicly traded; and performed such other studies and analyses, and considered such other factors, as we deemed appropriate.

For purposes of rendering this opinion, we have, with your consent, relied upon and assumed the accuracy and completeness of all of the financial, legal, regulatory, tax, accounting and other information provided to, discussed with or reviewed by, us, without assuming any responsibility for independent verification thereof. In that regard, we have assumed with your consent that the Forecasts, including the Synergies, and the Estimates have been reasonably prepared on a basis reflecting the best currently available estimates and judgments of the management of the Company. We have not made an independent evaluation or appraisal of the assets and liabilities (including any contingent, derivative or other off-balance-sheet assets and liabilities) of the Company or the Seller or any of their respective subsidiaries, including the Target, and we have not been furnished with any such evaluation or appraisal. We have assumed that all governmental, regulatory or other consents and approvals necessary for the consummation of the Transaction will be obtained without any adverse effect on the Company or the Target or on the expected benefits of the Transaction in any way meaningful to our analysis. We also have assumed that the Transaction will be consummated on the terms set forth in the Agreement, without the waiver or modification of any term or condition the effect of which would be in any way meaningful to our analysis.

Our opinion does not address the underlying business decision of the Company to engage in the Transaction, or the relative merits of the Transaction as compared to any strategic alternatives that may be available to the Company; nor does it address any legal, regulatory, tax or accounting matters. This opinion addresses only the fairness from a financial point of view to the Company, as of the date hereof, of the Consideration to be paid by the Company to acquire all of the issued and outstanding shares of capital stock of the Target pursuant to the Agreement. We do not express any view on, and our opinion does not address, any other term or aspect of the Agreement or Transaction or any term or aspect of any other agreement or instrument contemplated by the Agreement or entered into or amended in connection with the Transaction, including any allocation of the Consideration, any ongoing obligations of the Company or the Seller, any private placement of Company Common Stock, the Pre-Closing Restructuring (as defined in the Agreement), the fairness of the Transaction to, or any consideration received in connection therewith by, the holders of any class of securities, creditors or other constituencies of the Company; nor as to the fairness of the amount or nature of any compensation to be paid or payable to any of the officers, directors or employees of the Company, the Target or the Seller, or any class of such persons in connection with the Transaction, whether relative

to the Consideration to be paid by the Company for all of the issued and outstanding shares of capital stock of the Target pursuant to the Agreement or otherwise. We are not expressing any opinion as to the prices at which shares of Company Common Stock will trade at any time, as to the potential effects of volatility in the credit, financial and stock markets on the Company, the Target or the Seller or the Transaction or as to the impact of the Transaction on the solvency or viability of the Company, the Target or the Seller or the ability of the Company, the Target or the Seller to pay their respective obligations when they come due. Our opinion is necessarily based on economic, monetary, market and other conditions as in effect on, and the information made available to us as of, the date hereof, and we assume no responsibility for updating, revising or reaffirming this opinion based on circumstances, developments or events occurring after the date hereof. Our advisory services and the opinion expressed herein are provided for the information and assistance of the Board of Directors of the Company in connection with its consideration of the Transaction, and such opinion does not constitute a recommendation as to how any holder of Company Common Stock should vote with respect to such Transaction or any other matter. This opinion has been approved by a fairness committee of Goldman Sachs & Co. LLC.

Based upon and subject to the foregoing, it is our opinion that, as of the date hereof, the Consideration to be paid by the Company for all of the issued and outstanding shares of capital stock of the Target pursuant to the Agreement is fair from a financial point of view to the Company.

Very truly yours,

/s/ Goldman Sachs & Co. LLC

(GOLDMAN SACHS & CO LLC)

ANNEX D

SUBSCRIPTION AGREEMENT

This SUBSCRIPTION AGREEMENT (this "Subscription Agreement") is entered into on January 14, 2022, by and between Sema4 Holdings Corp., a Delaware corporation (formerly, CM Life Sciences, Inc.) (the "Issuer"), and the subscriber party or parties set forth on the signature page hereto ("Subscriber").

WHEREAS, the Issuer is concurrently with or immediately following the execution and delivery hereof entering into that certain Agreement and Plan of Merger and Reorganization (as amended or modified, the "Merger Agreement"; capitalized terms used herein without definition shall have the meanings ascribed thereto in the Merger Agreement), by and among the Issuer, Orion Merger Sub I, Inc., a Delaware corporation ("Merger Sub I"), Orion Merger Sub II, LLC, a Delaware limited liability company ("Merger Sub II" and together with Merger Sub I, the "Merger Subs"), GeneDx Holding 2, Inc., a Delaware Corporation ("Holdco2"), OPKO Health, Inc., a Delaware corporation (the "Seller"), and GeneDx, Inc., a New Jersey corporation (the "Company"), pursuant to which, among other transactions, the Issuer will acquire the Company from the Seller, on the terms and conditions set forth therein (the "Transactions");

WHEREAS, in connection with the Transactions and subject to the terms and conditions set forth herein, Subscriber desires to subscribe for and purchase from the Issuer that number of shares of the Issuer's Class A common stock, par value $0.0001 per share (the "Class A Shares"), as set forth on the signature page hereto (the "Acquired Shares"), for a purchase price of $4.00 per share (the "Per Share Price") and an aggregate purchase price set forth on the signature page hereto (the "Purchase Price"), and the Issuer desires to issue and sell to Subscriber the Acquired Shares in consideration of the payment of the Purchase Price by or on behalf of Subscriber to the Issuer on or prior to the Closing (as defined below);

WHEREAS, the Issuer and Subscriber are executing and delivering this Subscription Agreement in reliance upon the exemption from securities registration afforded by Section 4(a)(2) of the Securities Act of 1933, as amended (the "Securities Act");

WHEREAS, in connection with the Transactions, certain other "qualified institutional buyers" (as defined in Rule 144A under the Securities Act) or institutional "accredited investors" (as such term is defined in Rule 501 under the Securities Act) (each an "Other Subscriber"), have (severally and not jointly) entered into separate subscription agreements with the Issuer that are substantially similar to this Subscription Agreement (the "Other Subscription Agreements"), pursuant to which such investors have agreed to purchase Class A Shares on the Closing Date (as defined below) at the same Per Share Price as Subscriber (the "Other Acquired Shares");

WHEREAS, the aggregate amount of Class A Shares to be sold by the Issuer pursuant to this Subscription Agreement and the Other Subscription Agreements equals 50 million Class A Shares;

WHEREAS, the aggregate amount of gross proceeds to the Issuer in connection with the purchase and sale of the Acquired Shares and the Other Acquired Shares equals $200 million; and

WHEREAS, pursuant to the support agreements (in the form attached as Exhibit B to the Merger Agreement) (the "Support Agreements") and certain of the Other Subscription Agreements, the Issuer has obtained from existing stockholders of the Issuer restrictions on transfer of, and voting obligations in respect of, all or a percentage of the Class A Shares held by such stockholders (the "Commitments"), as an inducement to Seller and the Issuer to enter into the Merger Agreement and to consummate the Transactions.

NOW, THEREFORE, in consideration of the foregoing and the mutual representations, warranties and covenants, and subject to the conditions, herein contained, and intending to be legally bound hereby, the parties hereto hereby agree as follows:

1. Subscription. Subject to the terms and conditions hereof, Subscriber hereby agrees to subscribe for and purchase, and the Issuer hereby agrees to issue and sell to Subscriber, upon the payment of the Purchase Price, the Acquired Shares (such subscription and issuance, the "Subscription").

2. Closing.

(a) The closing of the Subscription contemplated hereby (the "Closing") is contingent upon the substantially concurrent consummation of the Transactions and shall occur immediately prior thereto. Not less than five (5) business days prior to the scheduled closing date of the Transactions (the "Closing Date"), the Issuer shall provide written notice to Subscriber (the "Closing Notice") of such Closing Date. Subscriber shall deliver to the Issuer no later than one (1) business day before the Closing Date (as specified in the Closing Notice or such other date as otherwise agreed to by the Issuer and Subscriber, the "Purchase Price Payment Date") the Purchase

Price for the Acquired Shares by wire transfer of U.S. dollars in immediately available funds (i) to the account specified by the Issuer in the Closing Notice, to be held in a third-party escrow account (the "Escrow Account") designated by the Issuer prior to the Closing Date for the benefit of Subscriber until the Closing Date or (ii) in the case of a Subscriber that is (1) an "investment company" registered under the Investment Company Act of 1940, as amended, (2) that is advised by an investment adviser subject to regulation under the Investment Advisors Act of 1940, as amended, or (3) that its internal compliance policies and procedures so require it, to an account specified by the Issuer otherwise mutually agreed by Subscriber and the Issuer ("Alternative Settlement Procedures"). For the avoidance of doubt, mutually agreeable Alternative Settlement Procedures shall include, without limitation, Subscriber delivering to the Issuer on the Closing Date the Purchase Price for the Acquired Shares by wire transfer of U.S. dollars in immediately available funds to the account specified by the Issuer in the Closing Notice against delivery to the undersigned of the Acquired Shares in book entry form as set forth in the following sentence. On the Closing Date, the Issuer shall deliver to Subscriber (1) the Acquired Shares in book entry form (or, if requested by Subscriber in writing in advance of the Closing, in certificated form, duly executed on behalf of the Issuer and countersigned by the Issuer's transfer agent (the "Transfer Agent")), free and clear of any liens or other restrictions whatsoever (other than those arising under state or federal securities laws), in the name of Subscriber (or its nominee in accordance with its delivery instructions) or to a custodian designated by Subscriber, as applicable, and (2) a copy of the records of the Transfer Agent showing Subscriber as the owner of the Acquired Shares on and as of the Closing Date (the "Subscriber's Deliveries"). Unless otherwise provided pursuant to Alternative Settlement Procedures, upon the transfer of the Subscriber's Deliveries by the Issuer to Subscriber (or its nominee in accordance with its delivery instructions), the Issuer shall, or shall cause the escrow agent for the Escrow Account to, on the Closing Date, release the Purchase Price from the Escrow Account to the Issuer. In the event the closing of the Transactions does not occur within two (2) business days of the Closing Date specified in the Closing Notice, unless otherwise agreed by the Issuer and Subscriber, the Issuer shall, or shall cause the escrow agent for the Escrow Account to, promptly (but not later than two (2) business days thereafter) return the Purchase Price to Subscriber by wire transfer of U.S. dollars in immediately available funds to the account specified by Subscriber, and any book entries or stock certificates shall be deemed cancelled.

(b) The Closing shall be subject to the satisfaction, or valid waiver by each of the parties hereto, of the conditions that, on the Closing Date:

(i) solely with respect to Subscriber, (A) the representations and warranties made by the Issuer (other than the representations and warranties set forth in Section 3(b), Section 3(c) and Section 3(g)) in this Subscription Agreement shall be true and correct as of the Closing Date (other than those representations and warranties expressly made as of an earlier date, which shall be true and correct as of such date), after giving effect to the consummation of the Transactions, except, in the case of this clause (B), for any failure of any such representation and warranty to be so true and correct (without giving effect to any qualification by materiality or Material Adverse Effect (as defined below) contained therein) that would not, individually or in the aggregate, reasonably be expected to have a Material Adverse Effect and (B) the representations and warranties made by the Issuer set forth in Section 3(b), Section 3(c) and Section 3(g) shall be true and correct in all respects as of the Closing Date (other than those representations and warranties expressly made as of an earlier date, which shall be true and correct in all respects as of such date and, solely in the case of Section 3(g), other than de minimis inaccuracies), in each case without giving effect to the consummation of the Transactions;

(ii) solely with respect to the Issuer, the representations and warranties made by Subscriber in this Subscription Agreement shall be true and correct in all material respects as of the Closing Date (other than those representations and warranties expressly made as of an earlier date, which shall be true and correct in all material respects as of such date, and other than those representations and warranties that are qualified as to materiality or Material Adverse Effect, which shall be true and correct in all respects as of the Closing Date), in each case without giving effect to the consummation of the Transactions;

(iii) solely with respect to the Issuer, Subscriber shall have delivered the Purchase Price in compliance with the terms of this Subscription Agreement;

(iv) no governmental authority having applicable jurisdiction shall have enacted, issued, promulgated, enforced or entered any material judgment, order, law, rule or regulation (whether temporary, preliminary or permanent) which is then in effect and has the effect of restraining, enjoining or otherwise prohibiting or making illegal the consummation of the transactions contemplated by this Subscription Agreement;

(v) no suspension of the qualification of the Class A Shares for offering or sale or trading in any applicable jurisdiction, no suspension or removal from listing of the Acquired Shares on The Nasdaq Global Select Market ("Nasdaq") and no initiation or threatening of any proceedings for any of such purposes or delisting, shall have occurred;

(vi) the Issuer's stockholders shall have approved the issuance of the Acquired Shares and Other Acquired Shares as and if required by Nasdaq rules;

(vii) solely with respect to Subscriber, the Issuer shall have filed with Nasdaq a true and complete Notification Form: Listing of Additional Shares covering the Acquired Shares and Other Acquired Shares;

(viii) all conditions precedent to the closing of the Transactions set forth in the Merger Agreement shall have been satisfied or waived (as determined by the Merger Agreement and related documentation) (other than those conditions that may only be satisfied at the closing of the Transactions, but subject to satisfaction or waiver by such party of such conditions as of the closing of the Transactions), and the closing of the Transactions shall be scheduled to occur substantially concurrently with or immediately following the Closing;

(ix) solely with respect to Subscriber, there shall have been no amendment, waiver or modification to the Other Subscription Agreements that materially benefits any Other Subscribers thereunder unless the Subscriber has been offered substantially the same benefits; and

(x) solely with respect to Subscriber, there has been no amendment, modification or supplement to the Merger Agreement that increases the aggregate consideration payable by the Issuer by more than 5% unless Subscriber has consented to such amendment, modification or supplement in writing.

