As confidentially submitted to the Securities and Exchange Commission on May 13, 2021.
This draft registration statement has not been filed publicly with the Securities and Exchange Commission and all information herein remains strictly confidential.
Registration No. 333-

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

FORM S-1
REGISTRATION STATEMENT UNDER
THE SECURITIES ACT OF 1933

IsoPlexis Corporation

(Exact name of registrant as specified in its charter)

Delaware	3826	46-2179799
(State or other jurisdiction of incorporation or organization)	(Primary Standard Industrial Classification Code Number)	(I.R.S. Employer Identification No.)

35 NE Industrial Rd
Branford, CT 06405
(475) 221-8402

(Address, including zip code, and telephone number, including area code, of registrant's principal executive offices)

Sean Mackay
Chief Executive Officer
IsoPlexis Corporation
35 NE Industrial Rd
Branford, CT 06405
(475) 221-8402

(Name, address, including zip code, and telephone number, including area code, of agent for service)

Copies to:

William V. Fogg **Matthew G. Jones** **Cravath, Swaine & Moore LLP** **Worldwide Plaza** **825 Eighth Avenue** **New York, NY 10019** **(212) 474-1000**	**Michael Grundei** **Evan S. Kipperman** **Wiggin and Dana, LLP** **Two Stamford Plaza** **281 Tresser Boulevard** **Stamford, CT 06901** **(203) 363-7600**	**Michael Benjamin** **Peter Handrinos** **Latham & Watkins LLP** **1271 Avenue of the Americas** **New York, NY 10020** **(212) 906-1200**

Approximate date of commencement of proposed sale to the public: As soon as practicable after this registration statement becomes effective.

If any of the securities being registered on this Form are to be offered on a delayed or continuous basis pursuant to Rule 415 under the Securities Act of 1933, check the following box. ☐

If this Form is filed to register additional securities for an offering pursuant to Rule 462(b) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering. ☐

If this Form is a post-effective amendment filed pursuant to Rule 462(c) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering. ☐

If this Form is a post-effective amendment filed pursuant to Rule 462(d) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering. ☐

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, a smaller reporting company or an emerging growth company. See the definitions of "large accelerated filer," "accelerated filer," "smaller reporting company," and "emerging growth company" in Rule 12b-2 of the Exchange Act.

Large accelerated filer	☐	Accelerated filer	☐
Non-accelerated filer	☒	Smaller reporting company	☒
		Emerging growth company	☒

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 7(a)(2)(B) of the Securities Act. ☐

CALCULATION OF REGISTRATION FEE

Title of Each Class of Securities to be Registered	Proposed Maximum Aggregate Offering Price [(1)(2)]	Amount of Registration Fee
Common Stock, $ 0.001 par value per share	$	$

(1) Estimated solely for the purpose of calculating the registration fee pursuant to Rule 457(o) under the Securities Act of 1933, as amended.
(2) Includes offering price of any additional shares that the underwriters have the option to purchase.

The registrant hereby amends this registration statement on such date or dates as may be necessary to delay its effective date until the registrant shall file a further amendment which specifically states that this registration statement shall thereafter become effective in accordance with Section 8(a) of the Securities Act of 1933, as amended, or until this registration statement shall become effective on such date as the Securities and Exchange Commission, acting pursuant to said Section 8(a), may determine.

The information in this preliminary prospectus is not complete and may be changed. We may not sell these securities until the registration statement filed with the Securities and Exchange Commission is effective. This preliminary prospectus is not an offer to sell these securities and is not soliciting an offer to buy these securities in any jurisdiction where the offer or sale is not permitted.

PRELIMINARY PROSPECTUS (Subject to Completion, dated , 2021)

Shares

COMMON STOCK

This is an initial public offering of shares of the common stock of IsoPlexis Corporation. We are offering shares to be sold in this offering.

Prior to this offering, there has been no public market for our common stock. We estimate that the initial public offering price per share will be between $ and $. We intend to apply to list the common stock on The Nasdaq Global Market under the symbol "ISO."

We are an "emerging growth company" and "smaller reporting company" as defined under the federal securities laws and, under applicable Securities and Exchange Commission rules, we have elected to comply with certain reduced public company reporting and disclosure requirements.

Investing in our common stock involves risk. See "Risk Factors" beginning on page 12 to read about factors you should consider before buying shares of our common stock.

PRICE $ A SHARE

	Price to Public	*Underwriting Discounts and Commissions[1]*	*Proceeds to IsoPlexis*
Per Share	*$*	*$*	*$*
Total	*$*	*$*	*$*

(1) See "Underwriters" for a description of compensation to be paid to the underwriters.

We have granted the underwriters the option for a period of 30 days to purchase up to an additional shares of our common stock from us at the initial public offering price less the underwriting discounts and commissions.

Neither the Securities and Exchange Commission nor any state securities commission or other regulatory body has approved or disapproved of these securities or passed upon the accuracy or adequacy of this prospectus. Any representation to the contrary is a criminal offense.

The underwriters expect to deliver the shares on or about , 2021.

MORGAN STANLEY COWEN EVERCORE ISI SVB LEERINK

Prospectus dated , 2021.

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Through and including , 2021 (25 days after the date of this prospectus), all dealers effecting transactions in these securities, whether or not participating in this offering, may be required to deliver a prospectus. This delivery is in addition to a dealer's obligation to deliver a prospectus when acting as an underwriter and with respect to an unsold allotment or subscription.

Neither we nor any of the underwriters have authorized anyone to provide any information or to make any representations other than those contained in this prospectus or in any free writing prospectuses we have prepared. We and the underwriters take no responsibility for, and can provide no assurance as to the reliability of, any other information that others may give you. This prospectus is an offer to sell only the shares offered hereby, but only under circumstances and in jurisdictions where it is lawful to do so.

The information contained in this prospectus is current only as of the date of this prospectus, regardless of the time of delivery of this prospectus or of any sale of our common stock. Our business, financial condition, results of operations and prospects may have changed since that date.

Neither we nor any of the underwriters have done anything that would permit this offering or possession or distribution of this prospectus in any jurisdiction where action for that purpose is required, other than in the United States. Persons outside the United States who come into possession of this prospectus must inform themselves about, and observe any restrictions relating to, the offering of the shares of common stock and the distribution of this prospectus outside the United States.

MARKET, INDUSTRY AND OTHER DATA

This prospectus includes estimates regarding market and industry data. Unless otherwise indicated, information concerning our industry and the markets in which we operate, including our general expectations, market position, market opportunity and market size, are based on our management's knowledge and experience in the markets in which we operate, together with currently available information obtained from various sources, including publicly available information, industry reports and publications, surveys, our customers, trade and business organizations and other contacts in the markets in which we operate. Certain information is based on management estimates, which have been derived from third-party sources, as well as data from our internal research, and are based on certain assumptions that we believe to be reasonable.

In presenting this information, we have made certain assumptions that we believe to be reasonable based on such data and other similar sources and on our knowledge of, and our experience to date in, the markets in which we operate. While we believe the estimated market and industry data included in this prospectus are generally reliable, such information, which is derived in part from management's estimates and beliefs, is inherently uncertain and imprecise. Market and industry data are subject to change and may be limited by the availability of raw data, the voluntary nature of the data gathering process and other limitations inherent in any statistical survey of such data. In addition, projections, assumptions and estimates of the future performance of the markets in which we operate and our future performance are necessarily subject to uncertainty and risk due to a variety of factors, including those described in "Risk Factors" and "Special Note Regarding Forward-Looking Statements." These and other factors could cause results to differ materially from those expressed in the estimates made by third parties and by us. Accordingly, you are cautioned not to place undue reliance on such market and industry data or any other such estimates. Neither we nor the underwriters have independently verified any third-party information and data from our internal research has not been verified by any independent source.

TRADEMARKS AND TRADE NAMES

We own or have rights to certain trademarks that we use in conjunction with the operations of our business, including IsoPlexis, IsoLight, IsoSpark, IsoCode, CodePlex and IsoSpeak. Each trademark, trade name or service mark of any other company appearing or incorporated by reference in this prospectus belongs to its holder. Solely for convenience, trademarks and service marks referred to in this prospectus may appear with or without the "®" or "™" symbols, but the inclusion, or not, of such references are not intended to indicate, in any way, that we will not assert, to the fullest extent possible under applicable law, our rights to these trademarks and service marks. We do not intend our use or display of other companies' trademarks, trade names or service marks to imply a relationship with, or endorsement or sponsorship of us by, such other companies.

PROSPECTUS SUMMARY

This summary highlights information contained elsewhere in this prospectus and does not contain all of the information that you should consider before deciding to invest in shares of our common stock. Before investing in shares of our common stock, you should carefully read this entire prospectus, including our consolidated financial statements and the related notes thereto and the information set forth under the sections "Risk Factors" and "Management's Discussion and Analysis of Financial Condition and Results of Operations," in each case included in this prospectus. Unless the context otherwise requires, we use the terms "IsoPlexis," the "Company," the "Issuer," "we," "us" and "our" in this prospectus to refer to IsoPlexis Corporation and our consolidated subsidiary.

Overview

We are enabling deeper access to *in vivo* biology and driving durable and potentially transformational research on disease in a new era of advanced medicine. We believe our platform is the first to employ both proteomics and single cell biology in an effort to fully characterize and link cellular function to patient outcomes by revealing treatment response and disease progression. Our single cell proteomics platform, which includes instruments, chip consumables and software, provides an end-to-end solution to reveal a more complete view of protein function at an individual cellular level. Our platform has been rapidly adopted by the top 15 global biopharmaceutical companies by revenue and nearly half of the comprehensive cancer centers in the United States to help develop more durable therapeutics, overcome therapeutic resistance, and predict patient responses for advanced immunotherapies, cell therapies, gene therapies, vaccines, and regenerative medicines. Our initial focus has been on developing applications of our platform for cancer immunology and cell and gene therapy. We are now expanding our capabilities to include applications for infectious diseases, inflammatory conditions, and neurological diseases.

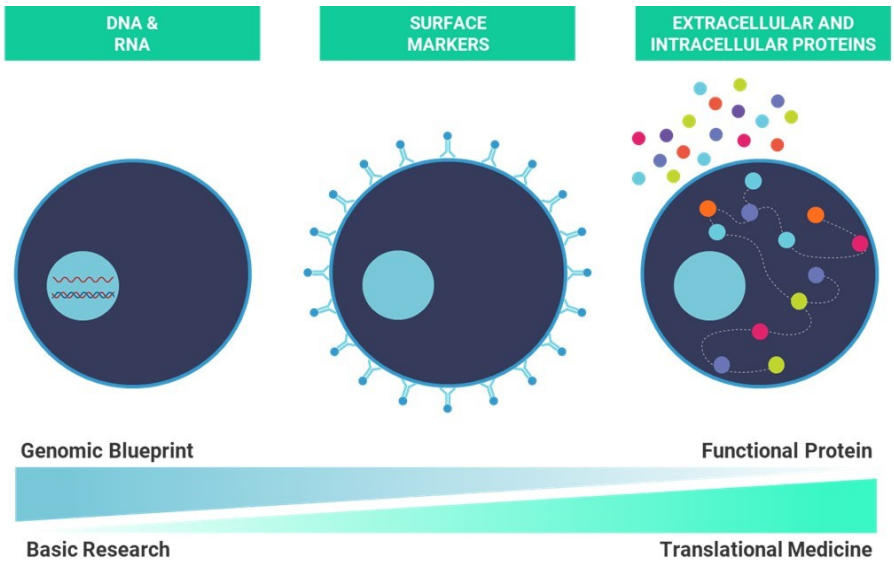
We believe that traditional bulk methods of proteomics analysis lack quality single cell resolution. Single cell biology has become highly valuable to the life sciences industry because individual core cell types underlying a specific disease (for example, tumor cells, immune cells, and cells of the central nervous system) look and act very differently. Single cell biology provides deep insights into variations among each individual cell's behavior, such as underlying disease activity and therapeutic response. Traditional bulk proteomic analyses fail to provide these insights as they focus on average cell activity in the aggregate. For example, in cell therapy, where heterogeneous populations of immune cells are engineered to combat tumors, traditional bulk proteomic methods are not designed to identify the unique immune cell subsets that contribute most significantly to effective treatment responses. At the same time, while the genome of single cells has been explored in depth, genomics has limitations on accurately predicting treatment resistance, which often results from tumor protein signaling adaptations rather than genetic aberrations. In oncology, while genomics has been used to reveal mutations that reside along druggable pathways, therapeutics targeting these pathways have only marginally improved patient outcomes often due to the rapid development of drug resistance. We believe that our platform can capture a more complete view of the functional biological drivers of disease and therapeutic response.

We designed our platform to reveal functional protein biology and cellular signaling networks at single cell resolution to accelerate the development of advanced medicines. The drivers of efficacy and toxicity are heavily impacted by cytokines, or extracellular functional proteins, through which certain individual cells send and receive signals. Additionally, disease progression and treatment resistance are heavily impacted by the intracellular signaling proteins, in particular phosphoproteins, which dictate the functional state of any cell. We believe that directly capturing the full range of intracellular and extracellular functional proteins is critical to analyzing the efficacy of therapies, identifying biomarkers suitable for druggable targets, and modifying therapeutics that are not generating the intended result. In contrast to traditional bulk methods of proteomics, which can only produce estimates of aggregated levels of functional proteins, our technology fills a critical knowledge gap by directly detecting the full range of intracellular and extracellular functional proteins within a sample.

As of December 31, 2020, we have placed 111 systems globally. Revenue for the fiscal years ended December 31, 2019 and 2020, was $7.5 million and $10.4 million, respectively. We generated net losses of $13.6 million and $23.3 million for the fiscal years ended December 31, 2019 and 2020, respectively. We market and sell our platform

through a direct sales channel in North America and specific regions in Europe. Additionally, we utilize ten distributor relationships to market and sell our products in Europe, the Middle East and Asia-Pacific.

Figure 1. The figure below represents the evolution of single cell biology from the study of the genomic blueprint of a cell—its DNA and RNA—through the functional representation of each cell's activity—its extracellular and intracellular proteins. This evolution towards the proteome is enabling greater application to translational medicine.



Our Platform

Our platform is an end-to-end solution comprised of our proprietary IsoLight and IsoSpark instruments, IsoCode and CodePlex chip consumables, and IsoSpeak software. Our IsoLight and IsoSpark instruments are designed to be fully-automated benchtop proteomic hubs. Our IsoCode chips utilize our core technology leveraging our proteomic barcoding to capture single cell protein information. Our recently introduced CodePlex chips leverage our core technology to assay multiplexed bulk proteins from very low volumes. Our IsoSpeak software interprets this data and is capable of rapidly returning publication-quality content and advanced visualizations to reveal key insights.

We believe that our platform overcomes many of the limitations of traditional bulk proteomic workflows, which can be capital intensive, time consuming and laborious, require multiple instruments and many manual steps, and may only be capable of analyzing small numbers of functional proteins at a time. Our platform supports multiple applications, including in cancer immunology, cell and gene therapy, infectious diseases, inflammatory conditions, and neurological diseases.

Figure 2. Our platform is comprised of instruments, chip consumables, and software.

IsoCode and CodePlex Chip Technology Overview

Chip Solutions	***Function***	***Applications***
Extracellular Protein Detection	Enables the discovery of better biomarkers, including rare cells that have the potential to drive therapeutic persistence, potency, and durability	**Translational medicine** • Cancer immunology • Inflammation • Cell therapies • Infectious disease • Targeted therapies
Intracellular Protein Detection	Measures cellular protein-to-protein interactions and adaptive resistance pathways to identify resistance earlier and enable earlier selection of potential treatments	**Discovery** • Combinatorial therapies • Kinase inhibitors • Targeted therapies • Cell therapies

Our Market Opportunity

Our current product offering supports a variety of applications that are broadly used for translational, preclinical and clinical development of advanced medicines, representing an initial $12 billion addressable market opportunity based on management estimates. This cumulative market spend accounts for an installed base of approximately 55,000 instruments, in line with mature protein and cell biology technologies such as flow cytometry and multiplexed proteomics. Our relevant end users span the range of biopharmaceutical companies and academic and research institutions worldwide, which in the aggregate cover approximately 5,500 advanced medicines programs in both preclinical and clinical stages.

In addition to our currently targeted addressable market opportunity in advanced medicines, we have recently expanded our capabilities with our intracellular protein detection IsoCode chip products, which are designed to improve discovery biology as a bridge to the earlier development of advanced medicines. We believe this represents an incremental $12 billion addressable market opportunity. Furthermore, our long term strategy is ultimately to add additional applications serving clinical diagnostics research that will allow us to serve additional markets we believe to be worth approximately $10 billion. We expect that our initial entry into the clinical diagnostics market will start with our CodePlex solution for low volume bulk proteomics as it provides accessibility to end users through automation. We believe investments in these areas will provide access to a potential $34 billion addressable market.

Our Competitive Advantages

We believe that our platform offers several advantages over existing proteomic and cellular analysis technologies, including:

- **Direct single cell analysis of functional proteins**: Our technology directly measures the functional proteins from each cell in a highly multiplexed manner.
- **Multiple proteomic applications on a single system**: Our technology provides highly multiplexed information from bulk and single cell extracellular proteome and the intracellular proteome, all on the same system.
- **Rapid data analysis and insights**: Our IsoSpeak software provides advanced, automated data analysis and accelerated insights that can save a significant amount of time for researchers and companies engaged in the development of advanced medicines.
- **Ultra-low sample volume requirements**: Our platform was designed to maximize the utility of the limited sample volume that our customers often obtain from their clinical trials.
- **Simplified workflow and minimal footprint**: Our automated benchtop instruments, with their minimal footprint and push button user interface, are designed to generate insights and publication-quality analysis within hours, with minimal technical expertise.

Our Growth Strategy

Our goal is to establish our platform as a leading proteomic workflow solution in the life sciences industry. In pursuit of that goal, the key elements of our growth strategy include:

- **Promoting our platform as the standard for single cell proteomic analysis**: We intend to continue promoting our platform as a critical tool that provides new and accessible layers of the functional extracellular and intracellular proteome at the single cell level.
- **Expand the installed base of our IsoLight and IsoSpark instruments with new and existing customers**: Utilizing our multi-channel sales and distribution network, we intend to continue engaging with the global life sciences community to grow our installed base and expand the number of instruments within organizations that are already utilizing our technology to advance their research and therapeutic development.
- **Drive adoption of our existing applications**: We intend to continue promoting our platform to help meet the urgent need to develop new therapeutics and accelerate development timelines across multiple applications spanning cancer immunology, cell and gene therapy, infectious diseases, inflammatory conditions, and neurological diseases.
- **Develop new applications across multiple therapeutic classes and indications**: As we continue to deploy our platform, we intend to concurrently expand the breadth of applications for our technologies as new areas of therapeutic development emerge.
- **Expand adoption of our platform into new geographical markets**: We currently market and sell our technology with an in-house commercial team in the United States and Europe, and utilize a distribution network to market and sell across multiple countries, which we intend to continue to expand.
- **Integrate sequencing biology with proteomics**: We intend to further develop our product roadmap to integrate sequencing and functional proteomic biology from single cells to enable novel applications in discovery biology.

Recent Developments

On May 12, 2021, the Company entered into a Patent Purchase Agreement (the "Patent Purchase Agreement") with certain third parties (the "Sellers") to purchase a collection of patents for an aggregate purchase price of $20.0 million. The Company expects to fund the purchase with cash on hand. In connection with entering into the Patent Purchase Agreement, the Company also entered into an Assumption Agreement with the Sellers to assume the Sellers' rights and obligations under a covenant not to sue with a separate third party related to certain patents purchased pursuant to the Patent Purchase Agreement. In addition, in connection with entering into the Patent Purchase Agreement, the Company has agreed to enter into a Supply Agreement with certain of the Sellers pursuant to which certain of the Sellers will agree to supply certain reagents to the Company.

Summary of Risk Factors

Our business is subject to a number of risks, including risks that may prevent us from achieving our business objectives or may adversely affect our business, financial condition, results of operations and prospects, which could cause the trading price of our common stock to decline and could result in a partial or total loss of your investment. You should consider these risks before making a decision to invest in shares of our common stock. These risks are discussed more fully in "Risk Factors" beginning on page 12 in this prospectus. The following is a summary of some of the principal risks we face:

- we have incurred significant net losses since inception, we expect to incur net losses in the future, and we may not be able to generate sufficient revenue to achieve and maintain profitability;
- it may be difficult for us to implement our strategies for executing our growth plan or to sustain or successfully manage our anticipated growth;
- we have a limited operating history, which may make it difficult to evaluate the prospects for our future viability and predict our future performance;
- the life sciences technology market is highly competitive. If we fail to compete effectively, our business and results of operation will suffer;
- the sizes of the markets and forecasts of market growth for our platform are based on a number of complex assumptions and estimates, and may be inaccurate;
- our business, financial condition, results of operations and prospects may be harmed if our customers discontinue or spend less on research, development and production and other scientific endeavors;
- if we do not successfully manage the development and launch of new products, our operating results could be adversely affected;
- we depend on our key personnel and other highly qualified personnel, and if we are unable to recruit, train and retain our personnel, we may not achieve our goals;
- we depend on our information technology systems, and any failure of these systems could harm our business;
- due to the significant resources required to enable access in new markets, we must make strategic and operational decisions to prioritize certain markets or technology offerings. We may expend our resources to access markets or develop technologies that do not yield meaningful revenue or we may fail to capitalize on markets or technologies that may be more profitable or with a greater potential for success;
- our international business could expose us to business, regulatory, political, operational, financial, and economic risks associated with doing business outside of the United States;
- our manufacturing operations are dependent upon third party suppliers, including single source suppliers, making us vulnerable to supply shortages and price fluctuations, which could harm our business;

- if our facilities are damaged or become inoperable, we will be unable to continue to research, develop and manufacture our products and, as a result, our business, financial condition, results of operations and prospects may be adversely affected until we are able to secure a new facility;
- if we are unable to obtain and maintain sufficient intellectual property protection for our products and technologies, or if the scope of the intellectual property protection obtained is not sufficiently broad, our competitors could develop and commercialize products similar or identical to ours, and our ability to successfully commercialize our products may be impaired; and
- we have identified a material weakness in our internal control over financial reporting, and the failure to remediate this material weakness may adversely affect our business, investor confidence in our company, our financial results and the market value of our common stock.

Implications of Being an Emerging Growth Company

We are an "emerging growth company" as defined in the Jumpstart Our Business Startups Act of 2012, as amended (the "JOBS Act"). An emerging growth company may take advantage of specified exemptions from various requirements that are otherwise applicable generally to public companies in the United States. These provisions include:

- presenting only two years of audited financial statements in addition to any required unaudited interim financial statements with correspondingly reduced "Management's Discussion and Analysis of Financial Condition and Results of Operations" disclosure in this prospectus;
- reduced disclosure about our executive compensation arrangements;
- an exemption from the requirements to hold non-binding advisory votes on executive compensation and golden parachute payments;
- an exemption from the auditor attestation requirement in the assessment of the emerging growth company's internal control over financial reporting; and
- an exemption from compliance with any requirement that the Public Company Accounting Oversight Board may adopt regarding mandatory audit firm rotation or a supplement to the auditor's report providing additional information about the audit and the financial statements.

We will remain an emerging growth company until the earliest to occur of:

- the last day of the fiscal year in which we have annual gross revenues of $1.07 billion or more;
- the date on which we have issued more than $1.0 billion in non-convertible debt in the previous three years;
- the last day of the fiscal year in which we are deemed to be a "large accelerated filer" under the Securities Exchange Act of 1934, as amended (the "Exchange Act"), which would occur if the market value of our common stock that is held by non-affiliates is $700.0 million or more as of the last business day of the second fiscal quarter of such year; and
- the last day of the fiscal year ending after the fifth anniversary of this offering.

We have elected to take advantage of certain of the reduced disclosure obligations in this prospectus and may elect to take advantage of other reduced reporting requirements in future filings. As a result, the information that we provide to our investors may be different from the information you might receive from other public reporting companies that are not emerging growth companies in which you hold equity interests.

In addition, the JOBS Act provides that an emerging growth company can take advantage of an extended transition period for complying with new or revised accounting standards. This allows an emerging growth company to delay the adoption of certain accounting standards until those standards would otherwise apply to private companies. We have elected to avail ourselves of this exemption and, therefore, while we are an emerging growth

company, we will not be subject to new or revised accounting standards at the same time that they become applicable to other public companies that are not emerging growth companies.

To the extent that we continue to qualify as a "smaller reporting company," as such term is defined in Rule 12b-2 under the Exchange Act, after we cease to qualify as an emerging growth company, we will continue to be permitted to make certain reduced disclosures in our periodic reports and other documents that we file with the Securities and Exchange Commission ("SEC").

Corporate Information

IsoPlexis Corporation was incorporated in Delaware on March 1, 2013. Our principal executive office is located at 35 NE Industrial Rd., Branford, CT 06405 and our telephone number is (475) 221-8402. Our website address is www.isoplexis.com. The information contained on, or that can be accessed through, our website is not part of, and is not incorporated into, this prospectus, and you should not rely on any such information in making the decision whether to purchase shares of our common stock.

THE OFFERING

Common stock offered by us	shares (or shares if the underwriters exercise in full their option to purchase additional shares from us).
Underwriters' option to purchase additional shares of common stock from us	shares.
Common stock to be outstanding immediately after this offering	shares (or shares if the underwriters exercise in full their option to purchase additional shares from us).
Use of proceeds	We estimate that the net proceeds to us from this offering will be approximately $ million (or approximately $ million if the underwriters exercise in full their option to purchase additional shares from us) based on an assumed initial public offering price of $ per share, which is the midpoint of the estimated price range set forth on the cover page of this prospectus, and after deducting estimated underwriting discounts and commissions and estimated offering expenses payable by us. We intend to use the net proceeds from this offering for general corporate purposes. See "Use of Proceeds."
Risk factors	You should read the "Risk Factors" section beginning on page 12 and the other information included in this prospectus for a discussion of the factors to consider before deciding to invest in shares of our common stock.
Proposed listing and symbol	We intend to apply to list our common stock on The Nasdaq Global Market ("Nasdaq") under the trading symbol "ISO."

The number of shares of our common stock that will be outstanding after this offering is based on shares of common stock outstanding as of , which gives effect to the Assumed Share Events (as defined below) and excludes:

- shares of our common stock issuable upon exercise of options to purchase shares of our common stock outstanding as of with a weighted-average exercise price of $ per share; and
- shares of our common stock reserved for future issuance under our 2014 Plan (as defined below) as of .

In addition, unless otherwise indicated, all information in this prospectus assumes and reflects (collectively, the "Assumed Share Events"):

- a one-for- stock split (the "Stock Split") of our common stock to be effected prior to the closing of this offering;
- the filing and effectiveness of our amended and restated certificate of incorporation and the adoption of our amended and restated bylaws, each of which will be in effect at the closing of this offering;
- the automatic conversion of all of our outstanding redeemable convertible preferred stock, of which shares were outstanding as of , into shares of our common stock concurrently with the closing of this offering, as if such conversion had occurred on (the "Preferred Stock Conversion");
- the exercise of the warrant (the "Series A-2 Preferred Stock Warrant") held by Connecticut Innovations, Incorporated into 3,178 shares of Series A-2 redeemable convertible preferred stock on May 11, 2021, at an exercise price of $12.58608 per share (the "Series A-2 Warrant Exercise");

- the net exercise of the warrant (the "Series D Preferred Stock Warrant") held by Perceptive Credit Holdings III, LP into shares of our common stock concurrently with the closing of this offering, based on an assumed initial public offering price of $ per share, which is the midpoint of the estimated price range set forth on the cover page of this prospectus, as if such exercise had occurred on (the "Series D Warrant Exercise"), at an exercise price of $;
- no exercise of outstanding options subsequent to ; and
- no exercise by the underwriters of their option to purchase up to an additional shares of our common stock.

For more information about our warrants, see "Description of Capital Stock—Warrants."

SUMMARY CONSOLIDATED FINANCIAL DATA

The following summary consolidated financial data as of December 31, 2019 and 2020 and for each of the two years in the period ended December 31, 2019 and December 31, 2020, are derived from the audited consolidated financial statements of IsoPlexis Corporation and the accompanying notes that are included elsewhere in this prospectus.

The historical results presented below are not necessarily indicative of financial results to be achieved in future periods. The summary consolidated financial data should be read together with "Management's Discussion and Analysis of Financial Condition and Results of Operations" and our consolidated financial statements and the related notes included elsewhere in this prospectus.

Consolidated Statements of Operations Data:

	Year Ended December 31,	
	2019	2020
	(in thousands, except share and per share amounts)	
Revenue		
Product revenue	$ 5,328	$ 9,318
Service revenue	2,177	1,069
Total revenue	7,505	10,387
Cost of product revenue	2,803	4,866
Cost of service revenue	455	108
Gross Profit	4,247	5,413
Operating expenses:		
Research and development expenses[1]	10,134	11,157
General and administrative expenses[1]	4,806	8,023
Sales and marketing expenses[1]	7,559	13,511
Total operating expenses	22,499	32,691
Loss from operations	(18,252)	(27,278)
Other income and (expense):		
Grant income	4,226	4,117
Research and development tax credits	411	—
Change in fair value of warrants	(10)	(85)
Interest income	—	3
Interest expense	(1)	(21)
Net loss	$ (13,626)	$ (23,264)
Accrued dividends on redeemable convertible preferred stock	(1,486)	(1,979)
Net loss attributable to common stockholders	$ (15,112)	$ (25,243)
Basic and diluted net loss per common share[2]	$ (58.62)	$ (96.61)
Weighted-average common shares outstanding—basic and diluted[2]	257,780	261,299

(1) Costs and expenses include stock-based compensation as follows:

	Year Ended December 31,	
	2019	2020
	(in thousands)	
Research and development	$ 25	$ 35
General and administrative	107	455
Sales and marketing	11	27
Total stock-based compensation expense	$ 143	$ 517

(2) See Note 2 and Note 15 to our consolidated financial statements included elsewhere in this prospectus for further details on the calculation of basic and diluted net loss per share attributable to common stockholders and the weighted-average amount of shares outstanding used to compute net loss per share attributable to common stockholders.

Consolidated Balance Sheet Data (at Period End):

	As of December 31, 2020		
	Actual	Pro Forma[1]	Pro Forma as Adjusted[2][3]
	(audited)	(unaudited)	(unaudited)
		(in thousands)	
Cash	$ 106,641	$	$
Working capital[4]	111,052		
Total assets	123,605		
Total liabilities	31,396		
Total redeemable convertible preferred stock	143,460		
Accumulated deficit	(52,404)		
Total stockholders' (deficit) equity	(51,251)		

(1) The pro forma column in the balance sheet data gives effect to (i) the Preferred Stock Conversion, (ii) the Series A-2 Warrant Exercise, (iii) the Series D Warrant Exercise and (iv) the filing and effectiveness of our amended and restated certificate of incorporation, which will be in effect at the closing of this offering.

(2) The pro forma adjusted column in the balance sheet data table above gives effect to (i) the pro forma adjustments set out above and (ii) the issuance and sale by us of shares of common stock in this offering at an assumed initial public offering price of $ per share, which is the midpoint of the estimated price range set forth on the cover page of this prospectus, and our receipt of the estimated net proceeds from that sale after deducting the estimated underwriting discounts and commissions and estimated offering expenses payable by us.

(3) A $1.00 increase or decrease in the assumed initial public offering price of our common stock of $ per share would increase or decrease, as applicable, the amount of our pro forma as adjusted cash, working capital, total assets and total stockholders' equity by approximately $, assuming that the number of shares offered, as set forth on the cover page of this prospectus, remains the same and after deducting the estimated underwriting discounts and commissions and estimated offering expenses payable by us. An increase or decrease of 1,000,000 shares in the number of shares of common stock offered by us in this offering, as set forth on the cover page of this prospectus, would increase or decrease, as applicable, the amount of our pro forma as adjusted cash, working capital, total assets and total stockholders' equity by approximately $, assuming no change in the assumed initial public offering price per share and after deducting the estimated underwriting discounts and commissions and estimated offering expenses payable by us.

(4) We define working capital as current assets less current liabilities. See our consolidated financial statements included elsewhere in this prospectus for further details regarding our current assets and current liabilities.

RISK FACTORS

Investing in our common stock involves a high degree of risk. You should consider and read carefully all of the risks and uncertainties described below, as well as other information included in this prospectus, including our consolidated financial statements and related notes appearing at the end of this prospectus, before making an investment decision. The occurrence of any of the following risks or additional risks and uncertainties not presently known to us or that we currently believe to be immaterial could materially and adversely affect our business, financial condition, results of operations and prospects. If any of these risks actually occur, the trading price of our common stock could decline, and you may lose all or part of your original investment. This prospectus also contains forward-looking statements and estimates that involve risks and uncertainties. Our actual results could differ materially from those anticipated in the forward-looking statements as a result of specific factors, including the risks and uncertainties described below.

Risks Related to Our Business and Industry

We have incurred significant net losses since inception, we expect to incur net losses in the future, and we may not be able to generate sufficient revenue to achieve and maintain profitability.

We have incurred significant net losses since our inception. For the years ended December 31, 2019 and 2020, we incurred net losses of $13.6 million and $23.3 million, respectively. As of December 31, 2020, we had an accumulated deficit of $52.4 million. We expect that our operating expenses will continue to increase as we develop, enhance and commercialize new products and incur additional operational costs associated with being a public company. Since our inception, we have financed our operations primarily from private placements of our redeemable convertible preferred stock, grant income, the incurrence of indebtedness and, to a lesser extent, revenue derived from sales of our instruments and chip consumables. We have devoted substantially all of our resources to the development and commercialization of our IsoLight and IsoSpark instruments, IsoCode and CodePlex chip consumables, and IsoSpeak software and to research and development activities related to advancing and expanding our scientific and technological capabilities. We will need to generate significant additional revenue to achieve and sustain profitability, and even if we achieve profitability, we cannot be sure that we will remain profitable for any substantial period of time. We may never be able to generate sufficient revenue to achieve or sustain profitability and our recent and historical growth should not be considered indicative of our future performance. If we do not achieve or sustain profitability, it will be more difficult for us to finance our business and accomplish our strategic objectives, either of which could have a material adverse effect on our business, financial condition, results of operations and prospects and cause the market price of our common stock to decline.

It may be difficult for us to implement our strategies for executing our growth plan or to sustain or successfully manage our anticipated growth.

Our success will depend on our ability to grow market penetration in existing markets and our ability to identify new applications for our platform to capture a greater share of the research spend accelerating advanced medicines and additional markets in the future. Our ability to grow our market penetration in existing markets will depend on our ability to attract new customers by increasing awareness of the capabilities of our platform. Future revenue growth will also depend on our ability to:

- properly identify and anticipate the needs of our customers in existing and new markets, including expanding our capabilities to include new applications for infectious diseases, inflammatory conditions and neurological diseases;
- develop and introduce new products;
- avoid infringing upon the intellectual property rights of third-parties and maintain necessary intellectual property licenses from third-parties; and
- provide adequate training to potential users of our products.

If we are unable to drive new customer conversion to our platform, expand adoption of the IsoLight or IsoSpark and our related products in new industries and markets, or increase the usage and value of our workflows to our customers, then our business, financial condition, results of operations and prospects could be adversely affected.

Additionally, as we continue to scale our business and the number of customers accessing our platform grows and our volume of installed platforms increases, we may find that certain of our products, certain customers or certain markets may require a dedicated sales force or sales personnel with different experience than those we currently employ. We may need to increase our capacity for customer service and support, for billing and general process improvements, and expand our internal quality assurance programs. Identifying, recruiting and training additional qualified personnel would require significant time, expense and attention. We may also need to purchase additional equipment, some of which can take several months or more to procure, setup and validate, and increase our personnel levels to meet increased demand. There is no assurance that any of these increases in scale, expansion of personnel, equipment, software and computing capacities or process enhancements will be successfully implemented, or that we will have adequate space, including in our manufacturing facilities, to accommodate such required expansion.

As we commercialize additional products, we will need to incorporate new equipment, implement new technology systems and laboratory processes, and hire new personnel, possibly with supplemental or different qualifications as compared to our current personnel. Failure to manage this growth or transition could result in turnaround time delays, higher product costs, declining product quality, deteriorating customer service and slower responses to competitive challenges. A failure in any one of these areas could make it difficult for us to meet market expectations for our products and could damage our reputation and the prospects for our business.

We have a limited operating history, which may make it difficult to evaluate the prospects for our future viability and predict our future performance.

We completed our first sale of our instruments in June 2018 and have experienced significant revenue growth in recent periods. Revenue increased 38% to $10.4 million for the year ended December 31, 2020 as compared to $7.5 million for the year ended December 31, 2019. In addition, we operate in highly competitive markets characterized by rapid technological advances and we expect that our business will have to evolve over time to remain competitive. Our limited operating history, evolving business and rapid growth may make it difficult to evaluate our future prospects and the risks and challenges we may encounter and may increase the risk that we will not continue to grow at or near historical rates.

If we fail to address the risks and difficulties that we face, including those described elsewhere in this “Risk Factors” section, our business, financial condition, results of operations and prospects could be adversely affected. We have encountered in the past, and expect to encounter in the future, risks and uncertainties frequently experienced by growing companies with limited operating histories in new and rapidly changing industries. If our assumptions regarding these risks and uncertainties, which we use to plan and operate our business, are incorrect or change, or if we do not address these risks and difficulties successfully, our results of operations could differ materially from our expectations and our business, financial condition, results of operations and prospects could be adversely affected.

The life sciences technology market is highly competitive. If we fail to compete effectively, our business and results of operation will suffer.

We face significant competition in the life sciences technology market. We currently compete with many established technology companies in the flow cytometry, cellular analysis and single cell -omics businesses. This includes companies that design, manufacture and market systems, consumables and software for, among other applications, genomics, transcriptomics, proteomics, metabolomics, single cell analysis and immunology, and/or provide services related to the same. These companies include Becton, Dickinson and Company, Thermo Fisher Scientific Inc. and Bio-Rad Laboratories, Inc., each of which has products that compete to varying degrees with some but not all of our products.

Some of our current competitors are large publicly-traded companies, or are divisions of large publicly-traded companies, and may enjoy a number of competitive advantages over us, including:

- greater name and brand recognition;
- greater financial and human resources;
- broader product lines;
- larger sales forces and more established distributor networks;
- substantial intellectual property portfolios;
- larger and more established customer bases and relationships; and
- better established, larger scale and lower cost manufacturing capabilities.

As a result, our competitors and potential competitors may be able to respond more quickly to changes in customer requirements, devote greater resources to the development, promotion and sale of their platforms or instruments than we can or sell their platforms or instruments, or offer services competitive with our platform and services, at prices designed to win significant levels of market share. We may not be able to compete effectively against these organizations.

In addition, competitors may be acquired by, receive investments from or enter into other commercial relationships with larger, well-established and well-financed companies. Certain of our 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 product development than we can. If we are unable to compete successfully against current and future competitors, we may be unable to increase market adoption and sales of our platform, which could prevent us from increasing our revenue or achieving profitability.

The sizes of the markets and forecasts of market growth for our platform are based on a number of complex assumptions and estimates, and may be inaccurate.

The market for our platform is evolving, making it difficult to predict with any accuracy the size of the markets for our current and future products. We use estimates and forecasts to calculate annual total addressable markets and market growth for our platform and for our technologies under development. These estimates and forecasts are based on a number of complex assumptions, internal and third party estimates and other business data, including assumptions and estimates relating to our ability to generate revenue from the development of new applications and products. While we believe our assumptions and the data underlying our estimates are reasonable, there are inherent challenges in measuring or forecasting such information. As a result, 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 total addressable market and our forecasts of market growth and future revenue for our current or future products may prove to be incorrect. If the annual total addressable market or the potential market growth for our platform is smaller than we have estimated, it may impair our sales growth and have an adverse impact on our business, financial condition, results of operations and prospects.

New product development involves a lengthy and complex process and we may be unable to develop or commercialize new products on a timely basis, or at all.

Products from our research and development programs will take time and considerable resources to develop, and may include improvements or changes to our instruments, chip consumables and software, and we may not be able to complete development and commercialize them on a timely basis, or at all. There can be no assurance that

any of our applications and other products in development will produce commercial products and solutions and before we can commercialize any new products or workflows, we will need to expend significant funds in order to:

- conduct substantial research and development, which may include validation and proof of concept studies;
- further develop and scale our laboratory, engineering and manufacturing processes to accommodate different products and workflows; and
- further develop and scale our infrastructure to be able to analyze increasingly large amounts of data.

Our product and workflow development processes involve a high degree of risk, and these efforts may be delayed or fail for many reasons, including:

- failure of the product or workflow to perform as expected; and
- failure to reliably demonstrate the process advantages of our products or workflows.

In addition, if we are unable to generate additional data and insights from our research and development programs, then we may not be able to advance these programs as quickly, or at all, or without significant additional investment, all of which could have a material adverse effect on our product and workflow development efforts.

Even if we are successful in developing new products or workflows, it will require us to make significant additional investments in marketing and selling resources in order to commercialize any such products or workflows. As a result, we may be unsuccessful in commercializing new products or workflows that we develop, which could adversely affect our business, financial condition, results of operations and prospects.

Our operating results may fluctuate significantly in the future, which makes our future operating results difficult to predict and could cause our operating results to fall below expectations or any guidance we may provide.

Our quarterly and annual operating results have fluctuated significantly in the past and may fluctuate significantly in the future, which makes it difficult for us to predict our future operating results. These fluctuations may occur due to a variety of factors, many of which are outside of our control, including, but not limited to:

- the level of demand for our platform, which may vary significantly;
- the length of time of the sales cycle for purchases of our products;
- the timing and cost of, and level of investment in, research, development and commercialization activities relating to our products, which may change from time to time;
- the mix of our products sold and the geographies in which they are sold period to period;
- the relative reliability and robustness of our IsoSpark and IsoLight instruments;
- the introduction of new products or product enhancements by us or others in our industry;
- expenditures that we may incur to acquire, develop or commercialize additional products and technologies;
- expenditures involved in preparing, filing, prosecuting, maintaining, defending and enforcing patent claims;
- changes in governmental regulations;
- future accounting pronouncements or changes in our accounting policies; and
- general market conditions and other factors, including factors unrelated to our operating performance or the operating performance of our competitors.

The effect of one of the factors discussed above, or the cumulative effects of a combination of factors discussed above, could result in large fluctuations and unpredictability in our quarterly and annual operating results. As a

result, comparing our operating results on a period-to-period basis may not be meaningful. Investors should not rely on our past results as an indication of our future performance.

Our business, financial condition, results of operations and prospects may be harmed if our customers discontinue or spend less on research, development and production and other scientific endeavors.

Our customers include biopharmaceutical companies and academic and research institutions. Many factors, including public policy spending priorities, available resources and product and economic cycles, have a significant effect on the capital spending policies of these entities. Fluctuations in the research and development budgets of our customers could have a significant effect on the demand for our products. Our customers determine their research and development budgets based on several factors, including the need to develop new products, continued availability of governmental and other funding, competition and the general availability of resources. If our customers' research and development budgets are reduced, the impact could adversely affect our business, financial condition, results of operations and prospects.

If we are unable to maintain and expand sales and marketing capabilities, we may not be successful in increasing sales of our existing products or commercializing new products.

We may not be able to market, sell or distribute our current products, or future products that we may develop, effectively enough to support our planned growth.

Competition for employees capable of selling expensive instruments and related products within the pharmaceutical and biotechnology industries is intense. As of December 31, 2020, we employed a commercial team of approximately 120 team members, but we may not be able to retain existing personnel or attract new personnel or be able to maintain, and continue to build, an efficient and effective sales organization, which could negatively impact sales and market acceptance of our products and limit our revenue growth and potential profitability. In addition, the time and cost of establishing and maintaining a specialized sales, marketing and service force for a particular product or service may be difficult to justify in light of the revenue generated or projected.

Our expected future growth will impose significant added responsibilities on members of management, including the need to identify, recruit, maintain and integrate additional employees. Our future financial performance and our ability to increase sales of our existing products, commercialize new products and to compete effectively will depend, in part, on our ability to manage this potential future growth effectively, without compromising quality.

In addition, we utilize ten distributor relationships to market and sell our products in Europe, the Middle East and Asia-Pacific and we intend to leverage our distributor partnerships to expand into additional markets in the future. We exert limited control over these distributors under our agreements with them, and if their sales and marketing efforts for our products in any region are not successful, our business would be materially and adversely affected. Locating, qualifying and engaging distribution partners with local industry experience and knowledge will be necessary in at least the short to mid-term to effectively market and sell our products in certain countries outside the United States. We may not be successful in finding, attracting and retaining distribution partners, or we may not be able to enter into such arrangements on favorable terms. Even if we are successful in identifying distributors, such distributors may engage in sales practices that violate local laws or our internal policies, which could create civil or criminal liability for us. Furthermore, sales practices utilized by any such distribution parties that are locally acceptable may not comply with sales practices standards required under U.S. and other laws that apply to us, which could create additional compliance risk. If our sales and marketing efforts by us or our distributors are not successful outside the United States, we may not achieve our sales goals for our products outside the United States, which would materially and adversely impact our business, financial condition, results of operations and prospects.

If we do not successfully manage the development and launch of new products, our operating results could be adversely affected.

Further development and commercialization of our current and future products are key elements of our growth strategy. For example, we completed our first sale of our IsoSpark instrument in the first quarter of 2021 and we intend to launch additional new products in the next six to twelve months. The expenses or losses associated with unsuccessful product development or launch activities, our inability to improve the functionality or reliability and

robustness of our current products, or lack of market acceptance of our new products could adversely affect our business, financial condition, results of operations and prospects. This future growth could create strain on our organizational, administrative and operational infrastructure, including laboratory operations, quality control, customer service and sales organization management.

If we fail to offer high-quality customer service, our business and reputation could suffer.

Ensuring high-quality customer service is important for the growth of our business and any failure to maintain such standards of customer service, or a related market perception, could affect our ability to sell products to existing and prospective customers. Additionally, we believe our customer service team has a positive influence on recurring chip consumables revenue. Providing an exceptional customer experience requires significant time and resources from our customer service team. Potential impacts of the COVID-19 pandemic on the health and safety of our customer service organization could reduce or eliminate the organization's ability to provide an exceptional customer experience. Additionally, the organization's ability to provide on-site, in-person customer service (including on-site installation of our instruments) has and may continue to be restricted or eliminated due to the impacts of the COVID-19 pandemic. Therefore, failure to scale our customer service organization adequately or impacts on our organization's ability to provide an exceptional customer experience may adversely impact our business, financial condition, results of operations and prospects.

Customers utilize our service teams and online content for help with a variety of topics, including how to use our products efficiently, how to integrate our products into existing workflows, how to determine which of our other products may be needed for a given experiment and how to resolve technical, analysis and operational issues if and when they arise. As we introduce new products and enhance existing products, we expect utilization of our customer service teams to increase. In particular, the introduction of new or improved products may require additional customer service efforts to ensure customers use such products correctly and efficiently. While we have developed significant resources for remote training, including an extensive library of online videos, we may need to rely more on these resources for future customer training or we may experience increased expenses to enhance our online and remote solutions, particularly due to the impacts of the COVID-19 pandemic. If our customers do not adopt these resources, we may be required to increase the staffing of our customer service team, which would increase our costs. Also, as our business scales, we may need to engage third-party customer service providers, which could increase our costs and negatively impact the quality of the customer experience if such third parties are unable to provide service levels equivalent to ours.

The number of our customers has grown significantly and such growth, as well as any future growth, will put additional pressure on our customer service organization. We may be unable to hire qualified personnel quickly enough or to the extent necessary to accommodate increases in demand.

In addition, as we continue to grow our operations and reach a global customer base, we need to be able to provide efficient customer service that meets our customers' needs globally at scale. In geographies where we sell through distributors, we rely on those distributors to provide customer service. If these third-party distributors do not provide a high-quality customer experience, our business operations and reputation may suffer.

Repair or replacement costs due to warranties we provide on our instruments could have a material adverse effect on our business, financial condition and results of operations.

We provide a one-year assurance-type warranty on our instruments. Existing and future warranties place us at the risk of incurring future repair and/or replacement costs. At the time revenue is recognized, we establish an accrual for estimated warranty expenses based on historical data and trends of product reliability and costs of repairing and replacing defective products. We exercise judgment in estimating the expected product warranty costs, using data such as the actual and projected product failure rates, estimated repair costs, freight, material, labor and overhead costs. While we believe that historical experience provides a reliable basis for estimating such warranty cost, unforeseen quality issues or component failure rates as well as significantly higher sales and the introduction of new products could result in future costs in excess of such estimates, or alternatively, improved quality and reliability in our products could result in actual expenses that are below those currently estimated. As of December

31, 2020, we had accrued expenses of $135,000 relating to product warranty accruals. Substantial amounts of warranty claims could have a material adverse effect on our business, financial condition and results of operations.

Our Credit Agreement contains covenants, which restrict our operating activities, and we may be required to repay the outstanding indebtedness in an event of default, which could have a material adverse effect on our business, financial condition, results of operations and prospects.

On December 30, 2020, we entered into a credit agreement and guaranty (the "Credit Agreement") with Perceptive Credit Holdings III, LP, as administrative agent and as a lender (the "Administrative Agent"), which provides for senior secured financing of up to $50.0 million, consisting of (i) a $25.0 million Tranche A term loan and (ii) a $25.0 million Tranche B term loan. The full amount of the Tranche A term loan was drawn on December 30, 2020 and our ability to draw the Tranche B term loan is subject to several conditions, including that the Administrative Agent shall have received evidence that we achieved total revenue of at least $20.0 million for the twelve-month period then most recently ended. Unless accelerated prior to such date, all amounts outstanding under the Credit Agreement are due to be repaid on December 30, 2025. Until we have repaid such indebtedness, the Credit Agreement subjects us to various customary covenants, including requirements as to minimum liquidity and minimum total revenue and restrictions on our ability to incur indebtedness or guarantees, to subject our assets to any liens, to make investments and loans, to make capital expenditures, to engage in mergers, acquisitions and asset sales, to engage in new lines of business, to declare dividends, make payments or redeem or repurchase equity interests, to enter into agreements limiting restricted subsidiary distributions, to prepay, redeem or purchase certain indebtedness and to engage in certain transactions with affiliates. Our business may be adversely affected by these restrictions on our ability to operate our business.

We may be required to repay the amounts outstanding under the Credit Agreement if an event of default occurs under the Credit Agreement. An event of default will occur if, among other things, we fail to make required payments under the Credit Agreement; we breach any of our covenants under the Credit Agreement, subject to specified cure periods with respect to certain breaches; the Administrative Agent determines that a material adverse change (as defined in the Credit Agreement) has occurred; we or our assets become subject to certain legal proceedings, such as bankruptcy proceedings; we are unable to pay our debts as they become due; or we default on certain material indebtedness which would permit the acceleration of maturity of such indebtedness. We may not have enough available cash or be able to raise additional funds through equity or debt financings to repay such indebtedness at the time any such event of default occurs. In such a case, we may be required to delay, limit, reduce or terminate our product development or operations or grant to others rights to develop and market products that we would otherwise prefer to develop and market ourselves. The Administrative Agent could also exercise its rights as secured lender to take possession of and to dispose of the collateral securing the term loans, which collateral includes substantially all of our property. Our business, financial condition, results of operations and prospects could be materially adversely affected as a result of any of these events.

Despite our level of indebtedness, we are able to incur more debt and undertake additional obligations. Incurring such debt or undertaking such additional obligations could further exacerbate the risks our indebtedness poses to our financial condition.

As of December 31, 2020, we had approximately $25.0 million in aggregate principal amount of outstanding indebtedness, in addition to $25.0 million of unfunded delayed draw term loans available, subject to certain conditions, under the Credit Agreement. Despite our level of indebtedness, we may be able to incur significant additional indebtedness in the future, including in the event we refinance or replace our existing Credit Agreement. Although the Credit Agreement contains restrictions on the incurrence of additional indebtedness, these restrictions are subject to a number of qualifications and exceptions. These restrictions also will not prevent us from incurring obligations that do not constitute indebtedness and, if we refinance existing indebtedness, such refinancing indebtedness may contain fewer restrictions on our activities. To the extent new indebtedness is added to our currently anticipated indebtedness levels, the related risks that we face could intensify. While the Credit Agreement also contains restrictions on making certain investments and loans, these restrictions are subject to a number of qualifications and exceptions, and the investments and loans incurred in compliance with these restrictions could be substantial.

Changes in the method for determining LIBOR or the elimination of LIBOR could affect our business, financial condition, results of operations and prospects.

Our Credit Agreement provides that interest may be indexed to the London Interbank Offered Rate ("LIBOR"), which is a benchmark rate at which banks offer to lend funds to one another in the international interbank market for short term loans. On July 27, 2017, the United Kingdom Financial Conduct Authority, which regulates LIBOR, announced its intention to stop persuading or compelling banks to submit LIBOR quotations by the end of 2021. In 2020, ICE Benchmark Administration, which administers LIBOR publication, issued a consultation requesting feedback on its intention to continue publication of overnight and one-, three-, six- and 12-month USD LIBOR rates through June 30, 2023 (the "IBA Announcement"). There were concurrent announcements by the United Kingdom Financial Conduct Authority, U.S. bank regulators, the Federal Reserve Board and the Alternative Reference Rates Committee supporting the IBA Announcement and, among other things, encouraging banks to stop entering into new LIBOR-based contracts by the end of 2021. On March 5, 2021, ICE Benchmark Administration announced its intention to cease the publication of the one week and two month USD LIBOR rates after December 31, 2021 and the overnight and 12-month USD LIBOR rates after June 30, 2023. We cannot predict the impact of any changes in the methods by which LIBOR is determined or any regulatory activity related to a potential phase out of LIBOR on our Credit Agreement and interest rates. While our Credit Agreement provides for the use of an alternative rate to LIBOR in the event LIBOR is phased out, uncertainty remains as to any such replacement rate and any such replacement rate may be higher or lower than LIBOR may have been. At this time, no consensus exists as to what rate or rates will become accepted alternatives to LIBOR, although The U.S. Federal Reserve, in conjunction with the Alternative Reference Rates Committee, is considering replacing LIBOR with the Secured Overnight Financing Rate ("SOFR"), a newly created index, calculated with a broad set of short-term repurchase agreements backed by treasury securities. It is not possible to predict the effect of these changes, other reforms or the establishment of alternative reference rates in the United States or elsewhere. The establishment of alternative reference rates or implementation of any other potential changes may materially and adversely affect our business, results of operations or financial condition.

