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

FORM 10-K

(Mark One)

☒ **ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

For the fiscal year ended December 31, 2021
OR

☐ **TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

For the transition period from _____ to_____
Commission file number: 001-39815

908 DEVICES INC.

(Exact name of registrant as specified in its charter)

Delaware	**45-4524096**
(State or other jurisdiction of incorporation or organization)	(I.R.S. Employer Identification No.)
645 Summer Street, Boston, MA	**02210**
(Address of principal executive offices)	(Zip Code)

Registrant's telephone number, including area code: (857) 254-1500

Securities registered pursuant to Section 12(b) of the Act:

Title of each class	Trading Symbol(s)	Name of each exchange on which registered
Common Stock, par value $0.001 per share	MASS	The Nasdaq Global Market

Securities registered pursuant to Section 12(g) of the Act:
None

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. Yes ☐ No ☒

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Act. Yes ☐ No ☒

Indicate by check mark whether the registrant: (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes ☒ No ☐

Indicate by check mark whether the registrant has submitted electronically every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit such files). Yes ☒ No ☐

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 13(a) of the Exchange Act. ☐

Indicate by check mark whether the registrant has filed a report on and attestation to its management's assessment of the effectiveness of its internal control over financial reporting under Section 404(b) of the Sarbanes-Oxley Act (15 U.S.C. 7262(b)) by the registered public accounting firm that prepared or issued its audit report. ☐

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act). Yes ☐ No ☒

The aggregate market value of common stock held by non-affiliates of the registrant as of June 30, 2021, the last business day of the most recently completed second fiscal quarter, was $674.6 million. This calculation does not reflect a determination that certain persons are affiliates of the registrant for any other purpose.

As of March 4, 2022, the registrant had 31,233,527 shares of common stock, par value $0.001 per share, outstanding.

DOCUMENTS INCORPORATED BY REFERENCE

Portions of the registrant's Proxy Statement for its 2022 Annual Meeting of Stockholders, which the registrant intends to file with the Securities and Exchange Commission not later than 120 days after the registrant's fiscal year ended December 31, 2021, are incorporated by reference into Part II and Part III of this Annual Report on Form 10-K.

908 Devices Inc.
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We own various trademark registrations and applications, and unregistered trademarks, including MX908, Rebel, ZipChip and 908 Devices and our corporate logo. All other trade names, trademarks and service marks of other companies appearing in this Annual Report on Form 10-K are the property of their respective holders. Solely for convenience, the trademarks and trade names in this Annual Report on Form 10-K may be referred to without the ®,™ or RTM symbols, but such references should not be construed as any indicator that their respective owners will not assert, to the fullest extent under applicable law, their rights thereto. We do not intend to use or display other companies' trademarks and trade names to imply a relationship with, or endorsement or sponsorship of us by, any other companies.

CAUTIONARY NOTE REGARDING FORWARD-LOOKING STATEMENTS

This Annual Report on Form 10-K contains forward-looking statements, which reflect our current views with respect to, among other things, our operations and financial performance. All statements other than statements of historical facts contained in this Annual Report on Form 10-K, including statements regarding our future results of operations and financial position, business strategy and plans and our objectives for future operations, are forward-looking statements, and are made under the safe harbor provisions of Section 27A of the Securities Act of 1933, as amended, and Section 21E of the Securities Exchange Act of 1934, as amended. The words “believe,” “may,” “will,” “estimate,” “continue,” “anticipate,” “intend,” “expect,” “should,” “could,” “target,” “predict,” “seek” and similar expressions are intended to identify forward-looking statements. We have based these forward-looking statements largely on our current expectations and projections about future events and financial trends that we believe may affect our financial condition, results of operations, business strategy, short- and long-term business operations and objectives, and financial needs. These forward-looking statements are subject to a number of risks, uncertainties and assumptions, including those described in the “Summary of Risk Factors”, Part I, Item 1A “Risk Factors” and elsewhere in this Annual Report on Form 10-K. Moreover, we operate in a very competitive and rapidly changing environment and new risks emerge from time to time. It is not possible for our management to predict all risks, nor can we assess the impact of all factors on our business or the extent to which any factor, or combination of factors, may cause actual results to differ materially from those contained in any forward-looking statements we may make. In light of these risks, uncertainties and assumptions, the forward-looking events and circumstances discussed in this Annual Report on Form 10-K may not occur and actual results could differ materially and adversely from those anticipated or implied in the forward-looking statements.

The forward-looking statements included in this Annual Report on Form 10-K are made only as of the date of this report. You should not rely upon forward-looking statements as predictions of future events. Although we believe that the expectations reflected in the forward-looking statements are reasonable, we cannot guarantee that the future results, levels of activity, performance or events and circumstances reflected in the forward-looking statements will be achieved or occur. Moreover, neither we nor any other person assumes responsibility for the accuracy and completeness of the forward-looking statements. We undertake no obligation to update publicly any forward-looking statements for any reason after the date of this Annual Report on Form 10-K to conform these statements to actual results or to changes in our expectations.

The market data and certain other statistical information used throughout this Annual Report on Form 10-K are based on independent industry publications, governmental publications, reports by market research firms or other independent sources that we believe to be reliable sources. Some data are also based on our good faith estimates. Industry publications and third party research, surveys and studies generally indicate that their information has been obtained from sources believed to be reliable, although they do not guarantee the accuracy or completeness of such information. We are responsible for all of the disclosure contained in this Annual Report on Form 10-K, and we believe these industry publications and third party research, surveys and studies are reliable. While we are not aware of any misstatements regarding any third party information presented in this Annual Report on Form 10-K, their estimates, in particular, as they relate to projections, involve numerous assumptions, are subject to risks and uncertainties and are subject to change based on various factors, including those described in Part I, Item 1A “Risk Factors” in this Annual Report on Form 10-K.