(c) In addition to the conditions set forth in Section 2(b), the obligation of Subscriber to consummate the Closing shall be subject to the satisfaction or valid waiver by Subscriber of the condition that, on the Closing Date, the Issuer shall have performed, satisfied and complied with the covenants, agreements and conditions required by this Subscription Agreement to be performed, satisfied or complied with by the Issuer at or prior to the Closing, except where the failure of such performance or compliance would not reasonably be expected to prevent, materially delay, or materially impair the ability of the Issuer to consummate the Closing.

(d) Upon the terms and subject to the conditions set forth in this Subscription Agreement, Subscriber and the Issuer shall use commercially reasonable efforts to take, or cause to be taken, all actions, and to do, or cause to be done, and to reasonably assist and cooperate with the other party hereto in doing, all things reasonably necessary, proper or advisable under applicable legal requirements to consummate and make effective, in the most expeditious manner practicable, the transactions contemplated by this Subscription Agreement.

3. Issuer Representations and Warranties. The Issuer represents and warrants to Subscriber that:

(a) The Issuer has been duly incorporated and is validly existing as a corporation in good standing under the laws of the State of Delaware, with corporate power and authority to own, lease and operate its properties and conduct its business as presently conducted and to enter into, deliver and perform its obligations under this Subscription Agreement.

(b) The Acquired Shares have been duly authorized by the Issuer and, when issued and delivered to Subscriber against full payment for the Acquired Shares in accordance with the terms of this Subscription Agreement, the Acquired Shares will be validly issued, fully paid and non-assessable, free and clear of all liens or other restrictions except as otherwise stated herein and will not have been issued in violation of or subject to any preemptive or similar rights created under the Issuer's certificate of incorporation, as amended concurrently with the Closing, and bylaws or under the laws of the State of Delaware or otherwise.

(c) This Subscription Agreement, the Merger Agreement and the Other Subscription Agreements (collectively, the "Transaction Documents") have been duly authorized, executed and delivered by the Issuer and, assuming that the Transaction Documents have been duly authorized, executed and delivered by the other parties thereto, are valid and binding obligations of the Issuer, and are enforceable against it in accordance with their terms, except as may be limited or otherwise affected by (i) bankruptcy, insolvency, reorganization, fraudulent conveyance, moratorium or other laws relating to or affecting the rights of creditors generally, and (ii) principles of equity, whether considered at law or equity.

(d) The execution, delivery and performance of this Subscription Agreement and the other Transaction Documents, including the issuance and sale of the Acquired Shares and the consummation of the Transactions and other transactions contemplated hereby and thereby, will not conflict with or result in a breach or violation of any of the terms or provisions of, or constitute a default under, or result in the creation or imposition of any lien, charge or encumbrance upon any of the property or assets of the Issuer pursuant to the terms of (i) any indenture, mortgage, deed of trust, loan agreement, lease, license or other agreement or instrument to which the Issuer or its subsidiaries is a party or by which the Issuer or its subsidiaries is bound or to which any of the property or assets of the Issuer or its subsidiaries is subject; (ii) the organizational documents of the Issuer; or (iii) any statute or any judgment, order, rule or regulation of any court or governmental agency, taxing authority or regulatory body, domestic or foreign, having jurisdiction over the Issuer or its subsidiaries or any of its or their properties, that, in the case of clause (i) or (iii), would reasonably be expected to have a Material Adverse Effect. For purposes of this Subscription Agreement, a "Material Adverse Effect" means any event, change, condition, circumstance, effect,

development, occurrence or state of facts (whether specific to the applicable party or generally applicable to multiple parties) or other matter (*"**Effect**"*) that, individually or in the aggregate with all other Effects, has, or would reasonably be expected to have, a material adverse effect on or give rise to a material adverse change to (i) the condition (financial or otherwise), business, results of operations, assets or liabilities of the Issuer and its subsidiaries or (ii) the ability of the Issuer to perform its obligations under this Subscription Agreement; provided that no Effect attributable to any of the following shall be taken into account in determining the existence of a Material Adverse Effect solely for purposes of clause (i) above: (A) conditions affecting the industry, financial markets or securities markets in, or the economy as a whole of, the United States, (B) changes in applicable Law (as defined in the Merger Agreement) or Accounting Standards (as defined in the Merger Agreement) (or, in each case, any interpretation thereof) after the Closing Date, or (C) earthquakes, hostilities, acts of war, sabotage or terrorism or military actions, epidemic, public health event or pandemic (including COVID-19 (as defined in the Merger Agreement) and any worsening thereof (including any COVID-19 Response (as defined in the Merger Agreement))), except, in the case of the forgoing clauses (A), (B) and (C), to the extent such conditions, changes or events disproportionately affect the Issuer and its subsidiaries relative to similarly situated industry participants (in which case the incremental disproportionate impact or impacts may be taken into account in determining whether there has been a Material Adverse Effect).

(e) The Issuer and its subsidiaries are not in default or violation (and no event has occurred which, with notice or the lapse of time or both, would constitute a default or violation) of any term, condition or provision of (i) the organizational documents of the Issuer, (ii) any loan or credit agreement, guarantee, note, bond, mortgage, indenture, lease or other agreement, permit, franchise or license to which, as of the date of this Subscription Agreement, the Issuer or its subsidiaries is a party or by which the Issuer's or its subsidiaries' properties or assets are bound or (iii) any statute or any judgment, order, rule or regulation of any court or governmental agency, taxing authority or regulatory body, domestic or foreign, having jurisdiction over the Issuer or its subsidiaries or any of its or their properties, except, in the case of clauses (ii) and (iii), for defaults or violations that have not had and would not reasonably be expected to have, individually or in the aggregate, a Material Adverse Effect.

(f) The Issuer is not required to obtain any consent, waiver, authorization or order of, give any notice to, or make any filing or registration with, any court or other federal, state, local or other governmental authority, self-regulatory organization or other person in connection with the execution, delivery and performance by the Issuer of this Subscription Agreement or the Transactions (including, without limitation, the issuance of the Acquired Shares), other than (i) the filing with the Securities and Exchange Commission (the "Commission") of the Registration Statement (as defined below), (ii) filings required by applicable state securities laws, (iii) the filing of notification under the Hart-Scott-Rodino Antitrust Improvements Act of 1976, if applicable; (iv) those required by Nasdaq, including with respect to obtaining approval of the Issuer's stockholders; (v) those that will be obtained on or prior to the Closing, (vi) any filing, the failure of which to obtain would not reasonably be expected to have, individually or in the aggregate, a Material Adverse Effect; (vii) as set forth in the Merger Agreement; and (viii) the filing of a Notice of Exempt Offering of Securities on Form D with the Commission under Regulation D of the Securities Act.

(g) As of the date of this Subscription Agreement, the authorized capital stock of the Issuer consists of (i) 1,000,000 shares of preferred stock, par value $0.0001 per share ("Preferred Stock") and (ii) 380,000,000 Class A Shares. As of December 31, 2021, (i) no shares of Preferred Stock are issued and outstanding, (ii) 242,578,824 Class A Shares are issued and outstanding, (iii) 14,758,305 redeemable warrants and 7,236,667 private placement warrants are outstanding, and (iv) (A) options to purchase 33,354,727 Class A shares are outstanding and (B) restricted stock units ("RSUs") which may be settled for 12,600,859 shares of Class A Shares are outstanding. All (i) issued and outstanding Class A Shares have been duly authorized and validly issued, are fully paid and are non-assessable and are not subject to and were not issued in violation of any preemptive rights, (ii) outstanding warrants have been duly authorized and validly issued, are fully paid and are not subject to and were not issued in violation of any preemptive rights and (iii) outstanding options and RSUs have been duly authorized and validly issued and are not subject to and were not issued in violation of any preemptive rights. Except (i) as set forth above, (ii) for any Class A Shares and RSUs that may be issued pursuant to Article III of the Agreement and Plan of Merger, dated as of February 9, 2021 (as amended, the "Business Combination Agreement"), by and among the Issuer, S-IV Sub, Inc. and Mount Sinai Genomics, Inc. d/b/a Sema4 ("Legacy Sema4"), (iii) for any equity awards or purchase rights that may be issued pursuant to the Issuer's 2021 Equity Incentive Plan or the Issuer's 2021 Employee Stock Purchase Plan and (iv) pursuant to the Other Subscription Agreements and the Merger Agreement, there are no outstanding options, warrants or other rights to subscribe for, purchase or acquire from the Issuer any Class A Shares or other equity interests in the Issuer, or securities convertible into or exchangeable or exercisable for such equity interests. Other than Sema4 OpCo, Inc. and the Merger Subs and as contemplated by the Merger Agreement, the Issuer has no subsidiaries and does not own, directly or indirectly, interests or investments (whether equity or debt) in any person, whether incorporated or unincorporated. There are no stockholder agreements, voting trusts or other agreements or understandings to which the Issuer is a party or by which it is bound relating to the voting of any securities of the Issuer, other than pursuant to this Subscription Agreement and the Other Subscription

Agreements, the Support Agreements and the Shareholder Agreements. Except as disclosed in the SEC Reports, the Issuer has no outstanding indebtedness.

(h) The Issuer and its subsidiaries are in compliance with all applicable laws and have not received any written communication from a governmental entity that alleges that the Issuer or any of its subsidiaries is not in compliance with or is in default or violation of any applicable law, except where such non-compliance, default or violation would not, individually or in the aggregate, be reasonably likely to have a Material Adverse Effect.

(i) The issued and outstanding Class A Shares are registered pursuant to Section 12(b) of the Securities Exchange Act of 1934, as amended (the "Exchange Act"), and are listed for trading on Nasdaq under the symbol "SMFR". There is no suit, action, proceeding or investigation pending or, to the knowledge of the Issuer, threatened against the Issuer by Nasdaq or the Commission with respect to any intention by such entity to deregister the Class A Shares or prohibit or terminate the listing of the Class A Shares on Nasdaq, excluding, for the purposes of clarity, the customary ongoing review by Nasdaq of the Issuer's listing of additional shares application in connection with the Transactions. The Issuer has taken no action that is designed to terminate or is reasonably expected to result in the termination of the registration of the Class A Shares under the Exchange Act or the listing of the Class A Shares on Nasdaq and is in compliance in all material respects with the listing requirements of Nasdaq.

(j) Assuming the accuracy of Subscriber's representations and warranties set forth in Section 4 of this Subscription Agreement and each of the Other Subscription Agreements of the Other Subscribers under their respective Other Subscription Agreement, no registration under the Securities Act is required for the offer and sale of the Acquired Shares or the Other Acquired Shares by the Issuer to Subscriber and to the Other Subscribers, as appropriate, in the manner contemplated by this Subscription Agreement and the Other Subscription Agreements. The Acquired Shares and the Other Acquired Shares (i) were not offered by any form of general solicitation or general advertising and (ii) are not being offered in a manner involving a public offering under, or in a distribution in violation of, the Securities Act, or any state securities laws.

(k) Each report, statement and form (including exhibits and other information incorporated therein) filed by the Issuer with the Commission under Sections 13(a), 14(a) or 15(d) of the Exchange Act or filed pursuant to the Securities Act since July 22, 2021 (the "SEC Reports") when filed complied in all material respects with the requirements of the Securities Act and the Exchange Act and the rules and regulations of the Commission promulgated thereunder. None of the SEC Reports filed under the Exchange Act (except to the extent that information contained in any SEC Report has been superseded by a later timely filed SEC Report) contained, when filed, any untrue statement of a material fact or omitted to state a material fact required to be stated therein or necessary to make the statements therein not misleading, in the case of any SEC Report that is a registration statement, or included, when filed, any untrue statement of a material fact or omitted to state a material fact necessary in order to make the statements therein, in light of the circumstances under which they were made, not misleading, in the case of all other SEC Reports; provided, that, with respect to any information related to the Company included in the proxy statement to be filed by the Issuer with respect to the Transactions, included in any other SEC Report or filed as an exhibit thereto, the representation and warranty in this sentence is made to the Issuer's knowledge. The Issuer has timely filed each SEC Report that the Issuer was required to file with the Commission since July 22, 2021. There are no material outstanding or unresolved comments in comment letters from the Commission staff with respect to any of the Issuer's SEC Reports. In addition, the Issuer has made available to Subscriber (including via the Commission's EDGAR system) a copy of the SEC Reports since July 22, 2021. Except as disclosed in the SEC Reports, each of the Financial Statements (including, in each case, any notes thereto) contained in the SEC Reports was prepared in accordance with U.S. generally accepted accounting principles applied on a consistent basis throughout the periods indicated (except as may be indicated in the notes thereto or, in the case of unaudited statements, as permitted by Form 10-Q of the Commission), each complied in all material respects with the rules and regulations of the Commission with respect thereto as in effect at the time of filing and each fairly presents, in all material respects, the financial position, results of operations and cash flows of the Issuer or Legacy Sema4, as applicable, as at the respective dates thereof and for the respective periods indicated therein. For purposes of this Subscription Agreement, the "Financial Statements" means, to the extent contained in the SEC Reports, (i) the audited balance sheets of Legacy Sema4 as of December 31, 2020 and 2019, the related statements of operations and comprehensive loss, redeemable convertible preferred stock and stockholders' deficit and cash flows for each of the three years in the period ended December 31, 2020, and the related notes, (ii) the unaudited condensed financial statements of Legacy Sema4 as of March 31, 2021 and for the three months ended March 31, 2021 and 2020 and the related notes, (iii) the unaudited condensed financial statements of Legacy Sema4 as of June 30, 2021 and for the three and six months ended June 30, 2021 and 2020 and the related notes, and (iv) the unaudited condensed consolidated financial statements of the Issuer as of September 30, 2021 and for the three months and nine months ended September 30, 2021 and 2020 and the related notes.