We depend on our key personnel and other highly qualified personnel, and if we are unable to recruit, train and retain our personnel, we may not achieve our goals.

Our future success depends upon our ability to recruit, train, retain and motivate key personnel. Our senior management team, including Sean Mackay, one of our co-founders and our Chief Executive Officer; John Strahley, our Chief Financial Officer; Jing Zhou, our Chief Scientific Officer; and Peter Siesel, our Chief Commercial Officer, is critical to our vision, strategic direction, product development and commercialization efforts. The departure of one or more of our executive officers, senior management team members, or other key employees could be disruptive to our business until we are able to hire qualified successors. We do not maintain "key man" life insurance on our senior management team.

Our continued growth depends, in part, on attracting, retaining and motivating qualified personnel, including highly-trained sales personnel with the necessary scientific background and ability to understand our platform at a technical level to effectively identify and sell to potential new customers. New hires require significant training and, in most cases, take significant time before they achieve full productivity. Our failure to successfully integrate these key personnel into our business could adversely affect our business. In addition, competition for qualified personnel in our industry is intense. We compete for qualified scientific and information technology personnel with other life science and information technology companies as well as academic institutions and research institutions. Some of our scientific personnel are qualified foreign nationals whose ability to live and work in the United States is contingent upon the continued availability of appropriate visas. As a result, changes to United States immigration policies could restrain the flow of technical and professional talent into the United States and may inhibit our ability to hire qualified personnel. The current United States rules, regulations, policies and mandates restricting immigration and reforming the work visa process may adversely affect our ability to retain and maintain qualified personnel.

We do not maintain fixed term employment contracts with any of our employees. As a result, our employees could leave our company with little or no prior notice and may be free to work for a competitor. Due to the complex and technical nature of our products and technology and the dynamic market in which we compete, any failure to

attract, train, retain and motivate qualified personnel could materially harm our business, results of operations, financial condition and prospects.

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

We depend on information technology and telecommunications systems for significant elements of our operations, including our laboratory information management system, our quality management system, our sales management system, and product lifecycle management system. We have installed, and expect to expand, a number of enterprise software systems that affect a broad range of business processes and functional areas, including for example, systems handling human resources, financial controls and reporting, contract management, regulatory compliance and other infrastructure operations. These information technology and telecommunications systems support a variety of functions, including manufacturing operations, laboratory operations, data analysis, quality control, customer service and support, billing, research and development activities, scientific and general administrative activities.

Information technology and telecommunications systems are vulnerable to damage from a variety of sources, including telecommunications or network failures, malicious software, bugs or viruses, 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. 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.

Due to the significant resources required to enable access in new markets, we must make strategic and operational decisions to prioritize certain markets or technology offerings. We may expend our resources to access markets or develop technologies that do not yield meaningful revenue or we may fail to capitalize on markets or technologies that may be more profitable or with a greater potential for success.

We believe our platform has potential applications across a wide range of markets and we have targeted certain markets in which we believe our technology has significant advantages, or for which we believe we have a higher probability of success or revenue opportunity or for which the path to realizing or achieving revenue is shorter. For example, our initial focus has been on developing applications for cancer immunology and cell and gene therapy but we are expanding our capabilities to include applications for infectious diseases, inflammatory conditions and neurological disorders. We seek to maintain a process of prioritization and resource allocation to maintain a balance between advancing near-term opportunities and exploring additional markets for our technology. However, due to the significant resources required for the development of new applications for new markets, we must make decisions on which markets to pursue and the amount of resources to allocate to each. Our decisions concerning the allocation of research, development, collaboration, management and financial resources toward particular applications may not lead to the development of any viable product and may divert resources away from better opportunities.

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

We currently sell our products in several international markets, including in Australia, China, Italy, Israel, Japan, New Zealand, Portugal, Singapore, South Korea, Spain, and Switzerland, and we intend to expand into additional international markets. We currently maintain relationships with distributors outside of the United States and may in the future enter into new distributor relationships. Doing business internationally involves a number of risks, including:

- multiple, conflicting and changing laws and regulations such as privacy regulations, tax laws, export and import restrictions, tariffs, economic sanctions and embargoes, employment laws, regulatory requirements and other governmental approvals, permits and licenses;
- failure by us or our distributors to obtain approvals to conduct our business in various countries;
- differing intellectual property rights;

- complexities and difficulties in obtaining intellectual property protection, enforcing our intellectual property and defending against third party intellectual property claims;
- difficulties in staffing and managing foreign operations;
- logistics and regulations associated with shipping systems and parts and components for instruments and chip consumables, as well as transportation delays;
- travel restrictions that limit the ability of marketing, presales, sales, services and support teams to service customers;
- 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 exposure to foreign currency exchange rate fluctuations;
- international trade disputes that could result in tariffs and other protective measures;
- natural disasters, political and economic instability, including wars, terrorism and political unrest, 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 U.S. Foreign Corrupt Practices Act (the "FCPA"), its books and records provisions, or its anti-bribery provisions, or similar laws in other countries.

Any of these factors could significantly harm our current operations and potential future international expansion and consequently, our business, financial condition, results of operations and prospects. In addition, certain international markets are subject to significant political and economic uncertainty, including for example the effect of the withdrawal of the United Kingdom from the European Union. Significant political and economic developments in international markets for which we operate or intend to operate, or the perception that any of them could occur, creates further challenges for operating in these markets in addition to creating instability in global economic conditions.

Our products could have defects or errors, which may give rise to claims against us, adversely affect market adoption of our products, and adversely affect our business, financial condition, and results of operations.

Our instruments, chip consumables and services utilize novel and complex technology and may develop or contain undetected defects or errors. We cannot assure you that material performance problems, defects, or errors will not arise, including as we commercialize additional products. We provide warranties that our instruments will meet performance expectations and will be free from defects. The costs incurred in correcting any defects or errors may be substantial and could adversely affect our operating margins.

In manufacturing our products, we depend upon third parties for the supply of various components, many of which require a significant degree of technical expertise to produce. If our suppliers fail to produce our components to specification or provide defective products to us and our quality control tests and procedures fail to detect such errors or defects, or if we or our suppliers use defective materials or workmanship in the manufacturing process, the reliability and performance of our products will be compromised.

If our products contain defects, we may experience:

- loss of customer orders and delay in order fulfillment;
- damage to our brand reputation;
- increased warranty and customer service and support costs due to product repair or replacement;
- product recalls, withdrawals or replacements;
- inability to attract new customers;

- diversion of resources from our manufacturing and research and development departments to our service department; and
- legal claims against us, including product liability claims, which could be costly and time consuming to defend and result in substantial damages.

If we were to be sued for product liability, we could face substantial liabilities that exceed our resources.

The marketing, sale and use of our products could lead to the filing of product liability claims were someone to allege that our products identified inaccurate or incomplete information regarding the cells analyzed or otherwise failed to perform as designed. We may also be subject to liability for errors in, a misunderstanding of or inappropriate reliance upon, the information we provide in the ordinary course of our business activities. If we cannot successfully defend ourselves against product liability claims, we could incur substantial liabilities and reputational harm. In addition, regardless of the merit or eventual outcome, product liability claims may result in:

- costs of litigation;
- distraction of management's attention from our primary business;
- the inability to commercialize existing or new products;
- decreased demand for our products;
- damage to our business reputation;
- product recalls or withdrawals from the market;
- termination of existing agreements by customers and suppliers; and
- loss of net sales.

We maintain product liability insurance that we believe is adequate, but this insurance is subject to deductibles and coverage limitations. Our current product liability insurance may not continue to be available to us on acceptable terms, if at all, and, if available, coverage may not fully protect us from the financial impact of defending against product liability claims. Any product liability claim brought against us, with or without merit, could increase our insurance rates or prevent us from securing insurance coverage in the future. A product liability lawsuit, recall or other claim with respect to uninsured liabilities or for amounts in excess of insured liabilities could impact our business, financial condition, results of operations and prospects.

Our insurance policies are expensive and protect us only from some business risks, which leaves us exposed to significant uninsured liabilities.

We do not carry insurance for all categories of risk that our business may encounter and our policies have limits and significant deductibles. Some of the policies we currently maintain include general liability, property, umbrella and directors' and officers' insurance.

Any additional product liability insurance coverage we acquire in the future may not be sufficient to reimburse us for any expenses or losses we may suffer. Moreover, insurance coverage is becoming increasingly expensive and in the future we may not be able to maintain insurance coverage at a reasonable cost or in sufficient amounts to protect us against losses. A successful product liability claim or series of claims in which judgments exceed our insurance coverage could adversely affect our business, financial condition, results of operations and prospects, including preventing or limiting the commercialization of any products we develop.

We also expect that operating as a public company will make it more difficult and more expensive for us to obtain director and officer liability insurance, and we may be required to accept reduced policy limits and coverage or incur substantially higher costs to obtain the same or similar coverage. As a result, it may be more difficult for us to attract and retain qualified people to serve on our board of directors, our board committees or as executive officers. We do not know, however, if we will be able to maintain existing insurance with adequate levels of

coverage. Any significant uninsured liability may require us to pay substantial amounts, which would adversely affect our business, financial condition, results of operations and prospects.

We may need to raise additional capital to fund our existing operations, improve our platform or develop and commercialize new instruments, consumables and software, or expand our operations.

Based on our current business plan, we believe that the anticipated net proceeds from this offering, together with our existing cash will enable us to fund our operating expenses and capital expenditure requirements into the second half of 2024. If our available cash resources, net proceeds from this offering and anticipated cash flow from operations are insufficient to satisfy our liquidity requirements including because of lower demand for our products or the realization of other risks described in this prospectus, we may be required to raise additional capital prior to such time through issuances of equity or convertible debt securities, entrance into a credit facility or another form of third party funding or seek other debt financing. There is no assurance we will be able to obtain future financing on commercially reasonable terms, or at all.

In any event, we may 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 platform and address competitive developments;
- fund development and marketing efforts of our existing products or any future products;
- expand our technologies into additional markets;
- acquire, license or invest in technologies and other intellectual property rights;
- acquire or invest in complementary businesses or assets; and
- finance capital expenditures and general and administrative expenses.

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

- our ability to achieve projected revenue growth;
- the cost of expanding our operations, including production capacity, lab space, and our offerings, including our sales and marketing efforts;
- our rate of progress in launching and commercializing new products, and the cost of the sales and marketing activities associated with increasing sales of our existing instruments and products;
- our rate of progress in, and cost of research and development activities associated with, products in research and development;
- the effect of competing technological and market developments;
- the costs involved in preparing, filing, prosecuting, maintaining, defending and enforcing patent claims;
- costs related to domestic and international expansion; and
- the potential cost of and delays in product development as a result of any regulatory oversight that may be applicable to our products.

The various ways we could raise additional capital carry potential risks. If we raise funds by issuing equity securities, 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 borrowing debt, such debt would have rights, preferences and privileges senior to those of holders of our common stock. The terms of such debt could impose significant restrictions on our operations. If we raise funds through collaborations

or licensing arrangements, we might be required to relinquish significant rights to our platform technologies or products or grant licenses on terms that are not favorable to us or commit to future payment streams. Market volatility resulting from the COVID-19 pandemic or other factors may further adversely impact our ability to raise capital as and when needed.

If we are unable to obtain adequate financing or financing on terms satisfactory to us, if we require it, our ability to continue to pursue our business objectives and to respond to business opportunities, challenges, or unforeseen circumstances could be significantly limited, and could have a material adverse effect on our business, financial condition, results of operations and prospects.

We are subject to differing tax rates in several jurisdictions in which we operate, which may adversely affect our business, financial condition, results of operations and prospects.

We are subject to taxes in the United States and certain foreign jurisdictions. Due to economic and political conditions, tax rates in various jurisdictions, including the United States, may be subject to change. Our future effective tax rates could be affected by changes in the mix of earnings in countries with differing statutory tax rates, changes in the valuation of deferred tax assets and liabilities and changes in tax laws or their interpretation. In addition, we may be subject to income tax audits by various tax jurisdictions. Although we believe our income tax liabilities are reasonably estimated and accounted for in accordance with applicable laws and principles, an adverse resolution by one or more taxing authorities could have a material impact on the results of our operations.

International tariffs applied to goods traded between the United States and China may adversely affect our business, financial condition, results of operations and prospects.

International tariffs, including tariffs applied to goods traded between the United States and China, may adversely affect our business, results of operations and financial condition. Since the beginning of 2018, there has been increasing rhetoric, in some cases coupled with legislative or executive action, from several U.S. and foreign leaders regarding the possibility of instituting tariffs against foreign imports of certain materials. More specifically, in March and April of 2018, the United States and China have applied tariffs to certain of each other's exports. The institution of trade tariffs both globally and between the United States and China specifically carries the risk of adversely affecting overall economic condition, which could have a negative impact on us as imposition of tariffs could cause an increase in the cost of our products and the components for our products, which may adversely affect our business, financial condition, results of operations and prospects.

Unfavorable U.S. or global economic conditions as a result of the COVID-19 pandemic, or otherwise, could adversely affect our ability to raise capital and our business, financial condition, results of operations and prospects.

While the potential economic impact brought by, and the duration of, the COVID-19 pandemic is difficult to assess or predict, the COVID-19 pandemic has resulted in, and may continue to result in, extreme volatility and disruptions in the capital and credit markets, reducing our ability to raise additional capital through equity, equity-linked or debt financings, which could negatively impact our short-term and long-term liquidity and our ability to operate in accordance with our operating plan, or at all. Additionally, our results of operations could be adversely affected by general conditions in the global economy and financial markets. If the operations of our suppliers are impacted by the COVID-19 pandemic, we may not be able to source the necessary components and materials to build our products in sufficient quantities to meet demand. If the operations of our customers are impacted by the COVID-19 pandemic, including shutdowns of laboratories and delayed spending on instruments or chip consumables, we may not be able to sell our products or provide on-site, in-person customer service. A severe or prolonged economic downturn could result in a variety of risks to our business, including weakened demand for our products and our ability to raise additional capital when needed on favorable terms, if at all. A weak or declining economy could strain our customers' budgets 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 ability to raise capital, business, financial condition, results of operations and prospects.

Risks Related to Manufacturing and Supply

If we are unable to manufacture our instruments in high-quality commercial quantities successfully and consistently to meet demand, our growth will be limited.

We have, to date, manufactured approximately 200 of our instruments. We currently manufacture our instruments and chip consumables at our facilities in Branford, Connecticut. To manufacture our products in the quantities that we believe will be required to meet anticipated market demand, we will need to increase manufacturing capacity, which could involve significant challenges and may require additional quality controls. We may not successfully complete any required increase to existing manufacturing capacity in a timely manner, or at all.

If there is a disruption to our manufacturing operations, whether from COVID-19 or some other disruptions, we will have no other means of producing our products until we restore our facility or develop alternative manufacturing facilities. Additionally, any damage to or destruction of our facility or equipment may significantly impair our ability to manufacture our products on a timely basis.

If we are unable to produce our products in sufficient quantities to meet anticipated customer demand, our business, financial condition, results of operations and prospects would be harmed. The lack of experience we have in producing commercial quantities of our products may also result in quality issues, and could result in product defects or errors or recalls.

We use biological and hazardous materials that require considerable expertise and expense for handling, storage and disposal and may result in claims against us.

We work with materials, including chemicals, biological agents and compounds that could be hazardous to human health and safety or the environment. Our operations also produce hazardous and biological waste products. Federal, state and local laws and regulations govern the use, generation, manufacture, storage, handling and disposal of these materials and wastes. We are subject to periodic inspections by federal, state and local authorities to ensure compliance with applicable laws. Compliance with applicable environmental laws and regulations is expensive, and current or future environmental laws and regulations may restrict our operations. If we do not comply with applicable regulations, we may be subject to fines and penalties.

In addition, we cannot eliminate the risk of accidental injury or contamination from these materials or wastes, which could cause an interruption of our commercialization efforts, research and development programs and business operations, as well as environmental damage resulting in costly clean-up and liabilities under applicable laws and regulations. In the event of contamination or injury, we could be liable for damages or penalized with fines in an amount exceeding our resources and our operations could be suspended or otherwise adversely affected. Furthermore, environmental laws and regulations are complex, change frequently and have tended to become more stringent. We cannot predict the impact of such changes and cannot be certain of our future compliance.

Our manufacturing operations are dependent upon third party suppliers, including single source suppliers, making us vulnerable to supply shortages and price fluctuations, which could harm our business.

Our products contain several critical components, including lasers, circuit boards, antibodies and reagents. Some of the suppliers of critical components or materials are single or sole source suppliers and the replacement of these suppliers or the identification and qualification of suitable second sources may require significant time, effort and expense, and could result in delays in production, which could negatively impact our business operations and revenue. We do not have supply agreements with certain suppliers of these critical components and materials beyond purchase orders and, although we maintain a safety stock inventory at our facilities in Branford, Connecticut for certain critical components, forecasted amounts may be inaccurate and we may experience shortages as a result of serious supply problems with these suppliers. There can be no assurance that our supply of components will not be limited, interrupted, or of satisfactory quality or continue to be available at acceptable prices. In addition, loss of any critical component provided by a single source supplier could require us to change the design of our manufacturing process based on the functions, limitations, features and specifications of the replacement components.

In addition, several other non-critical components and materials that comprise our products are currently manufactured by a single supplier or a limited number of suppliers. In many of these cases, we have not yet qualified alternate suppliers. A supply interruption or an increase in demand beyond our current suppliers' capabilities could harm our ability to manufacture our products unless and until new sources of supply are identified and qualified. Our reliance on these suppliers subjects us to a number of risks that could harm our business, including:

- interruption of supply resulting from modifications to or discontinuation of a supplier's operations;
- trade disputes or other political conditions or economic conditions;
- delays in the manufacturing operations of our suppliers, or in the delivery of parts and components to support such manufacturing operations, due to the impact of public health issues, endemics or pandemics, such as COVID-19;
- delays in product shipments resulting from uncorrected defects, reliability issues, or a supplier's variation in a component;
- a lack of long-term supply arrangements for key components with our suppliers;
- inability to obtain adequate supply in a timely manner, or to obtain adequate supply on commercially reasonable terms;
- difficulty and cost associated with locating and qualifying alternative suppliers for our components in a timely manner;
- a modification or change in a manufacturing process or part that unknowingly or unintentionally negatively impacts the operation of our platform;
- production delays related to the evaluation and testing of products from alternative suppliers, and corresponding regulatory qualifications;
- delay in delivery due to our suppliers prioritizing other customer orders over ours;
- damage to our brand reputation caused by defective components produced by our suppliers;
- increased cost of our warranty program due to product repair or replacement based upon defects in components produced by our suppliers; and
- fluctuation in delivery by our suppliers due to changes in demand from us or their other customers.

Any interruption in the supply of components or materials, or our inability to obtain substitute components or materials from alternate sources at acceptable prices in a timely manner, could impair our ability to meet the demand of our customers, which would have an adverse effect on our business.

We forecast sales to determine requirements for components and materials used in our instruments, and if our forecasts are incorrect, we may experience delays in shipments or increased inventory costs.

We keep limited materials, components and finished products on hand. To manage our operations with our third party suppliers, we forecast anticipated product orders and material requirements to predict our inventory needs and enter into purchase orders on the basis of these requirements. Several components of our products require an order lead time of 3 months to 6 months. Our limited historical commercial experience and rapid growth may not provide us with enough data to consistently and accurately predict future demand. If our business expands and our demand for components and materials increase beyond our estimates, our suppliers may be unable to meet our demand. In addition, if we underestimate our component and material requirements, we may have inadequate inventory, which could interrupt, delay, or prevent delivery of our products to our customers. By contrast, if we overestimate our component and material requirements, we may have excess inventory, which would increase our expenses. Any of these occurrences would negatively affect our financial performance and business results.

Shipping is a critical part of our business and any changes in our shipping arrangements or damages or losses sustained during shipping could adversely affect our business, financial condition, results of operations and prospects.

We currently rely on third party vendors for our shipping. If we are not able to negotiate acceptable pricing and other terms with these entities or they experience performance problems or other difficulties, it could negatively impact our operating results and our customers' experience. In the past, some of our products have sustained serious damage in transit and were not repairable. Although we have taken steps to improve our shipping containers, there is no guarantee our products will not become damaged or lost in transit in the future. If a product is damaged in transit, it may result in a substantial delay in the fulfillment of the customer's order, and depending on the type and extent of the damage and whether the incident is covered by insurance, it may result in a substantial financial loss. If our products are not delivered in a timely fashion or are damaged or lost during the delivery process, our customers could become dissatisfied and cease using our products or services, which would adversely affect our business, financial condition, results of operations and prospects.

If our facilities are damaged or become inoperable, we will be unable to continue to research, develop and manufacture our products and, as a result, our business, financial condition, results of operations and prospects may be adversely affected until we are able to secure a new facility.

We do not have redundant facilities for the final assembly of our products. Our facilities and equipment would be costly to replace and could require substantial lead-time to repair or replace. Our facilities may be harmed or rendered inoperable by natural or man-made disasters, including, but not limited to, tornadoes, flooding, fire and power outages. Such disasters may render it difficult or impossible to manufacture our products and conduct our research and development activities for new products. The inability to perform those activities, combined with our limited materials, components and finished products, may result in the inability to continue manufacturing or supplying our products during such periods and the loss of customers or harm to our reputation. Although we possess insurance for damage to our facilities and the disruption of our business, this insurance may not be sufficient to cover all of our potential losses and this insurance may not continue to be available to us on acceptable terms, or at all.

If we fail to maintain our numerous contractual relationships, our business, results of operations and financial condition could be adversely affected.

We are party to numerous contracts in the normal course of our business, including our supply and distribution agreements. In the aggregate, these contractual relationships are necessary for us to operate our business. From time to time, we amend, terminate or negotiate our contracts. We may also periodically be subject to, or make claims of breach of contract, or threaten legal action relating to our contracts. These actions may result in litigation. At any one time, we have a number of negotiations under way for new or amended commercial agreements. We devote substantial time, effort and expense to the administration and negotiation of contracts involved in our business. However, these contracts may not continue in effect past their current term or we may not be able to negotiate satisfactory contracts in the future with current or new business partners, which may adversely affect our business, financial condition, results of operations and prospects.

Risks Related To Government Regulation

If our current or future products become subject to FDA or other related international regulation, the regulatory clearance or approval and the maintenance of continued and post-market regulatory compliance for such products will be expensive, time-consuming, and uncertain both in timing and in outcome.

We make our platform, which includes our instruments, chip consumables and software, available to customers as research-use-only ("RUO") products. While products which are marketed and sold for RUO are not generally subject to regulation by the Food and Drug Administration (the "FDA"), regulatory requirements related to marketing, selling, and distribution of RUO products could change or be uncertain. Additionally, even if our products are labeled, promoted, and intended as RUO, the FDA or comparable agencies of other countries could disagree with our conclusion that our products are intended for research use only or deem our sales, marketing and promotional efforts as being inconsistent with RUO products. If the FDA or other regulatory authorities assert that

any of our RUO products are subject to regulatory clearance or approval, our business, financial condition, results of operations and prospects could be adversely affected.

In the event that we decide in the future to develop medical device products or modify our existing products in a manner intended for clinical or diagnostic uses, or if our existing platform were ever to be deemed a medical device by the FDA, we would be required in the United States to either receive clearance under Section 510(k) of the Federal Food, Drug, and Cosmetic Act or approval of a premarket approval application from the FDA, unless an exemption applies, prior to marketing any such product. The process of obtaining approval or clearance from the FDA for new products, or with respect to enhancements or modifications to existing products, could take a significant period of time, require the expenditure of substantial resources, involve rigorous preclinical and clinical testing, require changes to products or result in limitations on the indicated uses of products. There can be no assurance that we would receive the required approvals or clearances for any new products or for modifications to our existing products on a timely basis or that any approval or clearance would not be subsequently withdrawn or conditioned upon extensive post-market study requirements. Moreover, even if we were to receive FDA clearance or approval of new products or modifications to existing products, we would be required to comply with extensive regulations relating to the development, research, clearance, approval, distribution, marketing, advertising and promotion, manufacture, adverse event reporting, recordkeeping, import and export of such products, which could substantially increase our operating costs and have a material impact on our business, profits and results of operations. Failure to comply with applicable regulations could jeopardize our ability to sell our products and result in enforcement actions such as warning letters, fines, injunctions, civil penalties, termination of distribution, recalls or seizures of products, delays in the introduction of products into the market, total or partial suspension of production, refusal to grant future clearances or approvals, withdrawals or suspensions of current approvals, resulting in prohibitions on sales of our products, and in the most serious cases, criminal penalties. Occurrence of any of the foregoing could harm our reputation, business, financial condition, results of operations and prospects.

Our employees, consultants, distributors and commercial partners may engage in misconduct or other improper activities, including non-compliance with regulatory standards and requirements, and insider trading.

We are exposed to the risk of fraud or other misconduct by our employees, consultants, distributors and commercial partners. Misconduct by these parties could include intentional failures to comply with the applicable laws and regulations in the United States and abroad, report financial information or data accurately or disclose unauthorized activities to us. These laws and regulations may restrict or prohibit a wide range of pricing, discounting and other business arrangements. Such misconduct could result in legal or regulatory sanctions and cause serious harm to our reputation. It is not always possible to identify and deter employee misconduct, and any other precautions we take to detect and prevent this activity may not be effective in controlling unknown or unmanaged risks or losses, or in protecting us from governmental investigations or other actions or lawsuits stemming from a failure to comply with these laws or regulations. If any such actions are instituted against us, and we are not successful in defending ourselves or asserting our rights, those actions could result in the imposition of significant civil, criminal and administrative penalties, which could have a significant impact on our business. Whether or not we are successful in defending against such actions or investigations, we could incur substantial costs, including legal fees and divert the attention of management in defending ourselves against any of these claims or investigations.

If we fail to comply with certain healthcare laws, including fraud and abuse laws, we could face substantial penalties and our business, results of operations, financial condition, and prospects could be adversely affected.

Even though we do not order healthcare services or bill directly to Medicare, Medicaid, or other third-party payors, certain federal and state healthcare laws and regulations pertaining to fraud and abuse may be applicable to our business. We could be subject to healthcare fraud and abuse laws of both the federal government and the states in which we conduct our business. Because of the breadth of these laws and the narrowness of available statutory and regulatory exceptions, it is possible that some of our business activities could be subject to challenge under one or more of such laws. If we or our operations are found to be in violation of any of the laws described above or any other governmental regulations that apply to us, we may be subject to penalties, including administrative, civil and criminal penalties, damages, fines, imprisonment, and the curtailment or restructuring of our operations, any of which could materially adversely affect our ability to operate our business and our financial results.

Risks Related to Our Intellectual Property

If we are unable to obtain and maintain sufficient intellectual property protection for our products and technologies, or if the scope of the intellectual property protection obtained is not sufficiently broad, our competitors could develop and commercialize products similar or identical to ours, and our ability to successfully commercialize our products may be impaired.

We rely on patent protection as well as trademark, copyright, trade secret and other intellectual property rights protection and contractual restrictions to protect our proprietary products and technologies, all of which provide limited protection and may not adequately protect our rights or permit us to gain or keep any competitive advantage. If we fail to obtain, maintain, protect and enforce our intellectual property, third parties may be able to compete more effectively against us. In addition, we may incur substantial litigation costs in our attempts to recover or restrict use of our intellectual property.

To the extent our intellectual property offers inadequate protection, or is found to be invalid or unenforceable, we would be exposed to a greater risk of direct competition. If our intellectual property does not provide adequate coverage of our products, our competitive position could be adversely affected, as could our business, financial condition, results of operations and prospects. Both the patent application process and the process of managing patent and other intellectual property disputes can be time-consuming and expensive.

Our success depends in large part on our and our licensors' ability to obtain and maintain protection of the intellectual property we may own solely and jointly with, or license from, third parties, particularly patents, in the United States and other countries with respect to our products and technologies. We apply for patents covering our products and technologies and uses thereof, as we deem appropriate. However, obtaining and enforcing patents is costly, time-consuming and complex, and we may fail to apply for patents on important products and technologies in a timely fashion or at all, or we may fail to apply for patents in potentially relevant jurisdictions. We may not be able to file and prosecute all necessary or desirable patent applications, or maintain, enforce and protect any patents that may issue from such patent applications, at a reasonable cost or in a timely manner or in all jurisdictions. It is possible that defects of form in the preparation or filing of our patents or patent applications may exist, or may arise in the future, for example with respect to proper priority claims, investorship, claim scope or requests for patent term adjustments. It is also possible that we will fail to identify patentable aspects of our research and development output before it is too late to obtain patent protection. If we delay filing a patent application, and a competitor files a patent application on the same or similar invention before we do, our ability to secure patent rights may be limited and we may not be able to patent the invention at all. Even if we can patent the invention, we may be able to patent only a limited scope of the invention, and the limited scope may be inadequate to protect our products and technologies, or to block competitor's products and technologies that are similar or adjacent to ours. Our earliest patent filings have been published. A competitor may review our published patents and arrive at the same or similar technology advances for our products as we developed. If the competitor files a patent application on such an advance before we do, then we may no longer be able to protect that aspect of our products and technologies and we may require a license from the competitor, which may not be available on commercially viable terms. Moreover, we may not develop additional proprietary products, methods and technologies that are patentable. We may not have the right to control the preparation, filing and prosecution of patent applications, or to maintain the rights to patents licensed from or to third parties. Therefore, these patents and applications may not be prosecuted and enforced by such third parties in a manner consistent with the best interests of our business.

In addition, the patent position of life sciences technology companies generally is highly uncertain, involves complex legal and factual questions, and has been the subject of much litigation in recent years. Changes in either the patent laws or in interpretations of patent laws in the United States or other countries or regions may diminish the value of our intellectual property. As a result, the issuance, scope, validity, enforceability, and commercial value of our patent rights are highly uncertain. It is possible that none of our pending patent applications will result in issued patents in a timely fashion or at all, and even if patents are granted, they may not provide a basis for intellectual property protection of commercially viable products or services, may not provide us with any competitive advantages, or may be challenged, narrowed and invalidated by third parties. We cannot predict the breadth of claims that may be allowed or enforced in our patents or in third-party patents. It is possible that third parties will design around our current or future patents such that we cannot prevent such third parties from using

similar technologies and commercializing similar products to compete with us. Some of our owned or licensed patents or patent applications may be challenged at a future point in time and we may not be successful in defending any such challenges made against our patents or patent applications. Any successful third-party challenge to our patents could result in the narrowing, unenforceability or invalidity of such patents and increased competition to our business. The outcome of patent litigation or other proceeding can be uncertain, and any attempt by us to enforce our patent rights against others or to challenge the patent rights of others may not be successful, or, regardless of success, may take substantial time and result in substantial cost, and may divert our efforts and attention from other aspects of our business. Any of the foregoing events could have a material adverse effect on our business, financial condition and results of operations.

Further, while software and other of our proprietary works may be protected under copyright law, we have chosen not to register any copyrights in these works, and instead, we primarily rely on protecting our software as a trade secret. In order to bring a copyright infringement lawsuit in the United States, the copyright must be registered. Accordingly, the remedies and damages available to us for unauthorized use of our software may be limited.

The U.S. law relating to the patentability of certain inventions in the life sciences technology industry is uncertain and rapidly changing, which may adversely impact our existing patents or our ability to obtain patents in the future.

Changes in either the patent laws or interpretation of the patent laws in the United States or in other jurisdictions could increase the uncertainties and costs surrounding the prosecution of patent applications and the enforcement or defense of issued patents. For instance, under the Leahy-Smith America Invents Act, or the America Invents Act, enacted in September 2011, the United States transitioned to a first inventor to file system in which, assuming that other requirements for patentability are met, the first inventor to file a patent application is entitled to the patent on an invention regardless of whether a third party was the first to invent the claimed invention. Since patent applications in the United States and most other countries are confidential for a period of time after filing or until issuance, we cannot be certain that we or our licensors were the first to either file any patent application related to our products and other proprietary technologies or invent any of the inventions claimed in our or our licensor's patents or patent applications. Even where we have a valid and enforceable patent, we may not be able to exclude others from practicing the claimed invention where the other party can show that they used the invention in commerce before our filing date or the other party benefits from a compulsory license.

In addition, the America Invents Act implemented changes that affect the way patent applications are prosecuted, redefine prior art and provide more efficient and cost-effective avenues for competitors or other third parties to challenge the validity of our patents. These changes include allowing third-party submission of prior art to the United States Patent and Trademark Office (USPTO) during patent prosecution and additional procedures to challenge the validity of a patent by USPTO administered post-grant proceedings, including post-grant review, inter partes review and derivation proceedings. Further, because of a lower evidentiary standard in these USPTO post-grant proceedings compared to the evidentiary standard in United States federal courts necessary to invalidate a patent claim, a third party could potentially provide evidence in a USPTO proceeding sufficient for the USPTO to hold a claim invalid even though the same evidence would be insufficient to invalidate the claim if first presented in a district court action. Accordingly, a third party may attempt to use the USPTO procedures to invalidate our patent claims that would not have been invalidated if first challenged by the third party as a defendant in a district court action. The America Invents Act and its implementation could increase the uncertainties and costs surrounding the prosecution of our patent applications and the enforcement or defense of our issued patents, all of which could have a material adverse effect on our business, financial condition, results of operations and prospects.

Various courts, including the U.S. Supreme Court, have rendered decisions that impact the scope of patentability of certain inventions or discoveries relating to the life sciences technology. Specifically, these decisions stand for the proposition that patent claims that recite laws of nature are not themselves patentable unless those patent claims have sufficient additional features that provide practical assurance that the processes are genuine inventive applications of those laws rather than patent drafting efforts designed to monopolize the law of nature itself. What constitutes a "sufficient" additional feature is uncertain. Furthermore, in view of these decisions, since December 2014, the USPTO has published and continues to publish revised guidelines for patent examiners to apply when examining process claims for patent eligibility.

In addition, U.S. Supreme Court rulings have narrowed the scope of patent protection available in certain circumstances and weakened the rights of patent owners in certain situations. In addition to increasing uncertainty with regard to our ability to obtain patents in the future, this combination of events has created uncertainty with respect to the value of patents, once obtained. Depending on decisions by the U.S. Congress, the federal courts and the USPTO, the laws and regulations governing patents could change in unpredictable ways that may have a material adverse effect on our ability to obtain new patents and to defend and enforce our existing patents and patents that we might obtain in the future.

We cannot assure you that our patent portfolio will not be negatively impacted by the current uncertain state of the law, new court rulings or changes in guidance or procedures issued by the USPTO or other similar patent offices around the world. 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, scope and validity of patents within the life sciences technology and any such changes, or any similar adverse changes in the patent laws of other jurisdictions, could have a negative impact on our business, financial condition, prospects and results of operations.

We may not be able to protect our intellectual property rights throughout the world.

Filing, prosecuting and defending patents on our products and technologies in all countries throughout the world would be prohibitively expensive, and our intellectual property rights in some countries outside the United States can be less extensive than those in the United States.

The laws of some foreign countries do not protect intellectual property rights to the same extent as the laws of the United States, and we and our licensors may encounter difficulties in protecting and defending such rights in foreign jurisdictions. Consequently, we and our licensors may not be able to prevent third parties from practicing our inventions in some or all countries outside the United States, or from selling or importing products made using our or our licensors' inventions in and into the United States or other jurisdictions. Competitors and other third parties may use our technologies in jurisdictions where we have not obtained patent protection to develop their own products and technologies and may also export infringing products to territories where we have patent protection, but enforcement is not as strong as that in the United States. These products may compete with our products. Our and our licensors' patents or other intellectual property rights may not be effective or sufficient to prevent them from competing. In addition, certain countries have compulsory licensing laws under which a patent owner may be compelled to grant licenses to other parties. Furthermore, many countries limit the enforceability of patents against other parties, including government agencies or government contractors. In these countries, the patent owner may have limited remedies, which could materially diminish the value of any patents.

Many companies have encountered significant problems in protecting and defending intellectual property rights in foreign jurisdictions. The legal systems of many other countries do not favor the enforcement of patents and other intellectual property protection, which could make it difficult for us to stop the misappropriation or other violations of our intellectual property rights including infringement of our patents in such countries. The legal systems in certain countries may also favor state-sponsored or companies headquartered in particular jurisdictions over our first-in-time patents and other intellectual property protection. The absence of harmonized intellectual property protection laws and effective enforcement makes it difficult to ensure consistent respect for patent, trade secret, and other intellectual property rights on a worldwide basis. As a result, it is possible that we will not be able to enforce our rights against third parties that misappropriate our proprietary technology in those countries.

Proceedings to enforce our or our licensors' patent rights in foreign jurisdictions could result in substantial cost and divert our efforts and attention from other aspects of our business, could put our and our licensors' patents at risk of being invalidated or interpreted narrowly and our and our licensors' patent applications at risk of not issuing, and could provoke third parties to assert claims against us. We and our licensors may not prevail in any lawsuits that we or any of our licensors initiate, or that are initiated against us or any of our licensors, and the damages or other remedies awarded, if any, may not be commercially meaningful. In addition, changes in the law and legal decisions by courts in the United States and foreign countries may affect our ability to obtain adequate protection for our products, services and other technologies and the enforcement of intellectual property. Accordingly, our efforts to enforce our intellectual property rights around the world may be inadequate to obtain a significant commercial

advantage from the intellectual property that we develop or license. Any of the foregoing events could have a material adverse effect on our business, financial condition, results of operations and prospects.

Any of our issued patents covering our products could be narrowed or found invalid or unenforceable if challenged in court or before administrative bodies in the United States or abroad, including the USPTO.

Our owned and licensed patents and patent applications may be subject to validity, enforceability and priority disputes. The issuance of a patent is not conclusive as to its inventorship, scope, validity or enforceability. Some of our patents or patent applications (including licensed patents and patent applications) may be challenged at a future point in time in opposition, derivation, reexamination, inter partes review, post-grant review or interference or other similar proceedings. Any successful third-party challenge to our or our licensors' patents in this or any other proceeding could result in the unenforceability or invalidity of such patents, which may lead to increased competition to our business, which could have a material adverse effect on our business, financial condition, results of operations and prospects. In addition, if we or our licensors initiate legal proceedings against a third party to enforce a patent covering our products, the defendant could counterclaim that such patent covering our products, as applicable, is invalid and/or unenforceable. In patent litigation in the United States, defendant counterclaims alleging invalidity or unenforceability are commonplace. There are numerous grounds upon which a third party can assert invalidity or unenforceability of a patent. Grounds for a validity challenge could be an alleged failure to meet any of several statutory requirements, including lack of novelty, obviousness or non-enablement. Grounds for an unenforceability assertion could be an allegation that someone connected with prosecution of the patent withheld relevant information from the relevant patent office, or made a misleading statement, during prosecution. A litigant or the USPTO itself could challenge our patents on this basis even if we believe that we have conducted our patent prosecution in accordance with the duty of candor and in good faith. The outcome following such a challenge is unpredictable. Third parties may also raise similar claims before administrative bodies in the United States or abroad, even outside the context of litigation. Such mechanisms include ex parte re-examination, inter partes review, post-grant review and derivation proceedings in the U.S., and equivalent proceedings in non-U.S. jurisdictions, such as opposition proceedings. Such proceedings could result in revocation of or amendment to our or our licensors' patents in such a way that they no longer cover and protect our products. With respect to the validity of our or our licensors' patents, for example, we cannot be certain that there is no invalidating prior art of which we, our licensors, our or their respective patent counsel and the patent examiner were unaware during prosecution. The outcome following legal assertions of invalidity and unenforceability during patent litigation is unpredictable. If a defendant or other third party were to prevail on a legal assertion of invalidity or unenforceability, we would lose at least part, and perhaps all, of the patent protection on certain aspects of our products and technologies, which could have a material adverse effect on our business, financial condition, results of operations and prospects. In addition, if the breadth or strength of protection provided by our patents and patent applications is threatened, regardless of the outcome, it could dissuade companies from collaborating with us to license intellectual property, or develop or commercialize current or future products.

We may not be aware of all third-party intellectual property rights potentially relating to our products. Publications of discoveries in the scientific literature often lag behind the actual discoveries, and patent applications in the United States and other jurisdictions are typically not published until approximately 18 months after filing or, in some cases, not until such patent applications issue as patents. We might not have been the first to make the inventions covered by each of our pending patent applications and we might not have been the first to file patent applications for these inventions. To determine the priority of these inventions, we may have to participate in interference proceedings, derivation proceedings or other post-grant proceedings declared by the USPTO, or other similar proceedings in non-U.S. jurisdictions, that could result in substantial cost to us and the loss of valuable patent protection. The outcome of such proceedings is uncertain. No assurance can be given that other patent applications will not have priority over our patent applications. In addition, changes to the patent laws of the United States allow for various post-grant opposition proceedings that have not been extensively tested, and their outcome is therefore uncertain. Furthermore, if third parties bring these proceedings against our patents, regardless of the merit of such proceedings and regardless of whether we are successful, we could experience significant costs and our management may be distracted. Any of the foregoing events could have a material adverse effect on our business, financial condition, results of operations and prospects.

If we are unable to protect the confidentiality of our trade secrets, the value of our technology could be materially adversely affected and our business could be harmed.

We rely heavily on trade secrets and confidentiality agreements to protect our unpatented know-how, technology and other proprietary information and to maintain our competitive position. Certain elements of our products and technologies, including components of our software and processes for manufacturing, may involve proprietary know-how, information or technology that is not covered by patents. As such, we may consider trade secrets and know-how to be our primary intellectual property with respect to such aspects of our products and technologies. However, trade secrets and know-how can be difficult to protect. In particular, we anticipate that with respect to our technologies, these trade secrets and know how will over time be disseminated within the industry through independent development, the publication of journal articles describing the methodology, and the movement of personnel from academic to industry scientific positions.

In addition to pursuing patents on our technology, we take steps to protect our intellectual property and proprietary technology by entering into agreements, including confidentiality agreements, non-disclosure agreements and intellectual property assignment agreements, with our employees, consultants, academic institutions, corporate partners and, when needed, our advisers. However, we cannot be certain that such agreements have been entered into with all relevant parties that may have or have had access to our trade secrets or proprietary technology and processes, and we cannot be certain that our trade secrets and other confidential proprietary information will not be disclosed or that competitors or other third parties will not otherwise gain access (such as through cybersecurity breach) to our trade secrets or independently develop substantially equivalent information and techniques. For example, any of these parties may breach the agreements and disclose our proprietary information, including our trade secrets, and we may not be able to obtain adequate remedies for such breaches. Such agreements may not be enforceable or may not provide meaningful protection for our trade secrets or other proprietary information in the event of unauthorized use or disclosure or other breaches of the agreements, and we may not be able to prevent such unauthorized disclosure, which could adversely impact our ability to establish or maintain a competitive advantage in the market. If we are required to assert our rights against such parties, it could result in substantial costs and be a distraction to management. Depending on the parties involved in such a breach, the available remedies may not provide adequate compensation for the value of the proprietary information disclosed to a third party.

Monitoring unauthorized disclosure is difficult, and we do not know whether the steps we have taken to prevent such disclosure are, or will be, adequate. If we were to enforce a claim that a third party had wrongfully obtained and was using our trade secrets, it would be expensive and time-consuming, it could distract our personnel, and the outcome would be unpredictable. In addition, courts outside the United States may be less willing to protect trade secrets, if at all, and the damages and other remedies available for improper disclosure of proprietary information can differ substantially from those in the United States. We may need to share our proprietary information, including trade secrets, with future business partners, collaborators, contractors and other third parties located in countries with a heightened risk of theft of trade secrets, including through direct intrusion by private parties or foreign actors, and those affiliated with or controlled by state actors.

We also seek to preserve the integrity and confidentiality of our confidential proprietary information by maintaining physical security of our premises and physical and electronic security of our information technology systems, but it is possible that these security measures could be breached and we may not have adequate remedies for such breach. If any of our confidential proprietary information were to be lawfully obtained or independently developed by a competitor or other third party, absent patent protection, we would have no right to prevent such competitor from using that technology or information to compete with us, which could harm our competitive position. Competitors or third parties could purchase our products and attempt to replicate some or all of the competitive advantages we derive from our development efforts, design around our protected technology, develop their own competitive technologies that fall outside the scope of our intellectual property rights or independently develop our technologies without reference to our trade secrets. If any of our trade secrets were to be disclosed to or independently discovered by a competitor or other third party, it could materially and adversely affect our business, financial condition, results of operations and prospects.

We may be subject to claims that our employees, consultants or independent contractors have wrongfully used or disclosed confidential information of third parties or that our employees have wrongfully used or disclosed alleged trade secrets of their former employers or claims otherwise challenging the inventorship of our patents and other intellectual property.

We have employed and expect to employ individuals who were previously employed at universities or other companies, including our competitors or potential competitors. Although we try to ensure that our employees, consultants, advisors and independent contractors do not use the proprietary information or know-how of others in their work for us, we may be subject to claims that our employees, advisors, consultants or independent contractors have inadvertently or otherwise used or disclosed intellectual property, including trade secrets or other proprietary information of their former employers or other third parties, or to claims that we have improperly used or obtained such trade secrets. Litigation may be necessary to defend against these claims. If we fail in defending such claims, in addition to paying monetary damages, we may lose valuable intellectual property rights or personnel and face increased competition to our business. Any such litigation or the threat thereof may adversely affect our ability to hire employees or contract with advisors, contractors and consultants. A loss of key research personnel work product could hamper or prevent our ability to commercialize potential products, which could harm our business. Even if we are successful in defending against these claims, litigation could result in substantial costs and be a distraction to management. This type of litigation or proceeding could substantially increase our operating losses and reduce our resources available for development activities. Some of our competitors may be able to sustain the costs of this type of litigation or proceedings more effectively than we can because of their substantially greater financial resources.

Furthermore, we or our licensors may in the future be subject to claims by former employees, consultants or other third parties asserting an ownership right in our owned or licensed patents or patent applications as an inventor or co-inventor. The failure to name the proper inventors on a patent application can result in the patents issuing thereon being unenforceable. Inventorship disputes may arise from conflicting views regarding the contributions of different individuals named as inventors, the effects of foreign laws where foreign nationals are involved in the development of the subject matter of the patent, conflicting obligations of third parties involved in developing our products or as a result of questions regarding co-ownership of potential joint inventions. Litigation may be necessary to resolve these and other claims challenging inventorship and/or ownership. An adverse determination in any such proceeding may result in loss of exclusivity or freedom to operate or in patent claims being narrowed, invalidated or held unenforceable, in whole or in part, which could limit our ability to stop others from using or commercializing similar technology, without payment to us, or could limit the duration of the patent protection covering our technology and products. Such challenges may also result in our inability to develop, manufacture or commercialize our products without infringing third-party patent rights. Also, our licensors may have relied on third-party consultants or collaborators or on funds from third parties, such as the U.S. government, such that our licensors may not be the sole and exclusive owners of the patents we in-license. If other third parties have ownership rights or other rights to our in-licensed patents, they may be able to license such patents to our competitors, and our competitors could market competing products and technology. Any of the foregoing could harm our business, financial condition, results of operations and prospects.

In addition, while it is our policy to require our employees and contractors who may be involved in the conception or development of intellectual property to execute agreements assigning such intellectual property to us, we may be unsuccessful in executing such an agreement with each party who, in fact, conceives or develops intellectual property that we regard as our own. The assignment of intellectual property rights may not be self-executing, or the assignment agreements may be breached, and we may be forced to bring claims against third parties, or defend claims that they may bring against us, to determine the ownership of what we regard as our intellectual property. Furthermore, individuals executing agreements with us may have pre-existing or competing obligations to a third party, such as an academic institution, and thus an agreement with us may be ineffective in perfecting ownership of inventions developed by that individual, which could have a material adverse effect on our business, financial condition, results of operations, and prospects.

We may not be able to protect and enforce our trademarks and trade names or build name recognition in our markets of interest thereby harming our competitive position.

The registered or unregistered trademarks or trade names that we own may be challenged, infringed, circumvented, declared generic, lapsed or determined to be infringing on or dilutive of other marks. We may not be able to protect our rights in these trademarks and trade names, which we need in order to build name recognition. In addition, third parties have filed, and may in the future file, for registration of trademarks similar or identical to our trademarks, thereby impeding our ability to build brand identity and possibly leading to market confusion. If they succeed in registering or developing common law rights in such trademark or any other trademarks that are similar or identical to our trademarks, and if we are not successful in challenging such rights and defending against challenges to our trademarks, we may not be able to use such trademarks to develop brand recognition of our technologies, products or services. In addition, there could be potential trade name or trademark infringement claims brought by owners of other registered trademarks or trademarks that incorporate variations of our registered or unregistered trademarks or trade names. Further, we may in the future enter into agreements with owners of such third party trade names or trademarks to avoid potential trademark litigation which may limit our ability to use our trade names or trademarks in certain fields of business. We may also license our trademarks and trade names to third parties, such as distributors. Though these license agreements may provide guidelines for how our trademarks and trade names may be used, a breach of these agreements or misuse of our trademarks and trade names by our licensees may jeopardize our rights in or diminish the goodwill associated with our trademarks and trade names. 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, financial condition, results of operations and prospects may be adversely affected. Our efforts to enforce or protect our proprietary rights related to trademarks, trade secrets, domain names, copyrights or other intellectual property may be ineffective and could result in substantial costs and diversion of resources. Any of the foregoing events could have a material adverse effect on our business, financial condition and results of operations.

Patent terms may be inadequate to protect our competitive position on our products for an adequate amount of time.

Patents have a limited lifespan. In the United States, if all maintenance fees are timely paid, the natural expiration of a patent is generally 20 years from its earliest U.S. non-provisional filing date. While extensions may be available, the life of a patent, and the protection it affords, is limited. In the United States, a patent's term may, in certain cases, be lengthened by patent term adjustment, which compensates a patentee for administrative delays by the USPTO in examining and granting a patent, or may be shortened if a patent is terminally disclaimed over a commonly owned patent or a patent naming a common inventor and having an earlier expiration date. Even if patents covering our products are obtained, once the patent life has expired, we may be open to competition from competitive products. If one of our products requires extended development, testing and/or regulatory review, patents protecting such products might expire before or shortly after such products are commercialized. As a result, our owned and licensed patent portfolio may not provide us with sufficient rights to exclude others from commercializing products similar or identical to ours, which could have a material adverse effect on our business, financial condition and results of operations.

We may become involved in lawsuits to defend against third-party claims of infringement, misappropriation or other violations of intellectual property or to protect or enforce our intellectual property, any of which could be expensive, time consuming and unsuccessful, and may prevent or delay our development and commercialization efforts.

Our commercial success depends in part on our ability and the ability of future collaborators to develop, manufacture, market and sell our products and use our products and technologies without infringing, misappropriating or otherwise violating the intellectual property rights of third parties. There is a substantial amount of litigation involving patents and other intellectual property rights in the life sciences technology sector, as well as administrative proceedings for challenging patents, including interference, derivation, inter partes review, post grant review, and reexamination proceedings before the USPTO, or oppositions and other comparable proceedings in foreign jurisdictions. We may be exposed to, or threatened with, future litigation by third parties having patent or

other intellectual property rights alleging that our products, manufacturing methods, software and/or technologies infringe, misappropriate or otherwise violate their intellectual property rights.

Numerous issued patents and pending patent applications that are owned by third parties exist in the fields in which we are developing our products and technologies. It is not always clear to industry participants, including us, the claim scope that may issue from pending patent applications owned by third parties or which patents cover various types of products, technologies or their methods of use or manufacture. Thus, because of the large number of patents issued and patent applications filed in our fields, it is difficult to conclusively assess our freedom to operate without infringing on third party rights and there may be a risk that third parties, including our competitors, may allege they have patent rights encompassing our products, technologies or methods and that we are employing their proprietary technology without authorization. We cannot guarantee that any of our patent searches or analyses, including the identification of relevant patents, the scope of patent claims or the expiration of relevant patents, are complete or thorough, nor can we be certain that we have identified each and every third-party patent and pending application in the United States and abroad that is relevant to or necessary for the commercialization of our products in any jurisdiction. The scope of a patent claim is determined by an interpretation of the law, the written disclosure in a patent and the patent's prosecution history. Our interpretation of the relevance or the scope of a patent or a pending application may be incorrect. For example, we may incorrectly determine that our products are not covered by a third-party patent or may incorrectly predict whether a third-party's pending application will issue with claims of relevant scope. Our determination of the expiration date of any patent in the United States or abroad that we consider relevant may be incorrect. Our failure to identify and correctly interpret relevant patents may negatively impact our ability to develop and market our products.

If third parties, including our competitors, believe that our products or technologies infringe, misappropriate or otherwise violate their intellectual property, such third parties may seek to enforce their intellectual property, including patents, by filing an intellectual property-related lawsuit, including patent infringement lawsuit, against us. Even if we believe third-party intellectual property claims are without merit, there is no assurance that a court would find in our favor on questions of infringement, validity, enforceability, or priority. The patents and patent applications such third parties seek to enforce could be construed to cover our products and technologies. If any of these third parties were to assert these patents against us and we are unable to successfully defend against any such assertion, we may be required, including by court order, to cease the development and commercialization of the infringing products or technology and we may be required to redesign such products and technologies so they do not infringe such patents, which may not be possible or may require substantial monetary expenditures and time. We could also be required to pay damages, which could be significant, including treble damages and attorneys' fees if we are found to have willfully infringed such patents. We could also be required to obtain a license to such patents in order to continue the development and commercialization of the infringing product or technology. However, such a license may not be available on commercially reasonable terms or at all, including because certain of these patents are held by or may be licensed to our competitors. Even if such license were available, it may require substantial payments or cross-licenses under our intellectual property rights, and it may only be available on a non-exclusive basis, in which case third parties, including our competitors, could use the same licensed intellectual property to compete with us. Additionally, if our products are found to infringe the intellectual property rights of third parties, these third parties may assert infringement claims against our licensees and other parties with whom we have business relationships, and we may be required to indemnify those parties for any damages they suffer as a result of these claims. The claims may require us to initiate or defend protracted and costly litigation on behalf of licensees and other parties regardless of the merits of these claims. If any of these claims succeed, we may be forced to pay damages on behalf of those parties or may be required to obtain licenses for the products they use. Any of the foregoing could have a material adverse effect on our business, financial condition, results of operation or prospects.