Investors and others should note that we may announce material business and financial information to our investors using our investor relations website (ir.908devices.com), our filings with the Securities and Exchange Commission, or SEC, webcasts, press releases, and conference calls. We use these mediums, including our website, to communicate with investors and the general public about our company, our products, and other issues. It is possible that the information that we make available on our website may be deemed to be material information. We therefore encourage investors and others interested in our company to review the information that we make available on our website.

SUMMARY OF RISK FACTORS

The following is a summary of the principal risks described below in Part I, Item 1A "Risk Factors" in this Annual Report on Form 10-K. We believe that the risks described in the "Risk Factors" section are material to investors, but other factors not presently known to us or that we currently believe are immaterial may also adversely affect us. The following summary should not be considered an exhaustive summary of the material risks facing us, and it should be read in conjunction with the "Risk Factors" section and the other information contained in this Annual Report on Form 10-K.

- We have a history of net losses and may not be able to achieve profitability for any period in the future or sustain cash flow from operating activities.
- Our operating results may fluctuate significantly from period-to-period and may fall below expectations in any particular period, which could adversely affect the market price of our common stock.
- We have experienced a period of significant growth in recent years, and our inability to manage this growth could have a material adverse effect on our business, the quality of our products and services and our ability to retain key personnel.
- We must develop new products, as well as enhancements to existing products, and adapt to rapid and significant technological change to remain competitive.
- We have limited experience in marketing and sales and are in the early stages of building our sales channels in the life science market and internationally.
- The continuing global COVID-19 pandemic, including the emergence of new variants, has significantly affected our business and operations, and the pandemic and supply chain challenges may impact future operations and financial performance.
- We face intense and growing competition from leading technology companies as well as from emerging companies. Our inability to compete effectively with any or all of these competitors could affect our ability to achieve our anticipated market penetration and achieve or sustain profitability.
- Currently, we derive the majority of our revenue from our handheld products and are actively growing the revenue we derive from our desktop products, focused today in the life science market. If we fail to maintain significant market acceptance in existing markets or fail to successfully increase our penetration in new and expanding markets, we will not generate expected revenue and our prospects may be harmed.
- Our sales cycles can be long and unpredictable, and our sales efforts require considerable time and expense, which contribute to the unpredictability and variability of our financial performance and may adversely affect our profitability.
- A significant portion of our business depends on sales to the public sector, and our failure to receive and maintain government contracts or changes in the contracting or fiscal policies of the public sector could have a material adverse effect on our business.
- U.S. government programs are limited by budgetary constraints and political considerations and are subject to uncertain future funding levels that could result in the termination of programs.
- We rely on in-bound licenses granted to us from third parties. If we lose these rights, our business may be materially adversely affected, our ability to develop improvements to our existing products and to develop new products may be negatively and substantially impacted, and if disputes arise, we may be subjected to future litigation as well as the potential loss of or limitations on our ability to develop and commercialize products and technology covered by these license agreements.
- Insiders own a significant portion of our outstanding common stock and therefore have substantial control over us and are able to influence corporate matters.

PART I

Except where the context otherwise requires or where otherwise indicated, the terms "908 Devices," "we," "us," "our," "our company," "the company," and "our business" refer to 908 Devices Inc. and its consolidated subsidiary.

Item 1. Business.

Analysis for Life

We are leading a revolution in measurement devices for chemical and biochemical analysis. We are democratizing laboratory mass spectrometry instruments with our simple handheld and desktop devices, addressing critical-to-life applications. We are reimagining where Mass Spec technology can be used if it is sufficiently small in size, low in cost, and simple to operate.

Company Overview

We have developed an innovative suite of purpose-built handheld and desktop mass spectrometry, or Mass Spec, devices for the point-of-need. Leveraging our proprietary platform technology, we make the extraordinary analytical power of Mass Spec available in devices that are significantly smaller and more accessible than conventional laboratory instruments. Our Mass Spec devices are used at the point-of-need to interrogate unknown and invisible materials and provide quick, actionable answers to directly address some of the most critical problems in life sciences research, bioprocessing, industrial biotech, forensics and adjacent markets.

We create simplified measurement devices that our customers can use as accurate tools where-and-when their work needs to be done, rather than overly complex and centralized analytical instrumentation. We believe the insights and answers our devices provide will accelerate workflows, reduce costs, and offer transformational opportunities for our end users.

Since the launch of our first device, we have sold more than 1,900 handheld and desktop devices to over 450 customers in 42 countries, including all 20 of the top 20 pharmaceutical companies by revenue, as well as numerous domestic and foreign government agencies and leading academic institutions.

Our current products are available for both battery powered handheld and desktop applications, including our flagship devices -- MX908 and Rebel.

Front-line workers rely upon our handheld devices to combat the opioid crisis and detect counterfeit pharmaceuticals and illicit materials in the air or on surfaces at levels 1,000 times below their lethal dose. Our desktop

devices are accelerating development and production of biotherapeutics by identifying and quantifying extracellular species in bioprocessing critical to cell health and productivity. They sit alongside bioreactors and fermenters producing drug candidates, functional proteins, cell and gene therapies, and synthetic biology-derived products. We believe the insights and answers our devices provide accelerate workflows, reduce costs, and offer transformational opportunities for our end users.