(l) Except for such matters as have not had and would not reasonably be expected to have, individually or in the aggregate, a Material Adverse Effect, there is no (i) investigation, action, suit, claim or other

proceeding, in each case by or before any governmental authority pending, or, to the knowledge of the Issuer, threatened against the Issuer or its subsidiaries or (ii) judgment, decree, injunction, ruling or order of any governmental entity outstanding against the Issuer or its subsidiaries.

(m) Except for placement fees payable to the Placement Agents (as defined below), the Issuer has not paid, and is not obligated to pay, any brokerage, finder's or other fee or commission in connection with its issuance and sale of the Acquired Shares, including, for the avoidance of doubt, any fee or commission payable to any stockholder or affiliate of the Issuer and such relationships shall not have any liability on Subscriber. The Issuer is solely responsible for the payment of any fees, costs, expenses and commissions of the Placement Agents.

(n) Except as provided in this Subscription Agreement and the Other Subscription Agreements, none of the Issuer, its subsidiaries or any of their affiliates, nor any person acting on their behalf has, directly or indirectly, made any offers or sales of any security or solicited any offers to buy any security, under circumstances that would require registration of the issuance of any of the Acquired Shares under the Securities Act, whether through integration with prior offerings pursuant to Rule 502(a) of the Securities Act or otherwise.

(o) Neither the Issuer nor any of its subsidiaries has taken any steps to seek protection pursuant to any law or statute relating to bankruptcy, insolvency, reorganization, receivership, liquidation, administration or winding up or failed to pay its debts when due, nor does the Issuer or any subsidiary have any knowledge or reason to believe that any of their respective creditors intend to initiate involuntary bankruptcy proceedings or seek to commence an administration.

(p) The Issuer has not entered into any side letter or similar agreement with any Other Subscriber relating to such Other Subscriber's purchase of its respective Other Acquired Shares other than the Other Subscription Agreements to the extent that an Other Subscriber is party thereto, or any side letter or similar agreement unrelated to such Other Acquired Shares or whose terms (including as to restriction on transfer of, and voting obligations in respect of, securities held by such other Subscriber) are not materially more advantageous to such Other Subscriber than to Subscriber hereunder, other than the Support Agreements, the Shareholder Agreements, any separate lock-up agreements entered into with the Issuer in connection with Other Subscribers' evaluation of the transactions contemplated by the Other Subscription Agreements (if applicable) ("Other Lock-Ups"), the Amended and Restated Registration Rights Agreement, dated as of July 22, 2021, among the Issuer, CMLS Holdings LLC and the other holders party thereto (the "Registration Rights Agreement") or the subscription agreements, dated as of February 9, 2021, between the Issuer and the respective subscribers party thereto, in each case, to the extent that an Other Subscriber is a party thereto. To the extent Subscriber has entered into a separate lock-up agreement with the Issuer in connection with Subscriber's evaluation of the transactions contemplated by this Subscription Agreement, the terms of any Other Lock-Up are not materially more advantageous to any Other Subscriber party thereto than to Subscriber under its lock-up agreement with the Issuer.

(q) The Issuer is not, and immediately after receipt of payment for the Acquired Shares, and consummation of the Transactions, will not be, an "investment company" within the meaning of the Investment Company Act of 1940, as amended.

(r) There has been no action taken by the Issuer, or, to the knowledge of the Issuer, any officer, director, equityholder, manager, employee, agent or representative of the Issuer, in each case, acting on behalf of the Issuer, in violation of any applicable Anti-Corruption Laws (as herein defined), (i) the Issuer has not been convicted of violating any Anti-Corruption Laws or subjected to any investigation by a governmental authority for violation of any applicable Anti-Corruption Laws, (ii) the Issuer has not conducted or initiated any internal investigation or made a voluntary, directed, or involuntary disclosure to any governmental authority regarding any alleged act or omission arising under or relating to any noncompliance with any Anti-Corruption Laws and (iii) the Issuer has not received any written notice or citation from a governmental authority for any actual or potential noncompliance with any applicable Anti-Corruption Laws. As used herein, "Anti-Corruption Laws" means any applicable laws relating to corruption and bribery, including the U.S. Foreign Corrupt Practices Act of 1977 (as amended) ("FCPA"), the UK Bribery Act 2010, and any similar law that prohibits bribery or corruption.

(s) The Class A Shares are eligible for clearing through The Depository Trust Company (the "DTC"), through its Deposit/Withdrawal At Custodian (DWAC) system, and the Issuer is eligible and participating in the Direct Registration System (DRS) of DTC with respect to the Class A Shares. The Transfer Agent is a participant in DTC's Fast Automated Securities Transfer Program.

(t) The Issuer acknowledges that there have been no, and in issuing the Acquired Shares the Issuer is not relying on any, representations, warranties, covenants and agreements made to the Issuer by Subscriber, any of its officers, directors or representatives or any other person or entity, expressly or by implication, other than those representations, warranties, covenants and agreements expressly stated in this Subscription Agreement.

(u) Following the Closing, the Acquired Shares will not be subject to any Transfer Restriction. The term "Transfer Restriction" means any condition to or restriction on the ability of Subscriber to pledge, sell, assign or otherwise transfer the Acquired Shares under any organizational document or agreement of, by or with the Issuer, but excluding the restrictions on transfer described in Section 4(g) hereof with respect to the status of the Acquired Shares as "restricted securities" pending their registration for resale under the Securities Act in accordance with the terms of this Subscription Agreement.

(v) No Other Subscription Agreement (excluding any Commitments agreed to therein) includes terms and conditions that are materially more advantageous to any such Other Subscriber than Subscriber hereunder, and the terms of such Other Subscription Agreements (excluding any such Commitments) have not been amended or modified following the date of this Subscription Agreement in any way that are materially more advantageous to any such Other Subscriber than Subscriber hereunder. Each Other Subscriber that alone or together with its Affiliates beneficially owns five percent (5%) of the outstanding Class A Shares as of the date of this Subscription Agreement is subject to Other Commitments, either pursuant to a Support Agreement or an Other Subscription Agreement. To the extent Subscriber has entered into a Support Agreement, no other Commitments include terms and conditions that are materially more advantageous to any stockholder of the Issuer party thereto than Subscriber under its Support Agreement (it being understood that certain Other Commitments apply to all the Class A Shares held by the applicable stockholder and certain Other Commitments apply to 33% of the Class A Shares held by the applicable stockholder), and the terms of such other Commitments have not been amended, released, waived or otherwise modified following the date of this Subscription Agreement in any way that are materially more advantageous to any such other stockholder than Subscriber under its Support Agreement.

4. Subscriber Representations and Warranties. Subscriber represents and warrants that:

(a) If Subscriber is not an individual, Subscriber has been duly formed or incorporated and is validly existing and in good standing under the laws of its jurisdiction of incorporation or formation, with power and authority to enter into, deliver and perform its obligations under this Subscription Agreement. If Subscriber is an individual, Subscriber has the authority to enter into, deliver and perform its obligations under this Subscription Agreement.

(b) This Subscription Agreement has been duly authorized, executed and delivered by Subscriber and, assuming that this Subscription Agreement has been duly authorized, executed and delivered by the Issuer, this Subscription Agreement is the valid and binding obligation of Subscriber, enforceable against Subscriber in accordance with its terms, except as may be limited or otherwise affected by (i) bankruptcy, insolvency, reorganization, fraudulent conveyance, moratorium or other laws relating to or affecting the rights of creditors generally, and (ii) principles of equity, whether considered at law or equity.

(c) The execution, delivery and performance by Subscriber of this Subscription Agreement, including the consummation of the transactions contemplated hereby, have been duly authorized and approved by all necessary action. Subscriber acknowledges that Subscriber shall be responsible for any of Subscriber's tax liabilities that may arise as a result of the transactions contemplated by this Subscription Agreement, and that that none of the Issuer, the Seller or the Company, or any of their respective affiliates, have provided any tax advice or any other representation or guarantee, whether written or oral, regarding the tax consequences of the transactions contemplated by this Subscription Agreement.

(d) The execution, delivery and performance by Subscriber of this Subscription Agreement, including the consummation of the transactions contemplated hereby will not conflict with or result in a breach or violation of any of the terms or provisions of, or constitute a default under, or result in the creation or imposition of any lien, charge or encumbrance upon any of the property or assets of Subscriber or any of its subsidiaries pursuant to the terms of (i) any indenture, mortgage, deed of trust, loan agreement, lease, license or other agreement or instrument to which Subscriber or any of its subsidiaries is a party or by which Subscriber or any of its subsidiaries is bound or to which any of the property or assets of Subscriber or any of its subsidiaries is subject; (ii) Subscriber's organizational documents or under any law, rule, regulation, agreement or other obligation by which Subscriber is bound; and (iii) any statute or any judgment, order, rule or regulation of any court or governmental agency or body, domestic or foreign, having jurisdiction over Subscriber or any of its subsidiaries or any of their respective properties, that, in the case of clauses (i) and (iii), would reasonably be expected to have a material adverse effect on the legal authority or ability of Subscriber to perform in any material respects its obligations hereunder.

(e) Subscriber (i) is a "qualified institutional buyer" (as defined in Rule 144A under the Securities Act) or an institutional "accredited investor" (within the meaning of Rule 501(a) under the Securities Act) satisfying the applicable requirements set forth on Schedule A, (ii) is an "Institutional Account" as defined in FINRA Rule 4512(c), (iii) is acquiring the Acquired Shares only for its own account and not for the account of others, or if Subscriber is a "qualified institutional buyer" and is subscribing for the Acquired Shares as a fiduciary or agent for one or more investor accounts, each owner of such account is a "qualified institutional buyer" and Subscriber has full investment discretion with respect to each such account, and the full power and authority to make

the acknowledgements, representations and agreements herein on behalf of each owner of each such account, and (iv) is not acquiring the Acquired Shares with a view to, or for offer or sale in connection with, any distribution thereof in violation of the Securities Act or any other securities laws of the United States or any other jurisdiction (and shall provide the requested information on Schedule A following the signature page hereto). Subscriber is not an entity formed for the specific purpose of acquiring the Acquired Shares, unless such newly formed entity is an entity in which all of the equity owners are "accredited investors" (within the meaning of Rule 501(a) under the Securities Act).

(f) Subscriber is a sophisticated institutional investor, experienced in investing in private equity transactions and capable of evaluating investment risks independently, both in general and with regard to all transactions and investment strategies involving a security or securities, including its participation in the Subscription. Subscriber has determined based on its own independent review and such professional advice as it deems appropriate that its purchase of the Acquired Shares and participation in the Subscription (i) are fully consistent with its financial needs, objectives and condition, (ii) comply and are fully consistent with all investment policies, guidelines and other restrictions applicable to it, (iii) have been duly authorized and approved by all necessary action, (iv) do not and will not violate or constitute a default under its charter, by-laws or other constituent document or under any law, rule, regulation, agreement or other obligation by which it is bound, and (v) are a fit, proper and suitable investment for it, notwithstanding the substantial risks inherent in investing in or holding the Acquired Shares. Subscriber is able to bear the substantial risks associated with your purchase of the Acquired Shares, including but not limited to loss of its entire investment therein.

(g) Subscriber understands that the Acquired Shares are being offered in a transaction not involving any public offering within the meaning of the Securities Act and that the Acquired Shares have not been registered under the Securities Act or any other securities laws of the United States or any other jurisdiction. Subscriber understands that it is acquiring its entire beneficial ownership interest in the Acquired Shares for Subscriber's own account for investment purposes only and not with a view to any distribution of the Acquired Shares in any manner that would violate the securities laws of the United States. Subscriber understands that the Acquired Shares may not be resold, transferred, pledged or otherwise disposed of by Subscriber absent an effective registration statement under the Securities Act, except (i) to the Issuer or a subsidiary thereof, (ii) pursuant to offers and sales that occur in an "offshore transaction" within the meaning of and in accordance with Regulation S under the Securities Act, (iii) pursuant to Rule 144 under the Securities Act, provided that all of the applicable conditions thereof (including those set out in Rule 144(i) which are applicable to the Issuer) have been met, (iv) pursuant to another applicable exemption from the registration requirements of the Securities Act, including pursuant to a private sale effected under Section 4(a)(7) of the Securities Act or applicable formal or informal Commission interpretation or guidance, such as a so-called "4(a)(1) and a half" sale, and that any certificates or book-entry records representing the Acquired Shares shall contain a legend to such effect, which legend shall be subject to removal as set forth herein, in which case, notwithstanding anything else contained herein to the contrary, Section 5 and 8(c) hereof shall not apply and not be effective with respect to such Subscriber, or (v) otherwise except in compliance with applicable law. Subscriber understands and agrees that the Acquired Shares will be subject to the foregoing restrictions and, as a result, Subscriber may not be able to readily resell the Acquired Shares and may be required to bear the financial risk of an investment in the Acquired Shares for an indefinite period of time. Subscriber understands that it has been advised to consult legal counsel prior to making any offer, resale, pledge or transfer of any of the Acquired Shares. By making the representations herein, Subscriber does not agree to hold any of the Acquired Shares for any minimum or other specific term and reserves the right to assign, transfer or otherwise dispose of any of the Acquired Shares at any time in accordance with or pursuant to a registration statement or an exemption under the Securities Act.

(h) Subscriber understands and agrees that Subscriber is purchasing the Acquired Shares directly from the Issuer. Subscriber further acknowledges that there have been no, and in purchasing the Acquired Shares Subscriber is not relying on any, representations, warranties, covenants and agreements made to Subscriber by the Issuer, any of its officers, directors or representatives or any other person or entity, expressly or by implication, other than those representations, warranties, covenants and agreements expressly stated in this Subscription Agreement.

(i) To the extent applicable to it, Subscriber represents and warrants that its acquisition and holding of the Acquired Shares will not constitute or result in a non-exempt prohibited transaction under section 406 of the Employee Retirement Income Security Act of 1974, as amended, section 4975 of the Internal Revenue Code of 1986, as amended (the "Code"), or any applicable similar law.