We may choose to challenge, including in connection with any allegation of patent infringement by a third party, the patentability, validity or enforceability of any third-party patent that we believe may have applicability in our field, and any other third-party patent that may be asserted against us. Such challenges may be brought either in court or by requesting that the USPTO, European Patent Office (EPO), or other foreign patent offices review the patent claims, such as in an ex-parte reexamination, inter partes review, post-grant review proceeding or opposition proceeding. However, there can be no assurance that any such challenge by us or any third party will be successful. Even if such proceedings are successful, these proceedings are expensive and may consume our time or other

resources, distract our management and technical personnel. There can be no assurance that our defenses of non-infringement, invalidity or unenforceability will succeed.

Third parties, including our competitors, could be infringing, misappropriating or otherwise violating our owned and in-licensed intellectual property rights. Monitoring unauthorized use of our intellectual property is difficult and costly. We may not be able to detect unauthorized use of, or take appropriate steps to enforce, our intellectual property rights. From time to time, we seek to analyze our competitors' products and services, and may in the future seek to enforce our rights against potential infringement, misappropriation or violation of our intellectual property. However, the steps we have taken to protect our intellectual property rights may not be adequate to enforce our rights as against such infringement, misappropriation or violation of our intellectual property. Any inability to meaningfully enforce our intellectual property rights could harm our ability to compete and reduce demand for our products and technologies.

Litigation proceedings may be necessary for us to enforce our patent and other intellectual property rights. In any such proceedings, a court may refuse to stop the other party from using the technology at issue on the grounds that our owned and in-licensed patents do not cover the technology in question. Further, in such proceedings, the defendant could counterclaim that our intellectual property is invalid or unenforceable and the court may agree, in which case we could lose valuable intellectual property rights, which could allow third parties to commercialize technology or products similar to ours and compete directly with us, without payment to us, or could require us to obtain license rights from the prevailing party in order to be able to manufacture or commercialize our products without infringing such party's intellectual property rights, and if we are unable to obtain such a license, we may be required to cease commercialization of our products and technologies, any of which could have a material adverse effect on our business, financial condition, results of operations and prospects. The outcome in any such proceedings are unpredictable.

Regardless of whether we are defending against or asserting any intellectual property-related proceeding, any such intellectual property-related proceeding that may be necessary in the future, regardless of outcome, could result in substantial costs and diversion of resources and could have a material adverse effect on our business, financial condition, results of operations and prospects. Furthermore, because of the substantial amount of discovery required in connection with intellectual property litigation, there is a risk that some of our confidential information could be compromised by disclosure during this type of litigation. In addition, there could be public announcements of the results of hearings, motions, or other interim proceedings or developments, and if securities analysts or investors perceive these results to be negative, it could have a substantial adverse effect on the price of our common stock. Some of our competitors and other third parties may be able to sustain the costs of such litigation or proceedings more effectively than we can because of their greater financial resources and more mature and developed intellectual property portfolios. We may not have sufficient financial or other resources to adequately conduct these types of litigation or proceedings. Any of the foregoing, or any uncertainties resulting from the initiation and continuation of any litigation, could have a material adverse effect on our ability to raise the funds necessary to continue our operations or could otherwise have a material adverse effect on our business, financial condition, results of operations and prospects. Claims that we have misappropriated the confidential information or trade secrets of third parties could have a similar adverse effect on our business, financial condition, results of operations and prospects.

Obtaining and maintaining our patent protection depends on compliance with various required procedures, document submissions, fee payments and other requirements imposed by governmental patent agencies, and our patent protection could be reduced or eliminated for non-compliance with these requirements.

Periodic maintenance fees, renewal fees, annuity fees and various other governmental fees on patents and/or applications will be due to be paid to the USPTO and various governmental patent agencies outside of the United States at several stages over the lifetime of the patents and/or applications. The USPTO and various non-U.S. governmental patent agencies require compliance with a number of procedural, documentary, fee payment and other similar provisions during the patent application process. In certain circumstances, we rely on our licensors to pay these fees due to the U.S. and non-U.S. patent agencies and to take the necessary action to comply with these requirements with respect to our licensed intellectual property. In many cases, an inadvertent lapse, including due to the effect of the COVID-19 pandemic on us, our licensors or our and our licensors' patent maintenance vendors, can be cured by payment of a late fee or by other means in accordance with the applicable rules. However, there are

situations in which non-compliance can result in abandonment or lapse of the patent or patent application, resulting in partial or complete loss of patent rights in the relevant jurisdiction. Non-compliance events that could result in abandonment or lapse of a patent or patent application include, but are not limited to, failure to respond to official actions within prescribed time limits, non-payment of fees and failure to properly legalize and submit formal documents. In such an event, our competitors and other third parties may be able to enter the market without infringing our patents, which could have a material adverse effect on our business, financial condition, results of operations and prospects.

We currently rely on licenses from third parties, and in the future may rely on additional licenses from other third parties, and if we lose any of these licenses, then we may be subjected to future litigation.

We are, and may in the future become, a party to license agreements that grant us rights to use certain intellectual property, including patents and patent applications, typically in certain specified fields of use. Currently, we rely on an in-license from certain third parties with respect to certain patent rights relating to multiplexed detection and high throughput single cell polyomics, certain patent rights relating to methods and compositions for quantifying metabolites and certain patent rights relating to the detection of target molecules. We may in the future rely on licenses from other third parties with respect to our technology. Our rights to use licensed technology in our business are subject to the continuation of and compliance with the terms of these licenses and any licenses we may enter into in the future. Some of these licensed rights provide us with freedom to operate for aspects of our products and technologies. As a result, any termination of these licenses could result in the loss of significant rights and could harm our ability to develop, manufacture and commercialize our products. We may need to obtain additional licenses from others to advance our research, development and commercialization activities. For instance, to the extent any additional intellectual property developed by our licensors is not included under our existing license agreements are necessary or useful for our products, we would need to negotiate for additional licenses to such additional intellectual property. Such licenses may not be available on commercially reasonable terms or at all, or may be non-exclusive.

Our success may depend in part on the ability of our licensors and any future licensors to obtain, maintain and enforce patent protection for our licensed intellectual property. Under our current license agreements and under any licenses we may enter into in the future, we may not have the right to control the prosecution, maintenance or enforcement of patents and patent applications that are licensed to us. Our licensors or any future licensors may not successfully prosecute the patent applications we license or prosecute such patent applications in our best interest. Even if patents issue in respect of these patent applications, our licensors and any future licensors may fail to maintain these patents, may determine not to pursue litigation against other companies that are infringing these patents or may pursue such litigation less aggressively than we would. Without protection for the intellectual property we license, other companies might be able to offer substantially identical products and technologies for sale, which could materially adversely affect our competitive business position and harm our business, financial condition, results of operations and prospects.

Certain of our current license agreements impose, and future agreements may impose, various diligence, commercialization, milestone payment, royalty, insurance and other obligations on us and require us to meet development timelines, or to exercise commercially reasonable efforts to develop and commercialize licensed products, in order to maintain the licenses. If we fail to comply with these obligations (including as a result of COVID-19 impacting our operations), we use the licensed intellectual property in an unauthorized manner or we are subject to bankruptcy-related proceedings, the terms of these license agreements may be materially modified, such as by rendering currently exclusive licenses non-exclusive, or by giving our licensors the right to terminate their respective agreement with us, in which event we would not be able to develop or market products or technology covered by the licensed intellectual property. With respect to any license agreement under which we are a sublicensee, if our current or future sublicensor fails to comply with its obligations under its upstream license agreement with its licensor, such licensor may have the right to terminate the upstream license, which may terminate our sublicense. If this were to occur, we would no longer have rights to the applicable intellectual property unless we are able to secure our own direct license with the owner of the relevant rights, which may not be available on commercially reasonable terms or at all. Any of the foregoing could have a material adverse effect on our competitive position, business, financial conditions, results of operations and prospects.

Moreover, disputes may also arise between us and our licensors regarding intellectual property subject to a license agreement, including:

- the scope of rights granted under the license agreements and other interpretation-related issues;
- our compliance with reporting, financial or other obligations under the license agreements;
- whether, and the extent to which, our products, technology and processes infringe on, misappropriate or otherwise violate the intellectual property of the licensors that is not subject to the licensing agreements;
- our right to sublicense the applicable intellectual or proprietary rights to third parties;
- our right to transfer or assign the license;
- our diligence obligations under the license agreements and what activities satisfy those diligence obligations;
- the inventorship and ownership of inventions and know-how resulting from the joint creation or use of intellectual property by our licensors; and
- the priority of invention of patented technology.

If we do not prevail in such disputes, we may lose any or all of our rights under such license agreements, experience significant delays in the development and commercialization of our products and technologies, or incur liability for damages, any of which could have a material adverse effect on our business, financial condition, results of operations, and prospects. In addition, we may seek to obtain additional licenses from our licensors, and, in connection with obtaining such licenses, we may agree to amend our existing licenses in a manner that may be more favorable to the applicable licensor, including by agreeing to terms that could enable third parties, including our competitors, to receive licenses to a portion of the intellectual property that is subject to our existing licenses and to compete with our products.

Further, certain of our future agreements with third parties may limit or delay our ability to consummate certain transactions, may impact the value of those transactions, or may limit our ability to pursue certain activities. For example, we may in the future enter into license agreements that are not assignable or transferable, or that require the licensor's express consent in order for an assignment or transfer to take place.

In addition, the agreements under which we currently and in the future license intellectual property or technology from third parties are complex and certain provisions in such agreements may be susceptible to multiple interpretations. The resolution of any contract interpretation disagreement that may arise could narrow what we believe to be the scope of our rights to the relevant intellectual property or technology, or increase what we believe to be our financial or other obligations under the relevant agreement, either of which could have a material adverse effect on our business, financial condition, results of operations and prospects. Moreover, if disputes over intellectual property that we have licensed prevent or impair our ability to maintain our current licensing arrangements on commercially acceptable terms, we may be unable to successfully develop and commercialize any affected products or services, which could have a material adverse effect on our business, financial condition, results of operations and prospects.

Absent the license agreements, we may infringe patents subject to those agreements, and if the license agreements are terminated, we may be subject to litigation by the licensor. Litigation could result in substantial costs to us and distract our management. If we do not prevail, we may be required to pay damages, including treble damages, attorneys' fees, costs and expenses and royalties or be enjoined from selling our products, which could adversely affect our ability to offer products or services, our ability to continue operations and our business, financial condition, results of operations and prospects.

If we cannot license rights to use technologies on reasonable terms, we may not be able to commercialize new products in the future.

We may identify third-party technology that we may need to license or acquire in order to develop or commercialize our products or technologies. However, we may be unable to secure such licenses or acquisitions. The licensing or acquisition of third-party intellectual property rights is a competitive area, and several more established companies may pursue strategies to license or acquire third-party intellectual property rights that we may consider attractive or necessary. These established companies may have a competitive advantage over us due to their size, capital resources and greater clinical development and commercialization capabilities. In addition, companies that perceive us to be a competitor may be unwilling to assign or license rights to us.

We also may be unable to license or acquire third-party intellectual property rights on terms that would allow us to make an appropriate return on our investment or at all. In return for the use of a third party's technology, we may agree to pay the licensor royalties based on sales of our products or services. Royalties are a component of cost of products or technologies and affect the margins on our products. We may also need to negotiate licenses to patents or patent applications before or after introducing a commercial product. We may not be able to obtain necessary licenses to patents or patent applications, and our business may suffer if we are unable to enter into the necessary licenses on acceptable terms or at all, if any necessary licenses are subsequently terminated, if the licensor fails to abide by the terms of the license or fails to prevent infringement by third parties, or if the licensed intellectual property rights are found to be invalid or unenforceable.

Certain of our in-licensed patents are, and our future owned and in-licensed patents may be, subject to a reservation of rights by one or more third parties, including government march-in rights, that may limit our ability to exclude third parties from commercializing products similar or identical to ours.

Our owned and in-licensed patents may be subject to a reservation of rights by one or more third parties. For example, the U.S. government has certain rights, including march-in rights, to patent rights and technology funded by the U.S. government and licensed to us from certain third parties. When new technologies are developed with government funding, in order to secure ownership of such patent rights, the recipient of such funding is required to comply with certain government regulations, including timely disclosing the inventions claimed in such patent rights to the U.S. government and timely electing title to such inventions. Any failure to timely elect title to such inventions may permit the U.S. government to, at any time, take title to such inventions. Additionally, the U.S. government generally obtains certain rights in any resulting patents, including a non-exclusive license authorizing the government to use the invention or to have others use the invention on its behalf. If the government decides to exercise these rights, it is not required to engage us as its contractor in connection with doing so. These rights may permit the U.S. government to disclose our confidential information to third parties and to exercise march-in rights to use or allow third parties to use our licensed technology. The U.S. government can exercise its march-in rights if it determines that action is necessary because we fail to achieve practical application of the government-funded technology, because action is necessary to alleviate health or safety needs, to meet requirements of federal regulations, or to give preference to U.S. industry. In addition, our rights in such inventions may be subject to certain requirements to manufacture products embodying such inventions in the United States. Any exercise by the government of any of the foregoing rights could have a material adverse effect on our business, financial condition, results of operations and prospects.

In addition, our current and future licensors may retain certain rights under their agreements with us, including the right to use the underlying technology for non-commercial academic and research use, to publish general scientific findings from research related to the technology, and to make customary scientific and scholarly disclosures of information relating to the technology. It is difficult to monitor whether our licensors limit their use of the technology to these uses, and we could incur substantial expenses to enforce our rights to our licensed technology in the event of misuse, which could have a material adverse effect on our business, financial condition, results of operations and prospects.

Our products contain third-party open source software components and failure to comply with the terms of the underlying open source software licenses could restrict our ability to sell our products and provide third parties access to our proprietary software.

Our products contain software licensed by third parties under open source software licenses. Use and distribution of open source software may entail greater risks than use of third-party commercial software, as open source software licensors generally do not provide support, warranties, indemnification or other contractual protections regarding infringement claims or the quality of the code. Some open source software licenses contain requirements that the licensee make its source code publicly available if the licensee creates modifications or derivative works using the open source software, depending on the type of open source software the licensee uses and how the licensee uses it. If we combine our proprietary software with open source software in a certain manner, we could, under certain open source software licenses, be required to release the source code of our proprietary software to the public for free. This would allow our competitors and other third parties to create similar products with less development effort and time and ultimately could result in a loss of our product sales and revenue, which could have a material adverse effect on our business, financial condition, results of operations and prospects. Alternatively, to avoid the public release of the affected portions of our source code, we could be required to expend substantial time and resources to re-engineer some or all of our software. In addition, some companies that use third-party open source software have faced claims challenging their use of such open source software and their compliance with the terms of the applicable open source license. We may face claims from third parties claiming ownership of what we believe to be open source software, or claiming non-compliance with the applicable open source licensing terms, including claims that demand release of source code for the open source software, derivative works or our proprietary source code that was developed using, or that is distributed with, such open source software. These claims could also result in litigation and could require us to make our proprietary software source code freely available, devote additional research and development resources to re-engineer our platform, seek costly licenses from third parties or otherwise incur additional costs and expenses, any of which could result in reputational harm and would have a negative effect on our business and operating results. Use of open source software may also present additional security risks because the public availability of such software may make it easier for hackers and other third parties to compromise or attempt to compromise our platform.

Although we review our use of open source software to avoid subjecting our proprietary software to conditions we do not intend, the terms of many open source software licenses have not been interpreted by United States courts, and there is a risk that these licenses could be construed in a way that could impose unanticipated conditions or restrictions on our ability to commercialize our products and proprietary software. Moreover, we cannot assure investors that our processes for monitoring and controlling our use of open source software in our products will be effective. If we are held to have breached the terms of an open source software license, we could be subject to damages, required to seek licenses from third parties to continue offering our products on terms that are not economically feasible, to re-engineer our products, to discontinue the sale of our products if re-engineering could not be accomplished on a timely basis, or to make generally available, in source code form, our proprietary code, any of which could adversely affect our business, financial condition, results of operations and prospects.

Intellectual property rights do not necessarily address all potential threats.

The degree of future protection afforded by our intellectual property rights is uncertain because intellectual property rights have limitations, and may not adequately protect our business or permit us to maintain our competitive advantage. For example:

- others may be able to make products that are similar to products and technologies we may develop or utilize similar technology that are not covered by the claims of the patents that we own or license now or in the future;
- we, or our licensors, might not have been the first to make the inventions covered by the issued patent or pending patent application that we license or may own in the future;
- we, or our licensors, might not have been the first to file patent applications covering certain of our or their inventions;

- others may independently develop similar or alternative technologies or duplicate any of our technologies without infringing, misappropriating or otherwise violating our owned or licensed intellectual property rights;
- it is possible that our pending owned or licensed patent applications or those that we may own in the future will not lead to issued patents;
- issued patents that we hold rights to may be held invalid or unenforceable, including as a result of legal challenges by our competitors;
- our competitors might conduct research and development activities in countries where we do not have patent rights and then use the information learned from such activities to develop competitive products for sale in our major commercial markets;
- we may not develop additional proprietary technologies that are patentable;
- the patents of others may harm our business;
- we may choose not to file a patent for certain trade secrets or know-how, and a third party may subsequently file a patent covering such intellectual property; and
- our trade secrets or proprietary know-how may be unlawfully disclosed, thereby losing their trade secret or proprietary status.

Should any of these events occur, they could materially adversely affect our business, financial condition, results of operations and prospects.

Risks Related to Our Common Stock and This Offering

Prior to this offering, there has been no public market for shares of our common stock and an active trading market for our common stock may never develop or be sustained.

Prior to this offering, there has been no public market for shares of our common stock. Although we intend to apply for listing on Nasdaq, an active trading market for shares of our common stock may never develop or be sustained following this offering. If an active trading market does not develop, you may have difficulty selling your shares of our common stock at an attractive price, or at all. The price for shares of our common stock in this offering will be determined by negotiations among us and representatives of the underwriters, and it may not be indicative of prices that will prevail in the open market following the completion of this offering. Consequently, you may not be able to sell your shares of our common stock at or above the initial public offering price or at any other price, or at the time that you would like to sell. An inactive market may also impair our ability to raise capital by selling shares of our common stock, our ability to motivate our employees through equity incentive awards, and our ability to acquire other companies, products or technologies by using our common stock as consideration for such acquisitions.

Our management team has broad discretion in the use of the net proceeds from this offering and may not use them effectively.

We intend to use the net proceeds from this offering for general corporate purposes. Our management has broad discretion over how these proceeds are to be used and could spend the proceeds in ways with which you may not agree. In addition, we might not use the proceeds of this offering effectively or in a manner that increases our market value or enhances our profitability. We have not established a timetable for the effective deployment of the proceeds, and we cannot predict how long it will take to deploy the proceeds.

Our amended and restated bylaws designate a state or federal court located within the State of Delaware as the exclusive forum for substantially all disputes between us and our stockholders, and also provide that the federal district courts will be the exclusive forum for resolving any complaint asserting a cause of action arising under

the Securities Act of 1933, as amended, each of which could limit our stockholders' ability to choose the judicial forum for disputes with us or our directors, officers, stockholders, or employees.

Our amended and restated certificate of incorporation will provide that, subject to limited exceptions, the Court of Chancery for the State of Delaware will be the sole and exclusive forum for:

- any derivative action or proceeding brought on our behalf;
- any action asserting a claim of breach of a fiduciary duty owed by any of our directors, officers or other employees to us or our stockholders;
- any action asserting a claim against us arising pursuant to any provision of the General Corporation Law of the State of Delaware, our amended and restated certificate of incorporation or our amended and restated bylaws;
- any action to interpret, apply, enforce or determine the validity of our amended and restated certificate of incorporation or amended and restated bylaws; and
- any other action asserting a claim against us that is governed by the internal affairs doctrine.

Our amended and restated certificate of incorporation will also provide that the federal district courts of the United States of America will be the exclusive forum for the resolution of any complaint asserting a cause of action against us or any of our directors, officers, employees or agents and arising under the Securities Act. However, Section 22 of the Securities Act provides that federal and state courts have concurrent jurisdiction over lawsuits brought pursuant to the Securities Act or the rules and regulations thereunder. To the extent the exclusive forum provision restricts the courts in which claims arising under the Securities Act may be brought, there is uncertainty as to whether a court would enforce such a provision. We note that investors cannot waive compliance with the federal securities laws and the rules and regulations thereunder. This provision does not apply to claims brought under the Exchange Act.

Any person or entity purchasing or otherwise acquiring any interest in shares of our capital stock shall be deemed to have notice of and to have consented to these provisions. 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 our directors, officers or other employees, which may discourage such lawsuits against us and our directors, officers and employees. Alternatively, if a court were to find these provisions of our amended and restated certificate of incorporation inapplicable to, or unenforceable in respect of, one or more of the specified types of actions or proceedings, we may incur additional costs associated with resolving such matters in other jurisdictions, which could adversely affect our business or financial condition.

Delaware law and provisions in our amended and restated certificate of incorporation and amended and restated bylaws that will be in effect at the closing of this offering might discourage, delay or prevent a change in control of our company or changes in our management and, therefore, depress the trading price of our common stock.

Provisions of our amended and restated certificate of incorporation and amended and restated bylaws and of state law may delay, deter, prevent or render more difficult a takeover attempt that our stockholders might consider in their best interests. For example, such provisions or laws may prevent our stockholders from receiving the benefit from any premium to the market price of our common stock offered by a bidder in a takeover context. Even in the absence of a takeover attempt, the existence of these provisions may adversely affect the prevailing market price of our common stock if they are viewed as discouraging takeover attempts in the future.

Certain provisions of our amended and restated certificate of incorporation and amended and restated bylaws may have anti-takeover effects and may delay, deter or prevent a takeover attempt that our stockholders might consider in their best interests. These anti-takeover provisions and laws may delay, deter or prevent a takeover attempt that our stockholders might consider in their best interests and make it more difficult for stockholders to elect directors of their choosing. As a result, these provisions could limit our stockholders' ability to obtain a premium for their shares and could also affect the price that some investors are willing to pay for our common stock.

See “Description of Capital Stock—Certain Anti-Takeover Provisions of our Amended and Restated Certificate of Incorporation, our Amended and Restated Bylaws and Delaware Law.”

Our ability to use net operating losses to offset future taxable income may be subject to certain limitations.

As of December 31, 2020, we had net operating loss carryforward (NOLs) for federal purposes of approximately $12.7 million, which expire at various dates through 2033 and approximately $38.0 million which have no expiration. As of December 31, 2020, we also had state NOLs of approximately $44.2 million, which expire at various dates through 2042. We may use these NOLs to offset against taxable income for U.S. federal and state income tax purposes. However, Section 382 of the Internal Revenue Code of 1986, as amended, may limit the NOLs we may use in any year for U.S. federal income tax purposes in the event of certain changes in ownership of our company. A Section 382 “ownership change” generally occurs if one or more stockholders or groups of stockholders who own at least 5% of a company’s stock increase their ownership by more than 50 percentage points over their lowest ownership percentage within a rolling three-year period. Similar rules may apply under state tax laws. We have not conducted a 382 study to determine whether the use of our NOLs is impaired. We may have previously undergone multiple “ownership changes.” In addition, future issuances or sales of our stock, including certain transactions involving our stock that are outside of our control, could result in future “ownership changes.” “Ownership changes” that have occurred in the past or that may occur in the future could result in the imposition of an annual limit on the amount of pre-ownership change NOLs and other tax attributes we can use to reduce our taxable income, potentially increasing and accelerating our liability for income taxes, and also potentially causing those tax attributes to expire unused. States may impose other limitations on the use of our NOLs. Any limitation on using NOLs could, depending on the extent of such limitation and the NOLs previously used, result in our retaining less cash after payment of U.S. federal and state income taxes during any year in which we have taxable income, rather than losses, than we would be entitled to retain if such NOLs were available as an offset against such income for U.S. federal and state income tax reporting purposes, which could adversely impact our operating results.

We are an “emerging growth company” and a “smaller reporting company” and the reduced disclosure requirements applicable to emerging growth companies and smaller reporting companies may make our common stock less attractive to investors.

We are an “emerging growth company,” as defined in the JOBS Act. For so long as we remain an emerging growth company, we are permitted by SEC rules and plan to rely on exemptions from certain disclosure requirements that are applicable to other SEC registered public companies that are not emerging growth companies.

These exemptions include not being required to comply with the auditor attestation requirements of Section 404 of the SOX, not being required to comply with any requirement that may be adopted by the Public Company Accounting Oversight Board regarding mandatory audit firm rotation or a supplement to the auditor’s report providing additional information about the audit and the consolidated financial statements, reduced disclosure obligations regarding executive compensation and exemptions from the requirements of holding a nonbinding advisory vote on executive compensation and stockholder approval of any golden parachute payments not previously approved, and being permitted to provide only two years of audited financial statements, in addition to any required unaudited interim financial statements, with correspondingly reduced “Management’s Discussion and Analysis of Financial Condition and Results of Operations” disclosure in this prospectus. As a result, the information we provide stockholders will be different than the information that is available with respect to other public companies. In this prospectus, we have not included all of the executive compensation related information that would be required if we were not an emerging growth company. To the extent that we continue to qualify as a “smaller reporting company,” as such term is defined in Rule 12b-2 under the Securities Exchange Act of 1934, after we cease to qualify as an emerging growth company, we will continue to be permitted to make certain reduced disclosures in our periodic reports and other documents that we file with the SEC. We cannot predict whether investors will find our common stock less attractive if 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.

In addition, the JOBS Act provides that an emerging growth company can take advantage of an extended transition period for complying with new or revised accounting standards. This allows an emerging growth company

to delay the adoption of certain accounting standards until those standards would otherwise apply to private companies. We have elected to avail ourselves of this exemption from new or revised accounting standards and, therefore, we will not be subject to the same new or revised accounting standards as other public companies that are not emerging growth companies. As a result, our consolidated financial statements may not be comparable to companies that comply with new or revised accounting pronouncements as of public company effective dates.

If you purchase our common stock in this offering, you will incur immediate and substantial dilution as a result of this offering.

The initial public offering price of our common stock is substantially higher than the net tangible book deficit per share of our common stock. Therefore, if you purchase shares of our common stock in this offering, you will pay a price per share that substantially exceeds our net tangible book deficit per share after this offering. Based on the initial public offering price of $ per share, you will experience immediate dilution of $ per share, representing the difference between our pro forma net tangible book deficit per share after giving effect to this offering and the initial public offering price. In addition, purchasers of common stock in this offering will have contributed % of the aggregate price paid by all purchasers of our stock but will own only approximately % of our common stock outstanding after this offering. See "Dilution" for more detail.

A significant portion of our total outstanding shares are restricted from immediate resale but may be sold into the market in the near future. This could cause the market price of our common stock to drop significantly, even if our business is doing well.

Sales of a substantial 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 their shares, could result in a decrease in the market price of our common stock. Immediately after this offering, we will have outstanding shares of common stock based on the number of shares outstanding as of , 2021. This includes the shares that we are selling in this offering, which may be resold in the public market immediately without restriction, unless purchased by our affiliates. Of the remaining shares, shares are currently restricted as a result of securities laws or 180-day lock-up agreements but will be able to be sold after the offering as described in the section titled "Shares Eligible for Future Sale." Moreover, after this offering, holders of an aggregate of up to shares of our common stock issuable upon the conversion of the shares of our redeemable convertible preferred stock, concurrently with the closing of this offering, will have rights, subject to some conditions, to require us to file registration statements covering their shares or to include their shares in registration statements that we may file for ourselves or other stockholders as described in the section titled "Description of Capital Stock—Authorized Capital Stock—Registration Rights." We also intend to register all shares of common stock that we may issue under our equity compensation plans. Once we register these shares, they can be freely sold in the public market, subject to volume limitations applicable to affiliates and the lock-up agreements described in the section titled "Underwriters."

Your percentage ownership in us may be diluted by future issuances of capital stock, which could reduce your influence over matters on which stockholders vote.

Pursuant to our amended and restated certificate of incorporation and amended and restated bylaws as will be in effect upon the completion of this offering, our board of directors has the authority, without action or vote of our stockholders, to issue all or any part of our authorized but unissued shares of common stock, including shares issuable upon the exercise of options, or shares of our authorized but unissued redeemable convertible preferred stock. Issuances of shares of common stock or shares of voting preferred stock would reduce your influence over matters on which our stockholders vote and, in the case of issuances of shares of preferred stock, would likely result in your interest in us being subject to the prior rights of holders of that preferred stock.

Our directors, officers and principal stockholders have significant voting power and may take actions that may not be in the best interests of our other stockholders.

After this offering, our officers, directors and principal stockholders each holding more than 5% of our common stock will collectively control approximately % of our outstanding common stock. As a result, these stockholders, if they act together, may be able to exert significant influence over the management and affairs of our

company and most matters requiring stockholder approval, including the election of directors and approval of significant corporate transactions. This concentration of ownership may have the effect of delaying or preventing a change of control and might adversely affect the market price of our common stock. This concentration of ownership may not be in the best interests of our other stockholders.

We do not expect to pay any dividends for the foreseeable future and our indebtedness could limit our ability to pay dividends on our common stock. Investors in this offering may never obtain a return on their investment.

We have never declared or paid any cash dividends on our equity securities. We do not currently anticipate declaring or paying regular cash dividends on our common stock in the near term and you should not rely on an investment in our common stock to provide dividend income. We currently intend to use our future earnings, if any, to pay debt obligations, to fund our growth and develop our business and for general corporate purposes. Therefore, you are not likely to receive any cash dividends on your common stock in the near term, and the success of an investment in shares of our common stock will depend upon any future appreciation in their value. There is no guarantee that shares of our common stock will appreciate in value or even maintain the price at which they are initially offered. Any future declaration and payment of cash dividends or other distributions of capital will be at the discretion of our board of directors and the payment of any future cash dividends or other distributions of capital will depend on many factors, including our financial condition, earnings, cash needs, regulatory constraints, capital requirements (including requirements of our subsidiaries) and any other factors that our board of directors deems relevant in making such a determination. The agreement governing the indebtedness of our subsidiaries imposes restrictions on our subsidiaries' ability to pay dividends or other distributions to us, and future agreements governing debt our subsidiaries may enter into may impose similar restrictions. For more information, see "Dividend Policy." In addition, any future credit facility that we enter into may contain terms prohibiting or limiting the amount of dividends that may be declared or paid on our common stock. We cannot assure you that we will establish a dividend policy or pay cash dividends in the future or continue to pay any cash dividend if we do commence paying cash dividends pursuant to a dividend policy or otherwise.

General Risks

We may acquire businesses or form joint ventures or make investments in other companies or technologies that could negatively affect our operating results, could divert our management's attention, dilute our stockholders' ownership, increase our debt or cause us to incur significant expense.

We may pursue acquisitions of businesses and assets. We also may pursue strategic alliances and joint ventures that leverage our technologies and industry experience to expand our offerings or distribution. We have no experience with acquiring other companies and limited experience with forming strategic partnerships. We may not be able to find suitable partners or acquisition candidates, and we may not be able to complete such transactions on favorable terms, if at all. The competition for partners or acquisition candidates may be intense, and the negotiation process will be time-consuming and complex. If we make any acquisitions, we may not be able to integrate these acquisitions successfully into our existing business, these acquisitions may not strengthen our competitive position, the transactions may be viewed negatively by customers or investors, we may be unable to retain key employees of any acquired business, relationships with key suppliers, manufacturers or customers of any acquired business may be impaired due to changes in management and ownership, and we could assume unknown or contingent liabilities. Any future acquisitions also could result in the incurrence of debt, contingent liabilities or future write-offs of intangible assets or goodwill, any of which could have a material adverse effect on our business, financial condition, results of operations and prospects. If we were to issue additional equity in connection with such acquisitions, this may dilute our stockholders. We cannot guarantee that we will be able to fully recover the costs of any acquisition. Integration of an acquired company also may disrupt ongoing operations and require management resources that we would otherwise focus on developing our existing business. We may not realize the anticipated benefits of any acquisition, technology license, strategic alliance or joint venture. We also may experience losses related to investments in other companies, which could have a material adverse effect on our business, financial condition, results of operations and prospects.

To finance any acquisitions or joint ventures, we may choose to issue shares of our common stock as consideration, which would dilute the ownership of our stockholders. Additional funds may not be available on

terms that are favorable to us, or at all. If the price of our common stock is low or volatile, we may not be able to acquire companies or fund a joint venture project using our stock as consideration.

We have identified a material weakness in our internal control over financial reporting, and the failure to remediate this material weakness may adversely affect our business, investor confidence in our company, our financial results and the market value of our common stock.

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 our annual or interim financial statements will not be prevented or detected on a timely basis. The material weakness we identified related to the lack of maintaining a sufficient complement of personnel commensurate with the accounting and financial reporting requirements in order to have adequate segregation of key duties and responsibilities, which affected the operation of controls over the recording of journal entries and the reconciliation of key accounts. This material weakness did not result in a material misstatement to the financial statements. We plan to implement measures designed to improve internal control over financial reporting to remediate the control deficiencies that led to our material weakness by, among other things, hiring qualified personnel with appropriate expertise to perform specific functions, and designing and implementing improved processes and internal controls.

While we believe the remedial efforts we will take will improve our internal controls and address the underlying causes of the material weakness, we cannot be certain that the steps we will take will be sufficient to remediate the control deficiencies that led to our material weakness in our internal controls over financial reporting or prevent future material weaknesses or control deficiencies from occurring. While we will work to remediate the material weakness as timely and efficiently as possible, at this time we cannot provide an estimate of costs expected to be incurred in connection with the implementation of our remediation actions, nor can we provide an estimate of the time it will take to complete our remediation actions. Neither our management nor an independent registered public accounting firm has performed an evaluation of our internal controls over financial reporting in accordance with the provisions of the Sarbanes-Oxley Act because no such evaluation has been required.

If we fail to effectively remediate the material weakness in our internal controls over financial reporting described above, we may be unable to accurately or timely report our financial condition or results of operations. Such failure may adversely affect our business, investor confidence in our company, our financial condition and the market value of our common stock.

We are not currently required to comply with SEC rules that implement Section 404 of the Sarbanes-Oxley Act and are therefore not required to make a formal assessment of the effectiveness of our internal controls over financial reporting for that purpose. Upon becoming a public company, we will be required to comply with the SEC's rules implementing Sections 302 and 404 of the Sarbanes-Oxley Act, which will 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 controls over financial reporting. Although we will be required to disclose changes that have materially affected, or are reasonably likely to materially affect, our internal controls over financial reporting on a quarterly basis, we will not be required to make our first annual assessment of our internal controls over financial reporting pursuant to Section 404 until at least our second annual report required to be filed with the SEC, and we will not be required to have our independent registered public accounting firm formally assess our internal controls for as long as we remain an "emerging growth company" as defined in the JOBS Act.

When formally evaluating our internal controls over financial reporting, we may identify material weaknesses that we may not be able to remediate in time to meet the applicable deadline imposed upon us for compliance with the requirements of Section 404 of the Sarbanes-Oxley Act. In addition, if we fail to achieve and maintain the adequacy of our internal controls, as such standards are modified, supplemented or amended from time to time, we may not be able to ensure that we can conclude on an ongoing basis that we have effective internal controls over financial reporting in accordance with Section 404 of the Sarbanes-Oxley Act. We cannot be certain as to the timing of completion of our evaluation, testing and any remediation actions or the impact of the same on our operations. If we are not able to implement the requirements of Section 404 of the Sarbanes-Oxley Act in a timely manner or with adequate compliance, our independent registered public accounting firm may issue an adverse opinion due to ineffective internal controls over financial reporting, and we may be subject to sanctions or investigation by

regulatory authorities, such as the SEC. As a result, there could be a negative reaction in the financial markets due to a loss of confidence in the reliability of our financial statements. Any such action could have a significant and adverse effect on our business and reputation, which could negatively affect our results of operations or cash flows. In addition, we may be required to incur additional costs in improving our internal control system and the hiring of additional personnel.

If our estimates or judgments relating to our critical accounting policies are based on assumptions that change or prove to be incorrect, our results of operation could fall below our publicly announced guidance or the expectations of securities analysts and investors, resulting in a decline in the market price of our common stock.

The preparation of consolidated financial statements in conformity with U.S. GAAP requires management to make estimates and assumptions that affect the amounts reported in our consolidated financial statements and accompanying notes. We base our estimates on historical experience and estimates and on various other assumptions that we believe to be reasonable under the circumstances, the results of which form the basis for making judgments about the carrying values of assets, liabilities, equity, revenue and expenses that are not readily apparent from other sources. For example, in connection with the implementation of the new revenue accounting standard, management makes judgments and assumptions based on our interpretation of the new standard. The new revenue standard is principle-based and interpretation of those principles may vary from company to company based on their unique circumstances. It is possible that interpretation, industry practice and guidance may evolve as we apply the new standard. If our assumptions underlying our estimates and judgements relating to our critical accounting policies change or if actual circumstances differ from our assumptions, estimates or judgements, our operating results may be adversely affected and could fall below our publicly announced guidance or the expectations of securities analysts and investors, resulting in a decline in the market price of our common stock.

We expect to incur significant additional costs as a result of being a public company, which may adversely affect our business, financial condition, results of operations and prospects.

As a public company, we will incur significant legal, accounting, compliance and other expenses that we did not incur as a private company and these expenses may increase even more after we are no longer an “emerging growth company.” Our management and other personnel will need to devote a substantial amount of time and incur significant expense in connection with compliance initiatives. For example, in anticipation of becoming a public company, we will need to adopt additional internal controls and disclosure controls and procedures, retain a transfer agent and adopt an insider trading policy. As a public company, we will bear all of the internal and external costs of preparing and distributing periodic public reports in compliance with our obligations under the securities laws.

In addition, regulations and standards relating to corporate governance and public disclosure, including SOX, and the related rules and regulations implemented by the SEC and Nasdaq, have increased legal and financial compliance costs and will make some compliance activities more time-consuming. We intend to invest resources to comply with evolving laws, regulations and standards, and this investment will result in increased general and administrative expenses and may divert management’s time and attention from our other business activities. If our efforts to comply with new laws, regulations and standards differ from the activities intended by regulatory or governing bodies due to ambiguities related to practice, regulatory authorities may initiate legal proceedings against us, and our business may be harmed. In connection with this offering, we intend to increase our directors’ and officers’ insurance coverage, which will increase our insurance cost. In the future, it may be more expensive or more difficult for us to obtain director and officer liability insurance, and we may be required to accept reduced coverage or incur substantially higher costs to obtain coverage. These factors could also make it more difficult for us to attract and retain qualified members of our board of directors, particularly to serve on our audit committee and compensation committee, and qualified executive officers.

The market price of our common stock may be volatile, which could result in substantial losses for investors purchasing shares in this offering.

Our quarterly results of operations are likely to fluctuate in the future as a publicly traded company. In addition, securities markets worldwide have experienced, and are likely to continue to experience, significant price and volume fluctuations. This market volatility, as well as general economic, market or political conditions, could

subject the market price of our shares of common stock to wide price fluctuations regardless of our operating performance, which could cause a decline in the value of your investment. You should also be aware that price volatility may be greater if the public float and trading volume of shares of our common stock is low. Some factors that may cause the market price of our common stock to fluctuate, in addition to the other risks mentioned in this section of the prospectus, include:

- our operating and financial performance and prospects;
- our announcements or our competitors' announcements regarding new products or services, enhancements, significant contracts, acquisitions or strategic investments;
- changes in earnings estimates or recommendations by securities analysts who cover our common stock;
- fluctuations in our quarterly financial results or, in the event we provide it from time to time, earnings guidance, or the quarterly financial results or earnings guidance of companies perceived by investors to be similar to us;
- changes in our capital structure, such as future issuances of securities, sales of large blocks of common stock by our stockholders or the incurrence of additional debt;
- departure of key personnel;
- reputational issues;
- changes in general economic and market conditions, including related to the COVID-19 pandemic;
- changes in industry conditions or perceptions or changes in the market outlook for the life sciences technology industry; and
- changes in applicable laws, rules or regulations or regulatory actions affecting us or our clients and other dynamics.

These and other factors may cause the market price for shares of our common stock to fluctuate substantially, which may limit or prevent investors from readily selling their shares of our common stock and may otherwise negatively affect the liquidity of our common stock. In addition, in the past, when the market price of a stock has been volatile, holders of that stock sometimes have instituted securities class action litigation against the company that issued the stock. Securities litigation against us, regardless of the merits or outcome, could result in substantial costs and divert the time and attention of our management from the business, which could significantly harm our business, results of operation, financial condition or reputation.

Securities analysts may not publish favorable research or reports about our business or may publish no information at all, which could cause our stock price or trading volume to decline.

The trading market for our common stock will be influenced by the research and reports that industry or securities analysts publish about us or our business. We do not currently have and may never obtain research coverage by industry or securities analysts. If no or few analysts commence coverage of us, the trading price of our common stock could decrease. Even if we do obtain analyst coverage, if one or more of the analysts covering our business downgrade their evaluations of our common stock, the price of our common stock could decline. If one or more of these analysts cease to cover our common stock, we could lose visibility in the market for our common stock, which in turn could cause the price of our common stock to decline.

Security breaches, loss of data and other disruptions could compromise sensitive information related to our business or prevent us from accessing critical information and expose us to liability, which could adversely affect our business and our reputation.

In the ordinary course of our business, we collect and store sensitive data, including personally identifiable information, intellectual property and proprietary business information owned or controlled by ourselves or our

employees, customers and other parties. We manage and maintain our applications and data utilizing a combination of on-site systems and cloud-based data centers. We utilize external security and infrastructure vendors to manage parts of our data centers. 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 use or disclosure, unauthorized access, inappropriate modification and the risk of our being unable to adequately monitor and audit and modify our controls over our critical information. This risk extends to the third party vendors and subcontractors we use to manage this sensitive data or otherwise process it on our behalf. 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 reasonable measures to protect sensitive data from unauthorized access, use or disclosure, no security measures can be perfect and our information technology and infrastructure may be vulnerable to attacks by hackers or viruses or breached due to employee error, malfeasance or other malicious or inadvertent disruptions. Any such breach or interruption could compromise our networks and the information stored there could be accessed by unauthorized parties, publicly disclosed, lost or stolen. Any such access, breach, or other loss of information could result in legal claims or proceedings, and liability under federal or state laws that protect the privacy of personal information, and regulatory penalties. Notice of breaches may be required to affected individuals or state, federal or foreign regulators, and for extensive breaches, notice may need to be made to the media or State Attorneys General. Such a notice could harm our reputation and our ability to compete.

We are currently subject to, and may in the future become subject to additional, U.S. federal and state laws and regulations imposing obligations on how we collect, store and process personal information. Our actual or perceived failure to comply with such obligations could harm our business. Ensuring compliance with such laws could also impair our efforts to maintain and expand our future customer base, and thereby decrease our revenue.

We are, and may increasingly become, subject to various laws and regulations, as well as contractual obligations, relating to data privacy and security in the jurisdictions in which we operate. The regulatory environment related to data privacy and security is increasingly rigorous, with new and constantly changing requirements applicable to our business, and enforcement practices are likely to remain uncertain for the foreseeable future. These laws and regulations may be interpreted and applied differently over time and from jurisdiction to jurisdiction, and it is possible that they will be interpreted and applied in ways that may have a material adverse effect on our business, financial condition, results of operations and prospects.

In the United States, various federal and state regulators, including governmental agencies like the Consumer Financial Protection Bureau and the Federal Trade Commission, have adopted, or are considering adopting, laws and regulations concerning personal information and data security. Certain state laws may be more stringent or broader in scope, or offer greater individual rights, with respect to personal information than federal, international or other state laws, and such laws may differ from each other, all of which may complicate compliance efforts. For example, the California Consumer Privacy Act (“CCPA”), which increases privacy rights for California residents and imposes obligations on companies that process their personal information, came into effect on January 1, 2020. Among other things, the CCPA requires covered companies to provide new disclosures to California consumers and provide such consumers new data protection and privacy rights, including the ability to opt-out of certain sales of personal information. The CCPA provides for civil penalties for violations, as well as a private right of action for certain data breaches that result in the loss of personal information. This private right of action may increase the likelihood of, and risks associated with, data breach litigation. In November 2020, California voters passed the California Privacy Rights Act (“CPRA”), which will become effective in most material respects beginning on January 1, 2023. The CPRA further expands the CCPA with additional data privacy compliance requirements and obligations and establishes a regulatory agency dedicated to enforcing the CCPA and CPRA. In addition, laws in all 50 U.S. states require businesses to provide notice to consumers whose personal information has been disclosed as a result of a data breach. State laws are changing rapidly and there is discussion in the U.S. Congress of a new comprehensive federal data privacy law to which we would become subject if it is enacted.

Internationally, laws, regulations and standards in many jurisdictions apply broadly to the collection, use, retention, security, disclosure, transfer and other processing of personal information. For example, the E.U. General

Data Protection Regulation ("GDPR"), which became effective in May 2018, greatly increased the European Commission's jurisdictional reach of its data privacy and security laws and added a broad array of requirements for handling personal data. EU member states are tasked under the GDPR to enact, and have enacted, certain implementing legislation that adds to and/or further interprets the GDPR requirements and potentially extends our obligations and potential liability for failing to meet such obligations. The GDPR, together with national legislation, regulations and guidelines of the EU member states governing the processing of personal data, impose strict obligations and restrictions on the ability to collect, use, retain, protect, disclose, transfer and otherwise process personal data. In particular, the GDPR includes requirements to establish a legal basis for processing, higher standards for obtaining consent from individuals to process their personal data, more robust disclosures to individuals, a strengthened individual data rights regime, requirements to implement safeguards to protect the security and confidentiality of personal data, data breach notification obligations to appropriate data protection authorities or individuals, limitations on retention and secondary use of information and additional obligations when entities contract with third-party processors to process personal data. The GDPR authorizes fines for certain violations of up to 4% of global annual revenue or €20 million, whichever is greater. Following the withdrawal of the United Kingdom from the European Union, data privacy and security laws that are substantially similar to the GDPR are in effect in the United Kingdom, which carry similar risks and authorize similar fines for certain violations.

All of these evolving compliance and operational requirements impose significant costs, such as costs related to organizational changes, implementing additional protection technologies, training employees and engaging consultants, which are likely to increase over time. In addition, such requirements may require us to modify our data processing practices and policies, distract management or divert resources from other initiatives and projects, all of which could have a material adverse effect on our business, financial condition, results of operations and prospects. Any failure or perceived failure by us to comply with any applicable federal, state or similar foreign laws and regulations relating to data privacy and security could result in damage to our reputation, as well as proceedings or litigation by governmental agencies or other third parties, including class action privacy litigation in certain jurisdictions, which would subject us to significant fines, sanctions, awards, penalties or judgments, all of which could have a material adverse effect on our business, financial condition, results of operations and prospects.

SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS

This prospectus contains forward-looking statements. Forward-looking statements are neither historical facts nor assurances of future performance. Instead, they are based on our current beliefs, expectations and assumptions regarding the future of our business, future plans and strategies and other future conditions. In some cases, you can identify forward-looking statements because they contain words such as "anticipate," "believe," "estimate," "expect," "intend," "may," "predict," "project," "target," "potential," "seek," "will," "would," "could," "should," "continue," "contemplate," "plan," and other words and terms of similar meaning.

Forward-looking statements are subject to known and unknown risks and uncertainties, many of which may be beyond our control. We caution you that forward-looking statements are not guarantees of future performance or outcomes and that actual performance and outcomes may differ materially from those made in or suggested by the forward-looking statements contained in this prospectus. In addition, even if our results of operations, financial condition and cash flows, and the development of the markets in which we operate, are consistent with the forward-looking statements contained in this prospectus, those results or developments may not be indicative of results or developments in subsequent periods. New factors emerge from time to time that may cause our business not to develop as we expect, and it is not possible for us to predict all of them. Factors that could cause actual results and outcomes to differ from those reflected in forward-looking statements include, among others, the following:

- estimates of our addressable market, market growth, future revenue, expenses, capital requirements and our needs for additional financing;
- the implementation of our business model and strategic plans for our products and technologies;
- competitive companies and technologies and our industry;
- our ability to manage and grow our business by expanding our sales to existing customers or introducing our products to new customers;
- our ability to develop and commercialize new products;
- our ability to establish and maintain intellectual property protection for our products or avoid or defend claims of infringement;
- the performance of third party suppliers;
- our ability to hire and retain key personnel and to manage our future growth effectively;
- our ability to obtain additional financing in future offerings;
- the volatility of the trading price of our common stock;
- our expectations regarding use of proceeds from this offering;
- the potential effects of government regulation;
- the impact of COVID-19 on our business; and
- our expectations about market trends.

We discuss many of these risks in greater detail under the section titled "Risk Factors." Given these uncertainties, you should not place undue reliance on these forward-looking statements.

You should read this prospectus and the documents that we reference in this prospectus and have filed as exhibits to the registration statement, of which this prospectus is a part, completely and with the understanding that our actual future results may be materially different from what we expect. We qualify all of the forward-looking statements in this prospectus by these cautionary statements. Except as required by law, we undertake no obligation to publicly update any forward-looking statements, whether as a result of new information, future events or otherwise.

USE OF PROCEEDS

We estimate that the net proceeds we will receive from the issuance and sale of the shares of common stock offered by us in this offering will be approximately $ million, assuming an initial public offering price of $ per share, which is the midpoint of the range set forth on the cover page of this prospectus, and after deducting the estimated underwriting discounts and commissions and estimated offering expenses payable by us.

A $1.00 increase or decrease in the assumed initial public offering price of our common stock of $ per share would increase or decrease, as applicable, the net proceeds to us from this offering by approximately $, assuming that the number of shares offered, as set forth on the cover page of this prospectus, remains the same and after deducting the estimated underwriting discounts and commissions and estimated offering expenses payable by us. An increase or decrease of 1,000,000 shares in the number of shares of common stock offered by us in this offering, as set forth on the cover page of this prospectus, would increase or decrease, as applicable, the net proceeds to us from this offering by approximately $, assuming no change in the assumed initial public offering price per share and after deducting the estimated underwriting discounts and commissions and estimated offering expenses payable by us.

We intend to use the net proceeds from this offering for general corporate purposes. The principal purposes of this offering are to create a public market for our common stock, obtain additional capital, facilitate future access to public equity markets, increase awareness of the Company in the market, facilitate the use of our common stock as a means of attracting and retaining key employees and provide liquidity to our current stockholders. We will have broad discretion over how to use the net proceeds from this offering, and our investors will be relying on the judgment of our management regarding the application of the net proceeds from this offering.

DIVIDEND POLICY

We do not currently anticipate declaring or paying regular cash dividends on our common stock in the near term. Any future declaration and payment of cash dividends or other distributions of capital will be at the discretion of our board of directors and will depend on our financial condition, earnings, cash needs, capital requirements (including requirements of our subsidiaries), contractual, legal, tax and regulatory restrictions, and any other factors that our board of directors deems relevant in making such a determination. Therefore, we cannot assure you that we will pay any cash dividends or other distributions to holders of our common stock, or as to the amount of any such cash dividends or other distributions.

CAPITALIZATION

The following table sets forth our cash and capitalization as of December 31, 2020:

- on an actual basis;
- on a pro forma basis, giving effect to (i) the Preferred Stock Conversion, (ii) the Series A-2 Warrant Exercise, (iii) the Series D Warrant Exercise and (iv) the filing and effectiveness of our amended and restated certificate of incorporation, which will be in effect at the closing of this offering; and
- on a pro forma as adjusted basis to give further effect to (i) the pro forma adjustments set out above and (ii) the issuance and sale by us of shares of common stock in this offering at an assumed initial public offering price of $ per share, which is the midpoint of the estimated price range set forth on the cover page of this prospectus, and our receipt of the estimated net proceeds from that sale after deducting the estimated underwriting discounts and commissions and estimated offering expenses payable by us.

The pro forma as adjusted information set forth in the table below is illustrative only and our cash and capitalization following the completion of this offering will adjust based on the actual initial public offering price, the number of common shares issued and sold in this offering and other terms of this offering determined when the initial public offering price is determined. You should read the following table in conjunction with the sections titled "Management's Discussion and Analysis of Financial Condition and Results of Operations," "Description of Capital Stock" and our financial statements and related notes included elsewhere in this prospectus.

	As of December 31, 2020		
(in thousands, except share and per share data)	**Actual**	**Pro Forma**	**Pro Forma As Adjusted[1]**
	(audited)	**(unaudited)**	**(unaudited)**
Cash	$ 106,641	$	$
Long term debt	22,137		
Warrant liability[2][3]	4,637		
Redeemable convertible preferred stock, $0.001 par value; 3,442,340 shares authorized and 3,211,652 shares issued and outstanding on an actual basis; no shares authorized and no shares issued and outstanding on a pro forma and pro forma as adjusted basis	143,460		
Stockholders' (deficit) equity:			
Common stock; $0.001 par value; 4,647,474 shares authorized and 266,738 shares issued and outstanding on an actual basis; shares authorized and shares issued and outstanding on a pro forma basis; shares authorized and shares issued and outstanding on a pro forma as adjusted basis	—		
Additional paid-in capital	1,153		
Accumulated deficit	(52,404)		
Total stockholders' (deficit) equity	(51,251)		
Total capitalization	$ 118,983	$	$

(1) Each $1.00 increase or decrease in the assumed initial public offering price of our common stock of $ per share, which is the midpoint of the estimated price range set forth on the cover page of this prospectus, would increase or decrease, as applicable, each of cash, additional paid-in capital, total stockholders' equity and total capitalization on a pro forma as adjusted basis by approximately $, assuming that the number of shares of common stock offered by us, as set forth on the cover page of this prospectus, remains the same and after deducting estimated underwriting discounts and commissions and estimated offering expenses payable by us. Similarly, each 1,000,000 share increase or decrease in the number of shares of common stock offered by us in this offering would increase or decrease, as applicable, each of cash, additional paid-in capital, total stockholders' equity and total capitalization on a pro forma as adjusted basis by approximately $,

assuming no change in the assumed initial public offering price per share of our common stock of $ per share, which is the midpoint of the estimated price range set forth on the cover page of this prospectus, and after deducting estimated underwriting discounts and commissions and estimated offering expenses payable by us.