Mass Spec is the gold-standard analytical technology for laboratory-based molecular analysis and can identify and quantify sample components via molecular weight measurements. Mass Spec is highly regarded for its ability to provide an extraordinarily detailed analysis of a wide variety of samples -- from small molecules to large complex proteins. While Mass Spec is an extremely powerful analytical tool, conventional Mass Spec instruments are very large, expensive, and highly complex, which has profoundly bottlenecked market opportunities and relegated them to the equivalent of mainframe computers in central facilities. We are seeking to reimagine where Mass Spec technology can be used if it is sufficiently small in size, low in cost, and simple to operate.

Our proprietary Mass Spec platform relies on extreme miniaturization of the core of Mass Spec -- the ion trap and its vacuum system. Using semiconductor microfabrication techniques, we design and produce components that are more than a thousand fold smaller in volume when compared with most laboratory Mass Spec instruments and costs only dollars to manufacture. The vacuum system alone in a typical laboratory instrument weighs hundreds of pounds and requires several hundred watts of power, 24 hours per day, 365 days per year. Our miniaturized vacuum system weighs less than a pound, and our Mass Spec in total requires less power than a 20-watt LED light bulb. These landmark proprietary advances have enabled the first truly handheld Mass Spec devices and compact desktops.

Sample preparation and separation can be a painfully slow hours-long process, and we have invested heavily in the development of microfluidic sample preparation and microscale separation technologies to reduce preparation and separation time from hours to minutes. The size of a business card, our microfluidic capillary-electrophoresis, or CE, chip has demonstrated world-class performance and speed in separating everything from small molecules such as metabolites and drugs, to biopharmaceutical proteins, antibodies, and oligonucleotides.

Lastly, it is imperative that a point-of-need solution is operable by the widest possible user base. We have an industry-leading software automation and machine learning team comprised of five members, each with advanced scientific degrees, who have collective experience working on 30 commercial product launches and have won numerous research and innovation awards. They have applied advanced software automation and machine learning techniques to both control the hardware in our devices and interpret the incredibly rich and complex data streaming off of them. It is common for expert data interpretation from a laboratory Mass Spec instrument to take hours or days -- we can provide answers immediately to maximize value to the customer in critical-to-life applications where minutes matter.

We fundamentally believe that the technology platform we have built and the investments we are making will allow people to answer chemical and biochemical questions in times and places that were previously inconceivable. Given the market opportunity, we expect to face substantial competition from large established manufacturers of Mass Spec laboratory-based instruments and from new entrants; however, our proprietary advances have enabled us to manufacture the first truly handheld Mass Spec devices and compact desktops and we believe we are well-positioned to face future competition.

As we democratize the extraordinary power of Mass Spec, we believe our technology platform can expand in future opportunities far beyond the current $8 billion market for Mass Spec and associated front-end separations. We estimate our total addressable market, or TAM, for our devices was $4.8 billion in 2020 and is growing to an estimated $22 billion over the next few years. The TAM for our handhelds was estimated to be $1.5 billion in 2020 with expansion to over $3 billion with software application extensions into GxP facilities for raw material inspection, counterfeit and adulteration inspection, contamination and cleaning validation, and other quality assurance and quality control assays. Our desktop devices supporting bioprocess development represented an estimated TAM of $260 million in 2020 expanding significantly to approximately $12 billion with execution of our roadmap and the rapid growth of cell therapy. We see additional opportunity to address the estimated $3.0 billion in 2020 across the research chromatography market space growing to more than $6.9 billion with further market growth and roadmap expansion into complex proteomics by 2025. Our estimates of our TAM are based on potential customer research and development spending, addressable

aspects of potential customers' end product development process, and potential platform usage. We also utilize estimated penetration and placement rates for our platform with potential customers in our target markets and historical patterns for consumables usage.

Our Strengths

We believe the following competitive strengths provide us the ability to address point-of-need applications in forensics, life sciences research, bioprocessing, industrial biotech, and synthetic biology:

- ***Our proprietary microscale Mass Spec platform leverages well established, gold-standard technology.*** Mass Spec is already ubiquitous in the laboratory. Users do not need to take a risk on a completely unknown technology. We bring laboratory-grade capability to handhelds and desktops. We have developed a proprietary Mass Spec platform and approach that allow us to move the capabilities of conventional Mass Spec beyond the central laboratory. Our proprietary High-Pressure Mass Spec, or HPMS, technology enables us to produce significantly smaller, purpose-built Mass Spec devices that are much more ideal for use in point-of-need settings, in contrast to conventional mainframe Mass Spec solutions. The combination of HPMS, our proprietary microfluidic separation technology, and our data analytics, and machine-learning technology provides the foundations of an adaptable platform that can serve a growing number of new and adjacent applications and markets.

- ***Point-of-need technologies disrupting Mass Spec and creating new product categories***. Leveraging our Mass Spec platform, we have developed a portfolio of desktop and handheld devices that are reinventing the Mass Spec industry by accessing a variety of point-of-need market segments that were historically considered impossible for conventional Mass Spec manufacturers. Our products are small, purpose-built devices that avoid the typical size and complexity issues related to conventional Mass Spec while also offering real-time, actionable answers to new classes of users. As we continue to expand the capabilities of our Mass Spec platform, we believe our devices will continue to penetrate new and adjacent opportunities in life sciences, quality assurance and control, diagnostics and applied markets.