(j) In making its decision to purchase the Acquired Shares, Subscriber has (i) received and had the opportunity to review the offering materials made available to it in connection with the Subscription, as the case may be, (ii) had the opportunity to ask questions of and receive answers from the Issuer directly and (iii) conducted and completed its own independent due diligence with respect to the Subscription. Based on such information as Subscriber has deemed appropriate and without reliance upon any Placement Agent, Subscriber has independently made its own analysis and decision to enter into the Subscription. Except for the representations,

warranties, covenants and agreements of the Issuer expressly set forth in this Subscription Agreement, Subscriber is relying exclusively on its own sources of information, investment analysis and due diligence (including professional advice it may deem appropriate) with respect to the Subscription, the Acquired Shares and the business, condition (financial and otherwise), management, operations, properties and prospects of the Issuer, including but not limited to all business, legal, regulatory, accounting, credit and tax matters. Subscriber acknowledges and agrees that it has received and had the opportunity to review the offering materials made available to it in connection with the Subscription and such other information as Subscriber deems necessary in order to make an investment decision with respect to the Acquired Shares, including with respect to the Issuer, the Company and the Transactions. Subscriber represents and agrees that Subscriber and Subscriber's professional advisor(s), if any, have had the full opportunity to ask such questions, receive such answers and obtain such information from the Issuer directly as Subscriber and such Subscriber's professional advisor(s), if any, have deemed necessary to make an investment decision with respect to the Acquired Shares. However, neither any such inquiries, nor any due diligence investigation conducted by Subscriber or any of Subscriber's professional advisors nor anything else contained herein, shall modify, limit or otherwise affect Subscriber's right to rely on the Issuer's representations, warranties, covenants and agreements contained in this Subscription Agreement. Subscriber acknowledges that it is not relying upon, and has not relied upon, any statement, representation or warranty made by any person, firm or corporation (including, without limitation, the Issuer, the Seller, the Company, any of their respective affiliates or any control persons, officers, directors, employees, agents or representatives of any of the foregoing), other than the representations and warranties of the Issuer contained in Section 3 of this Subscription Agreement, in making its investment or decision to invest in the Issuer.

(k) Subscriber became aware of this offering of the Acquired Shares solely by means of direct contact between Subscriber and the Issuer or by means of contact from a Placement Agent, and the Acquired Shares were offered to Subscriber solely by direct contact between Subscriber and the Issuer or by contact between Subscriber and one or more Placement Agents. Subscriber did not become aware of this offering of the Acquired Shares, nor were the Acquired Shares offered to Subscriber, by any other means.

(l) Subscriber acknowledges that it is not relying upon, and has not relied upon, any statement, representation or warranty made by Goldman Sachs & Co. LLC, Jefferies LLC, Cowen and Company LLC, BTIG, LLC or any of their affiliates or any of their control persons, officers, directors or employees (each a "Placement Agent" and collectively, the "Placement Agents") in making its investment or decision to invest in the Issuer.

(m) Subscriber acknowledges that it is aware that there are substantial risks incident to the purchase and ownership of the Acquired Shares, including those set forth in the SEC Reports. Subscriber has such knowledge and experience in financial, business and private equity matters as to be capable of evaluating the merits and risks of an investment, both in general and with regard to transactions and investment strategies involving a security or securities, including Subscriber's investment in the Acquired Shares, and Subscriber has sought such accounting, legal and tax advice as Subscriber has considered necessary to make an informed investment decision.

(n) Subscriber represents and acknowledges that, alone, or together with any professional advisor(s), Subscriber has adequately analyzed and fully considered the risks of an investment in the Acquired Shares and determined that the Acquired Shares are a suitable investment for Subscriber and that Subscriber is able at this time and in the foreseeable future to bear the economic risk of a total loss of Subscriber's investment in the Issuer. Subscriber acknowledges specifically that a possibility of total loss exists.

(o) Subscriber understands and agrees that no federal or state agency has passed upon or endorsed the merits of the offering of the Acquired Shares or made any findings or determination as to the fairness of this investment.

(p) Subscriber represents and warrants that Subscriber is not (i) a person or entity named on the List of Specially Designated Nationals and Blocked Persons, the Executive Order 13599 List, the Foreign Sanctions Evaders List, or the Sectoral Sanctions Identification List, each of which is administered by the U.S. Treasury Department's Office of Foreign Assets Control ("OFAC") (collectively, "OFAC Lists") (ii) owned or controlled by, or acting on behalf of, a person, that is named on an OFAC List; (iii) organized, incorporated, established, located, resident or born in, or a citizen, national, or the government, including any political subdivision, agency, or instrumentality thereof, of, Cuba, Iran, North Korea, Syria, the Crimea region of Ukraine, or any other country or territory embargoed or subject to substantial trade restrictions by the United States, (iv) a Designated National as defined in the Cuban Assets Control Regulations, 31 C.F.R. Part 515, or (v) a non-U.S. shell bank or providing banking services indirectly to a non-U.S. shell bank. Subscriber agrees to provide law enforcement agencies, if requested thereby, such records as required by applicable law, provided that Subscriber is permitted to do so under applicable law. Subscriber represents that if it is a financial institution subject to the Bank Secrecy Act (31 U.S.C. section 5311 et seq.) (the "BSA"), as amended by the USA PATRIOT Act of 2001 (the "PATRIOT Act"), and its implementing regulations (collectively, the "BSA/PATRIOT Act"), Subscriber maintains policies and procedures reasonably designed to comply with applicable obligations under the BSA/PATRIOT Act. Subscriber

also represents that, to the extent required, it maintains policies and procedures reasonably designed to ensure compliance with OFAC-administered sanctions programs, including for the screening of its investors against the OFAC Lists. Subscriber further represents and warrants that, to the extent required, it maintains policies and procedures reasonably designed to ensure that the funds held by Subscriber and used to purchase the Acquired Shares were legally derived.

(q) If Subscriber is or is acting on behalf of (i) an employee benefit plan that is subject to Title I of the Employee Retirement Income Security Act of 1974, as amended ("ERISA"), (ii) a plan, an individual retirement account or other arrangement that is subject to Section 4975 of the Code, (iii) an entity whose underlying assets are considered to include "plan assets" of any such plan, account or arrangement described in clauses (i) and (ii) (each, an "ERISA Plan"), or (iv) an employee benefit plan that is a governmental plan (as defined in Section 3(32) of ERISA), a church plan (as defined in Section 3(33) of ERISA), a non-U.S. plan (as described in Section 4(b)(4) of ERISA) or other plan that is not subject to the foregoing clauses (i), (ii) or (iii) but may be subject to provisions under any other federal, state, local, non-U.S. or other laws or regulations that are similar to such provisions of ERISA or the Code (collectively, "Similar Laws," and together with ERISA Plans, "Plans"), then Subscriber represents and warrants that it has not relied on the Issuer or any of its affiliates (the "Transaction Parties") for investment advice or as the Plan's fiduciary with respect to its decision to acquire and hold the Acquired Shares, and none of the Transaction Parties is or shall at any time be relied upon as the Plan's fiduciary with respect to any decision to acquire and hold or transfer the Acquired Shares; and (B) its purchase of the Shares will not result in a non-exempt prohibited transaction under Section 406 of ERISA or Section 4975 of the Code, or any applicable Similar Law.

(r) At the Purchase Price Payment Date, Subscriber will have sufficient funds to pay the Purchase Price pursuant to Section 2(a).

5. Registration Rights.

(a) The Issuer agrees that, as soon as practicable, but in no event later than thirty (30) calendar days after the Closing Date (the "Filing Date"), the Issuer will file with the Commission (at the Issuer's sole cost and expense) a registration statement registering the resale of the Acquired Shares (the "Registration Statement"), and the Issuer shall use its commercially reasonable efforts to cause the Registration Statement to be declared effective as soon as practicable after the filing thereof, but no later than the earlier of (i) the 60th calendar day (or 90th calendar day if the Commission notifies the Issuer that it will "review" the Registration Statement) following the Closing and (ii) the 5th business day after the date the Issuer is notified (orally or in writing, whichever is earlier) by the Commission that the Registration Statement will not be "reviewed" or will not be subject to further review (such earlier date, the "Effectiveness Date"); *provided*, *however*, that if the Commission is closed for operations due to a government shutdown or otherwise, the Effectiveness Date shall be extended by the same amount of days that the Commission remains closed for operations, *provided*, *further*, that the Issuer's obligations to include the Acquired Shares in the Registration Statement are contingent upon Subscriber furnishing in writing to the Issuer such information regarding Subscriber, the securities of the Issuer held by Subscriber, the intended method of disposition of the Acquired Shares (which shall be limited to non-underwritten public offerings) and such other information as shall be reasonably requested by the Issuer to effect the registration of the Acquired Shares, and Subscriber shall execute such documents in connection with such registration as the Issuer may reasonably request that are customary of a selling stockholder in similar situations, including providing that the Issuer shall be entitled to postpone and suspend the effectiveness or use of the Registration Statement during any customary blackout or similar period or as permitted under Section 5(c); provided, however, under no circumstances shall Subscriber be required to sign any type of lock-up agreement. Any failure by the Issuer to file the Registration Statement by the Filing Date or to effect such Registration Statement by the Effectiveness Date shall not otherwise relieve the Issuer of its obligations to file or effect the Registration Statement as set forth above in this Section 5. The Issuer will provide a draft of the Registration Statement to the undersigned for review at least three (3) business days in advance of filing the Registration Statement. In no event shall the undersigned be identified as a statutory underwriter in the Registration Statement unless requested by the Commission; provided, that, if the Commission requests that the undersigned be identified as a statutory underwriter in the Registration Statement, the undersigned will have an opportunity to withdraw its Acquired Shares from the Registration Statement. Notwithstanding the foregoing, if the Commission prevents the Issuer from including any or all of the shares proposed to be registered under the Registration Statement due to limitations on the use of Rule 415 of the Securities Act for the resale of the Acquired Shares by the applicable stockholders or otherwise, such Registration Statement shall register for resale such number of Acquired Shares which is equal to the maximum number of Acquired Shares as is permitted by the Commission. In such event, the number of Acquired Shares or other Acquired Shares to be registered for the undersigned and each Other Subscriber named in the Registration Statement shall be reduced pro rata among all such selling shareholders (except to the extent otherwise required by the Commission). In the event the Issuer amends the Registration Statement in accordance with the foregoing, the Issuer will use its commercially reasonable efforts to file with the Commission, as promptly as allowed by the Commission, one or more registration statements to register the resale of those Registrable Securities (as defined below) that were not registered on the initial Registration Statement, as so amended. The Issuer will use its commercially reasonable efforts to maintain the

continuous effectiveness of the Registration Statement until all such securities cease to be Registrable Securities (as defined below) or such shorter period upon which each undersigned party with Registrable Securities included in such Registration Statement have notified the Issuer that such Registrable Securities have actually been sold. The Issuer will provide all customary and commercially reasonable cooperation necessary to enable the undersigned to resell Registrable Securities pursuant to the Registration Statement or Rule 144 under the Securities Act ("Rule 144"), as applicable, qualify the Registrable Securities for listing on the primary stock exchange on which its Class A Shares are then listed, update or amend the Registration Statement as necessary to include Registrable Securities and provide customary notice to holders of Registrable Securities. "Registrable Securities" shall mean, as of any date of determination, the Acquired Shares and any other equity security of the Issuer issued or issuable with respect to the Acquired Shares by way of share split, dividend, distribution, recapitalization, merger, exchange, replacement or similar event or otherwise. As to any particular Registrable Securities, once issued, such securities shall cease to be Registrable Securities at the earliest of: (A) when the undersigned ceases to hold any Registrable Securities; (B) the date all Registrable Securities held by the undersigned may be sold without restriction under Rule 144, including without limitation, any volume and manner of sale restrictions which may be applicable to affiliates under Rule 144, and without the requirement for the Issuer to be in compliance with the current public information required under Rule 144 (including, for the avoidance of doubt, the requirements of Rule 144(i)(2)); (C) when they shall have ceased to be outstanding; or (D) four (4) years from the date of effectiveness of the Registration Statement.

(b) In the case of the registration, qualification, exemption or compliance effected by the Issuer pursuant to this Subscription Agreement, the Issuer shall, upon reasonable request, inform Subscriber as to the status of such registration, qualification, exemption and compliance. At its expense the Issuer shall:

(i) except for such times as the Issuer is permitted hereunder to suspend the use of the prospectus forming part of a Registration Statement, use its commercially reasonable efforts to keep such registration, and any qualification, exemption or compliance under state securities laws which the Issuer determines to obtain, continuously effective with respect to Subscriber, and to keep the applicable Registration Statement or any subsequent shelf registration statement free of any material misstatements or omissions, for as long as Subscriber continues to hold Registrable Securities;

(ii) advise Subscriber, as promptly as practicable but in any event, within two (2) business days:

(1) when a Registration Statement or any amendment thereto has been filed with the Commission and when such Registration Statement or any post-effective amendment thereto has become effective;

(2) of the issuance by the Commission of any stop order suspending the effectiveness of any Registration Statement or the initiation of any proceedings for such purpose;

(3) of the receipt by the Issuer of any notification with respect to the suspension of the qualification of the Acquired Shares included therein for sale in any jurisdiction or the initiation or threatening of any proceeding for such purpose; and

(4) subject to the provisions in this Subscription Agreement, of the occurrence of any event that requires the making of any changes in any Registration Statement or prospectus included therein so that, as of such date, the statements therein are not misleading and do not omit to state a material fact required to be stated therein or necessary to make the statements therein (and in the case of a prospectus, in the light of the circumstances under which they were made) not misleading.