(2) In September 2015, we granted to Connecticut Innovations, Incorporated the Series A-2 Preferred Stock Warrant to purchase up to 3,178 shares of our Series A-2 redeemable convertible preferred stock. The Series A-2 Preferred Stock Warrant was exercised on May 11, 2021, at an exercise price of $12.58608 per share for 3,178 shares of Series A-2 redeemable convertible preferred stock.

(3) In December 2020, we granted to Perceptive Credit Holdings III, LP the Series D Preferred Stock Warrant to purchase up to 97,504 shares of our Series D redeemable convertible preferred stock. The Series D Preferred Stock Warrant is exercisable at an exercise price equal to $76.92 per share until the tenth anniversary of the issue date. While the Series D Preferred Stock Warrant is not automatically converted or required to be exercised as a result of the completion of this offering, we expect the holder to exercise the Series D Preferred Stock Warrant prior to the completion of this offering and we assume the Series D Warrant Exercise in our presentation of the pro forma and the pro forma as adjusted information in the table above.

The pro forma and pro forma as adjusted columns in the table above are based on the number of shares of our common stock to be outstanding after this offering, which in turn is based on shares of common stock issued and outstanding as of , which gives effect to the Assumed Share Events set forth under the section titled “The Offering” and excludes:

- shares of our common stock issuable upon exercise of options to purchase shares of our common stock outstanding as of with a weighted-average exercise price of $ per share; and
- shares of our common stock reserved for future issuance under our 2014 Plan as of .

DILUTION

If you invest in our common stock in this offering, your ownership interest will be immediately diluted to the extent of the difference between the initial public offering price per share of our common stock in this offering and the pro forma as adjusted net tangible book value per share of our common stock immediately after this offering.

Our historical net tangible book value (deficit) as of was $, or $ per share of common stock. Our historical net tangible book value (deficit) represents our total tangible assets less our total liabilities, which is not included within our stockholders' equity. Historical net tangible book value (deficit) per share represents historical net tangible book value divided by the shares of common stock outstanding as of .

Our pro forma net tangible book value (deficit) as of was $, or $ per share of common stock. Pro forma net tangible book value represents the amount of our total tangible assets less total liabilities. Pro forma net tangible book value (deficit) per share represents our pro forma net tangible book value (deficit) divided by , the total number of shares of common stock outstanding as of , after giving effect to (i) the Preferred Stock Conversion, (ii) the Series A-2 Warrant Exercise, (iii) the Series D Warrant Exercise and (iv) the filing and effectiveness of our amended and restated certificate of incorporation, which will be in effect at the closing of this offering.

After giving further effect to the sale of shares of our common stock in this offering at the initial public offering price of $ per share, which is the midpoint of the estimated price range set forth on the cover page of this prospectus, less the underwriting discounts and commissions and estimated offering expenses payable by us, our pro forma as adjusted net tangible book value (deficit) as of would have been approximately $ million, or $ per share of common stock. This amount represents an immediate increase (decrease) in the pro forma as adjusted net tangible book value (deficit) of $ per share to the existing stockholders and immediate dilution of $ per share to investors purchasing shares of our common stock in this offering.

Dilution per share to new investors is calculated by subtracting pro forma as adjusted net tangible book value (deficit) per share of our common stock from the initial public offering price per share of our common stock paid by new investors. The following table illustrates this dilution on a per share basis:

Assumed initial public offering price per share	$
Historical net tangible book value (deficit) per share as of	
Increase (decrease) per share attributable to the pro forma adjustments described above	
Pro forma net tangible book value (deficit) per share as of	
Increase in pro forma net tangible book value (deficit) per share attributable to new investors purchasing shares of common stock in this offering	
Pro forma as adjusted net tangible book value (deficit) per share immediately after this offering	
Dilution in pro forma as adjusted net tangible book value (deficit) per share to new investors in this offering	$

The dilution information discussed above is illustrative only and will change based on the actual initial public offering price, the number of shares of common stock sold by us in this offering and other terms of this offering determined at pricing. Each $1.00 increase or decrease in the assumed initial public offering price of our common stock of $ per share, which is the midpoint of the estimated price range set forth on the cover page of this prospectus, would increase or decrease, as applicable, the pro forma as adjusted net tangible book value per share after this offering by approximately $ and the dilution per share to new investors by $, assuming that the number of shares of common stock offered by us, as set forth on the cover page of this prospectus, remains the same and after deducting estimated underwriting discounts and commissions and estimated offering expenses payable by us. Each increase of 1,000,000 shares in the number of shares of common stock offered by us would increase our pro forma as adjusted net tangible book value per share after this offering by $ and decrease the dilution per share to new investors by $, assuming no change in the assumed initial public offering price per share and after deducting estimated underwriting discounts and commissions and estimated offering expenses payable by us. Each decrease of 1,000,000 shares in the number of shares of common stock offered by us would

decrease our pro forma as adjusted net tangible book value per share after this offering by $ and increase the dilution per share to new investors by $, assuming no change in the assumed initial public offering price per share and after deducting estimated underwriting discounts and commissions and estimated offering expenses payable by us.

If the underwriters exercise in full their option to purchase additional shares of common stock from us in this offering, our pro forma as adjusted net tangible book value (deficit) per share after the offering would be $, and the dilution per share to new investors would be $, in each case assuming an initial public offering price of $ per share, which is the midpoint of the estimated price range set forth on the cover page of this prospectus, and after deducting the estimated underwriting discounts and commissions and estimated offering expenses payable by us.

The following table summarizes, as of , on the pro forma as adjusted basis described above, the total number of shares of our common stock purchased from us, the total consideration paid to us, and the average price per share of our common stock paid by purchasers of such shares and by new investors purchasing shares of our common stock in this offering:

	Shares Purchased		Total Consideration		Average Price Per Share
	Number	Percent	Amount	Percent	
Existing stockholders			$		$
New investors					
Total		100 %	$	100 %	$

The number of shares of our common stock that will be outstanding after this offering is based on shares of common stock issued and outstanding as of , which gives effect to the Assumed Share Events set forth under the section titled “The Offering” and excludes:

- shares of our common stock issuable upon exercise of options to purchase shares of our common stock outstanding as of with a weighted-average exercise price of $ per share; and
- shares of our common stock reserved for future issuance under our 2014 Plan as of .

MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

The following discussion and analysis of our financial condition and results of operations should be read together with our consolidated financial statements and related notes and other financial information appearing elsewhere in this prospectus. Some of the information contained in this discussion and analysis or set forth elsewhere in this prospectus, including information with respect to our plans and strategy for our business and related financing, includes forward-looking statements that involve risks and uncertainties. As a result of many factors, including those factors set forth in the "Risk Factors" section of this prospectus, our actual results could differ materially from the results described in or implied by the forward-looking statements contained in the following discussion and analysis.

Overview

We are a life sciences company building solutions to accelerate the development of curative medicines and personalized therapeutics. Our award-winning single-cell proteomics systems reveal unique biological activity in small subsets of cells, allowing researchers to connect more directly to in vivo biology and develop more precise and personalized therapies.

We are enabling deeper access to *in vivo* biology and driving durable and potentially transformational research on disease in a new era of advanced medicine. We believe our platform is the first to employ both proteomics and single cell biology in an effort to fully characterize and link cellular function to patient outcomes by revealing treatment response and disease progression. Our single cell proteomics platform, which includes instruments, chip consumables and software, provides an end-to-end solution to reveal a more complete view of protein function at an individual cellular level. Our platform has been rapidly adopted by the top 15 global biopharmaceutical companies by revenue and nearly half of the comprehensive cancer centers in the United States to help develop more durable therapeutics, overcome therapeutic resistance, and predict patient responses for advanced immunotherapies, cell therapies, gene therapies, vaccines, and regenerative medicines. Our initial focus has been on developing applications of our platform for cancer immunology and cell and gene therapy. We are now expanding our capabilities to include applications for infectious diseases, inflammatory conditions, and neurological diseases.

We currently market and sell our technology with an in-house commercial team in the United States and Europe. We are also utilizing our distribution network to market and sell across multiple countries, including Australia, China, Italy, Israel, Japan, New Zealand, Portugal, Singapore, South Korea, Spain, and Switzerland. We intend to further expand our international presence by growing our distribution networks in Brazil, Canada, India, Mexico, Russia and beyond.

We manufacture our instruments and chip consumables in our manufacturing facilities in Branford, Connecticut and do not outsource any of our production manufacturing to third party contract manufacturers. Certain of our suppliers of components and materials are single or sole source suppliers.

Since our inception in March 2013, we have devoted substantially all of our resources to organizing and staffing our company, business planning, raising capital, conducting research and development activities, and filing patent applications. To date, we have financed our operations primarily through the private placement of our securities, grant income and the incurrence of indebtedness and, to a lesser extent, revenue derived from sales of our instruments and chip consumables. As of December 31, 2020, our principal source of liquidity was cash, which totaled $106.6 million.

We completed our first sale of our systems in June 2018 and have experienced significant revenue growth in recent periods. Revenue increased to $10.4 million for the year ended December 31, 2020 as compared to $7.5 million for the year ended December 31, 2019. Nevertheless, we have incurred recurring losses since inception. Our net losses were $13.6 million and $23.3 million for the years ended December 31, 2019 and 2020, respectively. As of December 31, 2020, we had an accumulated deficit of $52.4 million. We expect to continue to incur significant expenses and increasing operating losses for the foreseeable future. We expect our expenses will increase

substantially in connection with ongoing development and business expansion activities, particularly as we continue to:

- expand our research and development activities;
- obtain, maintain and expand and protect our intellectual property portfolio;
- market and sell new and existing products and services; and
- attract, hire and maintain qualified personnel to support our expanding business efforts.

Furthermore, following the completion of this offering, we expect to incur additional costs associated with operating as a public company, including significant legal, accounting, compliance, investor relations and other expenses that we did not incur as a private company.

As a result of these anticipated expenditures, we will need substantial additional financing to support our continuing operations and pursue our growth strategy. Until such time as we can generate positive cash flows from operations, if ever, we expect to finance our operations through a combination of equity offerings, debt financings and, to a lesser extent, grant income. We may be unable to raise additional funds when needed on favorable terms or at all. Our inability to raise capital as and when needed would have a negative impact on our financial condition and our ability to pursue our business strategy. We will need to generate significant revenue to achieve profitability, and we may never do so.

As of December 31, 2020, we had cash of $106.6 million. We believe that the anticipated net proceeds from this offering, together with our existing cash, will enable us to fund our operating expenses and capital expenditure requirements into the second half of 2024. Our future viability beyond that point is dependent on our ability to raise additional capital to finance our operations. We have based this estimate on assumptions that may prove to be wrong, and we could exhaust our available capital resources sooner than we expect. See "—Liquidity and Capital Resources."

Recent Developments

On May 12, 2021, the Company entered into the Patent Purchase Agreement with the Sellers to purchase a collection of patents for an aggregate purchase price of $20.0 million. The Company expects to fund the purchase with cash on hand. In connection with entering into the Patent Purchase Agreement, the Company also entered into an Assumption Agreement with the Sellers to assume the Sellers' rights and obligations under a covenant not to sue with a separate third party related to certain patents purchased pursuant to the Patent Purchase Agreement. In addition, in connection with entering into the Patent Purchase Agreement, the Company has agreed to enter into a Supply Agreement with certain of the Sellers pursuant to which certain of the Sellers will agree to supply certain reagents to the Company.

Key Factors Affecting Our Performance

We believe that our financial performance has been, and in the foreseeable future will continue to be, primarily driven by the following factors. While each of these factors presents significant opportunities for our business, they also pose important challenges that we must successfully address in order to pursue our growth strategy and improve our results of operations. Our ability to successfully address the factors below is subject to various risks and uncertainties, including those factors set forth in the "Risk Factors" section of this prospectus.

New Customer Adoption of Our Platform

Our financial performance has been, and in the foreseeable future will continue to be, driven by our ability to increase the adoption of our platform and the installed base of our instruments. We plan to drive new customer adoption through a direct sales and marketing organization in the United States and parts of Europe and third party distributors in Europe, the Middle East and Asia-Pacific. We currently market and sell our technology with an in-house commercial team of approximately 120 team members and also utilize our distribution network to market and sell across multiple countries.

Recurring Revenues from Sales of our Chip Consumables

Our IsoCode and CodePlex chip consumables represent a source of recurring revenue from customers using our platform across a wide range of applications. Our instruments and consumables are designed to work together exclusively. As we expand our installed base of instruments, we expect consumable revenues to increase on an absolute basis and become an increasingly important contributor to our overall revenues.

Adoption of Our Platform Across Existing Customers' Organizations

There is an opportunity to grow our installed base and expand the number of instruments within organizations that are already utilizing our platform to advance their research and therapeutic development by their purchasing of additional instruments to support multiple locations or to increase capacity.

Adoption of Our Platform for New Applications

We founded our company to help solve critical challenges to accelerating advanced medicines and since our inception, we have developed multiple applications spanning cancer immunology, cell and gene therapy, infectious diseases, inflammatory conditions, and neurological diseases. As we continue to deploy our platform, we intend to concurrently expand the breadth of applications for our technologies to encourage increased use of our platform across our addressable markets. We expect our investments in these efforts to increase as we develop and market new applications, including a diagnostic.

Components of Our Results of Operations

Revenue

Revenue consists of sales of instruments and consumables in addition to service revenue. Our total revenue for the years ended December 31, 2019 and 2020 was $7.5 million and $10.4 million, respectively. We expect that our revenue will be less than our expenses for the foreseeable future and that we will experience increasing losses as we continue to expand our business.

Cost of Product and Service Revenue

The Company's cost of product revenue primarily consists of manufacturing related costs incurred in the production process, including personnel and related costs, costs of components and materials, labor and overhead, packaging and delivery costs and allocated costs, facilities and information technology. Cost of service revenue consists primarily of personnel and related costs of service and warranty costs to support our customers.

Research and Development Expenses

Research and development expenses include:

- costs to obtain licenses to intellectual property and related future payments should certain success, development and regulatory milestones be achieved;
- employee-related expenses, including salaries, benefits and stock-based compensation expense;
- costs of purchasing lab supplies and non-capital equipment used in our research and development activities;
- consulting and professional fees related to research and development activities; and
- facility costs, depreciation, and other expenses, which include direct and allocated expenses for rent and maintenance of facilities, insurance, and other supplies.

We expense research and development costs as incurred. Research and development activities are central to our business model. We expect research and development costs to increase significantly for the foreseeable future as our current development programs progress and new programs are added.

Because of the numerous risks and uncertainties associated with product development, we cannot determine with certainty the duration and completion costs of the current or future research and development efforts.

General and Administrative Expenses

General and administrative expenses consist primarily of employee-related expenses, including salaries, benefits and stock-based compensation, for personnel in executive, finance, business development, facility and administrative functions. Other significant costs include facility costs not otherwise included in research and development expenses, legal fees relating to patent and corporate matters and fees for accounting, tax and consulting services.

We anticipate that our general and administrative expenses will increase in the future to support continued research and development activities and increased costs of operating as a public company. These increases will likely include increased costs related to the hiring of additional personnel and fees to outside consultants, lawyers and accountants, among other expenses. Additionally, we anticipate increased costs associated with being a public company, including services associated with maintaining compliance with exchange listing and SEC requirements, director and officer insurance costs and investor and public relations costs.

Sales and Marketing Expenses

Sales and marketing expenses consist primarily of compensation related expenses, including salaries, bonuses, benefits, non-cash stock-based compensation, for sales and marketing personnel, advertising and promotion expenses, consulting and subcontractor fees, sales commissions, recruiting fees, and various other selling expenses. We anticipate that our sales and marketing expenses will increase in the future as we pursue our growth mission, including the hiring of consultants to help us identify and expand into new markets, including worldwide markets.

Grant Income

We are engaged in various Small Business Innovation Research (“SBIR”) grants with the federal government to help fund the costs of certain research and development activities. We believe that we have complied with all contractual requirements of the SBIR grants through the date of the financial statements.

Research and Development State Tax Credits

Research and development (“R&D”) tax credits exchanged for cash pursuant to the Connecticut R&D Tax Credit Exchange Program, which permits qualified small businesses engaged in R&D activities within Connecticut to exchange their unused R&D tax credits for a cash amount equal to 65% of the value of exchanged credits, are recorded as a receivable and other income in the year the R&D tax credits relate to, as it is reasonably assured that the R&D tax credits will be received, based upon our history of filing for and receiving the tax credits. R&D tax credits receivable where cash is expected to be received by us more than one year after the balance sheet date are classified as noncurrent in the consolidated balance sheets.

Fair Value Adjustment for Warrants

Warrants are freestanding financial instruments that qualify as liabilities required to be recorded at their estimated fair value at the inception date and remeasured at each reported balance sheet date thereafter until settlement, with gains and losses arising from changes in fair value recognized in the statement of operations during each period.

Results of Operations

The following table summarizes our results of operations for the years ended December 31, 2019 and 2020, together with the dollar change in those items:

	Year Ended December 31,		Period to period change
	2019	2020	
	(in thousands)		
Revenue			
Product revenue	$ 5,328	$ 9,318	$ 3,990
Service revenue	2,177	1,069	(1,108)
Total revenue	7,505	10,387	2,882
Cost of product revenue	2,803	4,866	2,063
Cost of service revenue	455	108	(347)
Gross profit	4,247	5,413	1,166
Operating expenses:			
Research and development expenses	10,134	11,157	1,023
General and administrative expenses	4,806	8,023	3,217
Sales and marketing expenses	7,559	13,511	5,952
Total operating expenses	22,499	32,691	10,192
Loss from operations	(18,252)	(27,278)	(9,026)
Other income and (expense):			
Grant income	4,226	4,117	(109)
Research and development tax credits	411	—	(411)
Change in fair value of warrants	(10)	(85)	(75)
Interest income	—	3	3
Interest expense	(1)	(21)	(20)
Net loss	$ (13,626)	$ (23,264)	$ (9,638)

Revenue

Total revenue increased $2.9 million in 2020 compared to the prior year. This consisted of an increase of $2.6 million for instruments and $1.4 million for consumables, partially offset by a $1.1 million decrease for service revenue.

The increase in instruments revenue in 2020 was driven by an increase in unit sales generated from a larger commercial team, primarily hired in 2020 and new executive leadership with the addition of our Chief Commercial Officer in the second quarter of 2020. The increase in consumable revenue in 2020 was driven by an increase in the number of units at customer locations. Service revenue decreased in 2020 primarily as we advanced existing projects at a faster rate than we added new ones to our pipeline.

Gross Profit

Gross profit as a percentage of total revenues was 57% in 2019 compared to 52% in 2020. The decrease was driven primarily by a shift in our revenue mix and decreased service revenue, which generate higher margins. Production costs increased as we expanded capacity to plan for future growth. In addition, we experienced inefficiencies attributable to the launch of new products as well as the COVID-19 pandemic.

Research and Development Expenses

Research and development expenses increased by $1.0 million, or 10%, for the year ended December 31 2020 compared to the prior year, primarily due to increases in compensation related expenses of $1.2 million, a $0.8

million increase in prototyping, mostly related to a new product released in March 2021, an increase of $0.5 million in materials used, and an increase of $0.1 million of depreciation and amortization. These increases were partially offset by a $1.6 million decrease in professional and sub-contractor fees. Our increased headcount in 2020 partially reduced the need for outside labor. In addition, the cost of outside labor was considerably higher in 2019 as a result of project timing.

General and Administrative Expenses

General and administrative expenses increased by $3.2 million, or 67%, for the year ended December 31, 2020 compared to the prior year, primarily due to increases in compensation related expenses of $2.8 million, including increased salary, bonus, benefits, and non-cash stock-based compensation, for additional personnel due to an increase in headcount from 24 at December 31, 2019 to 44 at December 31, 2020, including several executives, to support increased activities, an increase of $0.2 million of professional fees, including legal, consulting, accounting, audit and recruiting expenses, an increase in state sales and use tax of $0.1 million, and an increase in depreciation, amortization, office and facility expenses of $0.1 million. A large portion of our headcount increase at the executive level occurred in the second half of 2019.

Sales and Marketing Expenses

Sales and marketing expenses increased by $6.0 million, or 79%, for the year ended December 31, 2020, compared to the prior year, primarily due to increases in compensation related expenses of $2.8 million, including increased salary, bonus, benefits, non-cash stock-based compensation, for additional personnel due to an increase in headcount from 30 at December 31, 2019 to 94 at December 31, 2020 to support increased activities, advertising and promotion expenses of $1.5 million, consulting and subcontractor fees of $1.0 million, sales commissions of $0.6 million, recruiting fees of $0.5 million, and various other selling expenses of $0.4 million, partially offset by a decrease in travel and entertainment of $0.8 million resulting from the COVID-19 pandemic. Overall, the increase was driven by the increase in headcount to support our growth mission and the hiring of consultants to help us identify and expand into new markets, including worldwide markets. The majority of the headcount increase for sales and marketing occurred in the fourth quarter of 2020.

Research and Development Tax Credits

We recognized $0.4 million of research and development tax credits in 2019 under the Connecticut R&D Tax Credit Exchange Program. The credit is incremental in nature and focuses on increasing research activities or costs. Given the small increase in overall R&D spend in 2020 we do not anticipate there being a significant available benefit in 2020. Therefore, we recognized no income related to research and development tax credits in 2020.

Liquidity and Capital Resources

At December 31, 2020, we had $106.6 million in cash. Cash as of December 31, 2020 increased by $79.3 million compared to the end of the year prior, primarily due to the factors described under the heading “—Cash Flows” below. Our primary source of liquidity, other than cash on hand, has been cash flows from issuances of preferred stock, debt financings and grant income.

Cash Flows

The following table provides information regarding our cash flows for the years ended December 31, 2019 and 2020:

	Year Ended December 31,	
	2019	2020
	(in thousands)	
Net cash provided by (used in):		
Operating activities	$ (14,958)	$ (22,434)
Investing activities	(2,178)	(2,295)
Financing activities	22,481	103,999
Net increase in cash	$ 5,345	$ 79,270

Operating Activities

Net cash used by operating activities in 2019 primarily consisted of net loss of $(13.6) million, partially offset by net non-cash adjustments of $0.9 million, plus net changes in operating assets and liabilities of $(2.2) million. The primary non-cash adjustments to net income included share-based compensation of $0.1 million, depreciation and amortization expenses of $0.5 million, and provision for warranty costs of $0.1 million. Cash flow impact from changes in net operating assets and liabilities were primarily driven by increases in accounts receivable, inventories and other assets, partially offset by increases in accounts payable and accrued liabilities, and a decrease in grants receivable.

Net cash used by operating activities in 2020 primarily consisted of net loss of $(23.3) million, partially offset by net non-cash adjustments of $1.6 million, plus net changes in operating assets and liabilities of $(0.7) million. The primary non-cash adjustments to net income included share-based compensation of $0.5 million, depreciation and amortization expenses of $0.9 million, change in fair value of warrants of $0.1 million, and provision for warranty costs of $0.1 million. Cash flow impact from changes in net operating assets and liabilities were primarily driven by an increase in inventories and prepaid expenses and other current assets and partially offset by increases in accounts payable and accrued liabilities.

Investing Activities

Net cash used in investing activities totaled $2.2 million in 2019. We purchased $1.8 million of property and equipment. We paid $0.3 million related to patent costs that were capitalized. We also purchased licenses for $0.1 million.

Net cash used in investing activities totaled $2.3 million in 2020. We purchased $1.5 million of property and equipment. We paid $0.3 million related to patent costs that were capitalized. We also purchased licenses for $0.5 million.

Financing Activities

Net cash provided by financing activities was $22.5 million in 2019. We raised cash through the issuance of Series C and Series C-2 redeemable convertible preferred stock, with net proceeds of $22.5 million.

Net cash provided by financing activities was $104.0 million in 2020. We raised cash through the issuance of Series C-2 and Series D redeemable convertible preferred stock, with net proceeds of $79.9 million. In addition, we received $24.1 million in net proceeds under the Credit Agreement.

Funding Requirements

We expect our expenses to increase in connection with our ongoing activities, particularly as we continue our research and development efforts and expand our business efforts. Furthermore, following the completion of this

offering, we expect to incur additional costs as a result of being a public company. Accordingly, we will need to obtain additional funding in connection with our continuing operations. If we are unable to raise capital when needed or on attractive terms, we would be forced to delay, reduce or eliminate our research and development programs or future commercialization efforts.

We believe that the anticipated net proceeds from this offering, together with our existing cash as of December 31, 2020, will enable us to fund our operating expenses and capital expenditure requirements into the second half of 2024.

We have based our projections of operating capital requirements on assumptions that may prove to be incorrect and we may use all of our available capital resources sooner than we expect. Because of the numerous risks and uncertainties associated with our research and development efforts, we are unable to estimate the exact amount of our operating capital requirements. Our future capital requirements will depend on many factors, including:

- future research and development efforts;
- the need to service and refinance our indebtedness;
- our ability to enter into and terms and timing of any collaborations, licensing agreements or other arrangements;
- the costs of sales, marketing, distribution and manufacturing efforts;
- out headcount growth and associated costs as we expand our business;
- the costs of preparing, filing and prosecuting patent applications, maintaining and protecting our intellectual property rights and defending against intellectual property related claims; and
- the costs of operating as a public company

Until such time, if ever, as we can generate positive cash flows from operations, we expect to finance our cash needs through a combination of equity offerings, debt financings, and, to a lesser extent, grants. To the extent that we raise additional capital through the sale of equity or convertible debt securities, your ownership interest will be diluted, and the terms of those securities may include liquidation or other preferences that adversely affect your rights as a holder of common stock. Debt financing, if available, may involve agreements that include covenants limiting or restricting our ability to take specific actions, such as incurring additional debt, making capital expenditures or declaring dividends.

If we raise funds through additional strategic alliances or licensing arrangements with third parties, we may have to relinquish valuable rights to our technologies or future revenue streams or to grant licenses on terms that may not be favorable to us. If we are unable to raise additional funds through equity offerings, debt financings or grants when needed, we may be required to delay, limit, or reduce our expansion efforts.

Contractual Obligations and Commitments

Contractual obligations represent future cash commitments and liabilities under agreements with third parties and exclude orders for goods and services entered into in the normal course of business that are not enforceable or legally binding.

On December 30, 2020, we entered into the Credit Agreement, which provides for senior secured financing of up to $50.0 million, consisting of a $25.0 million Tranche A term loan and a $25.0 million Tranche B term loan. $25.0 million of the Tranche A term loan was drawn at the initial closing of the Credit Agreement on December 30, 2021. Our ability to draw the $25.0 million Tranche B term loan remains available through March 31, 2022 subject to several conditions, including achieving total revenue of at least $20.0 million for the twelve month period then most recently ended. Borrowings under the Credit Agreement bears interest at a rate per annum equal to the one-month LIBOR rate (with a minimum LIBOR rate for such purposes of 1.75%) plus a margin of 9.50% (11.25% at December 31, 2020). Monthly payments of interest only are due over the term of the Credit Agreement with no

scheduled loan amortization. Unless accelerated prior to such date, all amounts outstanding under the Credit Agreement are due to be repaid on December 30, 2025.

We have multiple operating lease commitments for office and manufacturing space and equipment, which expire through 2026. The future rental payments required to be made by us under such operating leases are approximately $1,105,000 in 2021, $1,013,000 in 2022, $940,000 in 2023, $871,000 in 2024, $716,000 in 2025 and $292,000 thereafter.

Critical Accounting Policies and Significant Judgments and Estimates

The preparation of financial statements in accordance with U.S. generally accepted accounting principles requires management to make estimates and assumptions that affect the amounts reported in our consolidated financial statements and accompanying notes. Management bases its estimates on historical experience, market and other conditions, and various other assumptions it believes to be reasonable. Although these estimates are based on management's best knowledge of current events and actions that may impact us in the future, the estimation process is, by its nature, uncertain given that estimates depend on events over which we may not have control. Though the impact of the COVID-19 pandemic to our business and operating results presents additional uncertainty, we continue to use the best information available to inform our critical accounting estimates. If market and other conditions change from those that we anticipate, our consolidated financial statements may be materially affected. In addition, if our assumptions change, we may need to revise our estimates, or take other corrective actions, either of which may also have a material effect on our consolidated financial statements.

While our significant accounting policies are described in more detail in the notes to our financial statements appearing elsewhere in this prospectus, we believe that the following critical accounting policies and estimates have a higher degree of inherent uncertainty and require our most significant judgments.

Revenue Recognition

Our revenue is generated primarily from the sale of products and services. Product revenue primarily consists of sales of instruments and chip consumables. Service revenue primarily consists of revenue generated from measuring immune responses using the Company's technology.

The Company recognizes revenue when control of products and services is transferred to customers in an amount that reflects the consideration the Company expects to receive from the customers in exchange for those products and services. This process involves identifying the contract with a customer, determining the performance obligations in the contract, determining the contract price, allocating the contract prices to distinct performance obligations in the contract, and recognizing revenue when the performance obligations have been satisfied. Revenue recognition for contracts with multiple deliverables is based on the separate satisfaction of each distinct performance obligation within the contract. A performance obligation is considered distinct from other obligations in a contract when it provides a benefit to the customer either on its own or together with other resources that are readily available to the customer and is separately identified in the contract. The Company considers a performance obligation satisfied once the Company has transferred control of a good or service to the customer, meaning the customer has the ability to use and obtain the benefit of the good or service. The contract price is allocated to each performance obligation in proportion to its standalone selling price. If the product or service has no history of sales or if the sales volume is not sufficient, the Company relies upon prices set by management, adjusted for applicable discounts.

The Company records revenue from product sales when performance obligations under the terms of a contract with customers are satisfied. Generally, this occurs with the transfer of control of the goods to customers at the time of shipment. The Company also generates service revenues by measuring immune responses using the Company's technology. The Company recognizes service revenue when performance obligations under the terms of a contract with customers are satisfied, which is generally at the time the analysis data is made available to the customer or agreed-upon milestones are reached. The Company makes judgments as to its ability to collect outstanding receivables and provides allowances when collection becomes doubtful.

Revenue is recorded net of discounts and sales taxes collected on behalf of governmental authorities. Employee sales commissions are recorded as sales and marketing expenses when incurred as the amortization period for such costs, if capitalized, would have been one year or less.

Share-Based Compensation

Our determination of the fair value of stock options with time-based vesting on the date of grant utilizes the Black-Scholes option pricing model, and is impacted by our common stock price as well as other variables including, but not limited to, expected term that options will remain outstanding, expected common stock price volatility over the term of the option awards, risk-free interest rates and expected dividends.

The fair value of a stock-based award is recognized over the period during which an optionee is required to provide services in exchange for the option award, known as the requisite service period (usually the vesting period) on a straight-line basis. Stock-based compensation expense is recognized based on the fair value determined on the date of grant and is reduced for forfeitures as they occur. Estimating the fair value of equity-settled awards as of the grant date using valuation models, such as the Black-Scholes option pricing model, is affected by assumptions regarding a number of complex variables. Changes in the assumptions can materially affect the fair value and ultimately how much stock-based compensation expense is recognized. These inputs are subjective and generally require significant analysis and judgment to develop.

As there has been no public market for our common stock to date, the estimated fair value of our common stock has been determined by our board of directors as of the date of each option grant, with input from management, considering our most recently available third-party valuations of common stock, and our board of directors' assessment of additional objective and subjective factors that it believed were relevant and which may have changed from the date of the most recent valuation through the date of the grant. These third-party valuations were performed in accordance with the guidance outlined in the *American Institute of Certified Public Accountants' Accounting and Valuation Guide, Valuation of Privately-Held-Company Equity Securities Issued as Compensation*. Our common stock valuations were prepared using an option pricing method ("OPM"), which used market approaches to estimate our enterprise value. The OPM treats common stock and preferred stock as call options on the total equity value of a company, with exercise prices based on the value thresholds at which the allocation among the various holders of a company's securities changes. Under this method, the common stock has value only if the funds available for distribution to stockholders exceeded the value of the preferred stock liquidation preferences at the time of the liquidity event, such as a strategic sale or a merger. A discount for lack of marketability of the common stock is then applied to arrive at an indication of value for the common stock. In addition to considering the results of these third-party valuations, our board of directors considered both objective and subjective factors, including:

- the prices at which we sold our redeemable convertible preferred stock and the superior rights and preferences of the redeemable convertible preferred stock relative to our common stock at the time of each grant;
- the progress of our research and development;
- our stage of development and our business strategy;
- external market conditions affecting the biotechnology industry, and trends within the biotechnology industry;
- our financial position, including cash on hand, and our historical and forecasted performance and operating results;
- the lack of an active public market for our common stock and our redeemable convertible preferred stock; and
- the likelihood of achieving a liquidity event, such as an initial public offering or a sale of our company in light of prevailing market conditions.

The following table presents the grant dates of shares subject to awards from January 1, 2019 through December 31, 2020, along with the corresponding exercise price for each option grant and our estimate of the fair value per share of our common stock on each grant date, which we utilized to calculate stock-based compensation expense:

Date of grant	Number of shares subject to award	Exercise price	Fair value of common stock at grant date	Per share estimated fair value of award [1]
March 13, 2019	6,300	$ 7.70	$ 7.70 [2]	$ 4.01
June 12, 2019	8,100	7.70	7.70 [2]	4.01
December 4, 2019	30,150	8.22	8.22 [3]	4.28
March 10, 2020	8,000	8.22	8.22 [3]	4.07
April 6, 2020	600	8.22	8.22 [3]	4.07
April 15, 2020	85,000	8.22	8.22 [3]	4.07
June 10, 2020	14,150	8.22	12.00 [4]	7.08
September 2, 2020	8,200	8.22	12.00 [4]	7.08

(1) The per share estimated fair value of award reflects the fair value of options estimated at the date of grant using the Black-Scholes option pricing model.
(2) The fair value of common stock used for financial reporting purposes for the March 13, 2019 and June 12, 2019 options were determined based on a fair value assessment as of December 1, 2018.
(3) The fair value of common stock used for financial reporting purposes for the December 4, 2019, March 10, 2020, April 6, 2020 and April 15, 2020 options were determined based on a fair value assessment as of December 1, 2019.
(4) The fair value of common stock used for financial reporting purposes for the June 10, 2020 and September 2, 2020 options were determined based on a fair value assessment as of December 1, 2020.

Expected Term—We have opted to use the “simplified method” for estimating the expected term of options, whereby the expected term equals the arithmetic average of the vesting term and the original contractual term of the option (10 years).

Expected Volatility—Due to our limited operating history and a lack of company specific historical and implied volatility data, we have based our estimate of expected volatility on the historical volatility of a group of similar companies that are publicly traded. The historical volatility data was computed using the daily closing prices for the selected companies’ shares during the equivalent period of the calculated expected term of the stock-based awards.

Risk-Free Interest Rate—The risk-free rate assumption is based on the U.S. Treasury instruments with maturities similar to the expected term of our stock options.

Expected Dividend—We have not issued any dividends in our history and do not expect to issue dividends over the life of the options and therefore have estimated the dividend yield to be zero.

The assumptions underlying these valuations represented management’s best estimate, which involved inherent uncertainties and the application of management’s judgment. As a result, if we had used significantly different assumptions or estimates, the fair value of our common stock and our stock-based compensation expense could have been materially different. We will continue to use judgment in evaluating the expected volatility, expected terms and interest rates utilized for our stock-based compensation expense calculations on a prospective basis.

Estimates of the fair value of common stock will not be necessary to determine the fair value of new awards once the underlying shares begin trading publicly.

Valuation of warrants

We have issued warrants exercisable into Series A-2 redeemable convertible preferred stock and Series D redeemable convertible preferred stock in connection with debt issuances. These warrants are classified as liabilities on our consolidated balance sheets as we determined that they meet the definition of a freestanding financial

instrument since they are legally detachable and also determined that such instruments represent forward sale contracts on redeemable shares and, accordingly, the instruments should be accounted for as a liability separate from the redeemable convertible preferred stock. They are reported at fair value at inception with an allocation of the proceeds from the debt issued. We remeasure these liabilities to fair value at each reporting date, and immediately prior to exercise or settlement, and recognize changes in the fair value of the liabilities in our consolidated statements of operations recorded as "change in fair value of warrants." The Series A-2 Preferred Stock Warrant was exercised on May 11, 2021, at an exercise price of $12.58608 per share for 3,178 shares of Series A-2 redeemable convertible preferred stock.

The fair value of the liabilities was determined using a Black-Scholes option pricing model, which considered inputs including, but not limited to, exercise price, estimated fair value of the applicable redeemable convertible preferred stock, volatility, expected term, and risk-free interest rate.

Recent Accounting Pronouncements

Refer to Note 2, "Summary of Significant Accounting Policies," in the accompanying notes to the consolidated financial statements for a discussion of recent accounting pronouncements.

Qualitative and Quantitative Disclosures about Market Risk

We are exposed to market risk related to changes in interest rates. As of December 31, 2020, we had cash of $106.6 million. Our primary exposure to market risk is interest rate sensitivity, which is affected by changes in the general level of interest rates. As of December 31, 2020, our cash is held primarily in savings and checking accounts. Because of the short-term nature of the instruments in our portfolio, an immediate 10% change in the interest rate would not have a material impact on the fair market value of our investment portfolio or on our financial position or results of operations.

The JOBS Act

The JOBS Act permits an emerging growth company such as us to take advantage of an extended transition period to comply with new or revised accounting standards applicable to public companies until those standards would otherwise apply to private companies. We have elected to avail ourselves of this exemption and, therefore, we will not be subject to new or revised accounting standards at the same time that they become applicable to other public companies that are not emerging growth companies until such time that we either (i) irrevocably elect to "opt out" of such extended transition period or (ii) no longer qualify as an emerging growth company. See "Prospectus Summary—Implications of Being an Emerging Growth Company."

We are also a smaller reporting company meaning that the market value of our stock held by non-affiliates plus the proposed aggregate amount of gross proceeds to us as a result of this offering is less than $700.0 million and our annual revenue was less than $100.0 million during the most recently completed fiscal year. We may continue to be a smaller reporting company after this offering if either (i) the market value of our stock held by non-affiliates is less than $250.0 million or (ii) our annual revenue was less than $100.0 million during the most recently completed fiscal year and the market value of our stock held by non-affiliates is less than $700.0 million. To the extent we continue to qualify as a smaller reporting company after we cease to qualify as an emerging growth company, we will continue to be permitted to make certain reduced disclosures in our periodic reports and other documents that we file with the SEC. Specifically, as a smaller reporting company we may choose to present only the two most recent fiscal years of audited financial statements in our Annual Report on Form 10-K and, similar to emerging growth companies, smaller reporting companies have reduced disclosure obligations regarding executive compensation.

BUSINESS

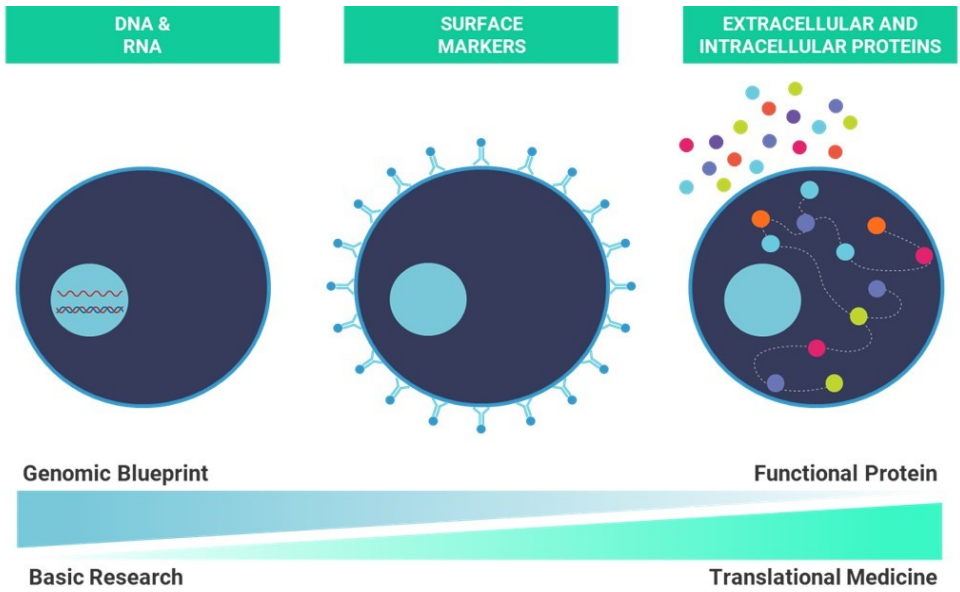
Overview

We are enabling deeper access to *in vivo* biology and driving durable and potentially transformational research on disease in a new era of advanced medicine. We believe our platform is the first to employ both proteomics and single cell biology in an effort to fully characterize and link cellular function to patient outcomes by revealing treatment response and disease progression. Our single cell proteomics platform, which includes instruments, chip consumables and software, provides an end-to-end solution to reveal a more complete view of protein function at an individual cellular level. Our platform has been rapidly adopted by the top 15 global biopharmaceutical companies by revenue and nearly half of the comprehensive cancer centers in the United States to help develop more durable therapeutics, overcome therapeutic resistance, and predict patient responses for advanced immunotherapies, cell therapies, gene therapies, vaccines, and regenerative medicines. Our initial focus has been on developing applications of our platform for cancer immunology and cell and gene therapy. We are now expanding our capabilities to include applications for infectious diseases, inflammatory conditions, and neurological diseases.

We believe that traditional bulk methods of proteomics analysis lack quality single cell resolution. Single cell biology has become highly valuable to the life sciences industry because individual core cell types underlying a specific disease (for example, tumor cells, immune cells, and cells of the central nervous system) look and act very differently. Single cell biology provides deep insights into variations among each individual cell's behavior, such as underlying disease activity and therapeutic response. Traditional bulk proteomic analyses fail to provide these insights as they focus on average cell activity in the aggregate. For example, in cell therapy, where heterogeneous populations of immune cells are engineered to combat tumors, traditional bulk proteomic methods are not designed to identify the unique immune cell subsets that contribute most significantly to effective treatment responses. At the same time, while the genome of single cells has been explored in depth, genomics has limitations on accurately predicting treatment resistance, which often results from tumor protein signaling adaptations rather than genetic aberrations. In oncology, while genomics has been used to reveal mutations that reside along druggable pathways, therapeutics targeting these pathways have only marginally improved patient outcomes, with almost universal and rapid development of drug resistance. We believe that our platform can capture a more complete view of the functional biological drivers of disease and therapeutic response.

We designed our platform to reveal functional protein biology and cellular signaling networks at single cell resolution to accelerate the development of advanced medicines. The drivers of efficacy and toxicity are heavily impacted by cytokines, or extracellular functional proteins, through which certain individual cells send and receive signals. Additionally, disease progression and treatment resistance are heavily impacted by the intracellular signaling proteins, in particular phosphoproteins, which dictate the functional state of any cell. We believe that directly capturing the full range of intracellular and extracellular functional proteins is critical to analyzing the efficacy of therapies, identifying biomarkers suitable for druggable targets, and modifying therapeutics that are not generating the intended result. In contrast to traditional bulk methods of proteomics, which can only produce estimates of aggregated levels of functional proteins, our technology fills a critical knowledge gap by directly detecting the full range of intracellular and extracellular functional proteins within a sample.

Figure 1. The figure below represents the evolution of single cell biology from the study of the genomic blueprint of a cell—its DNA and RNA—through the functional representation of each cell's activity—its extracellular and intracellular proteins. This evolution towards the proteome is enabling greater application to translational medicine.



Our platform is an end-to-end solution comprised of our proprietary IsoLight and IsoSpark instruments, IsoCode and CodePlex chip consumables, and IsoSpeak software. Our IsoLight and IsoSpark instruments are designed to be fully-automated benchtop proteomic hubs. Our IsoCode chips utilize our core technology leveraging our proteomic barcoding to capture single cell protein information. Our recently introduced CodePlex chips leverage our core technology to assay multiplexed bulk proteins from very low volumes. Our IsoSpeak software interprets this data and is capable of rapidly returning publication-quality content and advanced visualizations to reveal key insights. We believe that our platform overcomes many of the limitations of traditional bulk proteomic workflows, which can be capital intensive, time consuming and laborious, require multiple instruments and many manual steps, and may only be capable of analyzing small numbers of functional proteins at a time. Our platform supports multiple applications, including in cancer immunology, cell and gene therapy, infectious diseases, inflammatory conditions, and neurological diseases.

Figure 2. Our platform is comprised of instruments, chip consumables, and software.

IsoCode and CodePlex Chip Technology Overview

Chip Solutions	***Function***	***Applications***
Extracellular Protein Detection	Enables the discovery of better biomarkers, including rare cells that have the potential to drive therapeutic persistence, potency, and durability	**Translational medicine** • Cancer immunology • Inflammation • Cell therapies • Infectious disease • Targeted therapies
Intracellular Protein Detection	Measures cellular protein-to-protein interactions and adaptive resistance pathways to identify resistance earlier and enable earlier selection of potential treatments	**Discovery** • Combinatorial therapies • Kinase inhibitors • Targeted therapies • Cell therapies

Our current product offering supports a variety of applications that are broadly used for translational, preclinical and clinical development of advanced medicines, representing an initial $12 billion addressable market opportunity based on management estimates. This cumulative market spend accounts for an installed base of approximately 55,000 instruments, in line with mature protein and cell biology technologies such as flow cytometry and multiplexed proteomics. Our relevant end users span the range of biopharmaceutical companies and academic and research institutions worldwide, which in the aggregate cover approximately 5,500 advanced medicines programs in both preclinical and clinical stages. In addition to our currently targeted addressable market opportunity in advanced medicines, we have recently expanded our capabilities with intracellular protein detection IsoCode chip products, which are designed to improve discovery biology as a bridge to the earlier development of advanced medicines. We believe this represents an incremental $12 billion addressable market opportunity. Expanding our chip solution portfolio is a key factor in enabling us to expand our capabilities into applications for infectious diseases, inflammatory conditions, and neurological diseases.

As of December 31, 2020, we have placed 111 systems globally, including at each of the top 15 global biopharmaceutical companies by revenue and nearly half of the comprehensive cancer centers in the United States. As of December 31, 2020, we employed a commercial team of approximately 120 team members. We market and sell our platform through a direct sales channel in North America and specific regions in Europe. Additionally, we utilize ten distributor relationships to market and sell our products in Europe, the Middle East and Asia-Pacific.

Our revenue to date has been driven primarily by sales of our instruments and chip consumables. Revenue for the fiscal years ended December 31, 2019 and 2020, was $7.5 million and $10.4 million, respectively. For the year ended December 31, 2020, our sales to end-markets of biopharmaceutical companies and academic and research

institutions represented 60% and 40% of our total sales, respectively. We generated net losses of $13.6 million and $23.3 million for the fiscal years ended December 31, 2019 and 2020, respectively.

The IsoPlexis Advantage

We designed our platform to reveal functional protein biology and cellular signaling networks at single cell resolution to accelerate the development of advanced medicines and improve patient outcomes by revealing treatment response and disease progression. We believe that our platform offers several advantages over existing proteomic and cellular analysis technologies, including:

Direct single cell analysis of functional proteins: We designed our platform to directly measure the functional proteins from each cell in a highly multiplexed manner. For example, our platform is capable of directly measuring the proteomic activity of each immune cell—such as T cells, macrophages, or NK cells—providing highly correlative clinical and preclinical immune biomarkers. In contrast, while technologies such as RNA sequencing provide information useful for estimating cellular protein function, the correlation between such information and functional proteins is relatively low, making it difficult to translate the information from these technologies into insights for therapeutic applications. Similarly, flow cytometry cannot detect the highly multiplexed extracellular functional proteins from each cell that may directly correlate to *in vivo* response.

Multiple proteomic applications on a single system: We designed our technology to provide highly multiplexed information from bulk and single cell extracellular proteome and the intracellular proteome, all on the same system. Our approach, which leverages a single system, is designed to increase efficiency and accessibility across many areas of advanced cellular analysis for a wide range of applications.

Rapid data analysis and insights: Gathering insights from current single cell technologies can take months due to the limitations of current solutions in collecting and analyzing data. Our IsoSpeak software provides advanced automated data analysis with a push button user interface, generating insights and publication-quality figures within hours, with minimal technical expertise. These accelerated insights can significantly shorten drug development timelines.

Ultra-low sample volume requirements: Many traditional bulk proteomic workflows require relatively large sample volume, which can be a challenge for customers since samples are often very limited. We designed our platform to maximize the utility of the limited sample volume that our customers obtain from their clinical trials. Our IsoCode and CodePlex chip consumables require sample volumes as small as 11 µL, allowing for multiplexed analysis of samples that are difficult to obtain such as cerebrospinal fluid and tracheal samples.

Simplified workflow and minimal footprint: Many traditional bulk proteomic workflows and single cell workflows are laborious and time consuming, requiring many manual steps across multiple instruments. After a sample is loaded onto one of our chips, which is then inserted into our IsoLight or IsoSpark instrument, our platform automates all protein detection steps in a walk away fashion, saving time and laboratory resources. Our automated ELISA, or a standard immunoassay, workflow reduces the need for specialized technicians to run experiments or interpret results and reduces overhead. Without our platform, similar workflows would require multiple instruments that would occupy a substantially larger combined footprint compared to the benchtop placement of our instruments, which have a total footprint of 28.5 inches (in the case of the IsoLight) or 18 inches (in the case of the IsoSpark). We believe ease of use of our fully-automated benchtop instruments, combined with their minimal footprint, drives customers to adopt our platform at a lower system and labor cost.

Our Platform

Our platform is an end-to-end solution comprised of our proprietary IsoLight and IsoSpark instruments, IsoCode and CodePlex chip consumables, and IsoSpeak software, spanning multiple applications. Once a sample is loaded onto our proprietary “proteomic barcoded” IsoCode or CodePlex chips, highly sensitive software-enabled optics quantify the proteins associated with each single cell through individualized antibody-based proteomic reactions.

Our platform leverages a series of chambers that capture single cells, where each separate chamber enables multiplexed protein detection reactions simultaneously, or in a parallelized fashion. The highly multiplexed number of functional proteins per cell quantified by our platform's proteomic barcoding has led to correlative insights in cancer immunology, cell and gene therapy, infectious diseases, inflammatory conditions, and neurological diseases.

Our Instruments

Our IsoLight and IsoSpark instruments, both Red Dot Design Award winners, run our IsoCode and CodePlex chips, enabling high-throughput analysis of functional proteins from single cells and low sample volume bulk with a fully-automated workflow. The IsoLight has a footprint of 28.5 inches while the IsoSpark is a compact 18 inches. Both instruments are comprised of four modules:

- an optical system to quantify protein concentrations;
- a fluidic system to enable the automated ELISA workflow that allows the user to insert samples and retrieve answers with limited hands on time;
- a mechanical system to enable analysis of eight samples in the IsoLight, or four samples in the IsoSpark, simultaneously; and
- a thermal system to provide for the incubation of single cells to capture their proteomic reactions.

Our Chip Consumables

IsoCode chips: Our highly multiplexed chip solutions for single cell functional proteomics

Our IsoCode single cell chip solutions provide highly multiplexed applications to capture the functional extracellular and intracellular proteome.

Our single cell extracellular protein detection chip solution, which we also refer to as our single cell extracellular proteome solution, works through a series of steps:

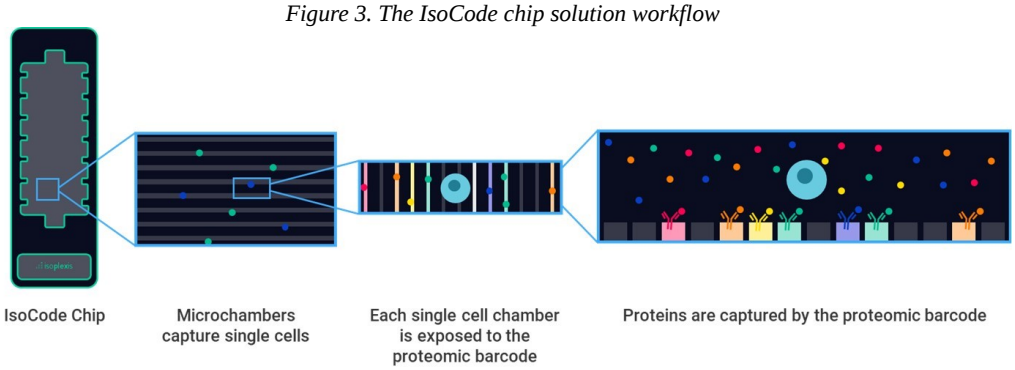
- first, the sample is prepared and retained in suspension;
- second, live cells are loaded onto the chip; and
- third, the live cells housed in the single cell chambers secrete their extracellular proteins, which are captured by our proteomic barcode.

Similarly, our single cell intracellular protein detection chip solution, which we also refer to as our single cell intracellular proteome solution, works through a series of similar steps:

- first, the sample is prepared and retained in suspension;
- second, live cells are loaded onto the chip; and
- third, these live cells are lysed within each single cell chamber to release their intracellular components, which are then captured by our proteomic barcode.