- ***Highly attractive business model validated by rapidly growing installed base of devices.*** We have over 450 customers, including all 20 of the top 20 pharmaceutical companies by revenue, academic and major government institutions, including the Department of Homeland Security, the U.S. Army and the U.S. Marine Corps and other international, federal and state agencies. These customers have validated our platform through the collective purchase of more than 1,900 devices, with more than 7,800 users trained on our devices. As we continue to grow our installed base, we expect to increase our recurring revenue derived from the sale of consumables and support services.

- ***Talented team with significant domain expertise.*** We are a technology driven company that has built vertically integrated capabilities to design, manufacture, and commercialize our products. We are led by a dedicated and highly experienced senior management team with significant industry experience and proven ability to deliver novel products. Each member of our senior management team has more than 20 years of relevant experience. Members of our technical team have been collectively responsible for numerous commercial product launches prior to joining the company, in varying markets such as point-of-care clinical diagnostics, handheld pharmaceutical inspection devices, high-throughput cell culture control systems, autonomous warehouse logistics, motion capture animation, high-volume telecom transmitters and receivers, and consumer wearables. The team possesses deep expertise in Mass Spec, system design and engineering, usability and ergonomics, thermal and mechanical engineering, software development, artificial intelligence and optical spectroscopy, as well as microfluidics and separations science. We had 56 full-time employees dedicated to research and development as of December 31, 2021. Of these, approximately 40% have advanced degrees in science and engineering.

Our Growth Strategy

We are pursuing the democratization of the gold-standard molecular analysis laboratory technique: Mass Spec. Just as mainframe computers transitioned to desktops, tablets, and mobile devices, we are leading a transformation of the Mass Spec market. Our growth strategy includes the following key elements:

- ***A continued focus on simplicity, speed, convenience and cost increases measurement consumption.*** We are a technology-driven company with significant core expertise in engineering, hard sciences and data analytics and a proven track record of delivering products that delight our customers by making things easy. We believe a relentless focus on these fundamentals drives consumption of consumables. We further believe broadscale democratization of Mass Spec is enabled by our progress on these same fundamentals.

- ***Drive enterprise adoption in our seeded accounts.*** We intend to continue to aggressively invest in and support our field applications team to accelerate the development of post-sale partnerships with customers and to drive broader adoption across the organization. We will focus on building upon our track record of leveraging our customers' success in trials and pilots into enterprise-wide adoption of both devices and consumables. As an example, for our handheld device, it is typical for government organizations to conduct a one week or longer trial prior to purchase to test our technology in their real-world setting. A trial generally results in budgeting for a pilot that can range in size from ten to more than 50 units. During the pilot, we support our customers closely to ensure their success. Data is compiled throughout to assist our customer in making a larger enterprise-wide justification, purchase and deployment. It is our belief that investment pre- and post-sale with prospects that have the potential for enterprise adoption creates a predictable pipeline of opportunity for our devices and their entrenchment as they become the organizational standard for our customers. Enterprise customers range from large government organizations with full fielding potential of more than 1,000 handheld devices to leading biopharma companies with capacity for ten or more desktop devices per site.

- ***Grow the installed base through expansion of commercial channels***. Since the commercial launch of our first handheld, the installed base of our handheld and desktop devices has grown to more than 1,900 devices across 42 countries. With our handheld and desktop device installations now taking root in the United States, we will focus on expanding our commercial channels to better serve the forensics, life sciences research, bioprocessing, industrial biotech, and synthetic biology markets. We look to expand both our direct channel in the United States and our international reach. We anticipate growing our network of international distributors focused in regions with a concentrated and rapidly expanding life sciences presence, specifically, Europe, China, Japan, India, and South Korea. We look to have local application and support specialists and sales managers supporting our distribution partners.

- ***Deepen our footprint into the rapidly growing bioprocessing market.*** We designed our first desktop device to accelerate development and enhance production by identifying and quantifying extracellular species critical to cell health and productivity. They sit alongside bioreactors and fermenters producing drug candidates, functional proteins, cell and gene therapies, and synthetic biology derived products. We look to expand our product line into broader extracellular panels, intracellular analysis, such as cellular flux, and pathway analysis. Consistent with our thesis of driving simplicity and convenience of measurement, we will progress from an at-line measurement tool to an on-line integrated device with comprehensive bioprocess analytics and control. We believe our technology platform can serve as the cornerstone of an integrated "bioprocess brain" by monitoring and managing the comprehensive extracellular environment.

- ***Expand our customer-driven pipeline of new point-of-need applications.*** We will continue to leverage our integrated sample preparation and microfluidic separations platform to expand our pipeline of new, customer-driven point-of-need applications that can be addressed by both our handheld and desktop devices. As our customers continue to prove out new applications in areas such as diagnostics and proteomics, we will look to incorporate select assays investigated by these customers into our handheld and desktop devices where those form factors can accelerate usage. We have already incorporated a number of customer-driven assays into both MX908 and Rebel and will continue to do so as we believe this will provide us with an expanding list of new point-of-need applications and market opportunities within forensics, life sciences research, bioprocessing,

industrial biotech and synthetic biology. In addition, we continue to make advancements in our core technologies to drive the evolution of our product portfolio beyond current applications and needs to enter new markets.