Notwithstanding anything to the contrary set forth herein, the Issuer shall not, when so advising Subscriber of such events, provide Subscriber with any material, nonpublic information regarding the Issuer other than to the extent that providing notice to Subscriber of the occurrence of the events listed in (1) through (4) above may constitute material, nonpublic information regarding the Issuer;

(iii) use its commercially reasonable efforts to obtain the withdrawal of any order suspending the effectiveness of any Registration Statement as soon as reasonably practicable;

(iv) upon the occurrence of any event contemplated in Section 5(b)(ii)(4), except for such times as the Issuer is permitted hereunder to suspend, and has suspended, the use of a prospectus forming part of a Registration Statement, the Issuer shall use its commercially reasonable efforts to as soon as reasonably practicable prepare a post-effective amendment to such Registration Statement or a supplement to the related prospectus, or file any other required document so that, as thereafter delivered to purchasers of the Acquired Shares included therein, such prospectus will not include any untrue statement of a material fact or omit to state any

material fact necessary to make the statements therein, in the light of the circumstances under which they were made, not misleading;

(v) use its commercially reasonable efforts to cause all Acquired Shares to be listed on the primary securities exchange or market, if any, on which the Class A Shares issued by the Issuer have been listed; and

(vi) use its commercially reasonable efforts to take all other steps reasonably necessary to effect the registration of the Acquired Shares contemplated hereby and, for so long as Subscriber holds Acquired Shares, to enable Subscriber to sell the Acquired Shares under Rule 144.

(c) Notwithstanding anything to the contrary in this Subscription Agreement, the Issuer shall be entitled to delay the filing or postpone the effectiveness of the Registration Statement, and from time to time to require Subscriber not to sell under the Registration Statement or to suspend the effectiveness thereof, if the negotiation or consummation of a transaction by the Issuer or its subsidiaries is pending or an event has occurred, which negotiation, consummation or event, the Issuer's board of directors reasonably believes, would require additional disclosure by the Issuer in the Registration Statement of material information that the Issuer has a bona fide business purpose for keeping confidential and the non-disclosure of which in the Registration Statement would be expected, in the reasonable determination of the Issuer's board of directors, would be expected to cause the Registration Statement to fail to comply with applicable disclosure requirements (each such circumstance, a "Suspension Event"); *provided*, *however*, that the Issuer may not delay or suspend the Registration Statement on more than two occasions or for more than forty five (45) consecutive calendar days, or more than ninety (90) total calendar days, in each case during any twelve (12)-month period. Upon receipt of any written notice from the Issuer of the happening of any Suspension Event during the period that the Registration Statement is effective or if as a result of a Suspension Event the Registration Statement or related prospectus contains any untrue statement of a material fact or omits to state any material fact required to be stated therein or necessary to make the statements therein, in light of the circumstances under which they were made (in the case of the prospectus) not misleading, Subscriber agrees that (i) it will immediately discontinue offers and sales of the Acquired Shares under the Registration Statement (excluding, for the avoidance of doubt, sales conducted pursuant to Rule 144) until Subscriber receives copies of a supplemental or amended prospectus (which the Issuer agrees to promptly prepare) that corrects the misstatement(s) or omission(s) referred to above and receives notice that any post-effective amendment has become effective or unless otherwise notified by the Issuer that it may resume such offers and sales, and (ii) it will maintain the confidentiality of any information included in such written notice delivered by the Issuer unless otherwise required by law or subpoena. If so directed by the Issuer, Subscriber will deliver to the Issuer or, in Subscriber's sole discretion destroy, all copies of the prospectus covering the Acquired Shares in Subscriber's possession; *provided*, *however*, that this obligation to deliver or destroy all copies of the prospectus covering the Acquired Shares shall not apply (i) to the extent Subscriber is required to retain a copy of such prospectus (a) in order to comply with applicable legal, regulatory, self-regulatory or professional requirements or (b) in accordance with a bona fide pre-existing document retention policy or (ii) to copies stored electronically on archival servers as a result of automatic data back-up.

(d) Subscriber may deliver written notice (including via email in accordance with Section 9(n), an "Opt-Out Notice") to the Issuer requesting that Subscriber not receive notices from the Issuer otherwise required by this Section 5; *provided*, *however*, that Subscriber may later revoke any such Opt-Out Notice in writing. Following receipt of an Opt-Out Notice from Subscriber (unless subsequently revoked), (i) the Issuer shall not deliver any such notices to Subscriber and Subscriber shall no longer be entitled to the rights associated with any such notice and (ii) each time prior to Subscriber's intended use of an effective Registration Statement, Subscriber will notify the Issuer in writing at least two (2) business days in advance of such intended use, and if a notice of a Suspension Event was previously delivered (or would have been delivered but for the provisions of this Section 5(d)) and the related suspension period remains in effect, the Issuer will so notify Subscriber, within one (1) business day of Subscriber's notification to the Issuer, by delivering to Subscriber a copy of such previous notice of Suspension Event, and thereafter will provide Subscriber with the related notice of the conclusion of such Suspension Event promptly following its availability.

(e) Indemnification.

(i) The Issuer shall, notwithstanding the termination of this Subscription Agreement, indemnify, defend and hold harmless, to the extent permitted by law, Subscriber, its directors, officers, employees, agents, trustees, partners, members, managers, stockholders, investment advisors and sub-advisors, each person who controls Subscriber (within the meaning of the Securities Act or the Exchange Act) and each affiliate of Subscriber (within the meaning of the Securities Act or the Exchange Act) to the fullest extent permitted by applicable law, from and against any and all losses, claims, damages, liabilities, costs and expenses (including, without limitation, any reasonable attorneys' fees and expenses incurred in connection with defending or investigating any such action or claim) (collectively, "Losses"), as incurred, that arise out of or are based upon (A) any untrue or alleged untrue statement of material fact contained in any Registration Statement (or incorporated by

reference therein), prospectus included in any Registration Statement ("Prospectus") or preliminary Prospectus or any amendment thereof or supplement thereto or document incorporated by reference therein or any omission or alleged omission of a material fact required to be stated therein or necessary to make the statements therein, in light of the circumstances under which they were made, not misleading, except insofar as the same are caused by or contained in any information furnished in writing to the Issuer by or on behalf of such Subscriber expressly for use therein. The Issuer shall notify Subscriber promptly of the institution, threat or assertion (to the Issuer's knowledge) of any proceeding arising from or in connection with the Transactions; *provided*, *however*, that the indemnification contained in this Section 5(e) shall not apply to amounts paid in settlement of any Losses if such settlement is effected without the consent of the Issuer (which consent shall not be unreasonably withheld, conditioned or delayed), nor shall the Issuer be liable for any Losses to the extent they arise out of or are based upon a violation which occurs (A) in connection with any failure of such person to deliver or cause to be delivered a Prospectus made available by the Issuer in a timely manner or (B) in connection with any offers or sales effected by or on behalf of Subscriber in violation of this Subscription Agreement.

(ii) In connection with any Registration Statement in which Subscriber is participating, Subscriber shall furnish to the Issuer in writing such information as the Issuer reasonably requests for use in connection with any such Registration Statement or Prospectus. In connection with any Registration Statement in which Subscriber is participating, Subscriber agrees, severally and not jointly with any Other Subscriber or other investor that is a party to the Other Subscription Agreements, to indemnify and hold harmless, to the extent permitted by law, the Issuer, its directors and officers and agents and employees and each person or entity who controls the Issuer (within the meaning of Section 15 of the Securities Act) against any Losses, resulting from or arising out of any untrue or alleged untrue statement of material fact contained in the Registration Statement, Prospectus or preliminary Prospectus or any amendment thereof or supplement thereto or any omission or alleged omission of a material fact required to be stated therein or necessary to make the statements therein, in light of the circumstances under which they were made, not misleading, but only to the extent that such untrue statement or omission is contained (or not contained in the case of an omission) in and are based on any information or affidavit so furnished in writing by or on behalf of Subscriber expressly for use therein; *provided*, *however*, that in no event shall the aggregate liability of Subscriber (including, for the avoidance of doubt, under Section 5(e)(v)) be greater in amount than the dollar amount of the net proceeds received by Subscriber from the sale of Acquired Shares pursuant to such Registration Statement giving rise to such indemnification obligation.

(iii) Any person entitled to indemnification herein shall (1) give prompt written notice to the indemnifying party of any claim with respect to which it seeks indemnification (*provided* that the failure to give prompt notice shall not impair any person's right to indemnification hereunder to the extent such failure has not prejudiced the indemnifying party) and (2) permit such indemnifying party to assume the defense of such claim with counsel reasonably satisfactory to the indemnified party. If such defense is assumed, the indemnifying party shall not be subject to any liability for any settlement made by the indemnified party without its consent (such consent not to be unreasonably withheld, conditioned or delayed). An indemnifying party who elects not to assume the defense of a claim shall not be obligated to pay the fees and expenses of more than one counsel (plus local counsel) for all parties indemnified by such indemnifying party with respect to such claim, unless in the reasonable judgment of legal counsel to any indemnified party a conflict of interest exists between such indemnified party and any other of such indemnified parties with respect to such claim. No indemnifying party shall, without the consent of the indemnified party, consent to the entry of any judgment or enter into any settlement which cannot be settled in all respects by the payment of money (and such money is so paid by the indemnifying party pursuant to the terms of such settlement) or which settlement does not include as an unconditional term thereof the giving by the claimant or plaintiff to such indemnified party of a release from all liability in respect to such claim or litigation or includes any admission as to fault, culpability or failure to act on the party of such indemnified party.

(iv) The indemnification provided under this Subscription Agreement shall remain in full force and effect regardless of any investigation made by or on behalf of the indemnified party or any officer, director, employee, agent, affiliate or controlling person of such indemnified party and shall survive the transfer of the Acquired Shares.

(v) If the indemnification provided under this Section 5(e) from the indemnifying party is unavailable or insufficient to hold harmless an indemnified party in respect of any Losses referred to herein, then the indemnifying party, in lieu of indemnifying the indemnified party, shall contribute to the amount paid or payable by the indemnified party as a result of such Losses in such proportion as is appropriate to reflect the relative fault of the indemnifying party and the indemnified party, as well as any other relevant equitable considerations. The relative fault of the indemnifying party and indemnified party shall be determined by reference to, among other things, whether any action in question, including any untrue or alleged untrue statement of a material fact or omission or alleged omission to state a material fact, was made by (or not made by, in the case of an omission), or relates to information supplied by (or not supplied by, in the case of an omission), such indemnifying party or indemnified party, and the indemnifying party's and indemnified party's relative intent, knowledge, access to information and opportunity to correct or prevent such action. The amount paid or payable by a party as a result of the Losses or other liabilities referred to above shall be deemed to include, subject to the limitations set forth in

Sections 5(e)(i), 5(e)(ii), and 5(e)(iii), any legal or other fees, charges or expenses reasonably incurred by such party in connection with any investigation or proceeding. No person guilty of fraudulent misrepresentation (within the meaning of Section 11(f) of the Securities Act) shall be entitled to contribution pursuant to this Section 5(e)(v) from any person who was not guilty of such fraudulent misrepresentation.

(f) Piggyback Rights. Subscriber agrees that each New Holder (as defined in the Registration Rights Agreement) and the Seller and each 5% Insider (as defined in the Shareholders Agreements) shall have piggyback registration rights in respect of any Registration Statement that is filed pursuant to this Section 5, pursuant to and in accordance with Section 5.6 of the Registration Rights Agreement and Section 8 of the Shareholder Agreements, respectively, and that the provisions of each of the Registration Rights Agreement and the Shareholder Agreements shall apply, mutatis mutandis, to the exercise of any such piggyback registration rights by any such New Holder, the Seller or any such 5% Insider in respect of any such Registration Statement.

6. Termination. This Subscription Agreement shall terminate and be void and of no further force and effect (except for those provisions expressly contemplated to survive termination of this Subscription Agreement), and all rights and obligations of the parties hereunder shall terminate without any further liability on the part of any party in respect thereof (except with respect to those provisions expressly contemplated to survive termination of this Subscription Agreement), upon the earlier to occur of (a) such date and time as the Merger Agreement is terminated in accordance with its terms, (b) upon the mutual written agreement of each of the parties hereto to terminate this Subscription Agreement, (c) if any of the conditions to Closing set forth in Section 2 of this Subscription Agreement are not satisfied (or waived, to the extent waivable) on or prior to the earlier of the Closing Date or October 14, 2022 (the "Outside Date"), or become incapable of being satisfied on or prior to the earlier of the Closing Date or the Outside Date, and, as a result thereof, the transactions contemplated by this Subscription Agreement are not consummated at the Closing, or (d) the Outside Date; provided, that nothing herein will relieve any party from liability for any willful breach hereof prior to the time of termination, and each party will be entitled to any remedies at law or in equity to recover Losses, liabilities or damages arising from such breach; provided, further, that Subscriber may, by written notice to the Issuer, extend the Outside Date beyond October 14, 2022. The Issuer shall promptly notify Subscriber in writing (with email being sufficient) of the termination of the Merger Agreement. Upon the termination hereof, any monies paid by Subscriber to the Issuer in connection herewith shall promptly (and in any event within one (1) business day) be returned in full to Subscriber by wire transfer of U.S. dollars in immediately available funds to the account specified by Subscriber, without any deduction for or on account of any tax withholding, charges or set-off, whether or not the Transactions shall have been consummated.

7. Additional Agreements of Subscriber.

(a) Subscriber agrees that none of the Seller, the Company or any of the Placement Agents shall be liable to Subscriber for any action heretofore or hereafter taken or omitted to be taken by any of them or have any liability or obligation (including without limitation, for or with respect to any losses, claims, damages, obligations, penalties, judgments, awards, liabilities, costs, expenses or disbursements incurred by Subscriber, the Issuer or any other person or entity), whether in contract, tort or otherwise, to Subscriber, or to any person claiming through Subscriber, in respect of the Subscription.