In each case, our IsoLight or IsoSpark then detects the concentration of these proteins per cell and determines the protein profile of each single cell.

Figure 3. The IsoCode chip solution workflow



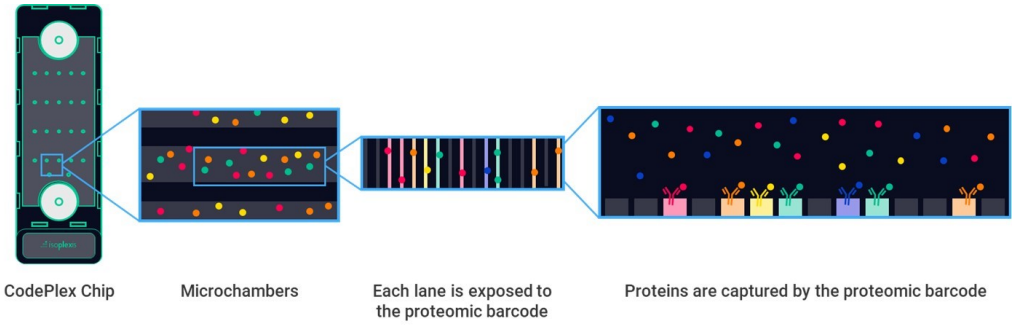
CodePlex chips: Our multiplexed solutions for ultra-low volume bulk samples

Our CodePlex chip solutions provide highly multiplexed applications to capture the functional extracellular and intracellular proteome from low volume of bulk protein samples, rather than from single cells. These extracellular and intracellular proteome solutions work through a series of steps:

- first, the protein sample is retained with minimal preparation or dilution;
- second, the protein sample is loaded into the chip through various ports to allow for multiple samples per chip; and
- third, each sample is retained in its respective chamber in which the proteins are captured by our proteomic barcode.

Our IsoLight or IsoSpark then detects the concentration of these proteins in bulk and determines the protein profile of each sample.

Figure 4. The CodePlex chip solution workflow



Our Software

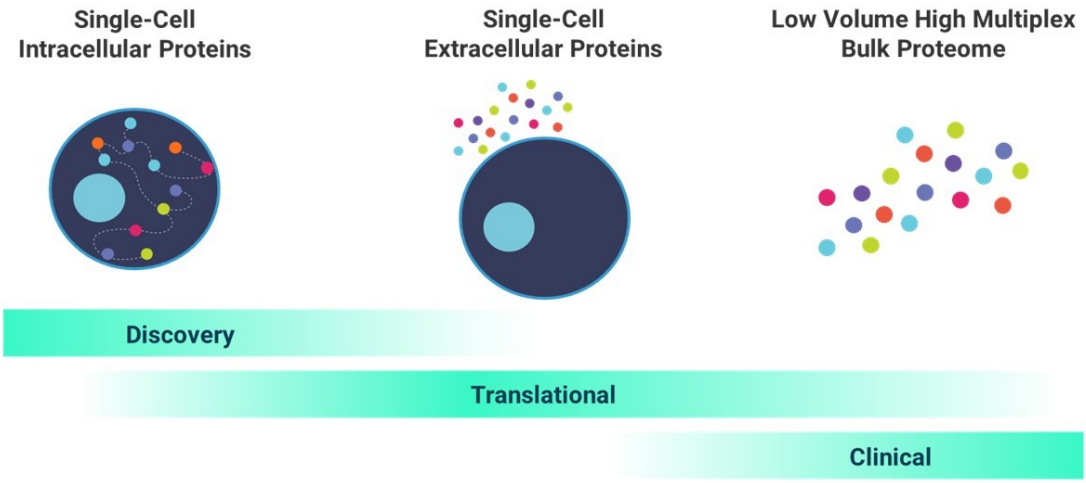
Our IsoSpeak Software, an Edison Award winner, takes complex high dimensional data and automates analysis with an intuitive push button user interface to deliver same day single cell and bulk proteome visualizations without the need for highly specialized informatics professionals. The software works by retaining the images of the proteins detected on the IsoLight or IsoSpark, analyzing the images for concentrations of those proteins using fluorescence and then converting the information into actionable insights through various data visualizations.

Our Applications across the Drug Development Continuum

Our IsoCode single cell extracellular proteome solution measures the extracellular functional proteins from each cell in a highly multiplexed manner, allowing for complete single cell functional characterization. This solution enables the comprehensive profiling of the extracellular function of a wide variety of immune cell types, resulting in the generation of correlative data sets in the fields of cancer immunology and cell and gene therapy, which have been our initial areas of focus. The differentiated information that has been obtained has been applied preclinically to evaluate immune and cell therapy candidates and processes. Additionally, it has generated key biomarkers of immune response in early clinical studies and forms the basis of our initial addressable market for advancing preclinical and clinical trials within advanced medicines. This chip solution has been leveraged by a number of high impact clinical studies published in reputable scientific journals such as *Cell* and *Blood*. See "—Customer Case Studies."

Our IsoCode single cell intracellular proteome solution simultaneously measures multiple intracellular protein signaling networks at the single cell level, allowing for detection of critical protein-to-protein interactions and signaling networks in rare cells and cell subsets. These various protein signaling networks form the basis of both functional and dysfunctional activity in a wide variety of cell types. Our single cell intracellular proteome solution enables a better understanding of these signaling networks, which can then be applied to treat dysfunction in tumor cells and to facilitate activation of key immune cell types earlier in the therapeutic discovery process. The ability to target these signaling networks provides access to serve a discovery-focused market, enabling us to address opportunities in the fields of infectious diseases, inflammatory conditions, and neurological diseases.

Our CodePlex bulk extracellular proteome and intracellular proteome solutions provide means to achieve highly multiplexed, low sample volume proteomics. CodePlex requires up to 10 times less sample volume versus other comparable methods of analyses, opening up opportunities for precious sample analysis in preclinical and clinical studies. The CodePlex solution enables automated proteomic analyses on customers' benchtops within one IsoLight or IsoSpark system, eliminating the need for multi-instrument workflows that require technician expertise to run. Our CodePlex solution is used across multiple applications for assaying proteins from blood, cerebrospinal fluid, and tracheal samples in both preclinical and clinical studies in the fields of cancer immunology and cell and gene therapy. Further, we expect that our initial entry into the clinical diagnostics market will start with our CodePlex solution as it provides accessibility to end users through automation.



Customer Case Studies

Each of the case studies described below leveraged our IsoCode single cell extracellular proteome solution by detecting immune cell protein responses within our IsoCode chip and detecting unique extracellular protein

signatures from subsets of these immune cells that predicted or correlated with treatment response or disease progression. The unique extracellular protein signature in each case study was defined by the ability of the cells to produce multiple proteins simultaneously, which we refer to as a sample having polyfunctional strength, or PSI.

Earlier measurement of potential survival biomarker in a cancer clinical study for checkpoint inhibitors

In a 38 patient metastatic melanoma study sponsored by Nektar Therapeutics, where the patients underwent checkpoint inhibitor and IL-2 agonist therapy, our platform identified that a blood-based biomarker correlated with patient response and progression-free survival. PSI of CD8+ T cells was measured at day 8 and day 1 in the set of metastatic melanoma patients treated with NKTR-214 (Bempeg) plus Nivolumab. The researchers found that the PSI difference (PSI on Day 8 minus PSI on Day 1) predicted eventual response, based on progression-free survival, to the Bempeg/Nivolumab treatment in first line therapy. Using our platform, researchers were able to measure PSI in week 1, much earlier than using other methods.

Analyzing treatment response and product potency in a CAR-T cell therapy study

As published in *Blood*, in a 20 patient non-Hodgkin lymphoma study sponsored by Kite Pharma, researchers using our platform determined that the PSI of each CAR-T cell therapy product, prior to infusion, had a significant association with complete or partial patient response to anti-CD19 CAR-T therapy. Other pre-infusion metrics tested in this study using alternative methods were not predictive. Through this research, we were able to highlight the important role a functionally versatile subpopulation of CAR-T cells may play in the potency of anti-CD19 therapies. We believe product-based readouts like this one have the potential to enable more predictive and scalable manufacturing and product release of cell therapies globally.

Understanding progression of disease and inflammation to enable therapy development in a COVID-19 study

As published in Cell, in collaboration with Merck & Co. and the Institute for Systems Biology, researchers using our platform identified that the PSI of peripheral monocytes increased with COVID-19 severity, while CD4+ T cells, CD8+ T cells and NK cell percentages decreased, revealing which of these cells contributed to the pro-inflammatory environment in moderate to severe cases of COVID-19. Our platform's characterization of immune biomarkers at each stage of COVID-19 progression is helping researchers to identify and develop treatments and critical prognostic biomarkers, based on functional profiles of critical subsets of immune cells.

Our Market Opportunity

Our current product offering supports a variety of applications which are broadly used for translational, preclinical and clinical development of advanced medicines, representing an initial $12 billion addressable market opportunity based on management estimates. This cumulative market spend accounts for an installed base of approximately 55,000 instruments, in line with mature protein and cell biology technologies such as flow cytometry and multiplexed proteomics. Within this addressable market, our relevant end users span the range of biopharmaceutical companies and academic and research institutions worldwide, which cover approximately 5,500 advanced medicines programs in both preclinical and clinical stages.

In addition to our currently targeted addressable market opportunity in advanced medicines, we have recently expanded our capabilities with our intracellular protein detection IsoCode chip products, which are designed to improve discovery biology as a bridge to earlier development of advanced medicines. We believe this represents an incremental $12 billion addressable market opportunity. Additionally, we are pursuing a range of integrated applications around sequencing and proteomic analytes from single cells, which will enable further applications for discovery biology. Expanding our chip solution portfolio is a key factor in enabling us to expand our capabilities into applications for infectious diseases, inflammatory conditions, and neurological diseases. Furthermore, our long term strategy is ultimately to add additional applications serving clinical diagnostics research that will allow us to serve additional markets we believe to be worth approximately $10 billion. We expect that our initial entry into the clinical diagnostics market will start with our CodePlex solution for low volume bulk proteomics as it provides accessibility to end users through automation. We believe investments in these areas will provide access to a potential $34 billion total addressable market.

Our Growth Strategy

Our goal is to establish our platform as a leading proteomic workflow solution in the life sciences industry. In pursuit of that goal, the key elements of our growth strategy include:

Promoting our platform as the standard for single cell proteomic analysis

We believe that our platform is a critical tool that provides new and accessible layers of biological data at the single cell level, and the ability to capture the functional extracellular and intracellular proteome from single cells for the first time. We believe that our platform is well positioned to fundamentally advance therapeutic discovery and development. We intend to continue promoting our instruments, chip consumables, and software to drive awareness of the broad utility of our platform for development of advanced medicines and the discovery of biomarkers.

Expand the installed base of our IsoLight and IsoSpark instruments with new and existing customers

As of December 31, 2020, we have placed 111 systems worldwide within leading biopharmaceutical companies and academic and research institutions in North America, Europe and Asia-Pacific. Utilizing our multi-channel sales and distribution network, we intend to continue engaging with the global life sciences community to grow our installed base and expand the number of instruments within organizations that are already utilizing our technology to advance their research and therapeutic development. Outside of North America, we intend to leverage our distributor partnerships across four continents to expand our presence, with an emphasis on the China market.

Drive adoption of our existing applications

We founded our company to help solve critical challenges to accelerating advanced medicines and since our inception, we have developed multiple applications spanning cancer immunology, cell and gene therapy, infectious diseases, inflammatory conditions, and neurological diseases. We intend to continue promoting our platform to help meet the urgent need to develop new therapeutics and accelerate development timelines across these applications. We intend to continue promoting the discoveries and data published by our customers, which we believe will further reinforce the value of our platform and drive additional adoption of our platform for use across these applications.

Develop new applications across multiple therapeutic classes and indications

As we continue to deploy our platform, we intend to concurrently expand the breadth of applications for our technologies to encourage increased use of our platform across our addressable markets. At present, we believe we have the ability to reveal insights in functional proteomics in new therapeutic classes and indications, such as infectious diseases, inflammatory conditions, and neurological diseases. Our goal is to continue innovating and bringing new products to market as new areas of therapeutic development emerge.

Expand adoption of our platform into new geographical markets

We currently market and sell our technology with an in-house commercial team in the United States and Europe. We are also utilizing our distribution network to market and sell across multiple countries, including Australia, China, Italy, Israel, Japan, New Zealand, Portugal, Singapore, South Korea, Spain, and Switzerland. We intend to further expand our international presence by growing our distribution networks in Brazil, Canada, India, Mexico, Russia and beyond.

Integrate sequencing biology with proteomics

We intend to further develop our product roadmap to integrate sequencing and functional proteomic biology from single cells to enable novel applications in discovery biology. Currently, single cell solutions are limited in their ability to detect genomic and transcriptomic information and functional proteins concurrently from single cells. We believe that the ability to modulate and modify genomic activity in cells and detect genomic impacts can be enhanced by verifying the proteomic, or functional, impacts concurrently from the same cell. Our technology’s ability to reveal this multi-omic connectivity across cellular pathways may be able to provide earlier therapeutic insights for developers of advanced medicines.

Our Commercial Organization

We launched our first product in June 2018 and have sold our products primarily to biopharmaceutical companies and academic and research institutions. Market adoption has accelerated since our initial commercial launch with 35 instruments sold in 2019 and 58 instruments in 2020, and as of December 31, 2020, we have sold a total of 111 systems. We have a global customer base with 87 systems placed in the United States, nine in EMEA and 15 in Asia-Pacific, in each case as of December 31, 2020.

We continue to invest in our commercial team of approximately 120 people as of December 31, 2020, including approximately 30 sales representatives. We also intend to build a direct salesforce in China that leverages our distributor relationships and other third parties. Beyond our direct salesforce, we have relationships with ten distributors covering countries including Australia, China, Italy, Israel, Japan, New Zealand, Portugal, Singapore, South Korea, Spain, and Switzerland.

Continued investment in research and development is critical to the commercialization of our future products. Our deep product and application roadmap represents one of the key growth drivers of instrument and consumable sales. We intend to expand our intellectual property and research capabilities through internally developed efforts, in conjunction with strategic partners and by acquiring technology.

Our Product Development Approach

Our research and development teams, located in Branford, Connecticut, design and develop our proprietary products utilizing and combining expertise in single cell biology, fluidics, optics, informatics, hardware and software engineering. Our collaborative approach across disciplines helps lead to advancements in technology development intended to provide clarity on new layers of complex biology to advance curative medicines. We plan to focus our research and development on:

- Releasing high value, highly differentiated applications that unlock new proteomically driven biology and drive the future of disease understanding and development of advanced medicines;
- Providing a depth of panels, protocols, and analyte targets for each application family to cover the full range of our customers biological needs;
- Providing software that automates and streamlines advanced analytics, enabling immediate insights;
- Providing integrated proteomics technologies with sequencing-based technologies to extend existing capacities in single cell biology; and
- Working with clinical partners to put in place validated tests that build a long-term path to clinical usage of our solutions.

Our research and development costs were $10.1 million and $11.2 million for the years ended December 31, 2019 and 2020, respectively. As of December 31, 2020, we employed 63 employees in research and development. We will continue investing in efforts to support the ongoing development of our instruments, chip consumables and software, as well as enhance the overall performance of our solutions.

Employees

As of December 31, 2020, we employed 232 employees. Of these employees, 63 were engaged in research and development activities, and we employed a commercial team of approximately 120 team members. 222 of these employees are located in the United States and 10 of these employees are located across Europe and Asia. None of our employees are represented by a labor union or are party to a collective bargaining agreement, and we have had no labor-related work stoppages.

Our human capital resources objectives include, as applicable, identifying, recruiting, retaining, incentivizing and integrating our existing and new employees, advisors and consultants. The principal purposes of our equity incentive plans are to attract, retain and reward personnel through the granting of stock-based and compensation

awards, in order to increase stockholder value and the success of our company by motivating such individuals to perform to the best of their abilities and achieve our objectives.

Scientific Advisory Board

We have assembled a highly qualified scientific advisory board composed of advisors who have deep expertise in the fields of nanotechnology, biomedical engineering and medicine. Our scientific advisory board is composed of Rong Fan, Ph.D. (our co-founder and chair of the scientific advisory board), James R. Heath, Ph.D., David Ho, M.D., Arnold Levine, Ph.D., Ross Levine, M.D., and Antoni Ribas, M.D., Ph.D.

Facilities

Our principal executive offices are located in Branford, Connecticut, where we lease approximately 14,674 square feet of office and manufacturing space. The lease for our principal executive offices is currently scheduled to terminate on July 31, 2025. In addition to our principal executive offices, we lease additional offices and manufacturing space in Branford, Connecticut and additional offices in Campbell, California and Kent, England.

We do not currently own any real property. We believe that our current facilities are adequate to meet our immediate needs and believe that we should be able to renew each of our leases without an adverse impact on our operations. In addition, we believe that if we require additional office space or manufacturing facilities, we will be able to obtain additional facilities on commercially reasonable terms.

Competition

We face significant competition in the life sciences technology market. We currently compete with many established technology companies in the flow cytometry, cellular analysis and single cell -omics businesses. This includes companies that design, manufacture and market systems, consumables and software for, among other applications, genomics, transcriptomics, proteomics, metabolomics, single cell analysis and immunology, and/or provide services related to the same. These companies include Becton, Dickinson and Company, Thermo Fisher Scientific Inc. and Bio-Rad Laboratories, Inc., each of which has products that compete to varying degrees with some but not all of our products. Growing understanding of the importance of single cell information is leading to more companies offering services related to collecting such information. Our target customers may also elect to develop their workflows on legacy systems or using traditional methods, rather than implementing our platform, and they may also decide to stop using our platform. In addition, there are many large established players in the life sciences technology market that we do not currently compete with but that could develop systems, tools or other products that will compete with us in the future. These large established companies have substantially greater financial and other resources than us, including larger research and development staff or more established marketing and sales forces.

For further discussion of the risks we face relating to competition, see “Risk Factors—Risks Related to Our Business and Industry—*The life sciences technology market is highly competitive. If we fail to compete effectively, our business and results of operation will suffer*.”

Government Regulation

Our products are currently marketed (and we currently intend to continue to market them) as research use only (“RUO”) and we sell them to biopharmaceutical companies and academic and research institutions that conduct research. The FDA defines RUO products as in-vitro diagnostic tests (“IVDs”) that are in the laboratory research phase of development and, if properly labeled, the FDA exempts RUO products from most FDA regulatory controls. RUO products must bear the statement: “For Research Use Only. Not for Use in Diagnostic Procedures.” RUO products cannot make any claims related to safety, effectiveness or diagnostic utility and they cannot be intended for human clinical diagnostic use. The FDA will evaluate the totality of the circumstances when determining if the product is intended for diagnostic purposes and, if the FDA were to determine, based on the totality of circumstances, that our products labeled and marketed for RUO are intended for diagnostic purposes, they would be considered medical devices and would require clearance or approval prior to commercialization. The FDA defines a medical device as an instrument, apparatus, implement, machine, contrivance, implant, in vitro reagent or other

similar or related article, including any component part or accessory, which is (i) intended for use in the diagnosis of disease or other conditions, or in the cure, mitigation, treatment or prevention of disease, in man or other animals, or (ii) intended to affect the structure or any function of the body of man or other animals and which does not achieve any of its primary intended purposes through chemical action within or on the body of man or other animals and which is not dependent upon being metabolized for the achievement of any of its primary intended purposes. The development, testing, manufacturing, marketing, post-market surveillance, distribution, advertising and labeling of medical devices, which includes IVDs, are subject to regulation in the United States by the FDA under the Federal Food, Drug, and Cosmetic Act ("FDC Act") and comparable state and international agencies. The FDA regulates, among other things, the research, design, development, preclinical and clinical testing, manufacturing, safety, effectiveness, packaging, labeling, storage, recordkeeping, pre-market clearance or approval, adverse event reporting, marketing, promotion, sales, distribution and import and export of medical devices. To be commercially distributed in the United States, medical devices must receive from the FDA either clearance of a premarket notification, known as 510(k), or premarket approval pursuant to the FDC Act prior to marketing, unless subject to an exemption. Sales of devices for diagnostic purposes may also subject us to additional healthcare regulation. We continue to monitor the changing legal and regulatory landscape to ensure our compliance with any applicable rules, laws and regulations. For further discussion of the risks we face relating to regulation by the FDA and related regulatory agencies, see "Risk Factors—Risks Related to Government Regulation—*If our current or future products become subject to FDA or other related international regulation, the regulatory clearance or approval and the maintenance of continued and post-market regulatory compliance for such products will be expensive, time-consuming, and uncertain both in timing and in outcome*."

In the United States, various federal and state regulators, including governmental agencies like the Consumer Financial Protection Bureau and the Federal Trade Commission, have adopted, or are considering adopting, laws and regulations concerning personal information and data security. Certain state laws may be more stringent or broader in scope, or offer greater individual rights, with respect to personal information than federal, international or other state laws, and such laws may differ from each other, all of which may complicate compliance efforts. For example, the California Consumer Privacy Act ("CCPA"), which increases privacy rights for California residents and imposes obligations on companies that process their personal information, came into effect on January 1, 2020. Among other things, the CCPA requires covered companies to provide new disclosures to California consumers and provide such consumers new data protection and privacy rights, including the ability to opt-out of certain sales of personal information. The CCPA provides for civil penalties for violations, as well as a private right of action for certain data breaches that result in the loss of personal information. This private right of action may increase the likelihood of, and risks associated with, data breach litigation. In November 2020, California voters passed the California Privacy Rights Act ("CPRA"), which will become effective in most material respects beginning on January 1, 2023. The CPRA further expands the CCPA with additional data privacy compliance requirements and obligations and establishes a regulatory agency dedicated to enforcing the CCPA and CPRA. While we are not currently subject to the CCPA and CPRA, we may in the future be required to comply with such laws, which may increase our compliance costs and potential liability. Furthermore, the CCPA and CPRA could mark the beginning of a trend toward more stringent state privacy legislation in the United States, which could increase our potential liability and adversely affect our business.

In addition, the E.U. General Data Protection Regulation ("GDPR"), which became effective in May 2018, greatly increased the European Commission's jurisdictional reach of its data privacy and security laws and added a broad array of requirements for handling personal data. EU member states are tasked under the GDPR to enact, and have enacted, certain implementing legislation that adds to and/or further interprets the GDPR requirements and potentially extends our obligations and potential liability for failing to meet such obligations. The GDPR, together with national legislation, regulations and guidelines of the EU member states governing the processing of personal data, impose strict obligations and restrictions on the ability to collect, use, retain, protect, disclose, transfer and otherwise process personal data. In particular, the GDPR includes requirements to establish a legal basis for processing, higher standards for obtaining consent from individuals to process their personal data, more robust disclosures to individuals, a strengthened individual data rights regime, requirements to implement safeguards to protect the security and confidentiality of personal data, data breach notification obligations to appropriate data protection authorities or individuals, limitations on retention and secondary use of information and additional obligations when entities contract with third-party processors to process personal data. The GDPR authorizes fines

for certain violations of up to 4% of global annual revenue or €20 million, whichever is greater. Following the withdrawal of the United Kingdom from the European Union, data privacy and security laws that are substantially similar to the GDPR are in effect in the United Kingdom, which carry similar risks and authorize similar fines for certain violations. The GDPR may increase our responsibility and liability in relation to personal data that we process where such processing is subject to the GDPR, and we may be required to put in place additional mechanisms to ensure compliance with the GDPR, including as implemented by individual countries. Compliance with the GDPR will be a rigorous and time-intensive process that may increase our cost of doing business or require us to change our business practices, and despite those efforts, there is a risk that we may be subject to fines and penalties, litigation, and reputational harm in connection with our European activities. We continue to monitor the changing legal and regulatory landscape to ensure our compliance with any applicable rules, laws and regulations.

For further discussion of the risks we face relating to data privacy and related regulations, see "Risk factors—General Risks—*We are currently subject to, and may in the future become subject to additional, U.S. federal and state laws and regulations imposing obligations on how we collect, store and process personal information. Our actual or perceived failure to comply with such obligations could harm our business. Ensuring compliance with such laws could also impair our efforts to maintain and expand our future customer base, and thereby decrease our revenue*."

Intellectual Property

Our ability to obtain and maintain intellectual property protection for our products and technology is fundamental to the long-term success of our business. We rely on a combination of intellectual property protection strategies, including copyrights, patents, trademarks, trade secrets, license agreements, confidentiality policies and procedures, nondisclosure agreements, invention assignment agreements and technical measures designed to protect the intellectual property and commercially valuable confidential information and data used in our business.

As of December 31, 2020, we owned one issued U.S. patent, seven pending U.S. patent applications, one pending patent cooperation treaty ("PCT") application, 13 issued foreign patents and nine pending foreign patent applications in various foreign jurisdictions, including Austria, Belgium, China, Denmark, the European Patent Office, Finland, France, Germany, Japan, Netherlands, Norway, Sweden, Switzerland and the United Kingdom. Excluding any possible patent term adjustments or extensions and assuming payment of all appropriate maintenance, renewal, annuity or other governmental fees, our owned patents and patent applications, if issued, are expected to expire between 2035 and 2042.

The subject matter covered by our owned patents and patent applications include the analysis and screening of cell secretion profiles; systems and methods for multiplexed analysis of cellular and other immunotherapeutics; compositions and methods for the simultaneous genomic, transcriptomic and proteomic analysis of single cells; systems, devices and methods for cell capture and methods of manufacture thereof; systems, devices and methods for identification, selective ablation and selection and collection of single cells; systems, devices and methods for multiplexed analysis; and compositions, devices and methods for on-device preparation of cDNA.

As of December 31, 2020, we exclusively licensed approximately four issued U.S. patents, six pending U.S. patent applications, four issued foreign patents and eight pending foreign patent applications in various foreign jurisdictions, including Australia, Canada, China, the European Patent Office and Japan. We currently have exclusive licenses with third parties for certain patent rights related to multiplexed detection and high-throughput single cell polyomics, certain patent rights related to methods and compositions for quantifying metabolites and certain patent rights related to the detection of target molecules. Excluding any possible patent term adjustments or extensions and assuming payment of all appropriate maintenance, renewal, annuity or other governmental fees, our exclusively in-licensed patents and patent applications, if issued, are expected to expire between 2027 and 2038.

We intend to pursue additional intellectual property protection to the extent we believe it would be beneficial and cost-effective. Our ability to stop third parties from making, using or commercializing any of our patented inventions will depend in part on our success in obtaining, defending and enforcing patent claims that cover our technology, inventions, and improvements. With respect to both our owned and in-licensed intellectual property, we cannot provide any assurance that any of our current or future patent applications will result in the issuance of

patents in any particular jurisdiction, or that any of our current or future issued patents will effectively protect any of our products or technology from infringement or prevent others from commercializing infringing products or technology.

In addition to our reliance on patent protection for our inventions, products and technologies, we also seek to protect our brand through the procurement of trademark rights. We own registered trademarks and pending trademark applications for “IsoPlexis,” “IsoLight,” “IsoSpark” and other product related brand names in the United States and certain foreign jurisdictions. Furthermore, we rely on trade secrets, know-how, unpatented technology and other proprietary information, to strengthen our competitive position. We currently maintain as trade secrets our software and certain other technologies, including assays. To mitigate the chance of trade secret misappropriation, we enter into nondisclosure and confidentiality agreements with parties who have access to our trade secrets, such as our employees, consultants, advisors and other third parties. We also enter into invention assignment agreements with our employees and consultants that obligate them to assign to us any inventions they have developed while working for us. We generally control access to our proprietary and confidential information through the use of internal and external controls. Although we take steps to protect our proprietary information and trade secrets, third parties may independently develop substantially equivalent proprietary information and techniques or otherwise gain access to our trade secrets or disclose our technology. As a result, we may not be able to meaningfully protect our trade secrets. For further discussion of the risks relating to intellectual property, see “Risk Factors—Risks Related to Our Intellectual Property.”

Legal Proceedings

From time to time we are a party to various litigation matters incidental to the conduct of our business. We are not presently party to any legal proceedings the resolution of which we believe would have a material adverse effect on our business, prospects, financial condition, liquidity, results of operation, cash flows or capital levels.

MANAGEMENT

Executive Officers and Non-Employee Directors

The following table presents information regarding our executive officers and directors as of the date of this prospectus:

Name	Age	Position(s)	Date of Appointment
Executive Officers:			
Sean Mackay	38	Chief Executive Officer, Co-Founder and Director	2013
Jing Zhou	51	Chief Scientific Officer	2015
John Strahley	54	Chief Financial Officer	2019
Peter Siesel	56	Chief Commercial Officer	2020
Non-Employee Directors:			
John G. Conley	64	Chairman of the Board	2014
Michael Egholm	58	Director	2018
James R. Heath	59	Director	2015
Gregory P. Ho	68	Director	2014
Siddhartha Kadia	51	Director	2021
Sharon Kedar	46	Director	2019
Daniel Wagner	50	Director	2014

Executive Officers

The following is biographical information and a brief summary of the business experience of our executive officers and directors.

Sean Mackay has served as our Chief Executive Officer and as a member of our board of directors since he co-founded the Company in 2014. Mr. Mackay also serves on the board of AbbraTech, a biotechnology company. Previously, Mr. Mackay worked at Lazard, and advised on a number of transactions across industries, helping life sciences and medical device companies manage and reconfigure their capital structures to pursue various operational goals. Additionally, Mr. Mackay was part of Kleiner Perkins-incubated Lifesquare, which aimed to connect patients, payers, and providers through sharing essential healthcare information. Throughout his career, Mr. Mackay has focused on advising and building companies that can improve the healthcare ecosystem with breakthrough technology. Mr. Mackay has co-authored publications centered around immunology and is an inventor on various patents for single cell products. We believe that Mr. Mackay is qualified to serve on our board of directors because of the perspective and experience he brings as our Chief Executive Officer, his experience in the biotechnology and life sciences industry and his scientific knowledge.

Jing Zhou, M.D., Ph.D., has served as our Chief Scientific Officer since 2020. Dr. Zhou served as our Senior Vice President of Translational Medicine from January 2019 to December 2019, Vice President of Immunology and Translational Medicine from January 2017 to December 2018, and Director of Immunology from January 2016 to December 2016. Working with the talented multidisciplinary teams at the Company, she is responsible for developing single cell assays for precisely profiling the functional properties and heterogeneity of immune cells using our IsoCode proteomics platform, and for discovery of predictive biomarkers as correlates of patient outcome to immunotherapies. Since joining the Company in 2015, she has led multiple studies with various biopharma and trial center leaders, particularly in the immuno-oncology space, to develop single cell polyfunctional metrics that can distinguish and predict patient response to CAR-T and antibody-based cancer immunotherapies. These novel findings have led to numerous presentations at prestigious scientific conferences including AACR, ASH, ASCO, SITC, FOCiS and high-impact publications in journals such as Blood and JITC. Prior to joining the Company, she was an immunologist at the Yale School of Medicine with expertise in defining phenotype and functionality of

immune cells in diseased and healthy settings, with a good track record of 30+ scientific publications in leading journals. Dr. Zhou earned her medical degree in Clinical Medicine from Bengbu Medical College, M.S. and Ph.D. in Immunology from Shanghai Jiao Tong University, and has been the principal investigator of NIH, AHA and Yale University grants.

John Strahley has served as our Chief Financial Officer since 2019. Prior to joining the Company, Mr. Strahley served as Managing Director at Ironwood Capital ("Ironwood"), a private equity fund manager, from 2010 to 2019. Mr. Strahley is a financial services professional with diverse experience in operational and investment roles with early-stage and closely held private companies. As CFO, Mr. Strahley leads strategic planning and financial management and reporting across the organization. While a Managing Director at Ironwood, Mr. Strahley was responsible for originating, structuring and closing debt and equity investments. In this role, Mr. Strahley worked closely with portfolio company management teams on strategy and execution, financial reporting, fund raising and acquisition. Prior to his time at Ironwood, Mr. Strahley was a Senior Vice President at Webster Bank, where he helped launched the bank's venture capital practice, built a loan sales and structuring group and during the 2008 financial crisis, led the credit administration group. Mr. Strahley began his career as a certified public accountant.

Peter Siesel has served as our Chief Commercial Officer since 2020. From 2014 to 2020, Mr. Siesel held a variety of sales, marketing and management roles at Tecan, a global provider of automated workflow solutions in the life sciences and clinical diagnostics markets. As one of Tecan's first employees, Mr. Siesel had a significant impact on the organization's growth, including product and applications development, intellectual property, strategic partnerships and the creation of state-of-the-art sales process methodologies. Mr. Siesel oversaw triple digit sales growth as Tecan took advantage of the global genomics revolution. Under Mr. Siesel's leadership, the United States became the market leader in liquid handling automation for key market segments such as bioprocessing, cell culture, genomics, molecular diagnostics and cfDNA. In his last position with Tecan, Mr. Siesel was Senior Vice President of Sales, where he was responsible for commercialization in the Americas.

Non-Employee Directors

John G. Conley has served as a member of our board of directors since 2014. Mr. Conley also serves on the board of Cognoptix, Inc., a biotechnology company, and Windgap Medical, Inc., a pharmaceutical company. Mr. Conley is also currently a partner at Gilliam Capital LLC, a life science investment firm he co-founded in 2007, and has been a member of Launchpad Venture Group since 2013. From 2015 to 2018, Mr. Conley served as the Chief Operating Officer of Entrepreneurship for All, a nonprofit that is accelerating economic and social impact through fostering entrepreneurship in mid-sized cities. He co-founded the RNA interference therapeutics company Alnylam Pharmaceuticals in 2002 where he held the position of Vice President, Strategy and Finance and Chief Financial Officer through to its successful IPO in 2004. Prior to that, he had over ten years of experience at Biogen where he served in several marketing, business development, sales and finance positions, including Country Manager – United Kingdom and Ireland, and Treasurer. He was a Manager at the strategy-consulting firm of Bain & Company for four years. Mr. Conley graduated with a B.S. in Economics from the University of Pennsylvania's Wharton School and an M.B.A. from the Yale School of Management. He was a 2014 Fellow in the Advanced Leadership Initiative at Harvard University. We believe that Mr. Conley is qualified to serve on our board of directors because of his extensive leadership experience in the biotechnology and life sciences industries.

Michael Egholm, Ph.D., has served as a member of our board of directors since 2018. Dr. Egholm has served as the Chief Technology Officer of Danaher Life Sciences, the life sciences arm of Danaher Corporation, a global science and technology company, since 2017. Prior to that, he served as President, Biopharmaceuticals at Pall Corporation, a global supplier of filtration, separations and purification products, from 2014 to 2017 and as their Chief Technology Officer from 2010 to 2014. Dr. Egholm completed his Ph.D. and Master's degree in Chemistry at the University of Copenhagen. We believe that Dr. Egholm is qualified to serve on our board of directors because of his expertise in the field of biochemistry and life sciences and track record of academic excellence.

James R. Heath, Ph.D., has served as a member of our board of directors since 2015. Dr. Heath has been president of the Institute of Systems Biology since 2018 and serves on the boards of PACT Pharma, Inc., a biotechnology company, and Indi Molecular, Inc., an emerging life sciences company. He is also a member of the Scientific Advisory Board of AtlasXomics Inc., a biotechnology company, and previously served on the board of

Sofie Biosciences, Inc., a biotechnology company that he co-founded, from 2010 to 2020. Dr. Heath was the Elizabeth W. Gilloon Professor and Professor of Chemistry at Caltech from 2003 to 2018, and Professor of Molecular & Medical Pharmacology at the University of California, Los Angeles (UCLA), and Director of the National Cancer Institute's NSB Cancer Center. He has founded or co-founded several companies, including NanoSys, MTI, and Indi Dx, and has served on the board of a number of organizations including the Board of Scientific Advisors of the National Cancer Institute. Dr. Heath graduated with a degree in Chemistry from Baylor University in Texas. He completed his Ph.D. in Physics and Chemistry from Rice University. He was awarded the 2000 Feynman Prize in Nanotechnology. He became a fellow of American Physical Society in 1999 and in 2009 he was named one of the seven most powerful innovators of the world by Forbes magazine. We believe that Dr. Heath is qualified to serve on our board of directors because of his extensive medical and scientific knowledge and track record of academic excellence.

Gregory P. Ho has served as a member of our board of directors since 2014. Mr. Ho serves as President of Spring Mountain Capital, LP ("SMC"), an investment management firm that he co-founded with John L. Steffens in 2001. Previously, he was a Principal and Chief Financial Officer of McKinsey & Company, Inc. ("McKinsey"). During his 16 years with McKinsey, he led financial and tax planning for the firm and its worldwide partner group. Mr. Ho was also a member of the firm's Investment Committee and a Trustee of McKinsey's Profit-Sharing Retirement Plan. In these capacities, he oversaw the identification, evaluation, and selection of traditional and alternative asset managers and investments for over $1 billion of assets managed by the McKinsey Investment Office. After leaving McKinsey in 1998 and prior to co-founding SMC, Mr. Ho was a private investor and consultant. Prior to joining McKinsey, he was associated with the law firm of Donovan Leisure Newton & Irvine. Mr. Ho currently serves on the boards of ReNetX Bio, Inc. and AtlasXomics Inc. and is a member of the Advisory Board for Venture for America. He received a J.D. from Columbia Law School and a B.S. with honors in Administrative Science from Yale College. He is a member of the New York Bar and the California Bar. We believe that Mr. Ho is qualified to serve on our board of directors because of his financial expertise and experience in the venture capital industry.

Siddhartha Kadia, Ph.D., has served as a member of our board of directors since 2021. Dr. Kadia currently serves on the boards of NuVasive, Inc., a medical devices company, and ALS Limited, a testing and verification services company, as well as other private biotechnology companies. Dr. Kadia also previously served on the board of Horizon Discovery Group, a biotechnology company, in 2020. From 2014 to 2018, Dr. Kadia served as president and CEO of EAG, Inc., a global scientific services company providing analytical testing and consulting solutions. Prior to his time at EAG, Inc., Dr. Kadia spent nine years with Life Technologies Corporation and its predecessor Invitrogen Corporation. Dr. Kadia held various positions with increasing responsibilities, including marketing and operations roles, as well as leadership roles in Japan and China. Most notably, he served as President, Life Sciences Division at Life Technologies where he managed a $2 billion product portfolio. Prior to Life Technologies, Dr. Kadia was a management consultant at McKinsey & Company in the Healthcare Practice, assisting global medical device companies, local and state governments, and healthcare providers. Dr. Kadia earned a B.E. in electronics and telecommunications from Gujarat University in India, an M.S. in biomedical engineering from Rutgers University, and a Ph.D. in biomedical engineering from Johns Hopkins University. We believe that Dr. Kadia is qualified to serve on our board of directors because of his extensive experience in leadership and the biotechnology and life sciences industries.

Sharon Kedar, CFA, has served as a member of our board of directors since 2019. Ms. Kedar is Co-Founder and Partner of Northpond Ventures ("Northpond"), a science, medical and technology focused venture capital firm founded in 2018. Prior to founding Northpond, Ms. Kedar spent fifteen years at Sands Capital Management, an investor in leading innovative businesses, where she served as the Chief Financial Officer and was active in all key functions of the company. Ms. Kedar is also a board director of other emerging companies, including 908 Devices (NASDAQ: MASS), Codex DNA, Inc., Emulate Inc. and Encodia, Inc. Ms. Kedar has also served on the boards of Ultivue, Inc. and Vizgen, Inc. Ms. Kedar is a CFA charterholder, has an M.B.A. from Harvard Business School, and a B.A. in Economics from Rice University. We believe that Ms. Kedar is qualified to serve on our board of directors because of her financial expertise and her substantial experience as an investor in emerging companies.

Daniel Wagner has served as a member of our board of directors since 2014. Mr. Wagner has served as Senior Managing Director of Investments at Connecticut Innovations, Incorporated ("CI") since 2007 and is an active board

member of multiple life sciences companies. Mr. Wagner contributes to CI's expertise in biotechnology with more than 10 years in the industry. He was previously employed by CuraGen Corporation, where he held a variety of scientific and operational management positions. He holds an M.B.A. and M.H.S. degree in Biomedical Sciences from Quinnipiac University, and a B.S. degree in Biology from the University of Dayton. We believe that Mr. Wagner is qualified to serve on our board of directors because of his extensive experience in the biotechnology and life sciences industries and experience serving as a member of other private and public company boards.

Family Relationships

There are no family relationships among any of our directors or executive officers.

Board Composition

Our business and affairs are managed under the direction of our board of directors. The authorized number of members on our board of directors is currently nine. Pursuant to our amended and restated certificate of incorporation, dated as of December 30, 2020, as amended and as in effect prior to the completion of this offering (our "Pre-IPO Charter"), and the Voting Agreement (as defined below), Messrs. Ho, Wagner, Mackay, Kadia, Conley, Heath and Egholm and Ms. Kedar have been designated to serve as members of our board of directors.

Under the terms of our Voting Agreement, the stockholders who are party thereto have agreed, among other things, to vote their respective shares to elect: (i) one director designated by Perceptive Life Sciences Master Fund, Ltd., which seat is currently vacant; (ii) one director designated by Northpond Ventures, LP, who is currently Ms. Kedar; (iii) one director designated by SMC Growth Capital Partners II, LP, who is currently Mr. Ho; (iv) one director designated by Connecticut Innovations, Incorporated, who is currently Mr. Wagner; (v) one director who is a member of our management, who is currently Mr. Mackay; (vi) one director not otherwise an affiliate of the Company or of any investor, designated by the holders of a majority of the shares held by the Key Holders (as defined in the Voting Agreement) who are then providing services to the Company as officers, employees, consultants or advisors, who is currently Dr. Kadia; (vii) one director not otherwise an affiliate of the Company or of any investor who is mutually acceptable to the other members of our board of directors, who is currently Mr. Conley; (viii) one director designated by all the stockholders entitled to vote upon the election of directors (voting as a single class), who is currently Dr. Heath; and (ix) one director designated by DH Life Sciences LLC, who is currently Dr. Egholm.

The provisions of our Pre-IPO Charter and the Voting Agreement by which the directors are currently elected will terminate in connection with this offering and we will not be party to any contractual obligations regarding the election of our directors following this offering.

Upon the completion of this offering, our amended and restated certificate of incorporation will provide that the board of directors shall consist of at least but not more than directors and that the number of directors may be fixed from time to time by resolution of the board of directors. The board of directors will initially consist of members.

Director Independence

Our board of directors has undertaken a review of the independence of each director. Based on information provided by each director concerning his or her background, employment and affiliations, our board of directors has determined that each of our directors other than Mr. Mackay does not have relationships that would interfere with the exercise of independent judgment in carrying out the responsibilities of a director and that each of these directors is "independent" under Nasdaq's listing rules. In making these determinations, the board of directors considered the current and prior relationships that each non-employee director has with the Company and all other facts and circumstances the board of directors deemed relevant in determining their independence, including the beneficial ownership of our capital stock by each non-employee director, and any transactions involving them described in the section titled "Certain Relationships and Related Party Transactions." Mr. Mackay is not considered independent because he is an employee of the Company.

Board Committees

Upon the completion of this offering, the board of directors will have three standing committees: the Audit Committee; the Compensation Committee; and the Nominating and Governance Committee. Each of the committees will operate under its own written charter adopted by the board of directors, each of which will be available on our website upon the completion of this offering. Members will serve on these committees until their resignation or until otherwise determined by the board of directors.

Audit Committee

Following this offering, the Audit Committee will be composed of , and , with serving as chairperson of the Audit Committee. We anticipate that, prior to the completion of this offering, the Audit Committee will determine that meet the definition of "independent director" under the rules of Nasdaq and under Rule 10A-3 under the Exchange Act. Within 90 days following the effective date of the registration statement of which this prospectus forms a part, we anticipate that the Audit Committee will consist of a majority of independent directors, and within one year following the effective date of the registration statement of which this prospectus forms a part, the Audit Committee will consist exclusively of independent directors. Our board of directors has determined that is an "audit committee financial expert" within the meaning of the SEC's regulations and the applicable listing standards of Nasdaq.

The purpose of the Audit Committee will be assisting the board of directors' oversight of (1) the integrity of our financial statements, (2) our compliance with legal and regulatory requirements, (3) the independent auditors' qualifications and independence, and (4) the performance of the independent auditors and our internal audit function. The responsibilities of the Audit Committee will include:

- appointment, compensation, retention and oversight of the work of our independent auditors and any other registered public accounting firm engaged for the purpose of preparing or issuing an audit report or to perform audit, review or attestation service;
- pre-approval, or the adoption of appropriate procedures to pre-approve, all audit and non-audit services to be provided by our independent auditors;
- consideration of reports or communications submitted to the Audit Committee by our independent auditors, including reports and communications related to the overall audit strategy;
- meeting with management and our independent auditors to discuss the scope of the annual audit, to review and discuss our financial statements and related disclosures, to discuss any significant matters arising from any audit and any major issues regarding accounting principles and financial statement presentations;
- discussing with members of the legal department any significant legal, compliance or regulatory matters that may have a material effect on our financial statements, business or compliance policies; and
- establishing procedures for the receipt, retention and treatment of complaints received by us regarding accounting, internal accounting controls or auditing matters, and for the confidential, anonymous submission by employees of concerns regarding questionable accounting or auditing matters.

Compensation Committee

Following this offering, the Compensation Committee will be composed of , and , with serving as chairperson of the Compensation Committee. The responsibilities of the Compensation Committee will include:

- establishing and approving, and making recommendations to the board of directors regarding, performance goals and objectives relevant to the compensation of our Chief Executive Officer, evaluating the performance of our Chief Executive Officer in light of those goals and objectives and setting, or recommending to the full board of directors for approval, the Chief Executive Officer's compensation, including incentive-based and equity-based compensation, based on that evaluation;

- setting the compensation of our other executive officers, based in part on recommendations of the Chief Executive Officer;
- exercising administrative authority under our equity incentive plans and employee benefit plans;
- establishing policies and making recommendations to our board of directors regarding director compensation; and
- preparing a compensation committee report on executive compensation as may be required from time to time to be included in our annual proxy statements or annual reports on Form 10-K filed with the SEC.

Nominating and Governance Committee

Following this offering, the Nominating and Governance Committee will be composed of , and , with serving as chairperson of the Nominating and Governance Committee. The responsibilities of the Nominating and Governance Committee will include:

- identifying and recommending director nominees, consistent with criteria approved by the board of directors;
- developing and recommending to the board of directors standards to be applied in making determinations as to the absence of material relationships between us and a director; and
- developing and recommending corporate governance guidelines to the board of directors.

Code of Ethics and Conduct

In accordance with Nasdaq's listing requirements and SEC rules, we will adopt a code of business conduct and ethics that applies to all of our employees, the members of our board of directors and our officers. The full text of the code will be posted on our website. We will make any legally required disclosures regarding amendments to, or waivers of, provisions of our code of ethics on our website. Information contained on our website is not incorporated by reference into this prospectus, and you should not consider information contained on our website to be part of this prospectus or in deciding to purchase shares of our common stock.

Compensation Committee Interlocks and Insider Participation

None of the members of the Compensation Committee are current or former officers or employees of the Company. We are party to certain transactions with the principal stockholder described in "Certain Relationships and Related Party Transactions." None of our executive officers serves as a director or member of a compensation committee of another entity.

DIRECTOR COMPENSATION

None of our independent directors received any cash fees or grants of any equity or equity-based awards or any other compensation for their services as directors in 2020. As of December 31, 2020, Messrs. Conley and Heath held an aggregate of 12,594 stock options to purchase shares of our common stock (of which 10,927 were fully vested) and 29,236 stock options (of which 25,986 were fully vested), respectively.

In April 2021, we entered into a director agreement with Siddhartha Kadia, pursuant to which Dr. Kadia agreed to serve on our board of directors commencing on March 29, 2021. The agreement provides, among other things, that Dr. Kadia will receive $50,000 annually for his service as a director and stock options to purchase 5,000 shares of our common stock subject to the terms of our 2014 Stock Plan (see "Executive Compensation—Equity Plans — 2014 Stock Plan"), with 25% of the stock options vesting upon the first anniversary of the vesting commencement date, and the remainder vesting in 36 equal monthly installments thereafter.

Post-Offering Director Compensation

Upon the completion of this offering, we will adopt a compensation policy for our independent directors (the "Director Compensation Policy"). The Director Compensation Policy will govern compensation paid to our independent directors beginning and to any newly appointed independent directors as of the completion of this offering and is intended to reward our independent directors for their experience and performance, motivate them to achieve our long-term strategic goals, and help align our director compensation program with those of leading U.S.-based publicly traded companies. As we transition to become a publicly traded company, we intend to periodically evaluate our Director Compensation Policy as part of our regular reviews of our overall compensation strategy.

One-Time Grants

Under our Director Compensation Policy, new independent directors joining our board of directors would receive a one-time grant of $ of , based on the fair market value of our common stock at the time of the grant. The vest over years from the date of grant, subject to continued service.

Annual Retainers and Grants

Our Director Compensation Policy provides that each of our independent directors would receive an annual cash retainer of $. Our Director Compensation Policy provides that we would grant to each applicable independent director $ of to the Chair of our Audit Committee, $ of to the Chair of our Compensation Committee, $ of to the Chair of our Nominating and Governance Committee, $ of to each member of our Audit Committee, $ of to each member of our Compensation Committee and $ of to each member of our Nominating and Governance Committee, in each case on an annual basis and based on the fair market value of our common stock at the time of the grants. These would vest .

CERTAIN RELATIONSHIPS AND RELATED PARTY TRANSACTIONS

Other than compensation arrangements for our executive officers and directors which are described elsewhere in this prospectus, see "Executive Compensation—Narrative Disclosure to Summary Compensation Table—*Employment Agreements*," below we describe transactions since January 1, 2018 to which we were or will be a participant and in which:

- the amounts involved exceeded or will exceed $120,000; and
- any of our directors, executive officers or holders of more than 5% of our outstanding voting securities, or any member of the immediate family of, or person sharing the household with, the foregoing persons, had or will have a direct or indirect material interest.

Convertible Preferred Stock Financings

Series D Convertible Preferred Stock Financing

In December 2020 and January 2021, we issued and sold an aggregate of 1,105,045 shares of our Series D redeemable convertible preferred stock at a purchase price of $76.92 per share for an aggregate purchase price of approximately $85.0 million. All shares of our Series D redeemable convertible preferred stock will convert into shares of our common stock concurrently with the closing of this offering in accordance with our Pre-IPO Charter. The following table summarizes purchases of our Series D redeemable convertible preferred stock by investors that hold more than 5% of our outstanding voting securities and their affiliated entities.

Investor	Series D Convertible Preferred Shares	Total Purchase Price
Connecticut Innovations, Incorporated[(1)]	13,000	$ 999,960.00
Entities affiliated with BlackRock, Inc.[(2)]	195,008	$ 15,000,015.36
Entities affiliated with Danaher Innovation Center LLC[(3)]	55,902	$ 4,299,981.84
Entities affiliated with Northpond Ventures, LP[(4)]	321,114	$ 24,700,088.88
Entities affiliated with Perceptive Advisors LLC[(5)]	390,016	$ 30,000,030.72

(1) Daniel Wagner, a member of our board of directors, is affiliated with Connecticut Innovations, Incorporated.
(2) Entities affiliated with BlackRock, Inc. whose shares are aggregated for the purposes of reporting ownership information include BlackRock Health Sciences Master Unit Trust and BlackRock Health Sciences Trust II.
(3) Entities affiliated with Danaher Innovation Center LLC whose shares are aggregated for the purposes of reporting ownership information include Danaher Innovation Center LLC and DH Life Sciences LLC. Michael Egholm, a member of our board of directors, is affiliated with Danaher Innovation Center LLC.
(4) Entities affiliated with Northpond Ventures, LP whose shares are aggregated for the purposes of reporting ownership information include Northpond Capital, LP and Northpond Ventures II, LP. Sharon Kedar, a member of our board of directors, is affiliated with Northpond Ventures, LP.
(5) Entities affiliated with Perceptive Advisors LLC whose shares are aggregated for the purposes of reporting ownership information include Perceptive Life Sciences Master Fund, Ltd., Perceptive Credit Holdings III, LP and PCOF EQ AIV III, LP.

Series C-2 Convertible Preferred Stock Financing

In December 2019, we issued and sold an aggregate of 515,218 shares of our Series C-2 redeemable convertible preferred stock at a purchase price of $48.5231 per share for an aggregate purchase price of approximately $25.0 million. All shares of our Series C-2 redeemable convertible preferred stock will convert into shares of our common stock concurrently with the closing of this offering in accordance with our Pre-IPO Charter. The following table

summarizes purchases of our Series C-2 redeemable convertible preferred stock by investors that hold more than 5% of our outstanding voting securities and their affiliated entities.

Investor	Series C-2 Convertible Preferred Shares	Total Purchase Price
Connecticut Innovations, Incorporated[(1)]	30,913	$ 1,499,994.59
Entities affiliated with Danaher Innovation Center LLC[(2)]	61,826	$ 2,999,989.18
Entities affiliated with Northpond Ventures, LP[(3)]	309,131	$ 14,999,994.43
Entities affiliated with Spring Mountain Capital[(4)]	103,044	$ 5,000,014.32

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(1) Daniel Wagner, a member of our board of directors, is affiliated with Connecticut Innovations, Incorporated.
(2) Entities affiliated with Danaher Innovation Center LLC whose shares are aggregated for the purposes of reporting ownership information include Danaher Innovation Center LLC and DH Life Sciences LLC. Michael Egholm, a member of our board of directors, is affiliated with Danaher Innovation Center LLC.
(3) Entities affiliated with Northpond Ventures, LP whose shares are aggregated for the purposes of reporting ownership information include Northpond Capital, LP and Northpond Ventures II, LP. Sharon Kedar, a member of our board of directors, is affiliated with Northpond Ventures, LP.
(4) Entities affiliated with Spring Mountain Capital whose shares are aggregated for the purposes of reporting ownership information include SMC Holdings II, LP, SMC Private Equity Holdings, LP and SMC Growth Capital Partners II, LP. Gregory Ho, a member of our board of directors, is affiliated with Spring Mountain Capital.