Our Industry Background

Conventional Mass Spec -- The Mainframe Computer of the Analytical Laboratory

Mass Spec is the gold-standard analytical technique for molecular analysis. This technology is highly regarded for its ability to provide an extraordinarily detailed analysis of a wide variety of molecular samples -- from small molecule chemicals to large complex proteins. Mass Spec instruments identify the components of samples via highly detailed mass-to-charge (m/z) measurements, and in some cases, can quantify those components. Together with its associated front-end separation technologies, Mass Spec can resolve and analyze the most complex of samples with high fidelity.

We believe Mass Spec has become the cornerstone of the chemical laboratory within academia, industry and government, serving an extremely wide range of markets including forensics, life sciences, environmental, and industrial. However, while Mass Spec is an extremely powerful analytical technique, the capabilities of conventional Mass Spec instruments are largely relegated to centralized laboratory settings due to their size, complexity, and high price. When compared in context to the computer industry, conventional Mass Spec instruments represent the mainframe computer of the analytical laboratory.

Mass Spec instruments contain three standard components: an ionization source, a mass analyzer and an ion detector. Utilizing these three components, the Mass Spec process is completed in three corresponding steps:

1. *Ionization:* First, the molecular sample must be ionized so that it takes on one or more positive or negative charges. This allows the charged molecule to be precisely manipulated by static or dynamic electric fields. The means of ionization itself also allows the user to selectively evaluate certain molecular classes, such as acids vs. bases, while ignoring others.

2. *Ion-Sorting:* Following ionization, the ions are trapped under vacuum, manipulated, and sorted based on their mass-to-charge ratio (m/z) within the mass analyzer. This is where the fine structural characteristics of the molecules begin to emerge with extraordinary levels of detail.

3. *Detection:* Finally, the detector converts the ion energy into electric signals as it carefully records the ion pattern representing the structure. The recorded data is then typically interpreted by a computer and then manipulated, studied and analyzed by a specialist.

Conventional “Mainframe” Laboratory Mass Spec instruments

Employing and building upon these three process steps, conventional Mass Spec instruments have penetrated almost every analytical laboratory. It is estimated there are thousands of laboratories employing more than 50,000 Mass Spec instruments according to a recent third party report. As the needs of laboratory scientists have evolved, Mass Spec instrument manufacturers for decades have grown their franchise and stimulated capital equipment replacement cycles by orienting their research and development towards sustained improvements in raw analytical performance metrics such as resolution, sensitivity, and range. As a result, conventional Mass Spec instruments:

- are extremely large and not readily mobile;
- are expensive (often ranging from $100,000 to $1 million);
- require a dedicated fixed power source; and
- require onsite specialists to maintain and operate.

These significant limitations have profoundly bottlenecked market opportunities for conventional Mass Spec instruments. Despite this, the conventional Mass Spec and associated front-end separations market is significant, with estimated annual revenues of $8 billion.

The Democratization of Mass Spec—Handhelds and Desktops

Given the inherent limitations of conventional mainframe Mass Spec instruments, we believe there is a compelling opportunity for handheld and compact desktop Mass Spec devices. Analogous to the democratization of computer

technologies, as price, access, and complexity are reduced, user space expands, utilization increases, and new applications emerge. While our expectation is that centralized laboratory Mass Spec instruments will continue to exist in laboratory settings -- just as mainframes still exist today as supercomputers servicing the most challenging computational problems -- we believe that the democratization of Mass Spec will open up new markets and applications. We also see many parallels with how next generation gene sequencing, or NGS, was democratized and has expanded the market for NGS through desktop devices.

Our Technology Platform

We have developed a technology platform designed to bring Mass Spec out of the confines of central laboratories and to the point-of-need. Our technology platform democratizes the Mass Spec market with high-fidelity handheld and desktop devices. We believe this democratization gives rise to:

- an expanded and more diverse set of users;
- more frequent measurements; and
- new use cases that were previously untenable.

These results are possible as our handheld and desktop devices are designed for extreme convenience and speed, requiring minimal training and maintenance. Our platform uses proprietary microscale Mass Spec and microfluidic technologies to prepare, separate, and characterize species at the molecular level, with integrated machine learning and analytics to automatically provide answers regarding identity, purity, and quantity. The core elements of our technology platform include:

- Our High-Pressure Mass Spec, or HPMS, approach enables Mass Spec at the point-of-need;
- microfluidics enable convenient sample preparations and fast separations; and
- analytics and machine learning technology provide actionable answers versus raw data.

HPMS Approach Enables Mass Spec at the Point-of-Need

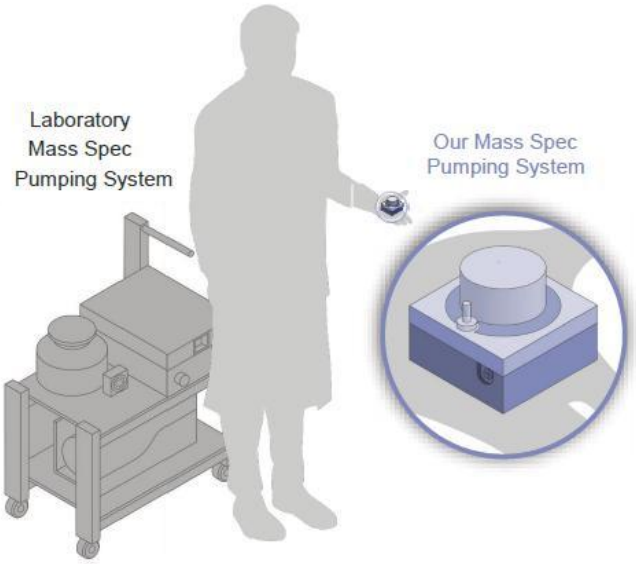
A key component of our technology is our proprietary microscale ion trap, which we estimate is 1,000 times smaller than those in conventional laboratory Mass Spec instruments. These microfabricated traps are able to operate a million times closer to atmospheric pressures than conventional Mass Spec instruments. This HPMS approach results in devices with dramatically smaller size and lower cost-of-goods through a reduction of vacuum pump requirements and power consumption, and an overall simplification of the hardware topology.