(b) Subscriber hereby acknowledges and agrees that (a) each Placement Agent is acting solely as the Issuer's placement agent in connection with the Subscription and is not acting as an underwriter or in any other capacity and is not and shall not be construed as a fiduciary for Subscriber, the Issuer or any other person or entity in connection with the Subscription, (b) no Placement Agent has made or will make any representation or warranty, whether express or implied, of any kind or character and has not provided any advice or recommendation in connection with the Subscription, and (c) no Placement Agent will have any responsibility with respect to (i) any representations, warranties or agreements made by any person or entity under or in connection with the Subscription or any of the documents furnished pursuant thereto or in connection therewith, or the execution, legality, validity or enforceability (with respect to any person) or any thereof, or (ii) the business, affairs, financial condition, operations, properties or prospects of, or any other matter concerning the Issuer or the Subscription.

(c) The Issuer hereby acknowledges and agrees that, except as expressly set forth in Section 5(c) hereto (and except pursuant to any Support Agreement or separate lock-up agreement entered into with the Issuer in connection with Subscriber's evaluation of the transactions contemplated by Subscription Agreement (if applicable)): (i) Subscriber has not been asked by the Issuer to agree, nor, to the knowledge of the Issuer, has Subscriber agreed, to desist from purchasing or selling, long and/or short, securities of the Issuer, or "derivative" securities based on securities issued by the Issuer or to hold the Acquired Shares for any specified term, (ii) past or future open market or other transactions by Subscriber, before or after the closing of this or future private placement transactions, may negatively impact the market price of the Issuer's publicly-traded securities, and (iii) Subscriber shall not be deemed to have any affiliation with or control over any arm's length counter-party in any "derivative" transaction.

8. Issuer's Covenants.

(a) Except as contemplated herein, the Issuer, its subsidiaries and their respective affiliates shall not, and shall cause any person acting on behalf of any of the foregoing to not, take any action or steps that would require registration of the issuance of any of the Acquired Shares under the Securities Act.

(b) With a view to making available to Subscriber the benefits of Rule 144 or any other similar rule or regulation of the Commission that may at any time permit Subscriber to sell securities of the Issuer to the public without registration, the Issuer agrees, for so long as Subscriber holds Registrable Securities to:

(i) make and keep public information available, as those terms are understood and defined in Rule 144;

(ii) file with the Commission in a timely manner all reports and other documents required of the Issuer under the Securities Act and the Exchange Act so long as the Issuer remains subject to such requirements and the filing of such reports and other documents is required for the applicable provisions of Rule 144; and

(iii) furnish to Subscriber so long as it owns Acquired Shares, promptly upon request, (x) a written statement by the Issuer, if true, that it has complied with the reporting requirements of Rule 144, the Securities Act and the Exchange Act, (y) a copy of the most recent annual or quarterly report of the Issuer and such other reports and documents so filed by the Issuer (public availability on the Commission's EDGAR system (or successor system) being sufficient) and (z) such other information as may be reasonably requested to permit Subscriber to sell such securities pursuant to Rule 144 without registration.

(c) The Issuer shall use its commercially reasonable efforts to remove the legend described in Section 4(g) and to issue a certificate or a book entry record without such legend to the holder of the Acquired Shares upon which it is stamped or issue to such holder by electronic delivery at the applicable balance account at DTC, if (i) such Acquired Shares are registered for resale under the Securities Act; provided that the Issuer shall use its commercially reasonable efforts to cause its legal counsel to deliver the necessary legal opinions, if any, to the transfer agent in connection therewith, (ii) in connection with a sale, assignment or other transfer, such holder provides the Issuer with an opinion of counsel and other customary paperwork, in a form reasonably acceptable to the Issuer, to the effect that such sale, assignment or transfer of the Acquired Shares may be made without registration under the applicable requirements of the Securities Act and such holder agrees to sell, assign or otherwise transfer such securities in accordance with such valid exemption from the registration requirements of the Securities Act, (iii) the Acquired Shares can be sold, assigned or transferred without restriction or current public information requirements pursuant to Rule 144, including without limitation, any volume and manner of sale restrictions which may be applicable to affiliates under Rule 144 and any requirement for the Issuer to be in compliance with the current public information required under Rule 144(c) or Rule 144(i), as applicable, and in each case, the holder provides the Issuer with customary paperwork including an undertaking to effect that any sales or other transfers will occur in accordance with Rule 144, or (iv) at any time on or after July 28, 2022, the holder of any Acquired Shares certifies that it is not an "affiliate" of the Issuer (as such term is used under Rule 144) and that the such holder's holding period for purposes of Rule 144 and subsection (d)(3)(iii) thereof with respect to such Acquired Shares is at least six (6) months. The Issuer shall be responsible for the fees of the Transfer Agent and all DTC fees associated with such issuance and Subscriber shall be responsible for all other fees and expenses (including, without limitation, any applicable broker fees, fees and disbursements of their legal counsel and any applicable transfer taxes).

(d) The Issuer shall use its best efforts not, and shall use its best efforts not to permit any of its subsidiaries and Affiliates or any of its or their respective directors, officers or representatives to, promise, authorize or make any payment to, or otherwise contribute any item of value to, directly or indirectly, any non-U.S. government official, in each case, in violation of the FCPA or any other applicable anti-bribery or anti-corruption law. The Issuer shall, and shall cause each of its subsidiaries and Affiliates to, cease all of its or their respective activities, as well as remediate any actions taken by the Issuer, its subsidiaries or Affiliates or any of its or their respective directors, officers or representatives in violation of the FCPA or any other applicable anti-bribery or anti-corruption law. The Issuer shall, and shall cause each of its Affiliates and subsidiaries to, maintain systems or internal controls (including, but not limited to, accounting systems, purchasing systems and billing systems) to ensure compliance with the FCPA or any other applicable anti-bribery or anti-corruption law.

9. Miscellaneous.

(a) Each party hereto acknowledges that the other party hereto will rely on the acknowledgments, understandings, agreements, representations and warranties contained in this Subscription Agreement. Prior to the Closing, each party hereto agrees to promptly notify the other party hereto if any of the acknowledgments, understandings, agreements, representations and warranties set forth herein with respect to it are

no longer accurate in all material respects. Subscriber further acknowledges and agrees that (i) each Placement Agent is a third-party beneficiary of the representations and warranties of Subscriber contained in this Subscription Agreement and (ii) each New Holder, the Seller and each 5% Insider is a third-party beneficiary of the piggyback registration rights provided in Section 5(f).

(b) Each of the Issuer and Subscriber is entitled to rely upon this Subscription Agreement and is irrevocably authorized to produce this Subscription Agreement or a copy hereof to any interested party in any administrative or legal proceeding or official inquiry with respect to the matters covered hereby. Each Placement Agent, in its capacity as such, is entitled to rely upon the representations, warranties, agreements and covenants of the Issuer and the representations and warranties of Subscriber in this Subscription Agreement.

(c) This Subscription Agreement may not be transferred or assigned without the prior written consent of each of the other parties hereto. Notwithstanding the foregoing, (i) this Subscription Agreement and any of Subscriber's rights and obligations hereunder may be assigned at any time to one or more affiliates of Subscriber or to any fund or account managed by the same investment manager or investment advisor as Subscriber or by an affiliate of such investment manager or investor advisor, without the prior consent of the Issuer, *provided* that such assignee(s) agrees in writing to be bound by the terms hereof. Upon such assignment by a Subscriber, the assignee(s) shall become Subscriber hereunder and have the rights and obligations provided for herein to the extent of such assignment; *provided further* that, no assignment shall relieve the assigning party of any of its obligations hereunder, including any assignment to any fund or account managed by the same investment manager or investment advisor as Subscriber or by an affiliate of such investment manager or investment advisor, unless consented to in writing by the Issuer (such consent not to be unreasonably conditioned, delayed or withheld); and (ii) at any time following the Closing, Subscriber's rights (including under Section 5) in respect of any Acquired Shares may be assigned to any transferee of such Acquired Shares.

(d) All the representations and warranties made by each party hereto in this Subscription Agreement shall survive the Closing. All covenants made by each party hereto in this Subscription Agreement required to be performed after the Closing shall expire upon performance.

(e) The Issuer may request from Subscriber such additional information as the Issuer may deem reasonably necessary to evaluate the eligibility of Subscriber to acquire the Acquired Shares, and Subscriber shall provide such information as may be reasonably requested, to the extent readily available and to the extent consistent with its internal policies and procedures; provided, that, the Issuer agrees to keep any such information provided by Subscriber confidential; provided, further, that upon recipient of such additional information, the Issuer shall be allowed to convey such information to the Placement Agents and each Placement Agent shall have agreed to keep the information confidential (with Subscriber being any express third party beneficiary of such agreement), except as may be required by applicable law, rule, regulation or in connection with any legal proceeding or regulatory request.

(f) This Subscription Agreement may not be amended, modified, waived or terminated except by an instrument in writing, signed by each of the parties hereto. This Subscription Agreement may not be waived except by an instrument in writing, signed by the party against whom enforcement of such waiver is sought.

(g) This Subscription Agreement (including the schedule hereto) constitutes the entire agreement, and supersedes all other prior agreements, understandings, representations and warranties, both written and oral, among the parties, with respect to the subject matter hereof.

(h) Except as otherwise provided herein (including the provisions of Section 5(e), as to which the indemnified parties are express third party beneficiaries), this Subscription Agreement shall be binding upon, and inure to the benefit of the parties hereto and their heirs, executors, administrators, successors, legal representatives, and permitted assigns, and the agreements, representations, warranties, covenants and acknowledgments contained herein shall be deemed to be made by, and be binding upon, such heirs, executors, administrators, successors, legal representatives and permitted assigns.

(i) If any provision of this Subscription Agreement shall be invalid, illegal or unenforceable, the validity, legality or enforceability of the remaining provisions of this Subscription Agreement shall not in any way be affected or impaired thereby and shall continue in full force and effect.

(j) This Subscription Agreement may be executed in two (2) or more counterparts (including by facsimile, electronic mail or in .pdf or other electronic means), all of which shall be considered one and the same agreement and shall become effective when signed by each of the parties and delivered to the other parties, it being understood that all parties need not sign the same counterpart.

(k) Each party shall pay all of its own expenses in connection with this Subscription Agreement and the transactions contemplated by this Subscription Agreement.

(l) The Issuer shall be solely responsible for the fees of the Placement Agent, Transfer Agent, the escrow agent, stamp taxes and all of DTC's fees associated with the issuance of the Acquired Shares.

(m) Subscriber understands and agrees that (i) no disclosure or offering document has been prepared by the Placement Agents or any of their respective affiliates in connection with the offer and sale of the Acquired Shares; (ii) none of the Placement Agents and their respective directors, officers, employees, representatives and controlling persons has made any independent investigation with respect to the Issuer, the Company, the Transactions or the Acquired Shares or the accuracy, completeness or adequacy of any information supplied to Subscriber by the Issuer; and (iii) in connection with the issue and purchase of the Acquired Shares, the Placement Agents have not acted as Subscriber's financial advisor, tax or fiduciary.

(n) Any notice or communication required or permitted hereunder shall be in writing and either delivered personally, emailed or telecopied, sent by overnight mail via a reputable overnight carrier, or sent by certified or registered mail, postage prepaid, and shall be deemed to be given and received (i) when so delivered personally, (ii) upon receipt of an appropriate electronic answerback or confirmation when so delivered by telecopy (to such number specified below or another number or numbers as such person may subsequently designate by notice given hereunder), (iii) when sent, with no mail undeliverable or other rejection notice, if sent by email, or (iv) five (5) business days after the date of mailing to the address below or to such other address or addresses as such person may hereafter designate by notice given hereunder:

if to Subscriber, to such address or addresses set forth on the signature page hereto;

if to the Issuer, to:
Sema4 Holdings Corp.
333 Ludlow Street, North Tower, 8th Floor
Stamford, Connecticut 06902
Attention: General Counsel
Email: legal@sema4.com

with a required copy to (which copy shall not constitute notice):

Fenwick & West LLP
902 Broadway
New York, NY 10010
Attention: Ethan Skerry, Per Chilstrom, Michael Pilo
Email: eskerry@fenwick.com; pchilstrom@fenwick.com;
mpilo@fenwick.com

and a required copy to (which copy shall not constitute notice):

Goldman Sachs & Co. LLC, 200 West Street, New York, New York 10282-2198

Jefferies LLC, 520 Madison Avenue, New York, New York 10022, Attention: General Counsel

Cowen and Company, LLC, 599 Lexington Avenue, New York, NY 10022, Attention: General Counsel, Fax: 646-562-1124, Bradley.friedman@cowen.com

BTIG, LLC, 65 E 55th Street, New York, New York 10022, Attention: Karen Koski, kkoski@btig.com; with a copy to: BTIG, LLC, 600 Montgomery Street, 6th Floor, San Francisco, CA 94111, Attention: General Counsel, IBlegal@BTIG.com

(o) The parties hereto agree that irreparable damage would occur in the event that any of the provisions of this Subscription Agreement were not performed in accordance with their specific terms or were otherwise breached. It is accordingly agreed that the parties shall be entitled to seek an injunction or injunctions to prevent breaches of this Subscription Agreement and to enforce specifically the terms and provisions of this

Subscription Agreement, this being in addition to any other remedy to which such party is entitled at law, in equity, in contract, in tort or otherwise.

(p) This Subscription Agreement, and any claim or cause of action hereunder based upon, arising out of or related to this Subscription Agreement (whether based on law, in equity, in contract, in tort or any other theory) or the negotiation, execution, performance or enforcement of this Subscription Agreement, shall be governed by and construed in accordance with the laws of the State of New York, without giving regard to the principles of conflicts of laws that would otherwise require the application of the law of any other state.