Series C Convertible Preferred Stock Financing

In November 2018, we issued and sold an aggregate of 564,287 shares of our Series C redeemable convertible preferred stock at a purchase price of $44.3037 per share for an aggregate purchase price of approximately $25.0 million. All shares of our Series C redeemable convertible preferred stock will convert into shares of our common stock concurrently with the closing of this offering in accordance with our Pre-IPO Charter. The following table summarizes purchases of our Series C redeemable convertible preferred stock by investors that hold more than 5% of our outstanding voting securities and their affiliated entities.

Investor	Series C Convertible Preferred Shares	Total Purchase Price
Connecticut Innovations, Incorporated[(1)]	16,928	$ 749,973.03
Entities affiliated with Danaher Innovation Center LLC[(2)]	112,857	$ 4,999,982.67
Entities affiliated with Northpond Ventures, LP[(3)]	287,785	$ 12,749,940.30
Entities affiliated with Spring Mountain Capital[(4)]	103,832	$ 4,600,141.78
North Sound Ventures, LP	28,214	$ 1,249,984.59

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(1) Daniel Wagner, a member of our board of directors, is affiliated with Connecticut Innovations, Incorporated.
(2) Entities affiliated with Danaher Innovation Center LLC whose shares are aggregated for the purposes of reporting ownership information include Danaher Innovation Center LLC and DH Life Sciences LLC. Michael Egholm, a member of our board of directors, is affiliated with Danaher Innovation Center LLC.
(3) Entities affiliated with Northpond Ventures, LP whose shares are aggregated for the purposes of reporting ownership information include Northpond Capital, LP and Northpond Ventures II, LP. Sharon Kedar, a member of our board of directors, is affiliated with Northpond Ventures, LP.
(4) Entities affiliated with Spring Mountain Capital whose shares are aggregated for the purposes of reporting ownership information include SMC Holdings II, LP, SMC Private Equity Holdings, LP and SMC Growth Capital Partners II, LP. Gregory Ho, a member of our board of directors, is affiliated with Spring Mountain Capital.

Credit Agreement and Guaranty

We are party to our Credit Agreement, dated as of December 30, 2020, with Perceptive Credit Holdings III, LP, as Administrative Agent and as a lender, which provides for senior secured financing of up to $50.0 million consisting of a $25.0 million Tranche A term loan and a $25.0 million Tranche B term loan. Perceptive Credit

Holdings III, LP is an affiliate of Perceptive Advisors LLC, which is a holder of more than 5% of our outstanding voting securities. The full amount of the Tranche A term loan was drawn on December 30, 2020 and our ability to draw the Tranche B term loan is subject to several conditions, including that the Administrative Agent shall have received evidence that we achieved total revenue of at least $20.0 million for the twelve-month period then most recently ended. Borrowings under the Credit Agreement bear interest at a rate per annum equal to the one-month LIBOR rate (with a minimum LIBOR rate for such purposes of 1.75%) plus a margin of 9.50%. The obligations under the Credit Agreement are secured by a security interest in substantially all of the assets of the Company, whether now owned or later acquired. See "Description of Certain Indebtedness—Secured Term Loan Facility."

In connection with the execution of the Credit Agreement, we issued to Perceptive Credit Holdings III, LP a warrant to purchase up to 97,504 shares of Series D redeemable convertible preferred stock at a price per share equal to $76.92. See "Description of Capital Stock—Warrants."

Investors' Rights Agreement

We are party to our Sixth Amended and Restated Investors' Rights Agreement (the "Investor Rights Agreement"), dated as of December 30, 2020, with certain holders of our capital stock, including entities affiliated with Northpond Ventures, LP, Spring Mountain Capital, Perceptive Advisors LLC, Connecticut Innovations, Incorporated and Danaher Innovation Center LLC. The Investor Rights Agreement provides, among other things, that certain holders of our capital stock have the right to demand that we file a registration statement or request that their shares of capital stock be covered by a registration statement that we are otherwise filing, subject to certain exceptions. The registration and associated rights will expire no later than five years following the completion of this offering. See "Description of Capital Stock—Authorized Capital Stock—Registration Rights" for additional information regarding these registration rights. Also under our Investor Rights Agreement, our stockholders party thereto have entered into customary market standoff agreements with us for the benefit of the underwriters, pursuant to which such stockholders have entered into lock-up agreements in connection with the offering. See "Shares Eligible for Future Sale—Lock-Up Agreements and Market Standoff Provisions." All other rights set forth in the Investor Rights Agreement will terminate immediately prior to the completion of this offering.

Right of First Refusal and Co-Sale Agreement

We are party to our Sixth Amended and Restated Right of First Refusal and Co-Sale Agreement (the "Right of First Refusal Agreement"), dated as of December 30, 2020, under which we have a right of first refusal, and certain holders satisfying an ownership threshold of redeemable convertible preferred stock have a right of first refusal and co-sale, with respect to shares of capital stock that certain stockholders propose to sell to third parties. The Right of First Refusal Agreement will terminate immediately prior to the completion of this offering. Entities affiliated with Northpond Ventures, LP, Spring Mountain Capital, Perceptive Advisors LLC, Connecticut Innovations, Incorporated and Danaher Innovation Center LLC are among the parties to the Right of First Refusal Agreement.

Voting Agreement

We are party to our Sixth Amended and Restated Voting Agreement (the "Voting Agreement"), dated as of December 30, 2020, under which certain holders of our capital stock, including Sean Mackay, our Chief Executive Officer, and entities affiliated with Northpond Ventures, LP, Spring Mountain Capital, Perceptive Advisors LLC, Connecticut Innovations, Incorporated and Danaher Innovation Center LLC, have agreed to the manner in which they will vote their shares on certain matters, including the election of directors. See "Management—Board Composition." In connection with this offering, the Voting Agreement will terminate following completion of this offering and none of our stockholders will have any special rights regarding the election or designation of any members of our board of directors or the voting of our capital stock.

Indemnification Agreements

We are currently party to and, in connection with this offering, we intend to enter into, an indemnification agreement with each of our directors and officers. These agreements will require us to indemnify these individuals to the fullest extent permitted under the DGCL against liabilities that may arise by reason of their service to us, and to

advance expenses incurred as a result of any proceeding against them as to which they could be indemnified. See "Description of Capital Stock—Limitation of Liability and Indemnification of Directors and Officers."

Policy on Related Party Transactions

In connection with this offering, we have adopted a policy with respect to the review, approval and ratification of related party transactions. Under the policy, our Audit Committee is responsible for reviewing and approving related party transactions. This policy will cover any transaction, arrangement or relationship, or any series of similar transactions, arrangements or relationships, in which we were or are to be a participant and a related party had or will have a direct or indirect material interest, as determined by the Audit Committee, including purchases of goods or services by or from the related party or entities in which the related party has a material interest, and indebtedness, guarantees of indebtedness or employment by us of a related party. In the course of its review and approval of related party transactions, our Audit Committee will consider the relevant facts and circumstances to decide whether to approve such transactions, including, but not limited to, the purpose of the transaction, whether the transaction is on terms comparable to those that could be obtained in an arm's length transaction with an unrelated third party under the same or similar circumstances and the extent of the related party's interest in the transaction. Related party transactions must be approved or ratified by the Audit Committee based on full information about the proposed transaction and the related party's interest.

EXECUTIVE COMPENSATION

As an emerging growth company under the JOBS Act, we have opted to comply with the executive compensation disclosure rules applicable to "smaller reporting companies" as such term is defined in the rules promulgated under the Securities Act, which permit us to limit reporting of executive compensation to our principal executive officer and our two other most highly compensated executive officers.

Our executive compensation program is designed to attract, motivate and retain high quality leadership and incentivize our executive officers to achieve performance goals over the short- and long-term, which also aligns the interests of our executive officers with those of our shareholders.

Our named executive officers ("NEOs") for 2020, which consist of our principal executive officer and our two other most highly compensated executive officers, were:

- Sean Mackay, our Chief Executive Officer;
- John Strahley, our Chief Financial Officer; and
- Peter Siesel, our Chief Commercial Officer.

Summary Compensation Table

The following table presents compensation awarded to, earned by and paid to our NEOs for the fiscal year ended December 31, 2020.

Name and Principal Position	Year	Salary ($)	Option Awards ($)[1]	Nonequity Incentive Plan Compensation ($)[2]	Total ($)
Sean Mackay, *Chief Executive Officer*	2020	380,000	439,560	150,000	969,560
John Strahley, *Chief Financial Officer*	2020	250,000	—	75,000	325,000
Peter Siesel, *Chief Commercial Officer*	2020	171,875[3]	40,700	80,000	292,575

(1) The amounts reported here do not reflect the actual economic value realized by each NEO. In accordance with SEC rules, these columns represent the grant date fair value of shares underlying stock options, calculated in accordance with Accounting Standards Update 718, "Compensation—Stock Compensation (Topic 718)." For additional information, see note 2 in "Notes to the Consolidated Financial Statements." The assumptions used in calculating the grant date fair value of the stock options reported in this table are set forth in the section titled "Management's Discussion and Analysis of Financial Condition and Results of Operations—Critical Accounting Policies and Significant Judgments and Estimates—Share-Based Compensation."

(2) Reflects annual incentive bonuses. See "—Annual Incentive Awards" below for more information.

(3) Reflects Mr. Siesel's annual salary pro-rated from his hire date in May 2020.

Narrative Disclosure to Summary Compensation Table

The following describes the material elements of our compensation program for the year ended December 31, 2020 as applicable to our NEOs and reflected in the Summary Compensation Table above. As part of our transition to a publicly-traded company in connection with this offering, we will evaluate our executive compensation program, which may differ in several respects from our historical program. For information on certain elements of our executive compensation program that we intend to adopt in connection with this offering, see "—Post-Offering Compensation" below.

Base Salary

Base salaries for our executive officers were established primarily based on individual negotiations with the executive officers when they joined the Company. In determining compensation for our executive officers, we considered salaries provided to executive officers of our peer companies, each executive officer's anticipated role criticality relative to others at the Company, and our determination of the essential need to attract and retain these executive officers.

Annual Incentive Awards

Each of our NEOs is eligible to receive an annual cash bonus, with the target opportunity expressed as an amount, in the case of Mr. Mackay, or a percentage of base salary in the case of Messrs. Strahley and Siesel and payable based upon the achievement of performance goals set annually by our board of directors.

Employee Benefits and Perquisites

Our NEOs are eligible to participate in our health and welfare plans on the same terms and conditions as provided to our full-time employees generally. We generally do not provide our NEOs with perquisites or other personal benefits.

Retirement Benefits

We maintain a 401(k) plan that provides eligible U.S. employees with an opportunity to save for retirement on a tax advantaged basis. Eligible employees are able to defer eligible compensation up to certain Code limits, which are updated annually. Contributions are allocated to each participant's individual account and are then invested in selected investment alternatives according to the participants' directions. Employees are immediately and fully vested in their own contributions. The Company may elect to make matching or other contributions into participants' individual accounts. The Company did not make any such contributions in 2020, but our board of directors has approved a 3% matching contribution beginning in respect of 2021. The 401(k) plan is intended to be qualified under Section 401(a) of the Code, with the related trust intended to be tax exempt under Section 501(a) of the Code. As a tax-qualified retirement plan, contributions to the 401(k) plan are deductible by us when made, and contributions and earnings on those amounts are not taxable to the employees until withdrawn or distributed from the 401(k) plan.

Employment Agreements

We currently do not have a formal employment agreement or offer letter with Mr. Mackay.

In November 2019 and May 2020, Messrs. Strahley and Siesel, respectively, each executed an offer letter with the Company, which provides for at-will employment and sets forth initial base salary, eligibility for an annual cash bonus and certain employee benefits. Mr. Strahley's offer letter additionally provides that upon a termination of his employment by the Company without cause at any time prior to, or within twelve months following, a "change in control" of the Company (as defined in the offer letter), Mr. Strahley would be entitled to an amount equal to six months of his then-current base salary, subject to his execution of the Company's standard form of severance agreement.

Long-Term Incentive Awards

We have granted our NEOs from time to time stock options to purchase shares of our common stock, each with an exercise price equal to the fair market value of a share of our common stock on the date of grant and subject to the terms of our 2014 Stock Plan (see "—Equity Plans—2014 Stock Plan" below) and the applicable award agreement. Generally 25% of the stock options granted to the NEOs vest upon the first anniversary of the vesting commencement date, with the remainder vesting in 36 equal monthly installments thereafter. Certain of Mr. Mackay's and Mr. Siesel's stock options are also subject to performance goals. For more information on the stock options granted to our NEOs and any applicable performance goals, see the "Outstanding Equity Awards Table" and accompanying footnote disclosure below.

In the event a NEO terminates employment for any reason, all unvested stock options are forfeited, unless the NEO is terminated by the Company for cause, in which case both vested and unvested stock options are forfeited.

In recognition of Mr. Mackay's performance during 2020, in December 2020 our board of directors accelerated the vesting of 85,000 of the 108,000 stock options granted to Mr. Mackay in 2020. In addition, 28,000 and 23,000 stock options granted to Mr. Mackay in 2018 and 2020, respectively, were forfeited in accordance with their terms or canceled, as applicable.

Outstanding Equity Awards at Fiscal Year-End

The following table presents information regarding outstanding equity awards held by our NEOs as of December 31, 2020.

		Option Awards				
Name	**Grant Date**	**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**
Sean Mackay	11/01/2015	12,916	2,084	—	2.23	10/31/2025
	10/20/2016	6,500	—	—	3.52	10/19/2026
	10/05/2017	11,958	3,792	1,750 [4]	5.81	10/4/2027
	01/16/2018	2,187	813	—	5.81	1/15/2028
	02/12/2018	5,000	1,000	—	5.81	2/11/2028
	06/29/2018	4,062	2,438	—	5.81	6/28/2028
	09/27/2018	2,812	2,188	—	5.81	9/26/2028
	12/14/2018	6,000	6,000	—	7.70	12/13/2028
	04/15/2020	85,000 [2]	—	—	8.22	4/14/2030
John Strahley	12/04/2019	3,125	9,375	—	8.22	12/03/2029
Peter Siesel	06/10/2020	—	10,000 [3]		8.22	06/09/2030

(1) These stock options are subject to the time-based vesting schedule described above in "—Long Term Incentive Awards."
(2) These stock options were granted subject to the achievement of certain 2020 revenue targets. As described above in "—Long Term Incentive Awards", in December 2020 our board of directors accelerated the vesting of these stock options.
(3) Includes 3,500 stock options that were subject to vesting based upon the achievement of our 2020 revenue target, which was achieved, in addition to the time-based vesting schedule described above in "—Long Term Incentive Awards."
(4) These stock options vest based upon the achievement of specified sales goals and are also subject to the time-based vesting schedule described above in "—Long Term Incentive Awards."

Emerging Growth Company Status

We are an "emerging growth company" as defined in the JOBS Act. As an emerging growth company we will be exempt from certain requirements related to executive compensation, including, but not limited to, the requirements to hold a nonbinding advisory vote on executive compensation and to provide information relating to the ratio of total compensation of our Chief Executive Officer to the median of the annual total compensation of all of our employees, each as required by the Investor Protection and Securities Reform Act of 2010, which is part of the Dodd-Frank Wall Street Reform and Consumer Protection Act.

Potential Payments Upon Termination or Change in Control

Other than Mr. Strahley's severance payments described above in the section titled "—Employment Agreement," none of our NEOs are entitled to any payments or benefits that are payable upon termination or in connection with a change in control of the Company.

Equity Plans

2014 Stock Plan

Our 2014 Stock Plan (the "2014 Plan") was adopted by our board of directors and our stockholders in May 2014. Our 2014 Plan provides for the grant of non-qualified stock options, incentive stock options ("ISOs") and restricted and unrestricted stock. Awards may be granted to employees, officers, directors, advisors and consultants of the Company or any of its affiliates.

As of December 31, 2020, 480,483 shares of our common stock were available for issuance under our 2014 Plan. As of December 31, 2020, stock options to purchase 384,613 shares of our common stock were outstanding with a weighted-average exercise price of $5.78 per share, of which stock options to purchase 285,450 shares were vested and exercisable with a weighted-average exercise price of $5.25 per share.

Shares of our common stock granted under the 2014 Plan that are reacquired by the Company or underlying forfeited or canceled awards will again be available for issuance under the 2014 Plan.

Our 2014 Plan is administered by our board of directors or a committee designated by our board of directors (as applicable, the "administrator"). The administrator has the authority to grant awards; to construe, and determine the terms and provisions of, the applicable award agreements and the 2014 Plan (including correcting any defect or any inconsistencies); to prescribe, amend and rescind rules and regulations relating to the 2014 Plan; and to make all other determinations in the judgment of the administrator necessary or desirable for the administration of the 2014 Plan. The administrator's interpretation of the 2014 Plan is final and conclusive.

In the event of any recapitalization, reclassification, stock dividend, stock split, reverse stock split, liquidation, exchange of shares, spin-off, combination, consolidation or other similar transaction, an appropriate and proportionate adjustment shall be made in (i) the maximum number and kind of shares reserved for issuance under the 2014 Plan, (ii) the number and kind of restricted shares granted and shares or other securities subject to any then outstanding options and (iii) the exercise price of any stock options. The administrator's determination regarding adjustments will final, binding and conclusive.

In the event of a "change in control" (as defined in the 2014 Plan), the 2014 Plan provides the administrator with discretion to, with respect to an award, provide for (1) full or partial vesting or (2) cash-out of a vested award.

Awards granted under our 2014 Plan generally may not be transferred or assigned in any manner other than by will, by the laws of descent and distribution, unless otherwise permitted by the administrator.

The administrator may amend or modify the 2014 Plan at any time without either a participant's consent (unless such amendment or waiver would adversely impact the rights of the participant) or stockholder approval (unless such approval is required under applicable law).

Unless sooner terminated in accordance with its terms, the 2014 Plan will terminate upon the earliest of (i) any date determined by our board of directors, (ii) the date all shares under the 2014 Plan have been issued and are free of all restrictions and (iii) the dissolution or liquidation of the Company.

Post-Offering Compensation

2021 Equity Incentive Plan

We plan to adopt the 2021 Stock Plan (the "2021 Plan") pursuant to which equity-based and cash incentives may be granted to current or prospective directors, officers, employees and consultants. We expect our board of

directors to adopt, and our stockholders to approve, the 2021 Plan prior to the completion of this offering. The 2021 Plan is intended to replace the 2014 Plan and, once the 2021 Plan is effective, no further grants will be made under the 2014 Plan. The following is a summary of certain terms and conditions of the 2021 Plan.

The 2021 Plan will provide for the grant of nonqualified stock options, incentive (qualified) stock options, stock appreciation rights, restricted share awards, restricted stock units, performance awards, cash incentive awards and other equity-based awards (including deferred share units and fully vested shares).

Our Compensation Committee will administer the 2021 Plan and will have the authority to determine the terms and conditions of any agreements evidencing awards granted under the 2021 Plan and to establish, amend, suspend or waive such rules or regulations relating to the 2021 Plan as it deems appropriate. Our Compensation Committee will have full discretion to administer and interpret the 2021 Plan and to establish such rules, regulations and procedures, and to determine, among other things, the circumstances under which the awards may be vested, exercised or settled. With respect to director awards, our board of directors may, at its discretion, grant or administer such awards, or may delegate such authority to a committee of our board of directors.

Any current or prospective directors, officers, employees and consultants of the Company or its affiliates who are selected by our Compensation Committee will be eligible for awards under the 2021 Plan. As of the date of this prospectus, approximately would be eligible.

The number of shares of our common stock initially reserved for issuance under the 2021 plan will be . The maximum amount payable to any non-employee director under the 2021 Plan for any single calendar year will be $.

Shares of our common stock underlying forfeited or canceled awards will again be available for issuance under the 2021 Plan, but shares of our common stock used to pay any exercise price or applicable tax withholding obligation with respect to an award will not.

If there is a change in the Company's corporate capitalization in the event of an extraordinary dividend or other extraordinary distribution (whether in the form of cash, shares or other securities or property), recapitalization, rights offering, stock split, reverse stock split, split-off or spin-off, our Compensation Committee will equitably adjust any or all of the following: (1) the number and kind of securities reserved for issuance under the 2021 Plan, (2) the number and kind of securities covered by awards then outstanding under the 2021 Plan and (3) the exercise price, if applicable, with respect to any award. In addition, upon any reorganization, merger, consolidation, combination, repurchase or exchange of securities of the Company, issuance of warrants or other rights to purchase securities of the Company or other similar corporate transaction or event affecting the shares or the financial statements of the Company or any affiliate, or any changes in applicable rules, rulings, regulations or other requirements of any governmental body or securities exchange, accounting principles or law, then our Compensation Committee may, in such manner as it may deem appropriate or desirable, (1) make any of the adjustments described above; (2) adjust any performance goal, target or measure, as applicable; (3) make provision for a cash payment to the holder of an outstanding award in consideration for the cancellation of such award; or (4) provide for the cancellation, substitution, termination or acceleration of vesting of any award.

Unless otherwise provided in an award agreement, in the event of a "change in control" (as defined in the 2021 Plan) in which no provision is made for the acquirer's assumption of or substitution for awards, then any outstanding unvested or unexercisable award will automatically become vested and exercisable immediately prior to such change in control, with any applicable performance conditions deemed achieved at target or actual performance as determined by our Compensation Committee.

Awards granted under our 2021 Plan generally may not be transferred or assigned in any manner other than by will, by the laws of descent and distribution, unless otherwise permitted by the committee.

Awards may be subject to clawback or forfeiture to the extent required by applicable law or the rules and regulations of Nasdaq or other applicable securities exchange, or if so required pursuant to a written policy adopted by the Company or the provisions of an award agreement.

The 2021 Plan will have a term of ten years. Our board of directors may amend, modify or terminate the 2021 Plan at any time, subject to stockholder approval of any amendment to increase the number of shares of our common stock reserved under the plan (other than certain adjustments upon changes in capitalization), to change the class of individuals eligible to participate or to reprice options or stock appreciation right in a manner that requires stockholder approval. No amendment, modification or termination may materially and adversely affect the rights of any participant of any award without the consent of the participant. Our Compensation Committee may amend, modify or terminate any award granted or related award agreement without a participant's consent unless such amendment, modification or termination would materially and adversely affect the rights of any participant. In addition, any such amendment or modification to reprice options or stock appreciation right in a manner that requires stockholder approval will be subject to such stockholder approval.

PRINCIPAL STOCKHOLDERS

The following table sets forth certain information with respect to beneficial ownership of our common stock as of and as adjusted to reflect the issuance and sale of our common stock in this offering, assuming no exercise of the underwriters' option to purchase additional shares, for:

- each person, or group of affiliated persons, known by us to beneficially own more than 5% of the outstanding shares of our common stock;
- each of our directors;
- each of our named executive officers; and
- all of our executive officers and directors as a group.

The number of shares beneficially owned by each stockholder is determined under the rules of the SEC and includes voting or investment power with respect to securities. Under these rules, beneficial ownership includes any shares as to which the individual or entity has sole or shared voting power or investment power. In computing the number of shares beneficially owned by an individual or entity and the percentage ownership of that person, shares of common stock subject to options, warrants or other rights held by such person that are currently exercisable or will become exercisable within 60 days of are considered outstanding, although these shares are not considered outstanding for purposes of computing the percentage ownership of any other person.

We have based our calculation of the applicable percentage of beneficial ownership prior to this offering on shares of common stock outstanding as of , assuming (i) the Preferred Stock Conversion, (ii) the Series A-2 Warrant Exercise and (iii) the Series D Warrant Exercise. We have based our calculation of the applicable percentage of beneficial ownership after this offering on shares of common stock outstanding immediately after the completion of this offering, giving effect to the foregoing assumptions (i) through (iii) and assuming that the underwriters will not exercise their option to purchase additional shares of our common stock from us.

Except as otherwise indicated in the footnotes to the following table, to our knowledge all persons listed below have sole voting and investment power with respect to the shares beneficially owned by them, subject to applicable community property laws.

Except as otherwise indicated, the address for each stockholder listed below is c/o IsoPlexis Corporation, 35 NE Industrial Rd, Branford, CT 06405.

	Shares beneficially owned prior to this offering		Shares beneficially owned after this offering	
Name and address of beneficial owners	**Number**	**Percent**	**Number**	**Percent**
5% stockholders:				
Connecticut Innovations, Incorporated[1]		%		%
Danaher Innovation Center LLC[2]		%		%
Entities affiliated with BlackRock, Inc.[3]		%		%
Entities affiliated with Northpond Ventures, LP[4]		%		%
Entities affiliated with Perceptive Advisors LLC[5]		%		%
Entities affiliated with Spring Mountain Capital[6]		%		%
North Sound Ventures, LP[7]		%		%
Directors and named executive officers:				
Sean Mackay		%		%
John Conley		*		*
Michael Egholm		*		*

James Heath	*	*
Gregory Ho	*	*
Siddhartha Kadia	*	*
Sharon Kedar	*	*
Peter Siesel	*	*
John Strahley	*	*
Daniel Wagner	*	*
Jing Zhou	*	*
All executive officers and directors as a group (11 persons)	%	%

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* Represents beneficial ownership of less than one percent of our outstanding shares of common stock.

(1) The address of the entities mentioned in this footnote is c/o 470 James Street, Suite 8, New Haven, CT 06513.

(2) The address of the entity mentioned in this footnote is c/o 2200 Pennsylvania Avenue, N.W., Suite 800W, Washington D.C. 20037.

(3) The registered holders of the referenced shares are funds and accounts under management by subsidiaries of BlackRock, Inc. BlackRock, Inc. is the ultimate parent holding company of such subsidiaries. On behalf of such subsidiaries, the applicable portfolio managers, as managing directors (or in other capacities) of such entities, and/or the applicable investment committee members of such funds and accounts, have voting and investment power over the shares held by the funds and accounts which are the registered holders of the referenced shares. Such portfolio managers and/or investment committee members expressly disclaim beneficial ownership of all shares held by such funds and accounts. The address of such funds and accounts, such subsidiaries and such portfolio managers and/or investment committee members is 55 East 52nd Street, New York, NY 10055 and 60 State Street, 19th/20th Floor, Boston, MA 02109.

(4) Consists of . The address of the entities mentioned in this footnote is c/o 7500 Old Georgetown Road, Suite 850, Bethesda, MD 20814.

(5) Consists of . The address of the entities mentioned in this footnote is c/o 51 Astor Place, 10th Floor, New York, NY 10003.

(6) Consists of . The address of the entities mentioned in this footnote is c/o 650 Madison Avenue, 20th Floor, New York, NY 10022.

(7) The address of the entity mentioned in this footnote is c/o 115 E. Putnam Ave, Greenwich, CT 06830.

DESCRIPTION OF CERTAIN INDEBTEDNESS

The following is a summary of the material terms of certain of our indebtedness. The summary is qualified in its entirety by reference to the full text of the agreements governing the terms of such indebtedness, which are filed as exhibits to the registration statement of which this prospectus is a part.

Secured Term Loan Facility

Overview. On December 30, 2020, we entered into the Credit Agreement with Perceptive Credit Holdings III, LP, as Administrative Agent, which provides for senior secured financing of up to $50.0 million, consisting of:

- a $25.0 million Tranche A term loan; and
- a $25.0 million Tranche B term loan.

In connection with the execution of the Credit Agreement, we issued to Perceptive Credit Holdings III, LP a warrant to purchase up to 97,504 shares of Series D redeemable convertible preferred stock at a price per share equal to $76.92. See "Description of Capital Stock—Warrants."

The full amount of the Tranche A term loan was drawn at the initial closing of the Credit Agreement on December 30, 2020. Our ability to draw the Tranche B term loan is subject to several conditions, including that the Administrative Agent shall have received evidence satisfactory to the Administrative Agent that we achieved total revenue of at least $20.0 million for the twelve month period then most recently ended. All borrowings under the Credit Agreement are also subject to the satisfaction of customary conditions, including the accuracy of certain representations and warranties and the absence of a default. Unless accelerated prior to such date, all amounts outstanding under the Credit Agreement are due to be repaid on December 30, 2025. No regularly scheduled payments of principal or interest are required prior to the maturity date of the Credit Agreement.

Interest rate. Borrowings under the Credit Agreement bear interest at a rate per annum equal to the one-month LIBOR rate (with a minimum LIBOR rate for such purposes of 1.75%) plus a margin of 9.50%.

Collateral and Guarantees. The obligations under the Credit Agreement are secured by a security interest in substantially all of the assets of the Company, whether now owned or later acquired.

The obligations under the Credit Agreement are not currently guaranteed by any other person or entity. Any of our future majority-owned subsidiaries will be required to guarantee the obligations under the Credit Agreement.

Prepayments. We are required to prepay outstanding loans under the Credit Agreement, subject to certain exceptions, with:

- 100% of the net proceeds of certain asset sales and insurance/condemnation events, subject to reinvestment rights and certain other exceptions; and
- 100% of the net proceeds of any incurrence of debt, excluding certain permitted debt issuances.

In addition, voluntary prepayments of the loans are permitted, in whole or in part, in minimum amounts, subject to prepayment premiums as follows:

- on or prior to the first anniversary of the closing date of the Credit Agreement, 7% of the principal amount being prepaid;
- after the first anniversary of the closing date of the Credit Agreement, and on or prior to the second anniversary, 6% of the principal amount being prepaid;
- after the second anniversary of the closing date of the Credit Agreement, and on or prior to the third anniversary of the Closing Date, 4% of the principal amount being prepaid;

- after the third anniversary of the closing date of the Credit Agreement, and on or prior to the fourth anniversary, 3% of the principal amount being prepaid; and
- after the fourth anniversary of the closing date of the Credit Agreement, and prior to December 30, 2025, 2% of the principal amount being prepaid.

Restrictive covenants and other matters. The Credit Agreement requires us to comply with, among other things, (i) a minimum liquidity test requiring that we have unrestricted cash (as defined in the Credit Agreement) of not less than $3.0 million at all times and (ii) a quarterly minimum total revenue covenant for the trailing twelve month period, which revenue threshold begins at approximately $15.02 million for the twelve months ending June 30, 2021 and increases over time. We are currently in compliance with these financial covenants.

In addition, the Credit Agreement includes negative covenants that, subject to exceptions, limit our ability to, among other things:

- incur indebtedness or guarantees, or subject its assets to any liens;
- make investments and loans;
- make capital expenditures;
- engage in mergers, acquisitions and asset sales;
- engage in new lines of business;
- declare dividends, make payments or redeem or repurchase equity interests;
- enter into agreements limiting restricted subsidiary distributions;
- prepay, redeem or purchase certain indebtedness; and
- engage in certain transactions with affiliates.

The Credit Agreement also contains customary representations and warranties, affirmative covenants and events of default. If any such event of default occurs, the Administrative Agent under the Credit Agreement will be entitled to take various actions, including the acceleration of all amounts due under the Credit Agreement and all other actions permitted to be taken by a secured creditor.

DESCRIPTION OF CAPITAL STOCK

The following description summarizes the most important terms of our capital stock. We will adopt an amended and restated certificate of incorporation and amended and restated bylaws in connection with this offering, and the provisions of our amended and restated certificate of incorporation and amended and restated bylaws that will be in effect upon the completion of this offering and relevant sections of the Delaware General Corporation Law (the "DGCL") are summarized below. The forms of our amended and restated certificate of incorporation and amended and restated bylaws have been filed as exhibits to the registration statement of which this prospectus is a part. The following descriptions of our capital stock and provisions of our amended and restated certificate of incorporation, our amended and restated bylaws and provisions of the DGCL are summaries and are qualified by reference to our amended and restated certificate of incorporation and our amended and restated bylaws that will be in effect upon the completion of this offering, as well as to the relevant provisions of the DGCL.

Authorized Capital Stock

In connection with this offering, we expect to consummate the Stock Split.

Upon the completion of this offering and the filing of our amended and restated certificate of incorporation, our authorized capital stock will consist of shares of common stock, par value $0.001 per share and shares of preferred stock, par value $0.001 per share. Assuming the Preferred Stock Conversion, as of , there would have been shares of common stock outstanding held by stockholders of record and no shares of preferred stock outstanding. Following the completion of this offering, assuming (i) the Preferred Stock Conversion and (ii) no exercise of the underwriters' option to purchase additional shares of our common stock from us, we will have shares of common stock outstanding and no shares of preferred stock outstanding.

Common Stock

As of , we had shares of common stock outstanding held by stockholders of record. Holders of our common stock will be entitled to one vote per share on all matters submitted to a vote of stockholders, including the election of directors. Our common stockholders will not be entitled to cumulative voting in the election of directors. Unless a different vote is required by applicable law or specifically required by our amended and restated certificate of incorporation or amended and restated bylaws, if a quorum exists at any meeting of stockholders, stockholders shall have approved any matter (other than the election of directors, which is described below) if a majority of votes cast on such matter by stockholders present in person or represented by proxy at the meeting and entitled to vote on such matter are in favor of such matter. Subject to the rights of the holders of any series of preferred stock to elect directors under specified circumstances, if a quorum exists at any meeting of stockholders, stockholders shall have approved the election of a director if a plurality of the votes cast at any meeting for the election of such director are in favor of such election.

Subject to preferences that may be applicable to any shares of preferred stock outstanding or that we may designate and issue in the future, holders of our common stock will be entitled to receive ratably such dividends as may be declared by our board of directors out of funds legally available therefor if our board of directors, in its discretion, determines to issue dividends and only then at the times and in the amounts that our board of directors may determine.

Upon liquidation, dissolution or winding up of IsoPlexis Corporation, holders of our common stock will be entitled to receive their ratable share of the net assets of IsoPlexis Corporation available after payment of all debts and other liabilities, subject to the prior preferential rights and payment of liquidation preferences, if any, of any outstanding shares of preferred stock. Holders of our common stock will have no preemptive, subscription, redemption or conversion rights. There will be no redemption or sinking fund provisions applicable to our common stock. The rights, preferences and privileges of holders of our common stock will be subject to, and may be adversely affected by, the rights of the holders of shares of any series of preferred stock that we may designate in the future.

Preferred Stock

As of , we had shares of redeemable convertible preferred stock outstanding held by stockholders of record, all of which will, concurrently with the closing of this offering, automatically convert into shares of our common stock. After the completion of this offering, no shares of our redeemable convertible preferred stock or any other series of preferred stock will be outstanding.

Our board of directors will have the authority, subject to the limitations imposed by Delaware law or Nasdaq's listing rules, without any further vote or action by our stockholders, to issue preferred stock in one or more series and to fix the designations, powers, preferences, limitations and rights of the shares of each series, including:

- dividend rates;
- conversion rights;
- voting rights;
- terms of redemption
- liquidation preferences;
- sinking fund terms; and
- the number of shares constituting each series.

Satisfaction of any dividend preferences of outstanding shares of preferred stock would reduce the amount of funds available for the payment of dividends on shares of our common stock. Holders of shares of preferred stock may be entitled to receive a preference payment in the event of our liquidation, dissolution or winding-up before any payment is made to the holders of shares of our common stock.

Our board of directors may authorize the issuance of preferred stock with voting or conversion rights that could adversely affect the voting power or other rights of the holders of our common stock. The issuance of preferred stock, while providing flexibility in connection with possible acquisitions and other corporate purposes, could, among other things, have the effect of making it more difficult for a third party to acquire, or could discourage a third party from seeking to acquire, a majority of our outstanding voting stock, and may adversely affect the market price of our common stock and the voting and other rights of the holders of our common stock.

There are no current agreements or understandings with respect to the issuance of preferred stock and our board of directors has no present intentions to issue any shares of preferred stock.

Stock Options

As of , options to purchase shares of our common stock were outstanding with a weighted-average exercise price of $ per share, of which options to purchase shares were vested and exercisable with a weighted-average exercise price of $ per share.

Restricted Stock Units

As of December 31, 2020, there were no outstanding restricted stock units to receive shares of our common stock.

Warrants

In connection with entering into the Credit Agreement, we issued to Perceptive Credit Holdings III, LP a warrant to purchase up to 97,504 shares of Series D redeemable convertible preferred stock at a price per share equal to $76.92. The Series D Preferred Stock Warrant provides for the adjustment of the exercise price and the number of shares issuable upon the exercise of the warrant in the event of certain stock dividends, stock subdivisions, stock combinations, reorganizations, reclassifications, fundamental changes or other similar transactions, including certain

defined liquidity events in which the warrant is not exercised. The Series D Preferred Stock Warrant is exercisable until the earlier of (i) the tenth anniversary of the issue date or (ii) the occurrence of certain defined liquidity events. Upon the completion of this offering, the Series D Preferred Stock Warrant will be exercisable for the number of shares of our common stock that would be issuable on conversion of the shares of our Series D redeemable convertible preferred stock that could otherwise be purchased pursuant to the warrant.

As of December 31, 2020, the Series D Preferred Stock Warrant was exercisable for an aggregate of 97,504 shares of our Series D redeemable convertible preferred stock at an exercise price of $76.92 per share (or $ per share as a result of the Stock Split effected on) and after the completion of this offering, it will be exercisable into shares of our common stock.

In September 2015, we granted to Connecticut Innovations, Incorporated the Series A-2 Preferred Stock Warrant to purchase up to 3,178 shares of our Series A-2 redeemable convertible preferred stock at a price per share equal to $12.58608. The Series A-2 Preferred Stock Warrant was exercised on May 11, 2021, at an exercise price of $12.58608 per share for 3,178 shares of Series A-2 redeemable convertible preferred stock.

Registration Rights

We are party to the Investor Rights Agreement, which provides, in relevant part, that certain holders of our common stock will be entitled to rights with respect to the registration of their shares under the Securities Act as described below. The registration rights set forth in the Investor Rights Agreement will terminate upon the earlier of (i) a deemed liquidation event (such as (a) a merger or consolidation in which we are a constituent party, (b) the sale, lease, transfer, exclusive license or other disposition by us of all or substantially all of our assets or (c) any transaction to which we are a party in which any entity or person, or a group of related persons or entities, acquires capital stock or other equity securities representing at least a majority of the voting power of the Company (other than in connection with certain financing transactions)) and (ii) five years following the completion of this offering, or, with respect to any particular stockholder, when such stockholder ceases to hold registrable securities (as defined in the Investor Rights Agreement). We will pay the registration expenses (other than underwriting discounts, selling commissions and other selling expenses), including the reasonable fees and disbursements of one counsel, of the holders of the securities registered pursuant to the registrations described below. However, we will not be required to bear the expenses in connection with the exercise of a demand registration if the registration request is subsequently withdrawn at the request of the selling stockholders holding a majority of the securities to be registered (in which case all selling stockholders shall bear such expenses pro rata based upon the number of shares that were to be included in the withdrawn registration), unless such selling stockholders agree to forfeit their right to one future registration.

S-1 Demand Registration Rights

After completion of this offering, the holders of shares of our common stock will be entitled to certain Form S-1 demand registration rights pursuant to the Investor Rights Agreement. At any time after the earlier of (i) December 30, 2023 and (ii) 180 days after the registration statement of which this prospectus forms a part is declared effective, the holders of at least 50% of the registrable securities then outstanding may make a written request that we register the offer and sale of their shares on a registration statement on Form S-1. Such request for registration must cover at least 40% of the registrable securities then outstanding, or a lesser percent if the anticipated aggregate offering price, net of payment of underwriting discounts, selling commissions and other selling expenses, is at least $10.0 million. We are obligated to effect only one such registration. If we determine that it would be materially detrimental to us and our stockholders to effect such a demand registration, we have the right to defer such registration, not more than once in any 12-month period, for a period of up to 120 days. In addition, we will not be required to effect a demand registration during the period beginning 60 days prior to our good faith estimate of the date of the filing and ending on a date 180 days following the effectiveness of a registration statement initiated by us. In addition, in an underwritten public offering, the managing underwriter has the right, subject to specified conditions, to limit the number of shares that such holders may include for registration.

S-3 Registration Rights

After the completion of this offering, the holders of shares of our common stock will be entitled to certain Form S-3 demand registration rights pursuant to the Investor Rights Agreement. The holders of at least 20% of registrable securities then outstanding may make a written request that we register the offer and sale of their shares on a registration statement on Form S-3 if we are eligible to file a registration statement on Form S-3, so long as the request covers securities the anticipated aggregate offering price of which, net of underwriting discounts, selling commissions and other selling expenses, is at least $3.0 million. These stockholders may make an unlimited number of requests for registration on Form S-3. However, we will not be required to effect a registration on Form S-3 if we have effected two such registrations within the 12-month period preceding the date of the request. Additionally, if we determine that it would be materially detrimental to us and our stockholders to effect such a registration, we have the right to defer such registration, not more than once in any 12-month period, for a period of up to 120 days. Further, we will not be required to effect a demand registration during the period beginning 30 days prior to our good faith estimate of the filing of and ending on a date 90 days following the effectiveness of a registration statement initiated by us. In addition, in an underwritten public offering, the managing underwriter has the right, subject to specified conditions, to limit the number of shares that such holders may include for registration.

Piggyback Registration Rights

The Investor Rights Agreement provides that if we propose to register the offer and sale of our common stock under the Securities Act, in connection with the public offering of such common stock (including, for purposes of the registration rights under the Investor Rights Agreement, this offering), the holders of registrable securities will be entitled to certain "piggyback" registration rights allowing the holders to include their shares in such registration, subject to certain marketing and other limitations. As a result, whenever we propose to file a registration statement under the Securities Act, other than with respect to (i) a registration related to the sale of securities to our employees or a subsidiary's employees pursuant to any employee benefit plan, (ii) a registration relating to a transaction covered by Rule 145 promulgated under the Securities Act, (iii) a registration on any registration form that does not include substantially the same information as would be required to be included in a registration statement covering the sale of our registrable securities or (iv) a registration in which the only common stock being offered is common stock issuable upon conversion of debt securities that are also being registered, the holders of these registrable securities are entitled to notice of the registration and have the right, subject to certain limitations, to include their shares in the registration. We will have the right to terminate or withdraw any registration initiated pursuant to such "piggyback registration" rights described above before the effective date of such registration, whether or not any stockholder has elected to include shares of their common stock in such registration. In addition, in an underwritten public offering, the managing underwriter has the right, subject to specified conditions, to limit the number of shares that such holders may include for registration.

Certain Anti-Takeover Provisions of our Amended and Restated Certificate of Incorporation, our Amended and Restated Bylaws and Delaware Law

Certain provisions of our amended and restated certificate of incorporation, our amended and restated bylaws and the DGCL may discourage or make more difficult a takeover attempt that a stockholder might consider to be in his, her or its best interest. These provisions may also adversely affect the prevailing market price for shares of our common stock. We believe that the benefits of increased protection give us the potential ability to negotiate with the proponent of an unsolicited proposal to acquire or restructure us, which may result in an improvement of the terms of any such proposal in favor of our stockholders, and outweigh any potential disadvantage of discouraging those proposals.

Authorized but Unissued Shares of Capital Stock

Our authorized but unissued shares of common stock and preferred stock will be available for future issuance without stockholder approval, subject to the applicable provisions of the DGCL and rules of Nasdaq. These additional shares may be used for a variety of corporate purposes, including future public offerings to raise additional capital, corporate acquisitions and employee benefit plans.

One of the effects of the existence of authorized but unissued common stock or preferred stock may be to enable our board of directors to issue shares to persons friendly to current management, which issuance could render more difficult or discourage an attempt to obtain control of the Company by means of a merger, tender offer, proxy contest or otherwise, and thereby protect the continuity of our management and possibly deprive our stockholders of opportunities to sell their shares of common stock at a price higher than the prevailing market price.

Board Vacancies and Board Size

Our amended and restated certificate of incorporation and amended and restated bylaws will provide that any vacancies, including any newly created directorships, on our board of directors will be filled by the affirmative vote of the majority of the remaining directors then in office, even if such directors constitute less than a quorum, or by a sole remaining director. In addition, the number of directors constituting our board of directors will be permitted to be set only by a resolution adopted by a majority vote of our entire board of directors. These provisions would prevent a stockholder from increasing the size of our board of directors and then gaining control of our board of directors by filling the resulting vacancies with its own nominees. This will make it more difficult to change the composition of our board of directors and will promote continuity of management.

No Cumulative Voting

Under the DGCL, stockholders are not entitled to cumulate votes in the election of directors unless a corporation's certificate of incorporation provides otherwise. Our amended and restated certificate of incorporation will not provide for cumulative voting.

Directors Removed Only for Cause

Our amended and restated certificate of incorporation will provide that stockholders may remove directors only for cause by the affirmative vote of holders of at least 66 2/3% of the voting power of our then outstanding capital stock.

Stockholder Action and Special Meetings of Stockholders

Our amended and restated certificate of incorporation and amended and restated bylaws will provide that our stockholders may not take action by written consent, but may only take action at annual or special meetings of our stockholders. As a result, a holder controlling a majority of our capital stock would not be able to amend our amended and restated bylaws or remove directors without holding a meeting of our stockholders called in accordance with our amended and restated bylaws. Our amended and restated bylaws will further provide that special meetings of our stockholders may be called only by a majority of our board of directors, the chairperson of our board of directors or our Chief Executive Officer, thus prohibiting a stockholder from calling a special meeting. These provisions may delay the ability of our stockholders to force consideration of a proposal or for stockholders controlling a majority of our capital stock to take any action, including the removal of directors.

Advance Notice Requirements for Stockholder Proposals and Director Nominations

Our amended and restated bylaws will establish advance notice procedures with respect to stockholder proposals and the nomination of candidates for election as directors at our annual meeting of stockholders, and will also specify certain procedural requirements regarding the form, content and timing of such notice. These provisions might preclude our stockholders from bringing matters before our annual meeting of stockholders or from making nominations for directors at our annual meeting of stockholders if the proper procedures are not followed. We expect that these provisions may also 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 the Company.

Amendment of Amended and Restated Certificate of Incorporation and Amended and Restated Bylaws

Any amendment, alteration, rescission or repeal of our amended and restated bylaws by our stockholders will require the affirmative vote of the holders of at least 66 2/3% in voting power of all the then outstanding shares of stock entitled to vote thereon, voting together as a single class, although our bylaws may be amended by a simple majority vote of our board of directors.

The DGCL provides generally that the affirmative vote of a majority of the outstanding shares entitled to vote thereon, voting together as a single class, is required to amend a corporation's certificate of incorporation or bylaws, unless the corporation's certificate of incorporation requires a greater percentage. Our amended and restated certificate of incorporation will provide that certain specified provisions in our amended and restated certificate of incorporation, including provisions relating to the size of the board, classification of the board, removal of directors, special meetings, actions by written consent and cumulative voting, may be amended, altered, rescinded or repealed only by the affirmative vote of the holders of at least 66 2/3% in voting power of all the then outstanding shares of our stock entitled to vote thereon, voting together as a single class.

Section 203 of the Delaware General Corporation Law

We will be subject to the provisions of Section 203 of the DGCL. In general, Section 203 prohibits a publicly held Delaware corporation from engaging in a "business combination" with an "interested stockholder" for three years following the date that such stockholder became an interested stockholder, unless:

- before such date, the board of directors of the corporation approved either the business combination or the transaction that resulted in the stockholder becoming an interested stockholder;
- upon closing of the transaction that resulted in the stockholder becoming an interested stockholder, the interested stockholder owned at least 85% of the voting stock of the corporation outstanding at the time the transaction began, excluding for purposes of determining the voting stock outstanding (but not the outstanding voting stock owned by the interested stockholder) those shares owned by (1) persons who are directors and also officers and (2) employee stock plans in which employee participants do not have the right to determine confidentially whether shares held subject to the plan will be tendered in a tender or exchange offer; or
- on or after such date, the business combination is approved by the board of directors and authorized at an annual or special meeting of the stockholders, and not by written consent, by the affirmative vote of at least 66 2/3% of the outstanding voting stock that is not owned by the interested stockholder.

In general, Section 203 defines a "business combination" to include mergers, asset sales and other transactions resulting in a financial benefit to a stockholder and an "interested stockholder" as a person who, together with affiliates and associates, owns, or within three years did own, 15% or more of the corporation's outstanding voting stock. These provisions may have the effect of delaying, deferring or preventing changes in control of us.

Certain Provisions of Our Amended and Restated Certificate of Incorporation and Delaware Law

Dissenters' Rights of Appraisal and Payment

Under the DGCL, with certain exceptions, our stockholders will have appraisal rights in connection with a merger or consolidation in which we are a constituent entity. Pursuant to the DGCL, stockholders who properly demand and perfect appraisal rights in connection with such merger or consolidation will have the right to receive payment of the fair value of their shares as determined by the Delaware Court of Chancery, if any, on the amount determined to be the fair value, from the effective time of the merger or consolidation through the date of payment of the judgment.

Stockholders' Derivative Actions

Under the DGCL, any of our stockholders may bring an action in our name to procure a judgment in our favor, also known as a derivative action, provided that the stockholder bringing the action is a holder of our shares at the time of the transaction to which the action relates or such stockholder's stock thereafter devolved by operation of law. To bring such an action, the stockholder must otherwise comply with Delaware law regarding derivative actions.

Exclusive Forum

Our amended and restated certificate of incorporation will require, to the fullest extent permitted by law, that (1) any derivative action or proceeding brought on behalf of the Company, (2) any action asserting a claim of breach of a fiduciary duty owed by any of our directors, officers or other employees to us or our stockholders, (3) any action asserting a claim against us arising pursuant to any provision of the DGCL, our amended and restated certificate of incorporation or our amended and restated bylaws, (4) any action to interpret, apply, enforce or determine the validity of our amended and restated certificate of incorporation or amended and restated bylaws and (5) any other action asserting a claim against us that is governed by the internal affairs doctrine, in each case, may be brought only in specified courts in the State of Delaware. As described below, this provision will not apply to suits brought to enforce any duty or liability created by the Securities Act or Exchange Act, or rules and regulations thereunder.

Our amended and restated certificate of incorporation also will provide that the federal district courts of the United States of America will be the exclusive forum for the resolution of any complaint asserting a cause of action against us or any of our directors, officers, employees or agents and arising under the Securities Act. However, Section 22 of the Securities Act provides that federal and state courts have concurrent jurisdiction over lawsuits brought pursuant to the Securities Act or the rules and regulations thereunder. To the extent the exclusive forum provision restricts the courts in which claims arising under the Securities Act may be brought, there is uncertainty as to whether a court would enforce such a provision. Our amended and restated certificate of incorporation will also provide that any person or entity purchasing or otherwise acquiring any interest in shares of our capital stock will be deemed to have notice of and to have consented to the foregoing provision; provided, however, that investors cannot waive compliance with the federal securities laws and the rules and regulations thereunder. This provision does not apply to claims brought under the Exchange Act.

We recognize that the forum selection clause in our amended and restated certificate of incorporation may impose additional litigation costs on stockholders in pursuing any such claims, particularly if the stockholders do not reside in or near the State of Delaware. Additionally, the forum selection clause in our amended and restated certificate of incorporation may limit our stockholders' ability to bring a claim in a forum that they find favorable for disputes with us or our directors, officers, employees or agents, which may discourage such lawsuits against us and our directors, officers, employees and agents even though an action, if successful, might benefit our stockholders. The Court of Chancery of the State of Delaware may also reach different judgments or results than would other courts, including courts where a stockholder considering an action may be located or would otherwise choose to bring the action, and such judgments may be more or less favorable to us than our stockholders. See "Risk Factors—Risks Related to Our Common Stock and This Offering—*Our amended and restated bylaws designate a state or federal court located within the State of Delaware as the exclusive forum for substantially all disputes between us and our stockholders, and also provide that the federal district courts will be the exclusive forum for resolving any complaint asserting a cause of action arising under the Securities Act of 1933, as amended, each of which could limit our stockholders' ability to choose the judicial forum for disputes with us or our directors, officers, stockholders, or employees*."

Limitation of Liability and Indemnification of Directors and Officers

Our amended and restated certificate of incorporation will include provisions that limit the personal liability of our directors for monetary damages for breach of their fiduciary duties as directors, except to the extent that such limitation is not permitted under the DGCL. Such limitation shall not apply, except to the extent permitted by the DGCL, to (1) any breach of a director's duty of loyalty to us or our stockholders, (2) acts or omissions not in good faith or that involve intentional misconduct or a knowing violation of law, (3) any unlawful payment of a dividend or unlawful stock repurchase or redemption, as provided in Section 174 of the DGCL, or (4) any transaction from which a director derived an improper personal benefit. These provisions will have no effect on the availability of equitable remedies such as an injunction or rescission based on a director's breach of his or her duty of care. Any amendment to, or repeal of, these provisions will not eliminate or reduce the effect of these provisions in respect of any act, omission or claim that occurred or arose prior to that amendment or repeal.

Our amended and restated certificate of incorporation and our amended and restated bylaws will provide for indemnification, to the fullest extent permitted by the DGCL, of any person made or threatened to be made a party to

any action, suit or proceeding by reason of the fact that such person is or was a director, officer, employee or agent of the Company, or, at the request of the Company, serves or served as a director, officer, employee or agent of another corporation, partnership, joint venture, trust or any other enterprise, against all expenses, judgments, fines, amounts paid in settlement and other losses actually and reasonably incurred in connection with the defense or settlement of such action, suit or proceeding. In addition, we intend to enter into indemnification agreements with each of our directors pursuant to which we will agree to indemnify each such director to the fullest extent permitted by the DGCL.

Insofar as indemnification for liabilities arising under the Securities Act may be permitted to directors, we have been informed that in the opinion of the SEC such indemnification is against public policy and is therefore unenforceable.

Listing

We intend to apply to list our common stock on Nasdaq under the symbol “ISO.”

Transfer Agent and Registrar

Upon the completion of this offering, the transfer agent and registrar for our common stock will be . The transfer agent’s address is .

SHARES ELIGIBLE FOR FUTURE SALE

Prior to this offering, there was no market for shares of our common stock. Future sales of substantial amounts of our common stock in the public market could adversely affect market prices prevailing from time to time. Furthermore, because only a limited number of shares will be available for sale shortly after this offering due to existing contractual and legal restrictions on resale as described below, there may be sales of substantial amounts of our common stock in the public market after the restrictions lapse. This may adversely affect the prevailing market price and our ability to raise equity capital in the future.