Conventional laboratory Mass Spec

Our Mass Spec

HPMS allows us to build ultracompact, high-fidelity measurement devices that are purpose-built for specific applications and deployable at the point-of-need. HPMS allows us to circumvent the complexities associated with the conventional and much larger, general-purpose, central laboratory Mass Spec instruments.

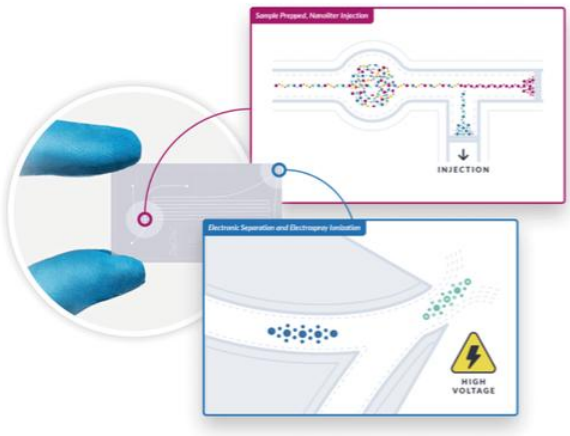
Our technology operates at size and cost scales that are multiple orders of magnitude smaller than conventional mainframe laboratory instruments. And while large, expensive, high maintenance vacuum systems have been a historical requirement for Mass Spec, our HPMS approach is capable of running with extreme efficiency on very small, robust, low-cost scroll pumps of our own proprietary designs. Our technology requires significantly less power than a 20-watt light bulb, allowing for up to 100x lower power consumption when compared to a competing product. The flexibility afforded by our approach provides access to existing and new market segments that were previously inconceivable for conventional Mass Spec instruments. We believe the insights and answers our devices provide will accelerate workflows, reduce costs and offer transformational opportunities for our end users.



Microfluidics Enable Convenient Sample Preparations and Fast Separations

Today, most central laboratory Mass Spec instruments are paired with large, complex solid and liquid handling systems for sample preparation and separation. Common examples include liquid chromatography stacks and robotic sample preparation systems. These systems are engineered for general applications and require large quantities of solvents, high level of maintenance, and expertly trained users, leading to higher operating costs.

Our approach integrates proprietary microfluidic sample preparation, separation, and ionization technologies on a single chip that can be produced efficiently at scale using semiconductor microfabrication techniques. These microfluidic chips can be paired with our microscale Mass Spec technology to create devices with extraordinary performance that are accessible and usable at the point-of-need by non-experts.



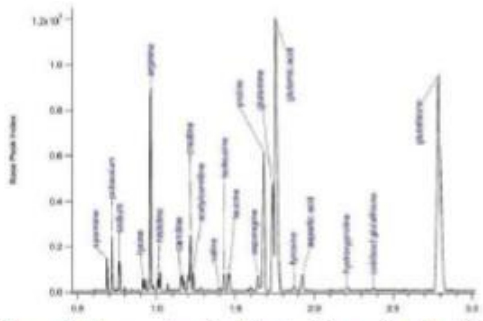
Our integrated microfluidics—sample injection, preparation, separation and electrospray simplified

Our integrated microfluidic chip brings the benefits of:

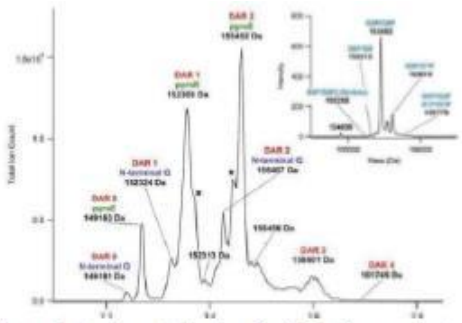
- highly controlled small sample injections at the nanoliter, or nL, scale;
- integrated preparation such as desalting;
- extractions and preconcentration by physical and chemical properties;
- capillary electrophoresis, or CE, for extremely high-resolution separations of complex samples; and
- integrated nanoscale electrospray ionization.

The integrated microfluidic CE can perform extremely high-performance separations of a wide range of molecular species from small molecule metabolites, amino acids, and vitamins, to intact antibodies and other proteins. Importantly for our platform, microfluidic CE is electrically driven and requires no bulky liquid pumping and valving systems. The microfluidic chip consumes only 100-200 nL of electrolyte per minute making it remarkably efficient with source and waste fluids. Microfluidic CE separations can be an order of magnitude or faster than similar chromatography separations. This allows for highly complex separations with high resolution to be completed in minutes.

Examples shown below illustrate the versatility of our microfluidic CE chip and include separation of cell lysate with minimal sample preparation and a highly detailed characterization of an antibody drug conjugate:



Three minute separation of cell lysate. Preparation: lys, dilute filter, and run



Three minute characterization of antibody drug conjugate, drug payload distribution, glycoforms and other post-translational modifications.