THE PARTIES HERETO IRREVOCABLY SUBMIT TO THE EXCLUSIVE JURISDICTION OF THE COURTS OF THE STATE OF NEW YORK OR THE FEDERAL COURTS OF THE UNITED STATES OF AMERICA LOCATED IN THE CITY OF NEW YORK SOLELY IN RESPECT OF THE INTERPRETATION AND ENFORCEMENT OF THE PROVISIONS OF THIS SUBSCRIPTION AGREEMENT AND THE TRANSACTIONS CONTEMPLATED HEREBY, AND HEREBY WAIVE, AND AGREE NOT TO ASSERT, AS A DEFENSE IN ANY ACTION, SUIT OR PROCEEDING FOR INTERPRETATION OR ENFORCEMENT HEREOF THAT SUCH ACTION, SUIT OR PROCEEDING MAY NOT BE BROUGHT OR IS NOT MAINTAINABLE IN SAID COURTS OR THAT VENUE THEREOF MAY NOT BE APPROPRIATE OR THAT THIS SUBSCRIPTION AGREEMENT MAY NOT BE ENFORCED IN OR BY SUCH COURTS, AND THE PARTIES HERETO IRREVOCABLY AGREE THAT ALL CLAIMS WITH RESPECT TO SUCH ACTION, SUIT OR PROCEEDING SHALL BE HEARD AND DETERMINED BY SUCH A NEW YORK STATE OR FEDERAL COURT. THE PARTIES HEREBY CONSENT TO AND GRANT ANY SUCH COURT JURISDICTION OVER THE PERSON OF SUCH PARTIES AND OVER THE SUBJECT MATTER OF SUCH DISPUTE AND AGREE THAT MAILING OF PROCESS OR OTHER PAPERS IN CONNECTION WITH SUCH ACTION, SUIT OR PROCEEDING IN THE MANNER PROVIDED IN SECTION 9(n) OR IN SUCH OTHER MANNER AS MAY BE PERMITTED BY LAW SHALL BE VALID AND SUFFICIENT SERVICE THEREOF.

EACH PARTY ACKNOWLEDGES AND AGREES THAT ANY CONTROVERSY WHICH MAY ARISE UNDER THIS SUBSCRIPTION AGREEMENT OR THE TRANSACTIONS CONTEMPLATED HEREBY IS LIKELY TO INVOLVE COMPLICATED AND DIFFICULT ISSUES, AND THEREFORE EACH SUCH PARTY HEREBY IRREVOCABLY AND UNCONDITIONALLY WAIVES ANY RIGHT SUCH PARTY MAY HAVE TO A TRIAL BY JURY IN RESPECT OF ANY LITIGATION DIRECTLY OR INDIRECTLY ARISING OUT OF OR RELATING TO THIS SUBSCRIPTION AGREEMENT OR THE TRANSACTIONS CONTEMPLATED BY THIS SUBSCRIPTION AGREEMENT. EACH PARTY CERTIFIES AND ACKNOWLEDGES THAT (I) NO REPRESENTATIVE, PLACEMENT AGENTS OR ATTORNEY OF ANY OTHER PARTY HAS REPRESENTED, EXPRESSLY OR OTHERWISE, THAT SUCH OTHER PARTY WOULD NOT, IN THE EVENT OF LITIGATION, SEEK TO ENFORCE THE FOREGOING WAIVER; (II) SUCH PARTY UNDERSTANDS AND HAS CONSIDERED THE IMPLICATIONS OF THE FOREGOING WAIVER; (III) SUCH PARTY MAKES THE FOREGOING WAIVER VOLUNTARILY AND (IV) SUCH PARTY HAS BEEN INDUCED TO ENTER INTO THIS SUBSCRIPTION AGREEMENT BY, AMONG OTHER THINGS, THE MUTUAL WAIVER AND CERTIFICATIONS IN THIS SECTION 9(p).

(q) The Issuer shall, by 9:00 a.m., New York City time, on the first (1st) business day immediately following the date of this Subscription Agreement, file with the Commission a Current Report on Form 8-K (collectively, the "Disclosure Document") disclosing all material terms of the transactions contemplated hereby and by the Other Subscription Agreements, the Transactions and any other material, nonpublic information that the Issuer or its representatives has provided to Subscriber any time prior to the filing of the Disclosure Document, to the extent such information has not previously been publicly disclosed by the Issuer in a press release or filing with the Commission and the Issuer considers such information material at the time of the filing of the Disclosure Document. Upon the issuance of the Disclosure Document, to the Issuer's knowledge, Subscriber shall not be in possession of any material, non-public information received from the Issuer or any of its officers, directors or employees or agents (including the Placement Agents) and Subscriber shall no longer be subject to any confidentiality or similar obligations under any current agreement, whether written or oral with the Issuer, the Placement Agents or any of its affiliates. Notwithstanding anything in this Subscription Agreement to the contrary, the Issuer shall not publicly disclose the name of Subscriber or any of its affiliates or its investment adviser, or include the name of Subscriber or any of its affiliates or its investment adviser without the prior written consent of Subscriber (which consent shall not be unreasonably withheld, conditioned or delayed) (i) in any press release; or (ii) in any filing with the Commission or any regulatory agency or trading market, except (A) current reports on Form 8-K filed with the SEC by the Issuer in connection with the announcement of the execution of this Subscription Agreement and the announcement of the Closing of the Transactions or (B) as required by state or federal securities law, any governmental authority or stock exchange rule, in which case the Issuer shall provide Subscriber with prior written notice of such disclosure permitted under hereunder. The Issuer shall not, and shall cause each of its officers, directors, employees and agents, not to, provide Subscriber with any material, nonpublic information from and after the filing of the Disclosure Document and if and so long as Subscriber has not designated a representative on the Issuer's board of directors, without the express prior written consent of Subscriber.

(r) The Issuer hereto agrees, and the Subscriber acknowledges such agreement for the express benefit of the Placement Agent, its respective affiliates and its respective representatives that:

(i) neither the Placement Agents nor any of their affiliates or any of their representatives (1) have any duties or obligations other than those specifically set forth herein or in the engagement letter among the Issuer and each Placement Agent (each an "Engagement Letter", and collectively, the "Engagement Letters"); (2) shall be liable for any improper payment made in accordance with the information provided by the Issuer; (3) makes any representation or warranty, or has any responsibilities as to the validity, accuracy, value or genuineness of any information, certificates or documentation delivered by or on behalf of the Issuer pursuant to this Subscription Agreement or the Merger Agreement or any agreement contemplated therein, or in connection with any of the Transactions; or (4) shall be liable (x) for any action taken, suffered or omitted by any of them in good faith and reasonably believed to be authorized or within the discretion or rights or powers conferred upon it by this Subscription Agreement, the Merger Agreement or any agreement contemplated therein, or (y) for anything which any of them may do or refrain from doing in connection with this Subscription Agreement, the Merger Agreement or any agreement contemplated therein, except for such party's own gross negligence, willful misconduct or bad faith.

(s) The Placement Agents, their affiliates and their representatives shall be entitled to (1) rely on, and shall be protected in acting upon, any certificate, instrument, opinion, notice, letter or any other document or security delivered to any of them by or on behalf of the Issuer, and (2) be indemnified by the Issuer for acting as Placement Agents hereunder pursuant the indemnification provisions set forth in the Engagement Letters.

(t) The obligations of Subscriber under this Subscription Agreement are several and not joint with the obligations of any Other Subscriber or any other investor under the Other Subscription Agreements, and Subscriber shall not be responsible in any way for the performance of the obligations of any Other Subscriber under any Other Subscription Agreement or other investor under the Other Subscription Agreements. The decision of Subscriber to purchase the Acquired Shares pursuant to this Subscription Agreement has been made by Subscriber independently of any Other Subscriber or any other investor and independently of any information, materials, statements or opinions as to the business, affairs, operations, assets, properties, liabilities, results of operations, condition (financial or otherwise) or prospects of the Issuer, the Company or any of their respective subsidiaries which may have been made or given by any Other Subscriber or investor or by any agent or employee of any Other Subscriber or investor, and neither Subscriber nor any of its agents or employees shall have any liability to any Other Subscriber or investor (or any other person) relating to or arising from any such information, materials, statements or opinions. The decision of each Other Subscriber to purchase Other Acquired Shares pursuant to an Other Subscription Agreement has been made by such Other Subscriber independently of Subscriber and independently of any information, materials, statements or opinions as to the business, affairs, operations, assets, properties, liabilities, results of operations, condition (financial or otherwise) or prospects of the Issuer, the Company or any of their respective subsidiaries which may have been made or given by Subscriber. Nothing contained herein or in any Other Subscription Agreement, and no action taken by Subscriber or investor pursuant hereto or thereto, shall be deemed to constitute Subscriber and any Other Subscribers or other investors as a partnership, an association, a joint venture or any other kind of entity, or create a presumption that Subscriber and any Other Subscribers or other investors are in any way acting in concert or as a group with respect to such obligations or the transactions contemplated by this Subscription Agreement and the Other Subscription Agreements. Subscriber acknowledges that no Other Subscriber has acted as agent for Subscriber in connection with making its investment hereunder and no Other Subscriber will be acting as agent of Subscriber in connection with monitoring its investment in the Acquired Shares or enforcing its rights under this Subscription Agreement. Subscriber shall be entitled to independently protect and enforce its rights, including without limitation the rights arising out of this Subscription Agreement, and it shall not be necessary for any Other Subscriber or investor to be joined as an additional party in any proceeding for such purpose.

(u) In connection with all aspects of this Subscription Agreement, the transactions contemplated hereby and the Transaction, the Issuer acknowledges and agrees that: (i) the purchase and sale of the Acquired Shares constitute an arm's-length commercial transaction between the Issuer, on the one hand, and Subscriber, on the other hand, and the Issuer is capable of evaluating and understanding and understands and accepts the terms, risks and conditions of the transactions contemplated hereby, (ii) in connection with the process leading to this Subscription Agreement, the transactions contemplated hereby and the Transactions, Subscriber is and has been acting solely as a principal and not as a financial advisor, agent or fiduciary, for the Issuer or the Issuer's affiliates, stockholders, directors, officers, employees or creditors or any other person, (iii) neither Subscriber nor any of its affiliates has assumed or will assume an advisory, agency or fiduciary responsibility in the Issuer or the Issuer's affiliates' favor with respect to any of this Subscription Agreement, the transactions contemplated hereby, the process leading hereto or the Transactions (irrespective of whether Subscriber or any of its affiliates have advised or are currently advising the Issuer or any of its affiliates on other matters) and neither Subscriber nor any of its affiliates has any obligation to the Issuer or any of the Issuer's affiliates with respect to the Other Subscription Agreements or the Transactions, (iv) Subscriber and its affiliates may be engaged in a broad range of transactions that involve interests that differ from the Issuer and its affiliates and neither Subscriber nor any of its affiliates shall have any obligation to disclose any of such interests, and (v) neither Subscriber nor any of its affiliates has provided

any legal, accounting, regulatory or tax advice with respect to this Subscription Agreement, any of the transactions contemplated hereby or the Transactions, and the Issuer has consulted its own legal, accounting, regulatory and tax advisors to the extent the Issuer deemed appropriate. The Issuer waives and releases, to the fullest extent permitted by law, any claims that it may have against Subscriber and its affiliates with respect to any breach of fiduciary duty or alleged breach of fiduciary duty as a consequence of this Subscription Agreement, the transactions contemplated hereby or the Transactions.

(v) The headings herein are for convenience only, do not constitute a part of this Subscription Agreement and shall not be deemed to limit or affect any of the provisions hereof. The language used in this Subscription Agreement will be deemed to be the language chosen by the parties to express their mutual intent, and no rules of strict construction will be applied against any party. Unless the context otherwise requires, (i) all references to Sections, Schedules or Exhibits are to Sections, Schedules or Exhibits contained in or attached to this Subscription Agreement, (ii) each accounting term not otherwise defined in this Subscription Agreement has the meaning assigned to it in accordance with GAAP, (iii) words in the singular or plural include the singular and plural and pronouns stated in either the masculine, the feminine or neuter gender shall include the masculine, feminine and neuter, (iv) the use of the word "including" in this Subscription Agreement shall be by way of example rather than limitation, and (v) the word "or" shall not be exclusive.

(w) If Subscriber is a Massachusetts Business Trust, a copy of the Agreement and Declaration of Trust of Subscriber or any affiliate thereof is on file with the Secretary of State of the Commonwealth of Massachusetts and notice is hereby given that the Subscription Agreement is executed on behalf of the trustees of Subscriber or any affiliate thereof as trustees and not individually and that the obligations of the Subscription Agreement are not binding on any of the trustees, officers or stockholders of Subscriber or any affiliate thereof individually but are binding only upon Subscriber or any affiliate thereof and its assets and property.

(x) This Subscription Agreement may only be enforced against, and a claim or cause of action based upon, arising out of, or related to this Subscription Agreement may only be brought by the expressly named party hereto and then only with respect to the specific obligations set forth herein with respect to such party. Except to the extent a named party, no present, former or future Affiliate, officer, director, employee, incorporator, member, partner, stockholder, agent, attorney or other Representative of any party or their Affiliates shall have any Liability (whether in contract, in tort or otherwise) for any obligations or Liabilities of any party which is not otherwise expressly identified as a party, and no recourse shall be brought or granted against any of them, by virtue of or based upon any alleged misrepresentation or inaccuracy in or breach of any of the representations, warranties, agreements or covenants of any party under this Subscription Agreement for any claim based upon, in respect of, or by reason of, the transactions contemplated by this Subscription Agreement or in respect of any representations made or alleged to have been made in connection therewith. The provisions of this Section 9(x) are intended to be for the benefit of, and enforceable by the Affiliates, officers, directors, employees, incorporators, members, partners, stockholders, agents, attorneys and other Representatives referenced in this Section 9(x) and each such Person shall be a third-party beneficiary of this Section 9(x).

[Signature pages follow.]

IN WITNESS WHEREOF, each of the Issuer and Subscriber has executed or caused this Subscription Agreement to be executed by its duly authorized representative as of the date set forth below.

Sema4 Holdings Corp.