Upon completion of this offering, based on the number of shares of our common stock outstanding as of December 31, 2020, assuming no exercise of the underwriters' option to purchase additional shares and after giving effect to the Preferred Stock Conversion, we will have shares of common stock outstanding. Of the shares of common stock outstanding following this offering, the shares of common stock (shares of common stock if the underwriters exercise in full their option to purchase additional shares) sold in this offering will be freely tradable without restriction or further registration under the Securities Act, except for any such shares of common stock held by our "affiliates", as defined in Rule 144 under the Securities Act, which would be subject to the limitations and restrictions described below under "—Rule 144."

The remaining shares of common stock that will be outstanding are "restricted shares" as defined in Rule 144 under the Securities Act. Restricted shares may be sold in the public market only if registered or if they qualify for an exemption from registration under Rule 144 under the Securities Act.

Rule 144

In general, under Rule 144 under the Securities Act, as currently in effect, a person (or persons whose shares are aggregated) who is not deemed to be or have been one of our affiliates for purposes of the Securities Act at any time during the 90 days preceding a sale and who has beneficially owned the shares proposed to be sold for at least six months, including the holding period of any prior owner other than an affiliate, is entitled to sell such shares without registration, subject to compliance with the public information requirements of Rule 144. If such a person has beneficially owned the shares proposed to be sold for at least one year, including the holding period of a prior owner other than an affiliate, then such person is entitled to sell such shares without complying with any of the requirements of Rule 144.

In general, under Rule 144 under the Securities Act, as currently in effect, our affiliates or persons selling shares on behalf of our affiliates, who have met the six-month holding period for beneficial ownership of "restricted shares" of our common stock, are entitled to sell within any three-month period, a number of shares that does not exceed the greater of:

- 1% of the number of shares of our common stock then outstanding, which will equal approximately shares immediately after this offering; and
- the average weekly trading volume of our common stock during the four calendar weeks preceding the date of filing a Notice of Proposed Sale of Securities Pursuant to Rule 144 under the Securities Act with respect to the sale.

Sales under Rule 144 by our affiliates or persons selling shares on behalf of our affiliates are also subject to certain manner of sale provisions and notice requirements and to the availability of current public information about us.

Rule 701

In general, under Rule 701, any of our employees, directors, officers, consultants or advisors who purchased shares from us in connection with a compensatory stock or option plan or other written agreement before the effective date of a registration statement under the Securities Act are entitled to sell such shares 90 days after such effective date in reliance on Rule 144. An affiliate of ours can resell shares in reliance on Rule 144 without having to

comply with the holding period requirement, and non-affiliates of ours can resell shares in reliance on Rule 144 without having to comply with the current public information and holding period requirements.

The SEC has indicated that Rule 701 will apply to typical stock options granted before we become subject to the reporting requirements of the Exchange Act, along with the shares acquired upon exercise of such options, including exercises after we become subject to the reporting requirements of the Exchange Act.

Equity Incentive Plans

We intend to file with the SEC, as soon as practicable following the completion of the offering, a registration statement on Form S-8 to register the offer and sale of all of the shares of common stock issuable or reserved for issuance under our equity compensation plans. The Form S-8 will become effective upon filing and shares of common stock so registered will become freely tradable upon such effectiveness, subject to any restrictions imposed on such resale pursuant to the lock-up agreements entered into with the underwriters for the offering.

Lock-Up Agreements and Market Standoff Provisions

We and all of our directors, executive officers and certain other record holders that together represent approximately % of our outstanding common stock and securities directly or indirectly convertible into or exchangeable or exercisable for our common stock are subject to lock-up agreements with the underwriters, agreeing that, subject to certain exceptions, without the prior written consent of Morgan Stanley & Co. LLC on behalf of the underwriters, we and they will not, and will not publicly disclose an intention to, during the period ending 180 days after the date of this prospectus (1) offer, pledge, sell, contract to sell, sell any option or contract to purchase, purchase any option or contract to sell, grant any option, right or warrant to purchase, lend or otherwise transfer or dispose of, directly or indirectly, any shares of common stock or any securities convertible into or exercisable or exchangeable for shares of common stock; (2) file any registration statement with the SEC relating to the offering of any shares of common stock or any securities convertible into or exercisable or exchangeable for common stock; or (3) enter into any swap or other arrangement that transfers to another, in whole or in part, any of the economic consequences of ownership of the common stock, whether any such transaction described in clause (1), (2) or (3) above is to be settled by delivery of common stock or such other securities, in cash or otherwise. In addition, certain holders of our capital stock are subject to market standoff provisions under our Investor Rights Agreement for the benefit of the underwriters that imposes similar restrictions. For additional information, see “Underwriters.”

Registration Rights Agreement

Pursuant to the Investor Rights Agreement, after the completion of this offering, the holders of up to shares of common stock will be entitled to rights with respect to the registration of their shares under the Securities Act. See “Description of Capital Stock—Authorized Capital Stock—Registration Rights” for a description of these registration rights. If the offer and sale of these shares of common stock are registered, the shares will be freely tradeable without restriction under the Securities Act, and a large number of shares may be sold into the public market, subject to the lock-up and market standoff agreements described above.

CERTAIN MATERIAL U.S. FEDERAL TAX CONSEQUENCES TO NON-U.S. HOLDERS OF OUR COMMON STOCK

The following is a general discussion of certain material U.S. federal income and estate tax consequences of the ownership and disposition of our common stock acquired in this offering by a "Non-U.S. Holder" that does not own, and has not owned, actually or constructively, more than 5% of our common stock. A "Non-U.S. holder" means a beneficial owner of our common stock (other than an entity treated as a partnership for U.S. federal income tax purposes) that is not, for U.S. federal income tax purposes, any of the following:

- an individual citizen or resident of the United States;
- a corporation (or any other entity treated as a corporation for U.S. federal income tax purposes) created or organized in or under the laws of the United States, any state thereof 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 it (1) is subject to the primary supervision of a court within the United States and one or more "United States persons" (within the meaning of Section 7701(a)(30) of the Code) have the authority to control all substantial decisions of the trust or (2) has a valid election in effect under applicable U.S. Treasury regulations to be treated as a United States person.

You are not a Non-U.S. Holder if you are a nonresident alien individual present in the United States for 183 days or more in the taxable year of your disposition of our common stock, or if you are a former citizen or former resident of the United States for U.S. federal income tax purposes. If you are such a person, you should consult your tax adviser regarding the U.S. federal income tax consequences of the ownership and disposition of our common stock.

If an entity or arrangement that is treated as a partnership for U.S. federal income tax purposes holds our common stock, the U.S. federal income tax treatment of a partner will generally depend on the status of the partner and the tax treatment of the partnership. A partner in a partnership holding our common stock should consult its tax advisor with regard to the United States federal income tax treatment of an investment in the common stock.

This discussion is based on the Internal Revenue Code of 1986, as amended to the date hereof (the "Code"), administrative pronouncements, judicial decisions and final, temporary and proposed Treasury regulations, all of which are subject to differing interpretation or changes subsequent to the date thereof, that may affect the tax consequences described herein, possibly with retroactive effect. This discussion is limited to Non-U.S. Holders that hold our common stock as a "capital asset" within the meaning of Section 1221 of the Code. This discussion does not describe all of the tax consequences that may be relevant to you in light of your particular circumstances, including alternative minimum tax and Medicare contribution tax consequences and does not address any aspect of state, local or non-U.S. taxation, or any taxes other than income and estate taxes. In addition, it does not represent a detailed description of the U.S. federal income and estate tax consequences applicable to you if you are subject to special treatment under the U.S. federal income tax laws (including if you are a foreign pension fund, "controlled foreign corporation" or "passive foreign investment company," bank or other financial institution, insurance company, tax exempt or governmental organization, dealer or trader in securities, holder that elects to mark its securities to market or holds our common stock as part of a straddle, conversion or other integrated transaction, holder deemed to sell our common stock under the constructive sale provisions of the Code, holder subject to special tax accounting rules as a result of any item of gross income with respect to our common stock being taken into account in an applicable financial statement or holder who acquired shares of our common stock as compensation or in connection with the performance of services).

You should consult a tax advisor regarding the U.S. federal tax consequences of acquiring, holding and disposing of common stock in your particular circumstances, as well as any tax consequences that may arise under the laws of any state, local or foreign taxing jurisdiction.

Dividends

As described in the section titled "Dividend Policy," we do not anticipate declaring or paying dividends to holders of our common stock in the near term. However, if we make a distribution of cash or other property (other than certain distributions of our stock) in respect of our common stock, the distribution generally will be treated as a dividend to the extent of our current or accumulated earnings and profits, as determined under U.S. federal income tax principles. Any portion of a distribution that exceeds our current and accumulated earnings and profits will generally be treated first as a tax-free return of capital, on a share-by-share basis, to the extent of your tax basis in our common stock (and will reduce your basis in such common stock, but not below zero), and, to the extent such portion exceeds your tax basis in our common stock, the excess will be treated as gain from the taxable disposition of the common stock, the tax treatment of which is discussed below under "—Gain on Disposition of Common Stock."

Except as described below, dividends paid to you are subject to U.S. withholding tax at a 30% rate or at a lower rate if you are eligible for the benefits of an income tax treaty that provides for a lower rate. Even if you are eligible for a lower treaty rate, the applicable withholding agent will generally be required to withhold at a 30% rate (rather than the lower treaty rate) on dividend payments to you, unless you have furnished to us a valid IRS Form W-8 or an acceptable substitute form upon which you certify under, penalties of perjury, your status as a non-United States person and your entitlement to the lower treaty rate with respect to such payments.

If you are eligible for a reduced rate of U.S. withholding tax under a tax treaty, you may obtain a refund of any amounts withheld in excess of that rate by timely filing a refund claim with the IRS.

If dividends paid to you are "effectively connected" with your conduct of a trade or business within the United States, and, if required by a tax treaty, the dividends are attributable to a permanent establishment that you maintain in the United States, the applicable withholding agent is not required to withhold tax from the dividends, provided that you have furnished a valid IRS Form W-8ECI or an acceptable substitute form upon which you represent, under penalties of perjury, that:

- you are a non-United States person; and
- the dividends are effectively connected with your conduct of a trade or business within the United States and are includible in your gross income.

"Effectively connected" dividends are taxed at rates applicable to U.S. citizens, resident aliens and U.S. corporations. If you are a corporate Non-U.S. Holder, "effectively connected" dividends that you receive may, under certain circumstances, be subject to an additional "branch profits tax" at a 30% rate or at a lower rate if you are eligible for the benefits of an income tax treaty that provides for a lower rate.

Gain on Disposition of Common Stock

Subject to the discussions below under "—Backup Withholding and Information Reporting" and "—FATCA Withholding," you generally will not be subject to U.S. federal income tax or withholding tax on gain that you recognize on a disposition of common stock unless:

- the gain is "effectively connected" with your conduct of a trade or business in the United States (and if required by an applicable income tax treaty, the gain is attributable to a permanent establishment that you maintain in the United States);
- we are or have been a "United States real property holding corporation" ("USRPHC") as described below, at any time within the five-year period preceding the disposition or your holding period, whichever period is shorter, you are not eligible for a treaty exemption, and either (1) our common stock is not regularly traded on an established securities market prior to the beginning of the calendar year in which the sale or disposition occurs (as such terms are defined by applicable U.S. Treasury regulations) or (2) you owned or are deemed to have owned, at any time within the five-year period preceding the disposition or your holding period, whichever period is shorter, more than 5% of our common stock.

If the gain from the taxable disposition of shares of our common stock is effectively connected with your conduct of a trade or business in the United States (and, if required by a tax treaty, the gain is attributable to a permanent establishment that you maintain in the United States), you will generally be taxed on such gain in the same manner as a United States person. You should consult your tax adviser with respect to other U.S. tax consequences of the ownership and disposition of our common stock, including the possible imposition of a branch profits tax at a rate of 30% (or a lower treaty rate) if you are a corporation.

We will be a USRPHC at any time that the fair market value of our "United States real property interests," ("USRPIs") as defined in the Code and applicable U.S. Treasury regulations, equals or exceeds 50% of the aggregate fair market value of our worldwide real property interests and our other assets used or held for use in a trade or business (all as determined for the U.S. federal income tax purposes). We believe that we are not currently, and do not anticipate becoming in the foreseeable future, a USRPHC. Because the determination of whether we are a USRPHC depends, however, on the fair market value of our USRPIs relative to the fair market value of our non-U.S. real property interests and our other business assets, there can be no assurance we currently are not a USRPHC or will not become one in the future.

FATCA Withholding

Pursuant to sections 1471 through 1474 of the Code, commonly known as the Foreign Account Tax Compliance Act ("FATCA"), a 30% withholding tax ("FATCA withholding") may be imposed on certain payments to foreign financial institutions (which is broadly defined for this purpose and generally includes investment vehicles) and certain other non-U.S. entities receiving payments on your behalf, unless certain U.S. information reporting and due diligence requirements have been satisfied or an exemption applies. An intergovernmental agreement between the United States and an applicable foreign country may modify these requirements. Payments of dividends that you receive in respect of our common stock could be affected by FATCA withholding if you hold our common stock through a foreign financial institution or non-U.S. entity that is required to comply with these requirements (even if payments to you would not otherwise have been subject to FATCA withholding). In addition, although a 30% withholding tax would have applied under FATCA to payments of gross proceeds of dispositions of our common stock, proposed U.S. Treasury regulations eliminate this 30% withholding tax on payments of gross proceeds. Taxpayers may rely on these proposed U.S. Treasury regulations until final U.S. Treasury regulations are issued. You should consult your own tax advisors regarding the relevant U.S. law and other official guidance on FATCA withholding.

Backup Withholding and Information Reporting

Information returns are required to be filed with the IRS in connection with any distributions on our common stock. Unless you comply with certification procedures to establish that you are not a United States person, information returns may also be filed with the IRS with respect to the proceeds from a sale or other disposition of our common stock. You may be subject to backup withholding on payments of dividends on our common stock or on the proceeds from a sale or other disposition of our common stock unless you comply with certification procedures to establish that you are not a United States person or otherwise establish an exemption. Your provision of a properly executed applicable IRS Form W-8 certifying your non-U.S. status will permit you to avoid backup withholding. Amounts withheld under the backup withholding rules are not additional taxes and may be refunded or credited against your U.S. federal income tax liability, provided the required information is timely furnished to the IRS.

Federal Estate Taxes

Individual Non-U.S. Holders and entities the property of which is potentially includible in such an individual's gross estate for U.S. federal estate tax purposes (for example, a trust funded by such an individual and with respect to which the individual has retained certain interests or powers) should note that, absent an applicable treaty exemption, our common stock will be treated as U.S.-situs property subject to U.S. federal estate tax.

UNDERWRITERS

Under the terms and subject to the conditions in an underwriting agreement dated the date of this prospectus, the underwriters named below, for whom Morgan Stanley & Co. LLC, Cowen and Company, LLC, Evercore Group, L.L.C. and SVB Leerink LLC are acting as representatives, have severally agreed to purchase, and we have agreed to sell to them, severally, the number of shares indicated below:

Underwriter	Number of Shares
Morgan Stanley & Co. LLC	
Cowen and Company, LLC	
Evercore Group, L.L.C.	
SVB Leerink LLC	
Total:	

The underwriters and the representatives are collectively referred to as the "underwriters" and the "representatives," respectively. The underwriters are offering the shares of common stock subject to their acceptance of the shares from us and subject to prior sale. The underwriting agreement provides that the obligations of the several underwriters to pay for and accept delivery of the shares of common stock offered by this prospectus are subject to the approval of certain legal matters by their counsel and to certain other conditions. The underwriters are obligated to take and pay for all of the shares of common stock offered by this prospectus if any such shares are taken. However, the underwriters are not required to take or pay for the shares covered by the underwriters' over-allotment option described below.

The underwriters initially propose to offer part of the shares of common stock directly to the public at the offering price listed on the cover page of this prospectus and part to certain dealers at a price that represents a concession not in excess of $ per share under the public offering price. After the initial offering of the shares of common stock, the offering price and other selling terms may from time to time be varied by the representatives.

We have granted to the underwriters an option, exercisable for 30 days from the date of this prospectus, to purchase up to additional shares of common stock at the public offering price listed on the cover page of this prospectus, less underwriting discounts and commissions. The underwriters may exercise this option solely for the purpose of covering over-allotments, if any, made in connection with the offering of the shares of common stock offered by this prospectus. To the extent the option is exercised, each underwriter will become obligated, subject to certain conditions, to purchase about the same percentage of the additional shares of common stock as the number listed next to the underwriter's name in the preceding table bears to the total number of shares of common stock listed next to the names of all underwriters in the preceding table.

The following table shows the per share and total public offering price, underwriting discounts and commissions, and proceeds before expenses to us. These amounts are shown assuming both no exercise and full exercise of the underwriters' option to purchase up to an additional shares of common stock.

	Per Share	Total	
		No Exercise	Full Exercise
Public offering price	$	$	$
Underwriting discounts and commissions to be paid by us	$	$	$
Proceeds, before expenses, to us	$	$	$

The estimated offering expenses payable by us, exclusive of the underwriting discounts and commissions, are approximately $. We have agreed to reimburse the underwriters for certain expenses relating to clearance of this offering with the Financial Industry Regulatory Authority in an amount not to exceed $.

The underwriters have informed us that they do not intend sales to discretionary accounts to exceed 5% of the total number of shares of common stock offered by them.

We intend to apply for listing of our common stock on the Nasdaq Global Market under the trading symbol “ISO.”

We and all directors and officers and certain holders of our outstanding stock and stock options (the “lock-up parties”) have agreed, subject to certain exceptions, that, without the prior written consent of Morgan Stanley & Co. LLC on behalf of the underwriters, we and they will not, and will not publicly disclose an intention to, during the period ending 180 days after the date of this prospectus (the “restricted period”):

- offer, pledge, sell, contract to sell, sell any option or contract to purchase, purchase any option or contract to sell, grant any option, right or warrant to purchase, lend or otherwise transfer or dispose of, directly or indirectly, any shares of common stock or any securities convertible into or exercisable or exchangeable for shares of common stock;
- file any registration statement with the Securities and Exchange Commission relating to the offering of any shares of common stock or any securities convertible into or exercisable or exchangeable for common stock; or
- enter into any swap or other arrangement that transfers to another, in whole or in part, any of the economic consequences of ownership of the common stock;

whether any such transaction described above is to be settled by delivery of common stock or such other securities, in cash or otherwise. In addition, we and each of the lockup parties agrees that, without the prior written consent of Morgan Stanley & Co. LLC on behalf of the underwriters, we or such lock-up party will not, during the restricted period, make any demand for, or exercise any right with respect to, the registration of any shares of common stock or any security convertible into or exercisable or exchangeable for common stock.

Morgan Stanley & Co. LLC, in its sole discretion, may release the common stock and other securities subject to the lock-up agreements described above in whole or in part at any time.

In order to facilitate the offering of the common stock, the underwriters may engage in transactions that stabilize, maintain or otherwise affect the price of the common stock. Specifically, the underwriters may sell more shares than they are obligated to purchase under the underwriting agreement, creating a short position. A short sale is covered if the short position is no greater than the number of shares available for purchase by the underwriters under the over-allotment option. The underwriters can close out a covered short sale by exercising the over-allotment option or purchasing shares in the open market. In determining the source of shares to close out a covered short sale, the underwriters will consider, among other things, the open market price of shares compared to the price available under the over-allotment option. The underwriters may also sell shares in excess of the over-allotment option, creating a naked short position. The underwriters must close out any naked short position by purchasing shares in the open market. A naked short position is more likely to be created if the underwriters are concerned that there may be downward pressure on the price of the common stock in the open market after pricing that could adversely affect investors who purchase in this offering. As an additional means of facilitating this offering, the underwriters may bid for, and purchase, shares of common stock in the open market to stabilize the price of the common stock. These activities may raise or maintain the market price of the common stock above independent market levels or prevent or retard a decline in the market price of the common stock. The underwriters are not required to engage in these activities and may end any of these activities at any time.

We and the underwriters have agreed to indemnify each other against certain liabilities, including liabilities under the Securities Act.

A prospectus in electronic format may be made available on websites maintained by one or more underwriters, or selling group members, if any, participating in this offering. The representatives may agree to allocate a number of shares of common stock to underwriters for sale to their online brokerage account holders. Internet distributions will be allocated by the representatives to underwriters that may make Internet distributions on the same basis as other allocations.

The underwriters and their respective affiliates are full service financial institutions engaged in various activities, which may include securities trading, commercial and investment banking, financial advisory, investment management, investment research, principal investment, hedging, financing and brokerage activities. Certain of the underwriters and their respective affiliates have, from time to time, performed, and may in the future perform, various financial advisory and investment banking services for us, for which they received or will receive customary fees and expenses.

In addition, in the ordinary course of their various business activities, the underwriters and their respective affiliates may make or hold a broad array of investments and actively trade debt and equity securities (or related derivative securities) and financial instruments (including bank loans) for their own account and for the accounts of their customers and may at any time hold long and short positions in such securities and instruments. Such investment and securities activities may involve our securities and instruments. The underwriters and their respective affiliates may also make investment recommendations or publish or express independent research views in respect of such securities or instruments and may at any time hold, or recommend to clients that they acquire, long or short positions in such securities and instruments.

Pricing of the Offering

Prior to this offering, there has been no public market for our common stock. The initial public offering price was determined by negotiations between us and the representatives. Among the factors considered in determining the initial public offering price were our future prospects and those of our industry in general, our sales, earnings and certain other financial and operating information in recent periods, and the price-earnings ratios, price-sales ratios, market prices of securities, and certain financial and operating information of companies engaged in activities similar to ours.

Selling Restrictions

European Economic Area

In relation to each Member State of the European Economic Area (each a "Relevant State"), no shares have been offered or will be offered pursuant to the Offering to the public in that Relevant State prior to the publication of a prospectus in relation to the shares which has been approved by the competent authority in that Relevant State or, where appropriate, approved in another Relevant State and notified to the competent authority in that Relevant State, all in accordance with the Prospectus Regulation), except that offers of shares may be made to the public in that Relevant State at any time under the following exemptions under the Prospectus Regulation:

- to any legal entity which is a qualified investor as defined under the Prospectus Regulation;
- to fewer than 150 natural or legal persons (other than qualified investors as defined under the Prospectus Regulation), subject to obtaining the prior consent of the representatives for any such offer; or
- in any other circumstances falling within Article 1(4) of the Prospectus Regulation,

provided that no such offer of shares shall require the Issuer or any Manager to publish a prospectus pursuant to Article 3 of the Prospectus Regulation or supplement a prospectus pursuant to Article 23 of the Prospectus Regulation.

In the case of any shares being offered to a financial intermediary as that term is used in Article 5(1) of the Prospectus Regulation, each such financial intermediary will be deemed to have represented, acknowledged and agreed that the shares acquired by it in the offer have not been acquired on a non-discretionary basis on behalf of, nor have they been acquired with a view to their offer or resale to, persons in circumstances which may give rise to an offer to the public other than their offer or resale in a Relevant State to qualified investors, in circumstances in which the prior consent of the representatives has been obtained to each such proposed offer or resale.

The Company, the representatives and their affiliates will rely upon the truth and accuracy of the foregoing representations, acknowledgements and agreements.

For the purposes of this provision, the expression an "offer to the public" in relation to any shares in any Relevant State means the communication in any form and by any means of sufficient information on the terms of the offer and any shares to be offered so as to enable an investor to decide to purchase or subscribe for any shares, and the expression "Prospectus Regulation" means Regulation (EU) 2017/1129.

The above selling restriction is in addition to any other selling restrictions set out below.

United Kingdom

In relation to the United Kingdom ("UK"), no shares have been offered or will be offered pursuant to the offering to the public in the UK prior to the publication of a prospectus in relation to the shares has been approved by the Financial Conduct Authority in accordance with the UK Prospectus Regulation and the FSMA, except that offers of shares may be made to the public in the UK at any time under the following exemptions under the UK Prospectus Regulation and the FSMA:

- to any legal entity which is a qualified investor as defined under the UK Prospectus Regulation;
- to fewer than 150 natural or legal persons (other than qualified investors as defined under the UK Prospectus Regulation), subject to obtaining the prior consent of the representatives for any such offer; or
- at any time in other circumstances falling within section 86 of the FSMA,

provided that no such offer of shares shall require the Issuer or any Manager to publish a prospectus pursuant to Section 85 of the FSMA or Article 3 of the UK Prospectus Regulation or supplement a prospectus pursuant to Article 23 of the UK Prospectus Regulation.

Each person in the UK who initially acquires any shares or to whom any offer is made will be deemed to have represented, acknowledged and agreed to and with the Company and the Managers that it is a qualified investor within the meaning of the UK Prospectus Regulation.

In the case of any shares being offered to a financial intermediary as that term is used in Article 5(1) of the UK Prospectus Regulation, each such financial intermediary will be deemed to have represented, acknowledged and agreed that the shares acquired by it in the offer have not been acquired on a non-discretionary basis on behalf of, nor have they been acquired with a view to their offer or resale to, persons in circumstances which may give rise to an offer to the public other than their offer or resale in the UK to qualified investors, in circumstances in which the prior consent of the representatives has been obtained to each such proposed offer or resale.

The Company, the representatives and their affiliates will rely upon the truth and accuracy of the foregoing representations, acknowledgements and agreements.

For the purposes of this provision, the expression an "offer to the public" in relation to any shares in the UK means the communication in any form and by any means of sufficient information on the terms of the offer and any shares to be offered so as to enable an investor to decide to purchase or subscribe for any shares, the expression "UK Prospectus Regulation" means Regulation (EU) 2017/1129 as it forms part of domestic law by virtue of the European Union (Withdrawal) Act 2018, and the expression "FSMA" means the Financial Services and Markets Act 2000.

This document is for distribution only to persons who (i) have professional experience in matters relating to investments and who qualify as investment professionals within the meaning of Article 19(5) of the Financial Services and Markets Act 2000 (Financial Promotion) Order 2005 (as amended, the "Financial Promotion Order"), (ii) are persons falling within Article 49(2)(a) to (d) ("high net worth companies, unincorporated associations etc.") of the Financial Promotion Order, (iii) are outside the United Kingdom, or (iv) are persons to whom an invitation or inducement to engage in investment activity (within the meaning of Section 21 of the Financial Services and Markets Act 2000, as amended ("FSMA")) in connection with the issue or sale of any securities may otherwise lawfully be communicated or caused to be communicated (all such persons together being referred to as "relevant persons"). This document is directed only at relevant persons and must not be acted on or relied on by persons who

are not relevant persons. Any investment or investment activity to which this document relates is available only to relevant persons and will be engaged in only with relevant persons.

Canada

The shares may be sold only to purchasers purchasing, or deemed to be purchasing, as principal that are accredited investors, as defined in National Instrument 45-106 *Prospectus Exemptions* or subsection 73.3(1) of the *Securities Act* (Ontario), and are permitted clients, as defined in National Instrument 31-103 *Registration Requirements, Exemptions and Ongoing Registrant Obligations*. Any resale of the shares must be made in accordance with an exemption from, or in a transaction not subject to, the prospectus requirements of applicable securities laws.

Securities legislation in certain provinces or territories of Canada may provide a purchaser with remedies for rescission or damages if this prospectus (including any amendment thereto) contains a misrepresentation, provided that the remedies for rescission or damages are exercised by the purchaser within the time limit prescribed by the securities legislation of the purchaser's province or territory. The purchaser should refer to any applicable provisions of the securities legislation of the purchaser's province or territory for particulars of these rights or consult with a legal advisor.

Australia

No placement document, prospectus, product disclosure statement or other disclosure document has been lodged with the Australian Securities and Investments Commission ("ASIC"), in relation to the offering. This prospectus does not constitute a prospectus, product disclosure statement or other disclosure document under the Corporations Act 2001 (the "Corporations Act"), and does not purport to include the information required for a prospectus, product disclosure statement or other disclosure document under the Corporations Act.

Any offer in Australia of the shares may only be made to persons (the "Exempt Investors") who are "sophisticated investors" (within the meaning of section 708(8) of the Corporations Act), "professional investors" (within the meaning of section 708(11) of the Corporations Act) or otherwise pursuant to one or more exemptions contained in section 708 of the Corporations Act so that it is lawful to offer the shares without disclosure to investors under Chapter 6D of the Corporations Act.

The shares applied for by Exempt Investors in Australia must not be offered for sale in Australia in the period of 12 months after the date of allotment under the offering, except in circumstances where disclosure to investors under Chapter 6D of the Corporations Act would not be required pursuant to an exemption under section 708 of the Corporations Act or otherwise or where the offer is pursuant to a disclosure document which complies with Chapter 6D of the Corporations Act. Any person acquiring shares must observe such Australian on-sale restrictions.

This prospectus contains general information only and does not take account of the investment objectives, financial situation or particular needs of any particular person. It does not contain any securities recommendations or financial product advice. Before making an investment decision, investors need to consider whether the information in this prospectus is appropriate to their needs, objectives and circumstances, and, if necessary, seek expert advice on those matters.

Switzerland

This document is not intended to constitute an offer or solicitation to purchase or invest in the securities. The securities may not be publicly offered, directly or indirectly, in Switzerland within the meaning of the Swiss Financial Services Act ("FinSA") and no application has or will be made to admit the securities to trading on any trading venue (exchange or multilateral trading facility) in Switzerland. Neither this document nor any other offering or marketing material relating to the securities constitutes a prospectus pursuant to the FinSA, and neither this document nor any other offering or marketing material relating to the securities may be publicly distributed or otherwise made publicly available in Switzerland.

Japan

No registration pursuant to Article 4, paragraph 1 of the Financial Instruments and Exchange Law of Japan (Law No. 25 of 1948, as amended) (the "FIEL") has been made or will be made with respect to the solicitation of the application for the acquisition of the shares of common stock.

Accordingly, the shares of common stock have not been, directly or indirectly, offered or sold and will not be, directly or indirectly, offered or sold in Japan or to, or for the benefit of, any resident of Japan (which term as used herein means any person resident in Japan, including any corporation or other entity organized under the laws of Japan) or to others for re-offering or re-sale, directly or indirectly, in Japan or to, or for the benefit of, any resident of Japan except pursuant to an exemption from the registration requirements, and otherwise in compliance with, the FIEL and the other applicable laws and regulations of Japan.

For Qualified Institutional Investors ("QII")

Please note that the solicitation for newly-issued or secondary securities (each as described in Paragraph 2, Article 4 of the FIEL) in relation to the shares of common stock constitutes either a "QII only private placement" or a "QII only secondary distribution" (each as described in Paragraph 1, Article 23-13 of the FIEL). Disclosure regarding any such solicitation, as is otherwise prescribed in Paragraph 1, Article 4 of the FIEL, has not been made in relation to the shares of common stock. The shares of common stock may only be transferred to QIIs.

For Non-QII Investors

Please note that the solicitation for newly-issued or secondary securities (each as described in Paragraph 2, Article 4 of the FIEL) in relation to the shares of common stock constitutes either a "small number private placement" or a "small number private secondary distribution" (each as is described in Paragraph 4, Article 23-13 of the FIEL). Disclosure regarding any such solicitation, as is otherwise prescribed in Paragraph 1, Article 4 of the FIEL, has not been made in relation to the shares of common stock. The shares of common stock may only be transferred en bloc without subdivision to a single investor.

Dubai International Financial Centre

This prospectus relates to an Exempt Offer in accordance with the Offered Securities Rules of the Dubai Financial Services Authority ("DFSA"). This prospectus is intended for distribution only to persons of a type specified in the Offered Securities Rules of the DFSA. It must not be delivered to, or relied on by, any other person. The DFSA has no responsibility for reviewing or verifying any documents in connection with Exempt Offers. The DFSA has not approved this prospectus nor taken steps to verify the information set forth herein and has no responsibility for the prospectus. The shares to which this prospectus relates may be illiquid and/or subject to restrictions on their resale. Prospective purchasers of the shares offered should conduct their own due diligence on the shares. If you do not understand the contents of this prospectus you should consult an authorized financial advisor.

Hong Kong

The shares may not be offered or sold in Hong Kong by means of any document other than (i) in circumstances which do not constitute an offer to the public within the meaning of the Companies (Winding Up and Miscellaneous Provisions) Ordinance (Cap. 32 of the Laws of Hong Kong), or the Companies (Winding Up and Miscellaneous Provisions) Ordinance, or which do not constitute an invitation to the public within the meaning of the Securities and Futures Ordinance (Cap. 571 of the Laws of Hong Kong), or the Securities and Futures Ordinance, or (ii) to "professional investors" as defined in the Securities and Futures Ordinance and any rules made thereunder, or (iii) in other circumstances which do not result in the document being a "prospectus" as defined in the Companies (Winding Up and Miscellaneous Provisions) Ordinance, and no advertisement, invitation or document relating to the shares may be issued or may be in the possession of any person for the purpose of issue (in each case whether in Hong Kong or elsewhere), which is directed at, or the contents of which are likely to be accessed or read by, the public in Hong Kong (except if permitted to do so under the securities laws of Hong Kong) other than with respect

to shares which are or are intended to be disposed of only to persons outside Hong Kong or only to "professional investors" in Hong Kong as defined in the Securities and Futures Ordinance and any rules made thereunder.

Singapore

This prospectus has not been registered as a prospectus with the Monetary Authority of Singapore. Accordingly, this prospectus and any other document or material in connection with the offer or sale, or invitation for subscription or purchase, of the shares may not be circulated or distributed, nor may the shares be offered or sold, or be made the subject of an invitation for subscription or purchase, whether directly or indirectly, to persons in Singapore other than (i) to an institutional investor (as defined under Section 4A of the Securities and Futures Act, Chapter 289 of Singapore, or the SFA) under Section 274 of the SFA, (ii) to a relevant person (as defined in Section 275(2) of the SFA) pursuant to Section 275(1) of the SFA, or any person pursuant to Section 275(1A) of the SFA, and in accordance with the conditions specified in Section 275 of the SFA or (iii) otherwise pursuant to, and in accordance with the conditions of, any other applicable provision of the SFA, in each case subject to conditions set forth in the SFA.

Where the shares are subscribed or purchased under Section 275 of the SFA by a relevant person which is a corporation (which is not an accredited investor (as defined in Section 4A of the SFA)) the sole business of which is to hold investments and the entire share capital of which is owned by one or more individuals, each of whom is an accredited investor, the securities (as defined in Section 239(1) of the SFA) of that corporation shall not be transferable for 6 months after that corporation has acquired the shares under Section 275 of the SFA except: (1) to an institutional investor under Section 274 of the SFA or to a relevant person (as defined in Section 275(2) of the SFA), (2) where such transfer arises from an offer in that corporation's securities pursuant to Section 275(1A) of the SFA, (3) where no consideration is or will be given for the transfer, (4) where the transfer is by operation of law, (5) as specified in Section 276(7) of the SFA, or (6) as specified in Regulation 32 of the Securities and Futures (Offers of Investments) (Shares and Debentures) Regulations 2005 of Singapore, or Regulation 32.

Where the shares are subscribed or purchased under Section 275 of the SFA by a relevant person which is a trust (where the trustee is not an accredited investor (as defined in Section 4A of the SFA)) whose sole purpose is to hold investments and each beneficiary of the trust is an accredited investor, the beneficiaries' rights and interest (howsoever described) in that trust shall not be transferable for 6 months after that trust has acquired the shares under Section 275 of the SFA except: (1) to an institutional investor under Section 274 of the SFA or to a relevant person (as defined in Section 275(2) of the SFA), (2) where such transfer arises from an offer that is made on terms that such rights or interest are acquired at a consideration of not less than S$200,000 (or its equivalent in a foreign currency) for each transaction (whether such amount is to be paid for in cash or by exchange of securities or other assets), (3) where no consideration is or will be given for the transfer, (4) where the transfer is by operation of law, (5) as specified in Section 276(7) of the SFA, or (6) as specified in Regulation 32.

Singapore SFA Product Classification—In connection with Section 309B of the SFA and the Securities and Futures (Capital Markets Products) Regulations 2018 (the "CMP Regulations 2018"), the Company has determined, and hereby notifies all relevant persons (as defined in the CMP Regulations 2018), that the shares are "prescribed capital markets products" (as defined in the CMP Regulations 2018) and Excluded Investment Products (as defined in MAS Notice SFA 04-N12: Notice on the Sale of Investment Products and MAS Notice FAA-N16: Notice on Recommendations on Investment Products).

LEGAL MATTERS

The validity of the shares of our common stock offered hereby will be passed upon for us by Cravath, Swaine & Moore LLP, New York, New York. Certain legal matters in connection with this offering will be passed upon for the underwriters by Latham & Watkins LLP, New York, New York.

EXPERTS

The financial statements included in this prospectus and in the registration statement, have been audited by Deloitte & Touche LLP, an independent registered public accounting firm, as stated in their report appearing herein. Such financial statements are included in reliance upon the report of such firm given upon their authority as experts in accounting and auditing.

WHERE YOU CAN FIND MORE INFORMATION

We have filed with the SEC a registration statement on Form S-1 under the Securities Act for the shares of our common stock being offered by this prospectus. This prospectus, which is part of the registration statement, does not contain all of the information included in the registration statement or the exhibits filed thereto. For further information about us and the common stock offered hereby, you should refer to the registration statement and the exhibits filed thereto, which are available on the website of the SEC referred to below. References in this prospectus to any of our contracts or other documents are not necessarily complete, and each such reference is qualified in all respects by reference to the full text of such contract or other document filed as an exhibit to the registration statement.

Upon completion of this offering, we will be subject to the reporting and information requirements of the Exchange Act and, as a result, will file periodic and current reports, proxy statements and other information with the SEC. We expect to make our periodic reports and other information filed with or furnished to the SEC available, free of charge, through our website at www.isoplexis.com as soon as reasonably practicable after those reports and other information are filed with or furnished to the SEC. Additionally, the SEC maintains an Internet site that contains such periodic and current reports, proxy statements and other information filed electronically with the SEC at www.sec.gov.

The information contained on, or that can be accessed through, our website, is not part of, and is not incorporated into, this prospectus. All website addresses in this prospectus are intended to be inactive textual references only.

ISOPLEXIS CORPORATION AND SUBSIDIARY

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the stockholders and the Board of Directors of IsoPlexis Corporation

Opinion on the Financial Statements

We have audited the accompanying balance sheets of IsoPlexis Corporation (the "Company") as of December 31, 2020 and 2019, the related statements of operations, changes in redeemable convertible preferred stock and stockholders' deficit, and cash flows for each of the two years in the period ended December 31, 2020, and the related notes (collectively referred to as the "financial statements"). In our opinion, the financial statements present fairly, in all material respects, the financial position of the Company as of December 31, 2020 and 2019, and the results of its operations and its cash flows for each of the two years in the period ended December 31, 2020, in conformity with accounting principles generally accepted in the United States of America.

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 and in accordance with auditing standards generally accepted in the United States of America. 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/ DELOITTE & TOUCHE LLP

Hartford, Connecticut
May 13, 2021

We have served as the Company's auditor since 2020.

CONSOLIDATED BALANCE SHEETS

(in thousands, except share amounts)	December 31, 2019	December 31, 2020
Assets		
Current assets:		
Cash	$ 27,371	$ 106,641
Accounts receivable, net	2,846	2,922
Inventories, net	3,193	3,955
Prepaid expenses and other current assets	460	2,156
Total current assets	33,870	115,674
Property and equipment, net	2,520	3,227
Intangible assets, net	934	1,643
Other assets	562	3,061
Total assets	$ 37,886	$ 123,605
Liabilities, redeemable convertible preferred stock and stockholders' deficit		
Current liabilities:		
Accounts payable	$ 1,478	$ 2,137
Accrued expenses and other current liabilities	948	2,129
Deferred revenue	271	356
Deferred rent	17	—
Total current liabilities	2,714	4,622
Warrant liability	122	4,637
Long-term debt	—	22,137
Total liabilities:	2,836	31,396
Commitments and Contingencies (Notes 10, 13 and 14)		
Redeemable convertible preferred stock:		
Series A preferred stock, $0.001 par value per share, 253,862 shares authorized; 253,862 shares issued and outstanding (liquidation value of $2,684 as of December 31, 2020)	1,596	1,596
Series A-2 preferred stock, $0.001 par value per share, 293,180 shares authorized; 290,002 shares issued and outstanding (liquidation value of $5,584 as of December 31, 2020)	3,623	3,623
Series B preferred stock, $0.001 par value per share, 376,061 shares authorized; 376,061 shares issued and outstanding (liquidation value of $9,313 as of December 31, 2020)	6,606	6,606
Series B-2 preferred stock, $0.001 par value per share, 237,183 shares authorized; 237,183 shares issued and outstanding (liquidation value of $9,159 as of December 31, 2020)	6,991	6,991
Series C preferred stock, $0.001 par value per share, 564,287 shares authorized; 564,287 shares issued and outstanding (liquidation value of $29,421 as of December 31, 2020)	24,839	24,839
Series C-2 preferred stock, $0.001 par value per share, 515,218 shares authorized; 412,174 and 515,218 shares issued and outstanding at December 31, 2019 and 2020 respectively (liquidation value of $26,994 as of December 31, 2020)	19,929	24,929
Series D preferred stock, $0.001 par value per share, 1,202,549 shares authorized; 0 and 975,039 shares issued and outstanding in 2019 and 2020, respectively (liquidation value of $75,016 as of December 31, 2020)	—	74,876
Stockholders' deficit:		
Common stock, $0.001 par value, 4,647,474 shares authorized; 260,446 and 266,738 shares issued and outstanding as of December 31, 2019 and 2020, respectively	—	—
Additional paid-in capital	606	1,153
Accumulated deficit	(29,140)	(52,404)
Total stockholders' deficit	(28,534)	(51,251)
Total liabilities, redeemable convertible preferred stock and stockholders' deficit	$ 37,886	$ 123,605

The accompanying notes are an integral part of these consolidated financial statements.

CONSOLIDATED STATEMENTS OF OPERATIONS

(in thousands, except share and per share amounts)	Years ended December 31, 2019	2020
Revenue		
Product revenue	$ 5,328	$ 9,318
Service revenue	2,177	1,069
Total revenue	7,505	10,387
Cost of product revenue	2,803	4,866
Cost of service revenue	455	108
Gross profit	4,247	5,413
Operating expenses:		
Research and development expenses	10,134	11,157
General and administrative expenses	4,806	8,023
Sales and marketing	7,559	13,511
Total operating expenses	22,499	32,691
Loss from operations	(18,252)	(27,278)
Other income and (expense):		
Grant income	4,226	4,117
Research and development tax credits	411	—
Change in fair value of warrants	(10)	(85)
Interest income	—	3
Interest expense	(1)	(21)
Net loss	$ (13,626)	$ (23,264)
Accrued dividends on preferred stock	(1,486)	(1,979)
Net loss attributable to common stockholders	$ (15,112)	$ (25,243)
Basic and diluted net loss per common share	$ (58.62)	$ (96.61)
Weighted-average common shares outstanding—basic and diluted	257,780	261,299

The accompanying notes are an integral part of these consolidated financial statements.

CONSOLIDATED STATEMENTS OF CHANGES IN REDEEMABLE CONVERTIBLE PREFERRED STOCK AND STOCKHOLDERS' DEFICIT

(in thousands, except share and per share amounts)	Series A Preferred		Series A-2 Preferred		Series B Preferred		Series B-2 Preferred		Series C Preferred		Series C-2 Preferred		Series D Preferred		Common Stock		Additional Paid-in Capital	Accumulated Deficit	Total Stockholders' Deficit
	Shares	Amount	Shares	Amount	Shares	Amount	Shares	Amount	Shares	Amount	Shares	Amount	Shares	Amount	Shares	Amount			
Balance at January 1, 2019	253,862	$ 1,596	290,002	$ 3,623	376,061	$ 6,606	237,183	$ 6,991	505,597	$ 22,239	—	—	—	—	255,362	—	$ 439	$ (15,514)	$ (15,075)
Issuance of Preferred Stock, net of issuance cost of $71	—	—	—	—	—	—	—	—	58,690	2,600	412,174	19,929	—	—	—	—	—	—	—
Exercise of common stock options	—	—	—	—	—	—	—	—	—	—	—	—	—	—	5,084	—	24	—	24
Stock-based compensation	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	143	—	143
Net loss	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	(13,626)	(13,626)
Balance at December 31, 2019	253,862	$ 1,596	290,002	$ 3,623	376,061	$ 6,606	237,183	$ 6,991	564,287	$ 24,839	412,174	19,929	—	—	260,446	—	606	(29,140)	(28,534)
Issuance of Preferred Stock, net of issuance cost of $124	—	—	—	—	—	—	—	—	—	—	103,044	5,000	975,039	74,876	—	—	—	—	—
Exercise of common stock options	—	—	—	—	—	—	—	—	—	—	—	—	—	—	6,292	—	30	—	30
Stock-based compensation	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	517	—	517
Net loss	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	(23,264)	(23,264)
Balance at December 31, 2020	253,862	$ 1,596	290,002	$ 3,623	376,061	$ 6,606	237,183	$ 6,991	564,287	$ 24,839	515,218	$ 24,929	975,039	$ 74,876	266,738	—	$ 1,153	$ (52,404)	$ (51,251)

The accompanying notes are an integral part of these consolidated financial statements.

CONSOLIDATED STATEMENTS OF CASH FLOWS

(in thousands)	Years Ended December 31, 2019	2020
Cash flows from operating activities		
Net loss	$ (13,626)	$ (23,264)
Adjustments to reconcile net loss to net cash used in operating activities:		
Depreciation and amortization	498	879
Provision for warranty costs	120	100
Change in fair value of warrants	10	85
Amortization of debt discount	1	—
Stock-based compensation	143	517
Provision for bad debt	50	—
Provision for excess and obsolete inventories	60	—
Loss on disposal of equipment	4	—
Changes in operating assets and liabilities:		
Accounts receivable	(989)	(76)
Grants receivable	274	—
Inventories	(2,551)	(762)
Prepaid expenses and other current assets	(210)	(1,696)
Other assets	70	(25)
Accounts payable	827	659
Accrued expenses and other current liabilities	341	1,081
Deferred revenue	46	85
Deferred rent	(26)	(17)
Net cash used in operating activities	(14,958)	(22,434)
Cash flows from investing activities		
Purchases of property and equipment	(1,811)	(1,442)
Payments for patents capitalized	(317)	(333)
Purchases of license	(50)	(520)
Net Cash used in investing activities	(2,178)	(2,295)
Cash flows from financing activities		
Proceeds from issuance of Series C preferred stock	2,600	—
Proceeds from issuance of Series C-2 preferred stock	20,000	5,000
Proceeds from issuance of Series D preferred stock	—	75,000
Preferred stock issuance costs	(71)	(124)
Proceeds received from long-term debt	—	25,000
Debt issuance cost paid	—	(907)
Exercise of common stock options	24	30
Payments on notes payable	(72)	—
Net cash provided by financing activities	22,481	103,999
Net change in cash	5,345	79,270
Cash beginning	22,026	27,371
Cash ending	$ 27,371	$ 106,641
Non-cash investing and financing activities		
Fair value of warrants issued with credit agreement	—	$ 4,430
Fair value of loan commitment	—	$ 2,240
Supplemental disclosure of cash flow information		
Cash paid for interest	$ 1	$ 21

The accompanying notes are an integral part of these consolidated financial statements.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

Note 1 - Nature of operations

IsoPlexis Corporation and its subsidiary (the "Company") was incorporated in the State of Delaware in March 2013. The Company is a privately held life sciences company building solutions to accelerate the development of curative medicines and personalized therapeutics. The Company's award-winning single-cell proteomics systems reveal unique biological activity in small subsets of cells, allowing researchers to connect more directly to in-vivo biology and develop more precise and personalized therapies. The Company's products have been adopted by researchers around the world, including each of the top 15 global pharmaceutical companies by revenue and by approximately 45% of comprehensive cancer centers in the United States. On December 28, 2018, the Company created IsoPlexis UK Limited (IsoPlexis UK), which has remained dormant.

COVID-19

The COVID-19 pandemic has developed rapidly in 2020, with a significant number of cases. Measures taken by various governments to contain the virus have affected economic activity. The Company has taken a number of measures to monitor and mitigate the effects of COVID-19, such as safety and health measures for the Company's employees (such as social distancing and working from home) and securing the supply of materials that are essential to the production process.

At this stage, the impact on the Company's business and results has not been significant and based on the Company's experience to date management expects this to remain the case. The Company will continue to follow the various government policies and advice.

Note 2 - Summary of significant accounting policies

Basis of presentation

The accompanying financial statements have been prepared in accordance with accounting principles generally accepted ("GAAP") in the United States. Any reference in these notes to applicable guidance is meant to refer to GAAP as found in the Accounting Standards Codification ("ASC") and Accounting Standards Updates ("ASU") promulgated by the Financial Accounting Standards Board ("FASB").

Principles of consolidation

The consolidated financial statements include the accounts of the Company and its wholly owned subsidiary, IsoPlexis UK. All intercompany transactions have been eliminated.

Use of estimates

The preparation of financial statements in conformity with GAAP requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosures of contingent assets and liabilities at the date of the financial statements and the reported amounts of income and expenses during the reporting period. Actual results could differ from those estimates. The most significant estimates are those used in the determination of the fair value of warrant liabilities, useful lives of long-lived assets, and estimated fair value of common stock for purposes of recording equity-based incentive compensation.

Liquidity and ability to continue as a going concern

The accompanying financial statements have been prepared assuming that the Company will continue as a going concern. Management has evaluated whether there are conditions and events that raise substantial doubt about the Company's ability to continue as a going concern within one year after the date the financial statements are issued. Since its inception, the Company has incurred net losses and negative cash flows from operations.

During the years ended December 31, 2019 and December 31, 2020, the Company incurred a net loss of $13.6 million and $23.3 million, respectively, and used $15.0 million and $22.4 million in cash for operations,

respectively. In addition, as of December 31, 2020, the Company had an accumulated deficit of $52.4 million. The Company expects to continue to generate operating losses and negative cash flows for the foreseeable future.

The Company currently expects that the cash on hand of $106.6 million as of December 31, 2020, will be sufficient to fund its operating expenses and capital requirements for more than 12 months from the date the financial statements are available to be issued. Additional funding will be needed to finance future research and development, manufacturing, and commercial activities. To date, the Company has principally financed its operations through private placements of preferred stock. The Company will seek additional funding either through an initial public offering or through private equity and debt financings and other arrangements. There is no assurance the Company will be successful in obtaining such additional financing on terms acceptable to it, if at all, and it may not be able to enter into other arrangements. If the Company is unable to obtain funding, it could be forced to delay, reduce or eliminate the Company's research and development programs, expansion or commercialization efforts, which could adversely affect its business prospects and ability to continue operations.

The Company is subject to risks common to companies in the life sciences industry. There can be no assurance that the Company's research and development will be successful, that adequate protection for its intellectual property will be maintained, that any products developed will obtain required regulatory approval, or that any approved products will be commercially viable.

Cash

The Company maintains its cash with high-credit quality financial institutions. At times, such amounts may exceed federally insured limits.

Inventories

Inventories are stated at the lower of cost, determined by the first-in-first-out method, or net realizable value. Inventories are adjusted for estimated obsolescence and excess volumes and written down to net realizable value based upon estimates of future demand.

Product and services revenue, accounts receivable and cost of sales

On January 1, 2019, the Company adopted the provisions of ASU 2014-09, Revenue from Contracts with Customers (Topic 606) ("ASC 606"), using the modified retrospective method. The adoption of ASC 606 had no impact on the Company's consolidated financial statements. The Company primarily generates product revenue from the sale of single cell diagnostic equipment and consumables and also generates service revenues by measuring immune responses using the Company's technology.

The Company recognizes revenue when and as control of products and services is transferred to customers in an amount that reflects the consideration the Company expects to be entitled from customers in exchange for those products and services. This process involves identifying the contract with a customer, determining the performance obligations in the contract, determining the transaction price, allocating the transaction prices to distinct performance obligations in the contract, and recognizing revenue when or as the performance obligations have been satisfied. Revenue recognition for contracts with multiple performance obligations is based on the separate satisfaction of each distinct performance obligation within the contract. A performance obligation is considered distinct from other obligations in a contract when it provides a benefit to the customer either on its own or together with other resources that are readily available to the customer and is separately identified in the contract. The Company considers a performance obligation satisfied once the Company has transferred control of a good or service to the customer, meaning the customer has the ability to use and obtain the benefit of the good or service. The transaction price is allocated to each performance obligation in proportion to its standalone selling price. If the product or service has no history of standalone sales or if the sales volume is not sufficient, the Company estimates standalone selling price maximizing the use of observable inputs such as expected cost plus a reasonable margin and competitor pricing.

The Company contracts with its customers based on purchase orders, which are short-term single orders. The Company records revenue from sales of single cell diagnostic equipment and consumables when performance obligations under the terms of a contract with customers are satisfied, which is when control of the goods is

transferred to the customer at the time of shipment. Invoicing typically occurs upon shipment and payment is typically due within 30 days from invoice. Product returns are minimal and must be requested by the customer within 72 hours of receipt. The Company recognizes service revenue when performance obligations under the terms of a contract with customers are satisfied, which is generally at the time the analysis data from measuring immune responses using the Company's technology is made available to the customer. The Company also generates revenues through the sale of extended service type warranties, which are recognized ratably over the contract term as the Company is standing ready to provide services when and if needed.

Revenue is recorded net of discounts and sales taxes collected on behalf of governmental authorities. Employee sales commissions are recorded as sales and marketing expenses when incurred as the amortization period for such costs, if capitalized, would have been one year or less.

Cost of products and services revenue consists of labor, components and overhead costs related to the products sold and services delivered, as well as royalty expense and amortization under the license technology agreements described in Note 13.

The Company makes judgements as to its ability to collect outstanding receivables and provides allowances when collections becomes doubtful.