Faster high resolution separations attainable in minutes using our microfluidic CE chip

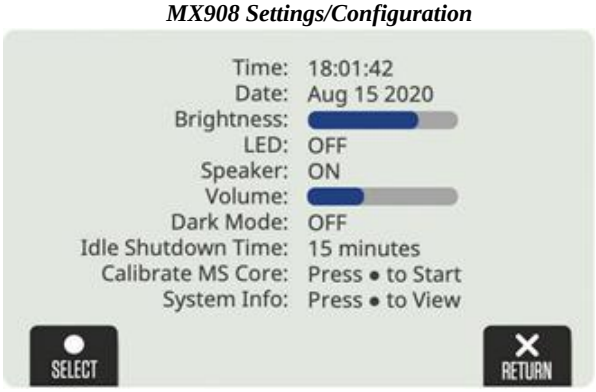
Analytics and Machine Learning Technology Provide Actionable Answers, Not Just Raw Data

The third crucial element of our technology platform is holistic device design with embedded analytics and machine learning. Our development team designs devices for a specific purpose, rather than for a wide scope of often disparate needs. Conventional Mass Spec manufacturers focus their attention on canonical analytical specifications such as “instrument resolution” or “detection limit” or “data rate” in the hopes of appealing to a wide range of laboratory specialist needs. Our devices are designed to do a job quickly, easily, and cost effectively. Achieving that aim requires very sophisticated autonomous and adaptive control systems and the machine learning engine to interpret the data and produce a clear, accurate result.

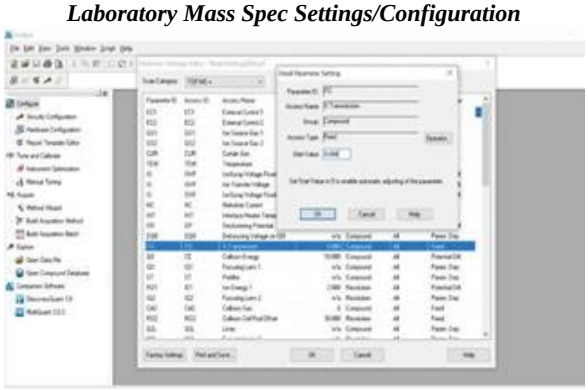
Control/optimization: Conventional Mass Spec configuration and tuning is highly complex. An example of such a configuration panel is shown on the right below. Our devices need to manage themselves autonomously for maximum

value to the customer. They can manage themselves by adapting to environmental factors like elevation, humidity, temperature, and vibration, and by optimizing themselves for the analytical objectives of the user, such as looking for traces of potent drug substances or sniffing for airborne hazards. This ability to automatically control the system reduces or eliminates the user's responsibility and opportunity for error in set up, optimization, and troubleshooting. Our product's "settings" screen shown below on the left looks very simple, but the embedded analytics and machine learning system controls and optimizes more than a hundred parameters continuously in real-time.

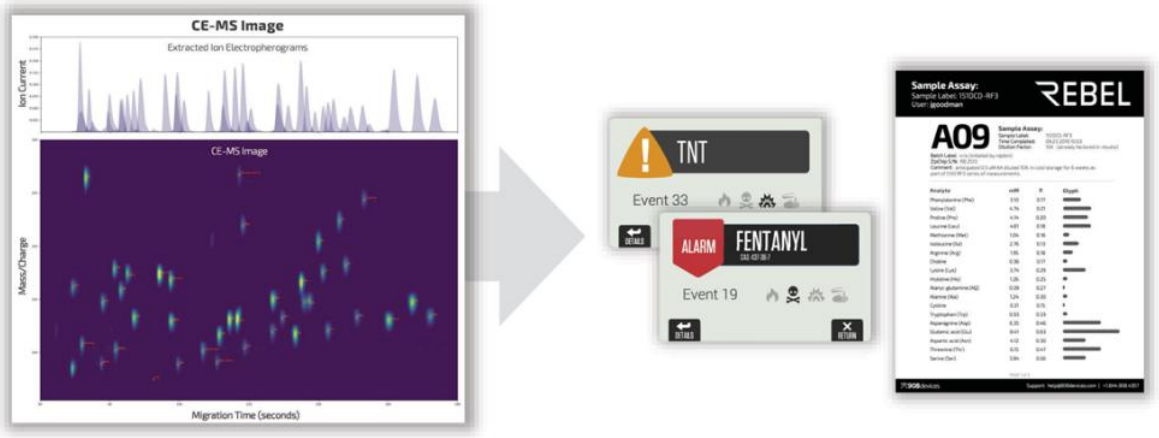
MX908 Settings/Configuration



Laboratory Mass Spec Settings/Configuration



Machine learning/embedded analytics: The integrated analysis of our platform's data is also critical to our customers' success. Conventional platforms may give the user basic tools to view data, and some limited analysis functionality, but they fall far short of completing the analysis loop. "Out of the box" machine and statistical learning methods are not really applicable to complex analytical sensor data and real-life molecular systems. Our data team has a commercial track record of embedding a "scientist in the box" with highly customized statistical and machine learning methods for our platforms to complete the customer experience. Several examples of these elements are highlighted below in the "Our Products" section.



Our devices are designed to provide fast, statistically-rigorous answers by providing autonomous control systems and applying rigorous machine learning methods.