By: _____

Name:

Title:

Date: January 14, 2022

SUBSCRIBER:

Signature of Subscriber:

By: _____
Name:
Title:

Signature of Joint Subscriber, if applicable:

By: _____
Name:
Title:

Date: January 14, 2022

Name of Subscriber:

_____
(Please print. Please indicate name and capacity of person signing above)

_____
Name in which securities are to be registered (if different)

Name of Joint Subscriber, if applicable:

_____
(Please print. Please indicate name and capacity of person signing above)

Email Address:

If there are joint investors, please check one:

☐ Joint Tenants with Rights of Survivorship

☐ Tenants-in-Common

☐ Community Property

Subscriber's EIN: _____

Business Address-Street:

_____

_____
City, State, Zip:

Attn:

Telephone No.: _____

Facsimile No.: _____

Joint Subscriber's EIN:

_____

Mailing Address-Street (if different):

_____

_____
City, State, Zip:

Attn:

Telephone No.: _____

Facsimile No.: _____

Aggregate Number of Acquired Shares subscribed for:

_____

Aggregate Purchase Price: $_____

You must pay the Purchase Price by wire transfer of United States dollars in immediately available funds to the account specified by the Issuer in the Closing Notice.

Number of Acquired Shares subscribed for and aggregate Purchase Price accepted and agreed to as of this 14th day of January, 2022, by:

Sema4 Holdings Corp.

Name:
Title:

SCHEDULE A
ELIGIBILITY REPRESENTATIONS OF SUBSCRIBER

A. QUALIFIED INSTITUTIONAL BUYER STATUS
(Please check the applicable subparagraphs):

1. ☐ We are a "qualified institutional buyer" (as defined in Rule 144A under the Securities Act (a "QIB")).

2. ☐ We are subscribing for the Acquired Shares as a fiduciary or agent for one or more investor accounts, and each owner of such account is a QIB.

*** OR ***

B. INSTITUTIONAL ACCREDITED INVESTOR STATUS
(Please check each of the following subparagraphs):

1. ☐ We are an "accredited investor" (within the meaning of Rule 501(a) under the Securities Act) or an entity in which all of the equity holders are accredited investors within the meaning of Rule 501(a) under the Securities Act and have marked and initialed the appropriate box on the following page indicating the provision under which we qualify as an "accredited investor".
2. ☐ We are not a natural person.

*** AND ***

C. AFFILIATE STATUS
(Please check the applicable box)
SUBSCRIBER:

☐ is:

☐ is not:

an "affiliate" (as defined in Rule 144 under the Securities Act) of the Issuer or acting on behalf of an affiliate of the Issuer.

FINRA Rule 4512(c) states that an "institutional account" shall mean any person who comes within any of the below listed categories. Subscriber has indicated, by marking and initialing the appropriate box below, the provision(s) below which apply to Subscriber and under which Subscriber accordingly qualifies as an "institutional account."

☐ a bank, savings and loan association, insurance company or registered investment company;

☐ an investment adviser registered either with the Commission under Section 203 of the Investment Advisers Act or with a state securities commission (or any agency or office performing like functions); or

☐ any other person (whether a natural person, corporation, partnership, trust or otherwise) with total assets of at least $50 million.

This page should be completed by Subscriber
and constitutes a part of the Subscription Agreement.

Schedule A-1

Rule 501(a), in relevant part, states that an "accredited investor" shall mean any person who comes within any of the below listed categories, or who the Issuer reasonably believes comes within any of the below listed categories, at the time of the sale of the securities to that person. Subscriber has indicated, by marking and initialing the appropriate box below, the provision(s) below that apply to Subscriber and under which Subscriber accordingly qualifies as an "accredited investor."

☐ Any bank as defined in section 3(a)(2) of the Securities Act, or any savings and loan association or other institution as defined in section 3(a)(5)(A) of the Securities Act whether acting in its individual or fiduciary capacity;

☐ Any broker or dealer registered pursuant to section 15 of the Exchange Act;

☐ An investment adviser registered pursuant to section 203 of the Investment Advisers Act of 1940 or registered pursuant to the laws of a state;

☐ An investment adviser relying on the exemption from registering with the Securities and Exchange Commission under section 203(l) or (m) of the Investment Advisers Act of 1940;

☐ Any insurance company as defined in section 2(a)(13) of the Securities Act;

☐ Any investment company registered under the Investment Company Act of 1940 or a business development company as defined in section 2(a)(48) of the Securities Act;

☐ Any Small Business Investment Company licensed by the U.S. Small Business Administration under section 301(c) or (d) of the Small Business Investment Act of 1958;

☐ A Rural Business Investment Company as defined in section 384A of the Consolidated Farm and Rural Development Act;

☐ Any plan established and maintained by a state, its political subdivisions, or any agency or instrumentality of a state or its political subdivisions, for the benefit of its employees, if such plan has total assets in excess of $5,000,000;

☐ Any employee benefit plan within the meaning of the Employee Retirement Income Security Act of 1974 if the investment decision is made by a plan fiduciary, as defined in section 3(21) of such Act, which is either a bank, savings and loan association, insurance company, or registered investment adviser, or if the employee benefit plan has total assets in excess of $5,000,000 or, if a self-directed plan, with investment decisions made solely by persons that are accredited investors;

☐ Any private business development company as defined in section 202(a)(22) of the Investment Advisers Act of 1940;

☐ Any organization described in section 501(c)(3) of the Internal Revenue Code, corporation, Massachusetts or similar business trust, partnership or limited liability company, not formed for the specific purpose of acquiring the securities offered, with total assets in excess of $5,000,000;

This page should be completed by Subscriber
and constitutes a part of the Subscription Agreement.

Schedule A-2

☐ Any trust, with total assets in excess of $5,000,000, not formed for the specific purpose of acquiring the securities offered, whose purchase is directed by a sophisticated person as described in Rule 506(b)(2)(ii) of the Securities Act;

☐ An entity, of a type not listed in any of the foregoing paragraphs, not formed for the specific purpose of acquiring the securities offered, owning investments in excess of $5,000,000;

☐ A "family office," as defined in rule 202(a)(11)(G)-1 under the Investment Advisers Act of 1940 (17 CFR 275.202(a)(11)(G)-1): (i) with assets under management in excess of $5,000,000, (ii) that is not formed for the specific purpose of acquiring the securities offered, and (iii) whose prospective investment is directed by a person who has such knowledge and experience in financial and business matters that such family office is capable of evaluating the merits and risks of the prospective investment;

☐ A "family client," as defined in rule 202(a)(11)(G)-1 under the Investment Advisers Act of 1940 (17 CFR 275.202(a)(11)(G)-1), of a family office meeting the requirements in the foregoing paragraph and whose prospective investment in the issuer is directed by such family office pursuant to clause (iii) in the foregoing paragraph;

☐ Any natural person whose individual net worth, or joint net worth with that person's spouse, at the time of his purchase exceeds $1,000,000. For purposes of calculating a natural person's net worth: (a) the person's primary residence must not be included as an asset; (b) indebtedness secured by the person's primary residence up to the estimated fair market value of the primary residence must not be included as a liability (except that if the amount of such indebtedness outstanding at the time of calculation exceeds the amount outstanding 60 days before such time, other than as a result of the acquisition of the primary residence, the amount of such excess must be included as a liability); and (c) indebtedness that is secured by the person's primary residence in excess of the estimated fair market value of the residence must be included as a liability;

☐ Any natural person who had an individual income in excess of $200,000 in each of the two most recent years or joint income with that person's spouse in excess of $300,000 in each of those years and has a reasonable expectation of reaching the same income level in the current year; or

☐ Any entity in which all of the equity owners are accredited investors meeting one or more of the above tests.

PROXY CARD

SCAN TO
VIEW MATERIALS & VOTE

SEMA4 HOLDINGS CORP.
333 LUDLOW STREET
NORTH TOWER, 8TH FLOOR
STAMFORD, CT 06902

VOTE BY INTERNET
Before The Meeting - Go to **www.proxyvote.com**

Use the Internet to transmit your voting instructions and for electronic delivery of information up until 11:59 p.m. Eastern Time the day before the cut-off date or meeting date. Have your proxy card in hand when you access the web site and follow the instructions to obtain your records and to create an electronic voting instruction form.

During The Meeting - Go to **www.virtualshareholdermeeting.com/SMFR2022SM**

You may attend the meeting via the Internet and vote during the meeting. Have the information that is printed in the box marked by the arrow available and follow the instructions.

VOTE BY PHONE - 1-800-690-6903
If you hold your shares in street name, you must submit voting instructions to your broker, bank or other nominee. In most instances, you will be able to do this over the Internet, by telephone or by mail. Please refer to information from your bank, broker, or other nominee on how to submit voting instructions.

VOTE BY MAIL
Mark, sign and date your proxy card and return it in the postage-paid envelope we have provided or return it to Vote Processing, c/o Broadridge, 51 Mercedes Way, Edgewood, NY 11717.

TO VOTE, MARK BLOCKS BELOW IN BLUE OR BLACK INK AS FOLLOWS:

D74082-S42575

KEEP THIS PORTION FOR YOUR RECORDS
DETACH AND RETURN THIS PORTION ONLY

THIS PROXY CARD IS VALID ONLY WHEN SIGNED AND DATED.

SEMA4 HOLDINGS CORP.

The Board of Directors recommends you vote FOR the following proposals:

		For	Against	Abstain
1.	**The Stock Consideration Issuance Proposal** - For purposes of complying with applicable Nasdaq Stock Market (the "*Nasdaq*") listing rules (the "*Nasdaq Listing Rules*"), to approve the issuance of the Company's Class A common stock, par value $0.0001 per share (the "*Class A common stock*"), in connection with the Acquisition (as defined in the accompanying Proxy Statement) and as contemplated by the Agreement and Plan of Merger and Reorganization dated January 14, 2022 (the "*Merger Agreement*"), by and among the Company, GeneDx, Inc. ("*GeneDx*"), a wholly-owned subsidiary of OPKO Health, Inc. ("*OPKO*"), OPKO, Orion Merger Sub I, Inc. ("*Merger Sub I*"), a wholly-owned subsidiary of the Company, Orion Merger Sub II, LLC ("*Merger Sub II*" and together with Merger Sub I, "*Merger Subs*"), a wholly-owned subsidiary of the Company, and GeneDx Holding 2, Inc., which will own 100% of GeneDx at the Effective Time (as defined in the accompanying Proxy Statement);	☐	☐	☐
2.	**The PIPE Investment Proposal** - For purposes of complying with the Nasdaq Listing Rules, to approve the issuance of the Class A common stock in connection with the PIPE Investment (as defined in the accompanying proxy statement) and as contemplated by the Subscription Agreements (as defined in the accompanying proxy statement);	☐	☐	☐
3.	**The Special Designee Director Election Proposal** - Assuming the Stock Consideration Issuance Proposal and the Charter Amendment Proposal are approved and adopted and the Acquisition is consummated, to appoint two directors who will become directors of the Company effective upon the consummation of the Acquisition;	☐	☐	☐
4.	**The Charter Amendment Proposal** - To adopt an Amendment (the "*Amendment*") to the Third Amended and Restated Certificate of Incorporation of the Company, in the form attached hereto as Annex B (the "*Charter*"), which increases the number of authorized shares of Class A common stock from 380,000,000 to 1,000,000,000;	☐	☐	☐
5.	**The Class I Director Election Proposal** - To elect three Class I directors of the Company, each to serve a three-year term expiring at the Company's 2025 annual meeting of stockholders and until such director's successor is duly elected and qualified;	☐	☐	☐
6.	**The Auditor Ratification Proposal** - To ratify the appointment of Ernst & Young LLP as the Company's independent registered public accounting firm for the fiscal year ending December 31, 2022; and	☐	☐	☐
7.	**Adjournment Proposal** - To approve, if necessary, the adjournment of the Special Meeting to a later date or dates to permit further solicitation and votes of proxies in the event that there are insufficient votes for, or otherwise in connection with any of the proposals presented at the Special Meeting.	☐	☐	☐

Signature should agree with name printed hereon. If stock is held in the name of more than one person, EACH joint owner should sign. Executors, administrators, trustees, guardians, and attorneys should indicate the capacity in which they sign. Attorneys should submit powers of attorney.

Signature [PLEASE SIGN WITHIN BOX]	Date	Signature (Joint Owners)	Date

Important Notice Regarding the Availability of Proxy Materials for the Special Meeting to be held on April 27, 2022
The Notice and Proxy Statement are available at: www.proxyvote.com.

D74083-S42575

Sema4 Holdings Corp.

SPECIAL MEETING OF STOCKHOLDERS

April 27, 2022

THIS PROXY IS SOLICITED ON BEHALF OF THE BOARD OF DIRECTORS OF

Sema4 Holdings Corp.

The undersigned, revoking any previous proxies relating to these shares, hereby acknowledges receipt of the Notice of Special Meeting of Stockholders of Sema4 Holdings Corp. (the "Special Meeting") and accompanying Proxy Statement dated March 31, 2022 in connection with the Special Meeting to be held on April 27, 2022 at 9:00 a.m. Eastern Time virtually at www.virtualshareholdermeeting.com/SMFR2022SM and hereby appoints Jason Ryan and Daniel Clark, and each of them (with full power to act alone), the attorneys-in-fact and proxies of the undersigned, with full power of substitution to each, to vote all shares of the Class A common stock, of Sema4 Holdings Corp., registered in the name provided, which the undersigned is entitled to vote at the Special Meeting, and at any adjournments thereof, with all the powers the undersigned would have if personally present. Without limiting the general authorization hereby given, said proxies are, and each of them is, instructed to vote or act as follows on the proposals set forth in the accompanying Proxy Statement.

THIS PROXY, WHEN EXECUTED, WILL BE VOTED IN THE MANNER DIRECTED HEREIN. IF NO DIRECTION IS MADE, THIS PROXY WILL BE VOTED "FOR" ALL PROPOSALS.

PLEASE RETURN THIS PROXY AS SOON AS POSSIBLE.