As of December 31, 2019 and 2020, no single customer represented 10% or more of revenue or accounts receivable.

Property and equipment

Property and equipment, including leasehold improvements, are carried at cost less accumulated depreciation and amortization. Depreciation and amortization are provided on a straight-line basis over the estimated useful lives of the assets, ranging from three to seven years. Amortization of leasehold improvements is recorded over the shorter of the estimated useful life of the asset or remaining lease term.

The estimated useful lives of the major classes of property and equipment as generally as follows:

	Estimated Useful Lives
Furniture and equipment	5 to 7 Years
Computers and technology	3 to 5 Years
Leasehold improvements	3 to 5 Years

Patents

Costs related to filing and pursuing patent applications for products that have reached technological feasibility are capitalized and amortized over the estimated period to be benefitted, not to exceed the patent lives, which may be as long as 17 years. Patent costs are amortized as part of cost of product and service revenue. The Company periodically evaluates capitalized patent costs to determine if any amounts should be written down. Patent costs for products that have not reached technological feasibility are expensed as incurred in general and administrative expenses since recoverability of such expenditures is uncertain.

License agreements

The Company has entered into and may continue to enter into license agreements to access and utilize certain technology. The Company evaluates if the license agreement results in acquisition of an asset or a business and then determines if the acquired asset has the ability to generate revenues or is subject to regulatory approval. When regulatory approval is not required and there is a probable future benefit from the license, the Company records the license as an asset and amortizes it over the estimated economic life. The Company records the amortization as a cost of product and service revenue.

Leases

The Company records rent expense on a straight-line basis over the life of the lease. In cases of escalating rental payments, the Company records rent expense on a straight-line basis with an offset to deferred rent liability.

Shipping and handling

Shipping and handling expenses are included in cost of product revenue.

Research and development state tax credits

Research and development (R&D) tax credits exchanged for cash pursuant to the Connecticut R&D Tax Credit Exchange Program, which permits qualified small business engaged in R&D activities within Connecticut to exchange their unused R&D tax credits for a cash amount equal to 65% of the value of exchanged credits, are recorded as a receivable and other income in the year the R&D tax credits relate to, as it is reasonably assured that the R&D tax credits will be received, based upon the Company's history of filing for and receiving the tax credits. R&D tax credits receivable where cash is expected to be received by the Company more than one year after the balance sheet date are classified as noncurrent in the consolidated balance sheets**.**

Loan commitment

The Company's Credit Agreement (see Note 7) contains a commitment from the lender for a second tranche of debt under certain conditions. The Company has determined the commitment represents a freestanding financial instrument under the definition provided within the ASC Glossary, and therefore has initially recorded it at fair value, with changes in fair value each period recorded in earnings. The balance of $2.2 million is included in other assets in the consolidated balance sheet at December 31, 2020.

Debt issuance costs

The costs associated with obtaining debt financing, including loan origination fees and legal costs, are offset against the related debt and amortized over the term of the related debt. For debt issuances with multiple tranches, the issuance costs related to unissued tranches are classified within other assets until the proceeds are received. As of December 31, 2019 and 2020, there were $0.0 and $0.9 million of deferred debt issuance costs, respectively.

Deferred offering costs

The Company capitalizes certain direct and incremental legal, professional accounting and other third-party fees associated with in-process equity financings as deferred offering costs until such equity financings are consummated. After consummation of the equity financing, these costs are recorded as a reduction of the carrying value of the common or preferred stock generated as a result of the equity financing. Should the in-process equity financing be abandoned, the deferred offering costs will be expensed immediately as a charge to operating expenses in the consolidated statements of operations. As of December 31, 2019 and 2020, there were no deferred equity offering costs.

Detachable warrants

The Company accounts for detachable warrants as freestanding financial instruments in accordance with ASC No. 480, Distinguishing Liabilities from Equity, which requires the Company to separately account for the detachable warrants at fair value. The fair value used for the warrants is calculated using the Black-Scholes valuation model. See Notes 3 and 7.

Fair value measurements

The fair value of assets and liabilities are based on the exchange price that would be received for an asset or paid to transfer a liability (an exit price) in the principal or most advantageous market for the asset or liability in an orderly transaction between market participants on the measurement date. Valuation techniques used to measure fair value maximize the use of observable inputs and minimize the use of unobservable inputs. The Company uses a fair

value hierarchy with three levels of inputs, of which the first two are considered observable and the last unobservable, to measure fair value:

Level 1 — Quoted prices in active markets for identical assets or liabilities.

Level 2 — Inputs, other than Level 1, that are observable, either directly or indirectly, such as quoted prices for similar assets or liabilities; quoted prices in markets that are not active; or other inputs that are observable or can be corroborated by observable market data for substantially the full term of the assets or liabilities.

Level 3 — Unobservable inputs that are supported by little or no market activity and that are significant to the fair value of the assets or liabilities.

To the extent that valuation is based on models or inputs that are less observable in the market, the determination of fair value hierarchy is based on the lowest level of any input that is significant to the fair value measurement.

Financial instruments measured at fair value on a recurring basis include loan commitment assets and warrant liabilities (Note 3). The fair value was determined based on Level 3 inputs as described in Note 3. An entity may elect to measure many financial instruments and certain other items at fair value at specified election dates. The Company did not elect to measure any additional financial instruments or other items at fair value.

There have been no changes to the valuation methods utilized by the Company during the years ended December 31, 2019 or 2020. The company evaluates transfers between levels at the end of each reporting period. There were no transfers of financial instruments between levels during the years ended December 31, 2019 or 2020.

The carrying amounts of financial instruments such as cash, accounts receivable, prepaid expenses and other current assets, accounts payable, and accrued liabilities approximate the related fair values due to the short-term maturities of these instruments. The carrying amount of the Company's debt under the Credit Agreement as of December 31, 2020 was determined to approximate fair value as the agreement was entered into on December 30, 2020.

Income taxes

The Company has adopted the accounting guidance within ASC Topic 740 on uncertainties in income taxes. ASC Topic 740, Income Taxes, prescribes a recognition threshold and measurement attribute for the financial statement recognition and measurement of a tax position taken or expected to be taken in a tax return.

Deferred income tax assets and liabilities are recognized for the expected future tax consequences attributed to differences between the financial statement carrying amounts of existing assets and liabilities and their respective tax basis and net operating loss and tax credit carryforwards. Deferred tax assets and liabilities are measured using the enacted tax rates expected to be applied to taxable income in the years in which those temporary differences are expected to reverse. Deferred income taxes result primarily from temporary differences between the recognition of depreciation and certain other expenses for both financial statement and income tax reporting purposes as well as net operating loss and tax carryforwards. Valuation allowances are recorded to reduce deferred income tax assets when it is more likely than not that a tax benefit will not be realized.

The Company has no unrecognized tax benefits at December 31, 2019 and 2020 and its income tax returns after 2016 are subject to audit by the applicable taxing authorities. The Company will recognize any interest and penalties associated with tax matters as part of income tax expense.

Stock-based compensation

The Company measures stock option awards made to employees and directors based on the estimated fair values of the awards and recognize the compensation expense over the requisite service period. ASC 718, Stock Compensation, requires the recognition of stock-based compensation expense, using a fair value-based method, for costs related to all stock options granted. The Company's determination of the fair value of stock options with time-based vesting on the date of grant utilizes the Black-Scholes option-pricing model, and is impacted by the estimated

fair value of its common stock as well as other variables including, but not limited to, the expected term that stock options will remain outstanding, the expected common stock price volatility over the term of the stock option, risk-free interest rates and expected dividends.

The fair value of stock options is recognized over the period during which an optionee is required to provide services in exchange for the stock option award, known as the requisite service period on a straight-line basis. Stock-based compensation expense is recognized based on the fair value determined on the date of grant and is reduced for forfeitures as they occur. The grant date is determined based on the date when a mutual understanding of the key terms of the stock option awards are established.

Due to the lack of a public market for the Company's common stock and lack of Company-specific historical implied volatility data, the Company has based its computations of expected volatility on the historical volatility of a representative group of public companies with similar characteristics of the Company, including stage of product development and life science industry focus. The historical volatility is calculated based on a period of time commensurate with the expected term assumption. The Company uses the simplified method as prescribed by the U.S. Securities and Exchange Commission ("SEC") Staff Accounting Bulletin No. 107, Share-Based Payment, to calculate the expected term for options granted to employees and non-employees, whereby, the expected term equals the arithmetic average of the vesting term and the original contractual term of the options due to its lack of sufficient historical data. The risk-free interest rate is based on U.S. Treasury securities with a maturity date commensurate with the expected term of the associated award. The expected dividend yield is assumed to be zero as the Company has never paid dividends and has no current plans to pay any dividends on its common stock.

Due to the absence of an active market for the Company's common stock, the Company utilizes methodologies in accordance with the framework of the American Institute of Certified Public Accountants Technical Practice Aid, Valuation of Privately-Held Company Equity Securities Issued as Compensation, to estimate the fair value of its common stock. The estimated fair value of the Company's common stock has been determined at each grant based upon a variety of factors, including the illiquid nature of the common stock, arm's-length sales of the Company's capital stock (including redeemable convertible preferred stock), the effect of the rights and preferences of the preferred shareholders, and the prospects of a liquidity event. Among other factors are the Company's financial position and historical financial performance, the status of technological developments within the Company's research, the composition and ability of the current research and management team, an evaluation or benchmark of the Company's competition, and the current business climate in the marketplace. Significant changes to the key assumptions underlying the factors used could result in different fair values of common stock at each valuation date.

Impairment of long-lived and intangible assets

The Company evaluates the recoverability of its long-lived assets, which include property and equipment and intangible assets, whenever events or circumstances indicate that the carrying amount of these assets may not be recoverable. Recoverability of an asset or asset group is measured by comparison of its carrying amount to the expected future undiscounted cash flows that the asset or asset group is expected to generate. If that review indicates that the carrying amount of the long-lived asset or asset group is not recoverable, an impairment loss is recorded in the amount by which the carrying amount of the asset or asset group exceeds its fair value. There were no impairment indicators in 2019 or 2020.

Preferred stock

The Company records all shares of preferred stock at their respective fair values less issuance costs on the dates of issuance. The preferred stock is recorded outside of stockholders' deficit because, in the event of certain deemed liquidation events, which are events that are not considered solely within the Company's control, such as a merger, acquisition or sale of all or substantially all of the Company's assets, the preferred stock will become redeemable. In the event of a change of control of the Company, proceeds received from the sale of such shares will be distributed in accordance with the liquidation preferences set forth in the Company's Amended and Restated Certificate of Incorporation unless the holders of preferred stock have converted their shares of convertible preferred stock into shares of common stock. Preferred stock is not currently redeemable or probable of becoming redeemable.

Derivatives

Upon issuing financial instruments, the Company assesses whether the nature of the host contract and any of the features embedded within the financial instrument could be considered derivatives that require bifurcation. In determining whether the embedded features represent derivatives that could require bifurcation, the Company assesses whether the economic characteristics of embedded features are not clearly and closely related to the economic characteristics and risks of the remaining component of the financial instruments (i.e., the host contracts), whether the instrument is measured at fair value with changes in fair value reported in earnings as they occur and whether a separate, non-embedded instrument with the same terms as the embedded instruments would meet the definition of a derivative instrument. When it is determined that all of the criteria above are met, the embedded derivative is separated from the host contract and carried at fair value with any changes in fair value recorded in current period earnings.

Research and development costs

Research and development expenses consist of costs incurred to develop an automated method and instrument and consumable assay (platform) that proves feasibility and expands the capability of the Company's technology. Research and development expenses include personnel costs for the Company's research and product development employees, as well as non-personnel costs such as facilities and overhead costs attributable to research and development, and professional fees payable to third parties for research services. Research and development costs are expensed as incurred.

Product warranties

The Company generally provides a one-year warranty on instruments. At the time revenue is recognized, an accrual is established for estimated warranty expenses based on historical experience as well as anticipated product performance. The Company periodically reviews the warranty reserve for adequacy and adjusts the warranty accrual, if necessary, based on actual experience and estimated costs to be incurred. Warranty expense is recorded as a component of cost of product revenue. Product warranties are meant to ensure all the Company's instruments are operating effectively and based on the terms of the purchase or service agreement.

Grant income and receivable

The Company recognizes income earned under cost-plus-fixed-fee grants from the federal government within the statements of operations as grant income. Grant income is recognized as allowable costs are incurred and fees are earned. Amounts requested for payment from the government related to the grant agreements that have not been collected are stated at the outstanding balance, less an allowance for bad debt, if necessary. The Company has no grants receivable balance as of December 31, 2019 or 2020.

Net loss per share attributable to common stockholders

The Company calculates basic net loss per share and diluted net loss per share using the weighted-average number of shares of common stock outstanding for the period. Net loss per share attributable to common stockholders is calculated using the two-class method, which is an earnings allocation formula that determines net loss per share for the holders of shares of the Company's common stock and participating securities. The Company's preferred stock contains a cumulative annual dividend right whether or not declared, which after consideration increases the net loss available to common stockholders. The Company's preferred stock also contains participation rights in any dividend paid by the Company as well as residuals in liquidation and were deemed to be participating securities. The participating securities do not include a contractual obligation to share in losses of the Company and are not included in the calculation of net loss per share in the periods in which net loss is recorded. Except where the result would be antidilutive to net income (loss), diluted net income (loss) per share is computed assuming the exercise of common stock options and the conversion of outstanding shares of preferred stock.

Segment information

Operating segments are defined as components of an enterprise for which discrete financial information is available for evaluation by the chief operating decision maker (CODM) in deciding how to allocate resources and in assessing operating performance. The Company manages its operations as a single segment for the purposes of allocating resources, assessing performance, and making operating decisions. For revenue by geographic area see Note 4.

New accounting standards not yet effective

In February 2016, the FASB issued ASU No. 2016-02, Leases (Topic 842). This standard established a right-of-use model that requires all lessees to recognize right-of-use assets and liabilities on their balance sheet that arise from leases as well as provide disclosures with respect to certain qualitative and quantitative information related to their leasing arrangements. The Company plans to adopt the standard on January 1, 2022, using a modified retrospective transition approach to be applied to leases existing as of, or entered into after, January 1, 2022. The Company has not yet determined the impact the adoption of this standard will have on the consolidated financial statements.

In June 2016, the FASB issued ASU No. 2016-13, Financial Instruments—Credit Losses (Topic 326): Measurement of Credit Losses on Financial Instruments. This standard requires that credit losses be reported using an expected losses model rather than the incurred losses model that is currently used, and establishes additional disclosures related to credit risks. For available-for-sale debt securities with unrealized losses, this standard now requires allowances to be recorded instead of reducing the amortized cost of the investment. This standard will be effective for the Company on January 1, 2023. The Company has not yet determined the impact the adoption of this standard will have on the consolidated financial statements.

In March 2020, the FASB issued ASU No. 2020-04, Reference Rate Reform (Topic 848) ("ASU 2020-04"), which provides companies with temporary optional financial reporting alternatives to ease the potential burden in accounting for reference rate reform and includes a provision that allows companies to account for a modified contract as a continuation of an existing contract. ASU 2020-04 is effective for all entities as of March 12, 2020 through December 31, 2022. The Company has certain debt instruments for which the interest rates are indexed to LIBOR, and as a result, is currently evaluating the effect that the implementation of this standard will have on the Company's consolidated operating results, cash flows, financial condition and related disclosures.

Note 3 - Fair Value Measurement

Certain of the Company's assets and liabilities are recorded at fair value, as described below.

The following tables set forth the Company's financial instruments that were measured at fair value on recurring basis by level within the fair value hierarchy:

	December 31, 2019			
(in thousands)	**Level 1**	**Level 2**	**Level 3**	**Total**
Warrant liability	$ —	$ —	$ 122	$ 122

	December 31, 2020			
(in thousands)	**Level 1**	**Level 2**	**Level 3**	**Total**
Warrant liability	$ —	$ —	$ 4,637	$ 4,637
Loan commitment asset	—	—	2,240	2,240

Under ASC Topic 480, Distinguishing Liabilities from Equity, the warrants (see Note 7) are freestanding financial instruments that qualify as liabilities required to be recorded at their estimated fair value at the inception date and remeasured at each reported balance sheet date thereafter until settlement.

The fair value of the warrant liability was estimated using a Black-Scholes Option Pricing Model, with the following significant unobservable inputs (Level 3):

	December 31, 2019	December 31, 2020	
	Series A-2	Series A-2	Series D
Stock price	$ 48.52	$ 76.92	$ 76.92
Exercise price	$ 12.29	$ 12.59	$ 76.92
Expected term (in years)	5.7	4.7	10
Volatility	50 %	50 %	50 %
Dividend rate	—	—	—
Risk-free interest rate	1.76 %	0.36 %	0.93 %

The Company's volatility was estimated at each valuation date based on the price history for guideline companies looking back over the number of years equal to the expected term. During the periods presented, the Company has not changed the manner in which it values assets and liabilities that are measured at fair value. The Company recognizes transfers between levels of the fair value hierarchy as of the end of the reporting period. There were no transfers within the hierarchy during the years ended December 31, 2019 and 2020.

The commitment for a second tranche under the Credit Agreement (see Note 7) qualifies as a freestanding financial instrument required to be recorded at estimated fair value. The fair value of the loan commitment was estimated based on the present value of future expected cash flows discounted at the Company's effective interest rate of 13.98%. As the Credit Agreement was signed on December 30, 2020, the loan commitment is excluded from the Level 3 roll forward below.

The following table presents changes during the years ended December 31, 2019 and 2020 in Level 3 liabilities measured at fair value on a recurring basis:

(in thousands)	Series D Warrants	Series A Warrants
Balances at January 1, 2019	$ —	$ 112
Change in estimated fair value	—	10
Balances at December 31, 2019	—	122
Issuance	4,430	—
Change in estimated fair value	—	85
Balances at December 31, 2020	$ 4,430	$ 207

The above fair value measurements are sensitive to changes in underlying unobservable inputs. A change in those inputs could result in a significantly higher or lower fair value measurement.

Changes in fair value of the warrants is included in other expense in the statements of operations.

Note 4 - Revenue

The Company's revenue is generated primarily from the sale of products and services. Product revenue primarily consists of sales of instruments and consumables used in single cell research equipment. Service and other revenue primarily consists of revenue generated from measuring immune responses using the Company's technology.

Revenue by source

(in thousands)	Year Ended December 31, 2019	2020
Instruments	$ 4,818	$ 7,432
Consumables	510	1,886
Extended service warranty	18	357
Other service revenue	2,159	712
Total Revenue	$ 7,505	$ 10,387

Revenue by geographic area

Based on region of destination (in thousands)	Years Ended December 31, 2019	2020
Americas[(1)]	$ 6,224	$ 7,558
Europe[(2)]	928	878
Greater China[(3)]	253	1,129
Asia-Pacific[(4)]	100	822
Total Revenue	$ 7,505	$ 10,387

(1) Region includes revenue from the United States of America
(2) Region includes revenue from the United Kingdom, Belgium, Portugal, Germany, Sweden, and Switzerland
(3) Region includes revenue from China and Taiwan
(4) Region includes revenue from Singapore, Japan and Korea

Performance obligations

The Company regularly enters into contracts with multiple performance obligations. Most performance obligations are generally satisfied within a short time after the contract execution date. As of December 31, 2020, the aggregate amount of the transaction price allocated to remaining performance obligations was $0.4 million, of which substantially all is expected to be recognized as revenue during 2021.

Contract balances

Contract balances represent amounts presented in the consolidated balances sheets when either the Company has transferred goods or services to the customer, or the customer has paid consideration to the Company under the contract. These contract balances included accounts receivable (see Note 5) and deferred revenue. Accounts receivable balances represent amounts billed to customers for goods and services when the Company has an unconditional right to payment of the amount billed. Deferred revenue, as of December 31, 2019 and December 31, 2020 was $0.3 million and $0.4 million respectively. Deferred revenue represents cash consideration received from customers for which all services or products have not yet been transferred. Revenue recorded in 2020 included $0.3 million of previously deferred revenue that was included in contract liabilities as of December 31, 2019.

Note 5 - Supplemental Balance Sheet Details

Accounts receivable, net consists of the following:

(in thousands)	December 31, 2019	2020
Accounts receivable	$ 2,896	$ 2,972
Allowance for doubtful accounts	(50)	(50)
Total accounts receivable, net	$ 2,846	$ 2,922

(in thousands)	December 31, 2019	2020
Allowance for doubtful accounts, beginning of year	$ —	$ 50
Write-offs of uncollectable accounts	—	—
Provision for allowance for doubtful accounts	50	—
Allowance for doubtful accounts, end of year	$ 50	$ 50

Inventories, net consists of the following:

(in thousands)	December 31, 2019	2020
Raw materials	$ 2,747	$ 3,631
Work in process	252	28
Finished good	254	356
Reserve for excess and obsolete inventory	(60)	(60)
Total Inventories, net	$ 3,193	$ 3,955

Property and equipment, net consist of the following:

(in thousands)	December 31, 2019	2020
Furniture and equipment	$ 2,009	$ 2,848
Computers and technology	992	1,453
Leasehold improvements	555	698
Total	3,556	4,999
Accumulated depreciation	(1,036)	(1,772)
Property and equipment, net	$ 2,520	$ 3,227

Depreciation expense was $0.5 million and $0.7 million for the years ended December 31, 2019 and 2020, respectively.

Accrued expenses and other current liabilities consist of the following:

(in thousands)	December 31, 2019	2020
Accrued compensation	$ 183	$ 867
Accrued unvouchered expenses	680	1,081
Other, including product warranties	85	181
Total accrued liabilities	$ 948	$ 2,129

Note 6 - Intangible assets

Intangible assets consist of the following:

(in thousands)	December 31, 2019			
	Remaining Useful Life (Years)	Gross	Accumulated Amortization	Net
Patents	9 - 14	$ 849	$ 22	$ 827
Capitalized Licenses	3 - 6	150	43	107
Total intangible assets		$ 999	$ 65	$ 934

(in thousands)	December 31, 2020			
	Remaining Useful Life	Gross	Accumulated Amortization	Net
Patents	8 - 14	$ 1,182	$ 52	$ 1,130
Capitalized Licenses	2 - 5	670	157	513
Total intangible assets		$ 1,852	$ 209	$ 1,643

During 2020 the Company acquired an additional license for $0.5 million with useful life of 5 years.

Amortization expense was $0.1 million for each of the years ended December 31, 2019 and 2020. The amortization of intangible assets is recognized in cost of product and service revenue.

The estimated annual amortization of intangible assets for the next five years is shown in the following table. Actual amortization expense to be reported in future periods could differ from these estimates as a result of acquisitions, divestitures, and asset impairments, among other factors.

Year (in thousands)	Estimated Annual Amortization
2021	$ 154
2022	154
2023	134
2024	134
2025	51

Note 7 - Debt

On September 15, 2015, the Company received a $0.4 million loan from Connecticut Innovations, Inc. (“CII”). The loan matured on March 15, 2019 and was repaid in full. The interest rate on the loan was 8% per year compounded monthly. The loan was secured by all of the Company's assets.

In connection with the issuance of the loan, the Company also issued to CII warrants to purchase 3,178 shares of Series A-2 preferred stock. The warrants have a contractual life that expires on September 15, 2022. The exercise price is $12.58608 per warrant share.

On December 30, 2020, the Company closed on a $50.0 million Credit Agreement, of which the Company borrowed $25.0 million immediately upon closing. An additional $25.0 million remains available through March 31, 2022 subject to a revenue milestone, defined as total revenue of at least $20.0 million over the twelve-month period most recently ended.

The Credit Agreement bears interest at the one-month Libor, with a 1.75% floor, plus a 9.50% margin (11.25% at December 31, 2020). Monthly payments of interest-only are due over the term of the loan with no schedule loan amortization. Amounts borrowed are due and payable on the maturity date, December 30, 2025. The loan is secured by substantially all of the Company’s assets. Financial covenants include a $3.0 million minimum cash balance at all times and minimum revenue amounts, which range from $15.0 million for the twelve-month period ended June 31, 2021 to $46.8 million for the twelve-month period ended June 30, 2023 and are measured on a quarterly basis.

In connection with the Credit Agreement closing, the Company issued to the lender warrants to purchase 97,504 shares of Series D preferred stock. The warrants have a 10-year contractual life and an exercise price of $76.92 per warrant share. The fair value at issuance was estimated at $4.4 million and was recorded as a warrant liability. In addition, given that the Credit Agreement contains a second tranche of potential borrowings, the Company identified and recorded within other assets on the balance sheet a $2.2 million asset related to the future loan commitment. The remaining proceeds were allocated to the value of the initial debt borrowed and the discount resulting on such debt will be amortized over the term of the Credit Agreement.

Note 8 - Equity

Common stock

As of December 31, 2019 and 2020, the Company had authorized 4,647,474 shares of common stock, $0.001 par value per share ("Common Stock"), of which a total of 260,446 shares and 266,738 shares were outstanding, respectively.

Preferred stock

All Series of preferred stock are collectively referred to as the "Preferred Stock". Under the Amended and Restated Certificate of Incorporation dated December 30, 2020, the significant rights and preferences of the outstanding Preferred Stock of the Company include:

Voting rights

Each holder of Preferred Stock is entitled to cast the number of votes equal to the number of whole shares of Common Stock into which the shares of Preferred Stock held are convertible. The holders of Preferred Stock vote together with the holders of Common Stock as a single class.

Dividends

The Preferred Stock accrues dividends at a rate of 8% per annum on the original issue price. Dividends are cumulative and accrue whether declared or not. The Company is under no obligation to pay the dividends unless in the event of a triggering event. A triggering event includes an initial public offering of Common Stock and as specified by written consent or vote of the holders of the majority of the then-outstanding shares of Preferred Stock, voting together as a single class. As of December 31, 2020, the cumulative, accrued dividends totaled $14.2 million.

Liquidation preference

In the event of any voluntary or involuntary liquidation, dissolution or winding up of the Company or a Deemed Liquidation Event, as defined below, (and after payment of all liabilities and all costs incurred in connection with the Deemed Liquidation Event or setting aside of monies sufficient to cover such liabilities and costs), the net assets in cash, shares or other assets ("Liquidation Proceeds") shall be distributed in the following order:

1) First, the holders of Preferred Stock (if necessary, on a pro rata basis) shall, in preference to any other outstanding securities, receive an amount equal to the original subscription price paid, plus accrued but unpaid dividends.

2) Second, any remaining Liquidation Proceeds shall be distributed among the holders of the shares of Preferred Stock and Common Stock, pro rata based on the number of shares held by each such holder, treating for this purpose all such securities as if they had been mandatorily converted to Common Stock pursuant to the terms of the Amended and Restated Certificate of Incorporation.

Deemed liquidation event

A "Deemed Liquidation Event" means (i) a merger or consolidation in which the Company is a constituent party or a subsidiary of the Company is a constituent party and the Company issues shares of its capital stock pursuant to such merger or consolidation, (ii) the sale, lease, transfer, exclusive license or other disposition, in a single transaction or series of related transactions, by the Company or any subsidiary of the Company of all or substantially all the assets of the Company and its subsidiaries taken as a whole, or (iii) a transaction or series of related transactions to which the Company is a party (including without limitation, any acquisition of capital stock, reorganization, merger, or consolidation, but excluding any merger effected exclusively for the purpose of changing the domicile of the Company) in which an entity or person, or a group of related persons or entities, acquires from one or more stockholders of the Company, capital stock or other equity securities representing at least a majority of the outstanding voting power of the Company.

Redemption rights

The Preferred Stock is not redeemable by the Company, except in connection with a Deemed Liquidation Event as defined above.

Optional conversion

Each share of Preferred Stock is convertible, at the option of the holder, into shares of Common Stock at a ratio equal to the original applicable issuance price divided by the applicable conversion price in effect at the time of conversion (initially equal to the applicable original issue price, adjusted going forward for any dilutive issuances, stock splits or similar events).

Mandatory conversion

Each share of Preferred Stock shall automatically convert into shares of Common Stock at the then applicable conversion rate upon (i) vote by the holders of the majority the then-outstanding shares of Preferred Stock, voting together as a single class, and the then-outstanding shares of Series D Preferred Stock or, (ii) an initial public offering of Common Stock at a price of at least $115.38 per share (subject to appropriate adjustment in the event of any stock dividend, stock split, combination or other similar recapitalization with respect to Common Stock) and a proposed offering size of at least $50.0 million. As of December 31, 2020, shares of Preferred Stock would be convertible to 3,211,652 shares of Common Stock.

Directors

The preferred shareholders are entitled to elect five directors out of the nine directors of the Board.

Put agreement

In connection with the issuance of the Preferred Stock, the Company entered into a put agreement (the “Put Agreement”) with a stockholder that allows the stockholder to redeem its shares of Preferred Stock at the current market price or the original purchase price plus a return, all as defined in the Put Agreement. The stockholder can put the stock only if the Company moves out of the State of Connecticut and the stockholder’s put rights terminate once such stock is freely saleable to the public pursuant to a public registration. At this time, the Company has no plan to move out of the State of Connecticut in the foreseeable future, which is within the Company’s control, therefore the Company has determined that there is no value in the put option due to the remote likelihood of exercisability.

Note 9 - Equity based compensation

The Company's 2014 Stock Plan (the “Plan”) provides for the granting of stock options or restricted stock to key employees, officers, directors and consultants. The Board of Directors, at its sole discretion, shall determine the exercise price. Stock options expire 10 years from the date of grant. The stock options generally vest 25% upon the one-year anniversary of the service inception date and then ratably each month over the remaining 36 months. Upon termination of service, any unvested stock options are automatically returned to the Company. Vested stock options that are not exercised within the specified period, according to the terms and conditions of the option plan, following the termination as an employee, consultant, or service provider to the Company are surrendered back to the Company. Those stock options are added back to the pool and made available for future grants. The maximum number of shares of common stock reserved under the Plan is 960,420. Compensation cost is recorded on a straight-line basis over the requisite service period of the award based on the fair value of the options issued on the measurement date.

The following table summarizes stock option activity for the year ended December 31, 2020:

	Stock Options			
	Options	Weighted Average Exercise Price	Weighted Average Remaining Contractual Life (in years)	Aggregate Intrinsic Value (In thousands)
Outstanding as of December 31, 2019	308,947	$ 5.05	7.5	
Granted	115,950	8.22		
Forfeited	(33,992)	7.63		
Exercised	(6,292)	5.12		
Outstanding as of December 31, 2020	384,613	$ 5.78	7.2	$ 3,409
Vested and expected to vest as of December 31, 2020	384,613	$ 5.78	7.2	$ 3,409
Exercisable at December 31, 2020	285,450	$ 5.25	6.4	$ 3,161

The following table summarizes stock-based compensation expense, and also the allocation within the consolidated statements of operations:

	Years Ended December 31,	
(in thousands)	2019	2020
Research and development	$ 25	$ 35
General and administrative	107	455
Sales and marketing	11	27
Total stock-based compensation expense	$ 143	$ 517

The weighted-average grant-date fair value of stock options awarded during the years ended December 31, 2019 and 2020 was approximately $4.21 per share and $4.65 per share, respectively. The aggregate grant date fair value of stock options vested during the years ended December 31, 2019 and 2020 were $0.1 million and $0.4 million, respectively. As of December 31, 2020, there was a total of $0.4 million of unrecognized employee compensation costs related to non-vested stock option awards expected to be recognized over a weighted average period of 2.6 years.

The Company estimates the fair value of stock-based compensation utilizing the Black-Scholes option pricing model, which is dependent upon several variables, such as expected term, volatility, risk-free interest rate, and expected dividends. Each of these inputs is subjective and generally requires significant judgment to determine.

The following table summarizes the range of key assumptions used to determine the fair value of stock options granted during:

	Years Ended December 31,	
	2019	2020
Risk-free interest rate	1.70 %	0.22 %
Expected term (in years)	7	7
Expected volatility	50 %	50 %
Expected dividend yield	—	—
Exercise price	$7.70 - $8.22	$8.22
Estimated fair value of common stock	$7.70 - $8.22	$8.22 - $12.00

The risk-free interest rate assumption was based upon observed interest rates appropriate for the expected term of the stock options. The expected volatility was calculated based on comparable public companies. The expected

term is based on the average of the vesting period and the legal term. The Company has not declared any dividends in its history and does not expect to issue dividends over the life of the stock options and therefore has estimated the dividend yield to be zero.

Note 10 - Operating leases

The Company has multiple operating lease commitments for office space and equipment, which expire through 2026. The future rental payments required by the Company under the operating leases are approximately as follows:

(in thousands)	Years Ended December 31
2021	$ 1,105
2022	1,013
2023	940
2024	871
2025	716
Thereafter	292
Total	$ 4,937

The rent expense for the years ended December 31, 2019 and 2020 was approximately $0.8 million and $0.9 million, respectively.

Note 11 - Product warranties

The Company warrants certain products generally for periods of one year following the delivery date. Accrued warranty costs are included in accrued expenses and other current liabilities.

	December 31,	
(in thousands)	2019	2020
Accrued warranty costs, beginning of year	$ 25	$ 85
Cost of warranty services during the year	(60)	(50)
Estimated provision for warranty costs	120	100
Accrued warranty costs, end of year	$ 85	$ 135

Note 12 - Income taxes

For the years ended December 31, 2019 and 2020, the Company did not have a current or deferred income tax expense or benefit as the Company has incurred losses since inception.

The effective tax rate for the Company for years ended December 31, 2019 and 2020 was zero percent. A reconciliation of the anticipated income tax rate by applying the statutory federal income tax rate of 21% to income before taxes to the amount reported in the statement of operations is as follows:

	Years Ended December 31,	
	2019	2020
U.S. statutory federal income tax rate	21.0 %	21.0 %
State income taxes (net of federal benefit)	4.9 %	4.5 %
Research and development tax credits	3.3 %	— %
Non-deductible expenses	(0.1)%	— %
Change in valuation allowance	(29.1)%	(25.5)%
Effective income tax rate	— %	— %

The tax effects of temporary difference and carryforwards that give rise to significant portions of the net deferred tax assets were as follows:

(in thousands)	December 31, 2019	December 31, 2020
Deferred tax assets:		
Stock based compensation	$ 55	$ 172
Other accruals	43	64
Deferred revenue	60	78
Inventory adjustments	26	26
Intangible assets	4	5
Net operating losses	7,537	13,278
Federal and State tax credits	973	928
Total deferred tax assets	8,698	14,551
Valuation allowance	(8,631)	(14,489)
Deferred tax assets, net of valuation allowance	67	62
Deferred tax liabilities:		
Depreciation and amortization	(67)	(62)
Total deferred tax liabilities	(67)	(62)
Deferred tax assets and liabilities, net of valuation allowance	$ —	$ —

As of December 31, 2020, the Company had net operating loss carryforwards for federal purposes of approximately $12.7 million, which expire at various dates through 2033 and approximately $38.0 million which have no expiration. The Company also had state net operating loss carryforwards of approximately $44.2 million, which expire at various dates through 2042. The Company had federal research and development tax credit carryforwards available to offset future federal income taxes of approximately $0.7 million and state of Connecticut research and development tax credit carryforwards available to offset future state income taxes of approximately $0.3 million.

On March 27, 2020, the Coronavirus Aid, Relief, and Economic Security Act (CARES Act) was enacted which included provisions related to NOL carryovers and carrybacks. The CARES Act amended the NOL carryback rules by allowing NOLs arising in tax years beginning after December 31, 2017 and before January 1, 2021 to be carried back to each of the 5 years preceding the year of the loss to generate a refund of previously paid income taxes. In addition, the CARES Act temporarily removed the 80% limitation under which NOLs generated post-2017 could be used to offset no more than 80% of taxable income, and allows for full use of such NOLs for tax years before January 1, 2021. The Company has evaluated the relevant provisions of the CARES Act and has determined that it does not expect to recognize any income tax benefit related to these provisions due to its net operating losses in the current year and all prior years.

The Company’s valuation allowance increased during 2020 by $5.9 million primarily due to the generation of net operating losses.

Future realization of the tax benefits of existing temporary differences and net operating loss carryforwards ultimately depends on the existence of sufficient taxable income within the carryforward period. As of December 31, 2019 and 2020, the Company performed an evaluation to determine whether a valuation allowance was needed. The Company considered all available evidence, both positive and negative, which included the results of operations for the current and preceding years. The Company determined that it was not possible to reasonably quantify future taxable income and determined that it is more likely than not that all of it deferred tax assets will not be realized. Accordingly, the Company maintained a full valuation allowance as of December 31, 2019 and 2020.

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, which could potentially result in the expiration of a portion of the federal and state net operating losses and tax credit carryforwards before utilization, the reduction of the Company's gross deferred tax assets and corresponding calculation allowance, and increased future tax liability to the Company.

As of December 31, 2019 and 2020, the Company did not have any unrecognized tax benefits. The Company has completed a study for the research and development credit carryforwards through December 31, 2019, and has not yet completed a study of research and development credit carryforwards for the year ended December 31, 2020. This study, once completed, may result in an adjustment to the Company's research and development credit carryforwards; however, until the study is completed, and any adjustment is known, no amounts are being presented as an uncertain tax position. A full valuation allowance has been provided against the Company's research and development credits and, if an adjustment is required, this adjustment would be offset by an adjustment to the valuation allowance. Thus, there would be no impact to the balance sheets or statements of operations if an adjustment were required.

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, 2019 and 2020, the Company had no 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 tax 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 for all years until the net operating loss carryforwards are utilized or expire prior to utilization.

Additionally, as a result of legislation in the State of Connecticut, companies have the opportunity to exchange certain research and development tax credit carryforwards for a cash payment of 65% of the research and development tax credits. The research and development expenses that qualify for Connecticut credits are limited to those costs incurred within Connecticut. The Company has elected to participate in the exchange program and, as a result, has recognized net benefits of $0.4 million for the year ended December 31, 2019, which is included in non-operating income in the accompanying statements of operations. The Company does not expect to utilize the exchange program for the year ended December 31, 2020.

Note 13 - Technology license agreements

Yale Agreement

On April 25, 2014, the Company entered into a License Agreement (the "Yale Agreement") with Yale University. The Yale Agreement provides the Company with exclusive rights to the use of certain patented technology for a period expiring on the later of (i) the expiration of all patent claims licensed to the Company on a country-by-country basis, or (ii) ten years from the date of first sale of the licensed product in such country. After that, the license will become non-exclusive.

During the remaining term of the Yale Agreement, the Company is required to pay a customary annual license maintenance royalty ("LMR"), as well as low single-digit earned royalties on worldwide cumulative net sales of licensed products, which royalties are subject to reduction upon the occurrence of certain events specified in the Yale Agreement. The LMR is credited against earned royalties due by the Company in the same calendar year. For

the years ended December 31, 2019 and 2020, the Company incurred an immaterial amount in royalty expense pursuant to the Yale Agreement. The amount is included in cost of revenue in the accompanying statements of operations.

In connection with entering into the Yale Agreement, the Company issued 7,772 shares of Series A preferred stock to Yale University in 2014.

The Company amended the Yale Agreement in January 2018 to include certain patent rights. In consideration for the inclusion of these patent rights, the Company agreed to issue 3,374 shares of Series B-2 Preferred Stock to Yale in 2018.

Caltech Agreement

On March 8, 2017, the Company entered into a License Agreement with California Institute of Technology ("Caltech") (the "Caltech Agreement"). The Caltech Agreement provides the Company with exclusive rights to certain patents and non-exclusive rights to certain technology, in each case as defined therein. The Caltech Agreement will continue until the related patent rights expire.

During the term of the Caltech Agreement, the Company is required to pay a royalty on the exclusively licensed patent rights at a low single-digit percentage of net revenue, as defined in the Caltech Agreement, until the expiration of all patent claims on a country-by-country basis, and on the non-exclusively licensed technology at a lower single-digit percentage of net revenue, for a period of ten years from the first commercial sale. In the event that the Company fails to commercialize products that incorporate the licensed patents or technology, the annual minimum royalties due to Caltech will increase in accordance with the terms of the Caltech Agreement. The Company is also required to pay Caltech a mid-teen percentage of sublicensing revenue. In connection with entering into the Caltech Agreement, the Company issued 2,830 shares of Series B preferred stock to Caltech in 2018.

License and Supply and Non-Exclusive License Agreements

The Company is party to certain license and supply agreements that provide the Company with commercial access rights to certain supplies. Under certain of the Company's supply agreements, the Company is required to make annual minimum purchases of supplies (with such minimums ranging from $25,000 per year to $500,000 per year under the applicable agreements) during the terms of such agreements, which ranges from 5 to 6 years. The Company is also required to pay royalties on net sales of certain products and services under the license and supply agreements at rates that range from mid single-digit to low double-digit percentage. The Company is also party to a non-exclusive sublicense agreement that provides the Company with a non-exclusive sublicense to certain patent rights. During the term of the agreement, the Company is required to pay royalties at a low single-digit percentage rate on net revenue of products and services that are covered by the licensed patent rights. For the years ended December 31, 2019 and 2020, the Company incurred an immaterial amount in royalty expense pursuant to these agreements.

Note 14 - Legal proceedings

The Company may be a party to a litigation or subject to claims incident to the ordinary course of business. Although the results of litigation and claims cannot be predicted with certainty, the Company currently believes that the final outcome of these ordinary course matters will not have a material adverse effect on its business. Regardless of the outcome, litigation can have an adverse impact on the Company because of defense and settlement costs, diversion of management resources and other factors. The Company is not currently a party to any material legal proceedings, and the Company's management believes that there are currently no claims or actions pending against the Company, the ultimate disposition of which could have a material adverse effect on the Company's results of operations or financial condition.

Note 15 - Net loss per share attributable to common stockholders

The Company excluded the following potential common shares, presented based on amounts outstanding at each period end, from the computation of diluted net loss per share attributable to common stockholders for the periods indicated because including them would have an anti-dilutive effect:

	Years Ended December 31,	
	2019	2020
Options outstanding to purchase common stock	308,947	384,613
Convertible preferred stock (as converted to common stock)	2,133,569	3,211,652

Note 16 - Related party transactions

As summarized in Note 13, the Company has a License Agreement with Yale University, which is a holder of Series A and Series B-2 preferred stock. The Company has a License Agreement with Caltech, which is a holder of Series B preferred stock. There are no receivables or payables due from or to these entities as of December 31, 2019 and 2020.

Note 17 - Subsequent events

The Company has evaluated for subsequent events through May 13, 2021, the date these financial statements were issued.

On January 5, 2021, the Company sold an additional 130,006 shares of Series D Preferred Stock for net consideration of approximately $10.0 million.

On May 12, 2021, the Company entered into a Patent Purchase Agreement (the “Patent Purchase Agreement”) with certain third parties (the “Sellers”) to purchase a collection of patents for an aggregate purchase price of $20.0 million. The Company expects to fund the purchase with cash on hand. In connection with entering into the Patent Purchase Agreement, the Company also entered into an Assumption Agreement with the Sellers to assume the Sellers’ rights and obligations under a covenant not to sue with a separate third party related to certain patents purchased pursuant to the Patent Purchase Agreement. In addition, in connection with entering into the Patent Purchase Agreement, the Company has agreed to enter into a Supply Agreement with certain of the Sellers pursuant to which certain of the Sellers will agree to supply certain reagents to the Company.


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PART II

INFORMATION NOT REQUIRED IN PROSPECTUS

Item 13. Other Expenses of Issuance.

The following table sets forth the various expenses, other than the underwriting discount, payable in connection with the offering contemplated by this registration statement. All of the fees set forth below are estimates except for the SEC registration fee, the FINRA fee and the stock exchange listing fee.

	Payable by the registrant
SEC registration fee	*
FINRA filing fee	*
Nasdaq listing fee	*
Printing and engraving expenses	*
Legal fees and expenses	*
Accounting fees and expenses	*
Transfer agent and registrar fees and expenses	*
Miscellaneous fees and expenses	*
Total	*

* To be furnished by amendment.

Item 14. Indemnification of Directors and Officers.

Limitation of personal liability of directors and indemnification

We have entered into indemnification agreements with each of our current directors and executive officers. These agreements require us to indemnify these individuals to the fullest extent permitted under Delaware law against liabilities that may arise by reason of their service to us, and to advance expenses incurred as a result of any proceeding against them as to which they could be indemnified. We also intend to enter into indemnification agreements with our future directors and executive officers.

Section 145 of the Delaware General Corporation Law (the "DGCL") provides that a corporation may indemnify directors and officers as well as other employees and individuals against expenses (including attorneys' fees), judgments, fines and amounts paid in settlement actually and reasonably incurred by such person in connection with any threatened, pending or completed actions, suits or proceedings in which such person is made a party by reason of such person being or having been a director, officer, employee or agent to the registrant. The DGCL provides that Section 145 is not exclusive of other rights to which those seeking indemnification may be entitled under any bylaw, agreement, vote of stockholders or disinterested directors or otherwise. Our amended and restated bylaws provide for indemnification by the registrant of its directors, officers and employees to the fullest extent permitted by the Delaware General Corporation Law.

Section 102(b)(7) of the DGCL permits a corporation to provide in its certificate of incorporation that a director of the corporation shall not be personally liable to the corporation or its stockholders for monetary damages for breach of fiduciary duty as a director, except for liability (1) for any breach of the director's duty of loyalty to the corporation or its stockholders, (2) for acts or omissions not in good faith or which involve intentional misconduct or a knowing violation of law, (3) for unlawful payments of dividends or unlawful stock repurchases, redemptions or other distributions or (4) for any transaction from which the director derived an improper personal benefit. Our amended and restated certificate of incorporation provides for such limitation of liability.

We maintain standard policies of insurance under which coverage is provided (a) to our directors and officers against loss arising from claims made by reason of breach of duty or other wrongful act and (b) to us with respect to

payments we may make to our officers and directors pursuant to the above indemnification provision or otherwise as a matter of law.

Item 15. Recent Sales of Unregistered Securities.

Since January 1, 2018, we have engaged in the following transactions that were not registered under the Securities Act:

- In November 2018, we issued and sold 564,287 shares of Series C redeemable convertible preferred stock to nine accredited investors at a price of $44.3037 per share, for aggregate proceeds of $25,000,001.95;
- In December 2019, we issued and sold 515,218 shares of Series C-2 redeemable convertible preferred stock to six accredited investors at a price of $48.5231 per share, for aggregate proceeds of $24,999,974.54;
- In December 2020, we issued and sold 975,039 shares of Series D redeemable convertible preferred stock to ten accredited investors at a price of $76.92 per share, for aggregate proceeds of $74,999,999.88;
- In January 2021, we issued and sold 130,006 shares of Series D redeemable convertible preferred stock to one accredited investor at a price of $76.92 per share, for aggregate proceeds of $10,000,061.52;
- From January 1, 2018 to May 13, 2021, we granted options to purchase an aggregate of 322,912 shares of our common stock under our 2014 Plan to our directors, officers, employees, consultants and other service providers at exercise prices ranging from $5.81 to $14.64;
- From January 1, 2018 to May 13, 2021, we issued 12,848 shares of our common stock upon the exercise of options under our 2014 Plan to our directors, officers, employees, consultants and other service providers at exercise prices ranging from $1.02 to $8.22 per share, for a weighted-average exercise price of $4.88 per share;
- In December 2020, we issued a warrant to purchase an aggregate of 97,504 shares of Series D redeemable convertible preferred stock, exercisable for a period of ten years at an exercise price of $76.92 per share, to Perceptive Credit Holdings III, LP in connection with our entry into a Credit Agreement and Guaranty with the guarantors and lenders thereto and Perceptive Credit Holdings III, L.P. as administrative agent, on December 30, 2020; and
- In May 2021, we issued 3,178 shares of Series A-2 redeemable convertible preferred stock in connection with the exercise of the warrant held by Connecticut Innovations, Incorporated at an exercise price of $12.58608 per share, for aggregate proceeds of $39,998.56.

None of the foregoing transactions involved any underwriters, underwriters discounts or commissions, or any public offering. Unless otherwise stated, the sales of the above securities were deemed to be exempt from registration under the Securities Act in reliance upon Section 4(a)(2) of the Securities Act (or Regulation D or Regulation S promulgated thereunder) or Rule 701 promulgated under Section 3(b) of the Securities Act as transactions by an issuer not involving any public offering or pursuant to benefit plans and contracts relating to compensation as provided under Rule 701. The recipients of the securities in each of these transactions represented their intentions to acquire the securities for investment only and not with a view to, or for sale in connection with, any distribution thereof and appropriate legends were placed upon the stock certificates issued in these transactions.

Item 16. Exhibits and Financial Statement Schedules.

(a) Exhibits: The list of exhibits set forth under “Exhibit Index” at the end of this registration statement is incorporated herein by reference.

Item 17. Undertakings.

The undersigned registrant hereby undertakes to provide to the underwriters at the closing specified in the underwriting agreement certificates in such denominations and registered in such names as required by the underwriters to permit prompt delivery to each purchaser.

Insofar as indemnification for liabilities arising under the Securities Act may be permitted to directors, officers and controlling persons of the registrant pursuant to the foregoing provisions, or otherwise, the registrant has been advised that in the opinion of the SEC such indemnification is against public policy as expressed in the Securities Act and is, therefore, unenforceable. In the event that a claim for indemnification against such liabilities (other than the payment by the registrant of expenses incurred or paid by a director, officer or controlling person of the registrant in the successful defense of any action, suit or proceeding) is asserted by such director, officer or controlling person in connection with the securities being registered, the registrant will, unless in the opinion of its counsel the matter has been settled by controlling precedent, submit to a court of appropriate jurisdiction the question whether such indemnification by it is against public policy as expressed in the Securities Act and will be governed by the final adjudication of such issue.

The undersigned registrant hereby undertakes that:

(1) For purposes of determining any liability under the Securities Act, the information omitted from the form of prospectus filed as part of this registration statement in reliance upon Rule 430A and contained in a form of prospectus filed by the registrant pursuant to Rule 424(b)(1) or (4) or 497(h) under the Securities Act shall be deemed to be part of this registration statement as of the time it was declared effective.

(2) For the purpose of determining any liability under the Securities Act, each post-effective amendment that contains a form of prospectus shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.

EXHIBIT INDEX

Exhibit Number	Exhibit Description
1.1	Form of Underwriting Agreement *
3.1	Form of Amended and Restated Certificate of Incorporation of IsoPlexis Corporation to be in effect upon completion of this offering*
3.2	Form of Amended and Restated Bylaws of IsoPlexis Corporation to be in effect upon completion of this offering*
4.1	Form of Common Stock Certificate of IsoPlexis Corporation*
4.2	Amended and Restated Investors' Rights Agreement, dated as of December 30, 2020, by and among IsoPlexis Corporation and the other parties thereto*
4.3	Stock Subscription Warrant, dated as of January 15, 2015, by and between IsoPlexis Corporation and Connecticut Innovations, Incorporated*
4.4	Warrant Certificate, dated as of December 30, 2020, by and between IsoPlexis Corporation and Perceptive Credit Holdings III, LP*
5.1	Opinion of Cravath, Swaine & Moore LLP*
10.1	Credit Agreement and Guaranty, dated as of December 30, 2020, by and among IsoPlexis Corporation, Perceptive Credit Holdings III, L.P., as administrative agent, and the other parties thereto*
10.2§	Amended and Restated License Agreement, dated as of November 28, 2015, by and between IsoPlexis Corporation and Yale University*§
10.3§	License Agreement, dated as of March 8, 2017, by and between IsoPlexis Corporation and the California Institute of Technology*§
10.4§	Amended and Restated Sublicense Agreement, dated as of January 25, 2016, by and between IsoPlexis Corporation and Indi Molecular, Inc.*§
21.1	Subsidiaries of IsoPlexis Corporation*
23.1	Consent of Deloitte & Touche LLP*
23.2	Consent of Cravath, Swaine & Moore LLP (contained in its opinion filed as Exhibit 5.1 hereto)*
24.1	Power of attorney (included on the signature page to this registration statement)*

* To be filed by amendment.
† Indicates management contract or compensatory plan.
§ Portions of the exhibit, marked by brackets, have been omitted because the omitted information (i) is not material and (ii) would likely cause competitive harm if publicly disclosed.

SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, the registrant has duly caused this registration statement to be signed on its behalf by the undersigned, thereunto duly authorized, in , on , 2021.

IsoPlexis Corporation

By: _____

Name: Sean Mackay

Title: Chief Executive Officer and Co-Founder

Signatures and Powers of Attorney

Each of the undersigned officers and directors of IsoPlexis Corporation hereby severally constitutes and appoints Sean Mackay and John Strahley, and each of them acting alone, as his or her true and lawful attorneys-in-fact and agents, with full power of substitution and resubstitution, for him or her and in his or her name, place and stead, and in any and all capacities, to sign any and all amendments (including post-effective amendments) to this registration statement and any subsequent registration statement filed pursuant to Rule 462 under the Securities Act, and to file the same, with all exhibits thereto and other documents in connection therewith, with the SEC and any applicable securities exchange or securities self-regulatory body, granting unto said attorneys-in-fact and agents, and each of them, full power and authority to do and perform each and every act and thing requisite and necessary to be done in and about the premises, as fully to all intents and purposes as he or she might or could do in person, hereby ratifying and confirming all that said attorneys-in-fact and agents, or either of them individually, or their or his or her substitute or substitutes, may lawfully do or cause to be done by virtue hereof.

Pursuant to the requirements of the Securities Act of 1933, this registration statement has been signed by the following persons in the capacities and on the dates indicated.

Signature	Title	Date
By: _____ Sean Mackay	Chief Executive Officer, Co-Founder and Director (*Principal Executive Officer*)	, 2021
By: _____ John Strahley	Chief Financial Officer (*Principal Financial Officer and Principal Accounting Officer)*	, 2021
By: _____ John G. Conley	Chairman of the Board	, 2021
By: _____ Michael Egholm	Director	, 2021
By: _____ James R. Heath	Director	, 2021
By: _____ Gregory P. Ho	Director	, 2021
By: _____ Siddhartha Kadia	Director	, 2021
By: _____ Sharon Kedar	Director	, 2021
By: _____ Daniel Wagner	Director	, 2021