Our Products

We were founded on a vision to deliver high quality Mass Spec to a broad set of users at the point-of-need. We offer handheld and desktop devices, each of which are capable of providing quick, high-fidelity and actionable results. These aspects are important to our customers, who previously have had to choose between a slow and thorough analysis by Mass Spec in a laboratory or a point-of-need result that may have been more timely, but provided only a partial measurement picture prone to false-positives. For instance, forensics customers who do not have access to laboratory-based Mass Spec instruments have at best had access to the field techniques of Ion-mobility spectrometry and Raman/FTIR spectroscopy, each with its own severe limitation of specificity (ability to distinguish one chemical from another) and sensitivity (ability to detect minute amounts), respectively. Our bioprocess customers have likewise only had access to a cropped measurement picture by largely relying on simple enzymatic and electrochemical sensors that can measure just a few simple gases and other analytes with poor accuracy. Our devices are changing this paradigm and providing laboratory-like results at the point-of-need.

MX908®

Launched in June 2017, MX908 is a handheld, battery-powered, Mass Spec device designed for rapid analysis of gas, liquid and solid materials of unknown identity. It is an agile, multi-purpose device utilized by a wide spectrum of user segments for a variety of forensic field applications such as chemical, explosive, priority drug and HazMat operations, detecting materials at the trace level.

We have sold approximately 1,650 MX908s into every U.S. state, in 42 countries and across five continents. More than 6,500 operators, including in numerous domestic and foreign government agencies, have been trained to use the MX908.

When a civilian or military first responder, customs agent, or front-line worker is presented with residue on a package, a powder in the ER, pills at a border crossing, an apparent overdosing individual, or a mass casualty event, immediate actionable information is needed. The U.S. opioid crisis in particular is driving demand for broadly capable point-of-need measurement devices that can detect a multitude of hazards at trace quantities.

The MX908 detects trace quantities of more than 150 named dangerous materials, including fentanyl and its many derivatives, explosives, and hazardous chemical agents with sensitivity comparable to existing field-based technologies, but with much higher specificity. This allows users to conduct rapid field analysis for a broad range of unknown substances at trace levels that would typically lead to confusion and false positives in other instruments. The device is also able to identify a far greater number of substances than other trace technologies and with one million times the dynamic range of those other handheld or mobile technologies. Compared to a leading transportable Mass Spec product, the MX908 is up to 15x faster, up to 10x smaller and up to 2x cheaper. The MX908 is able to start up in less than a minute, completing analysis of gas and vapor materials in less than ten seconds, and solids and liquids in less than a minute.

The MX908 was designed to operate in harsh outdoor environments such as pervasive rain and dust, and scorching to freezing temperatures in a nimble 4.3 kg (approximately 10 lb) handheld form factor. Our systems also undergo extensive mechanical shock, drop, vibration, and environmental testing as part of the development and certification process.

Designed with the non-technical user in mind, the user interface on the MX908 requires no Mass Spec knowledge for navigation, operation or interpretation of results. The MX908 user interface is very mission driven. These mission modes provide a categorization of functionality, allow the device to guide operators through proper procedures with visual cues, and present results in a manner most relevant for that operational intent. The mission modes also allow the

software to optimize the hardware operation of the MX908 to maximize sensitivity and specificity for a given class of chemicals, much as a laboratory chemist would do by changing the settings on their conventional Mass Spec.

The MX908's machine-learning software, enabled by our proprietary technology platform, serves as a critical element of the device. For example, one of the challenges associated with analyzing fentanyl derivatives is that there are potentially thousands of pharmacologically-active variants for this same compound. However, MX908 is pre-programmed to evaluate against the dozen most common fentanyl variants and is then able to utilize a machine learning classifier to look for characteristic mass fragment loss patterns that are suggestive of the more than 2,000 fentanyl analogs.

Since introducing the MX908, we have continued to expand the device's capability through mission add-ons such as offering an Aerosol Module accessory to detect and identify aerosolized chemical hazards, adding targets to allow responders to identify additional priority drug substances, and providing a Bluetooth capability that enables seamless data transfer and accelerates support in the field. These added capabilities are aimed to address gaps in responders' workflows, increase engagement, and drive utilization.

We are currently working to expand the MX908's mission add-ons to support the detection of adulterated and counterfeit pharmaceuticals, detection of pesticide residues, and applications in quality control and quality assurance such as raw material purity and GxP cleaning validation.

Services and Consumables

Our MX908 comes with a standard warranty for up to one year from purchase. Our customers also can purchase extended warranty service plans, which include hardware repair and replacement coverage, technical support, and software updates. We designed the MX908 to be intuitive and easy-to-use, while ensuring that the MX908 is operating as it is intended is critical to our customers. The annual and extended warranty service plans provide the customer the ability to contact us to assist in validating their results given the severity and context of the situations in which our devices operate. Our technical support, also known as our Reachback program, allows any participating MX908 user to email, text, or call a 908 Devices Scientific Support Team member to receive support 24 hours per day, 365 days per year to ensure the MX908 is working as intended. The Scientific Support Team is staffed by M.Sc. and Ph.D. chemists and forensic scientists expert in the operation of the MX908 and other field analytical technologies. Our extended warranty service plans are sold with multiyear commitments, which allows us to deepen our relationship with customers and provides us with an upfront payment, a predictable recurring revenue stream, and an opportunity to offer additional future services.

For simplicity and convenience, we also sell single-use swab samplers for the analysis of liquid and solid materials. These swab samplers are most heavily used today by customers who are evaluating drug substances. However, we designed the MX908 so that it does not require swab samplers or any other consumables for a number of other applications. Our customers value the low-logistics tail of our MX908.

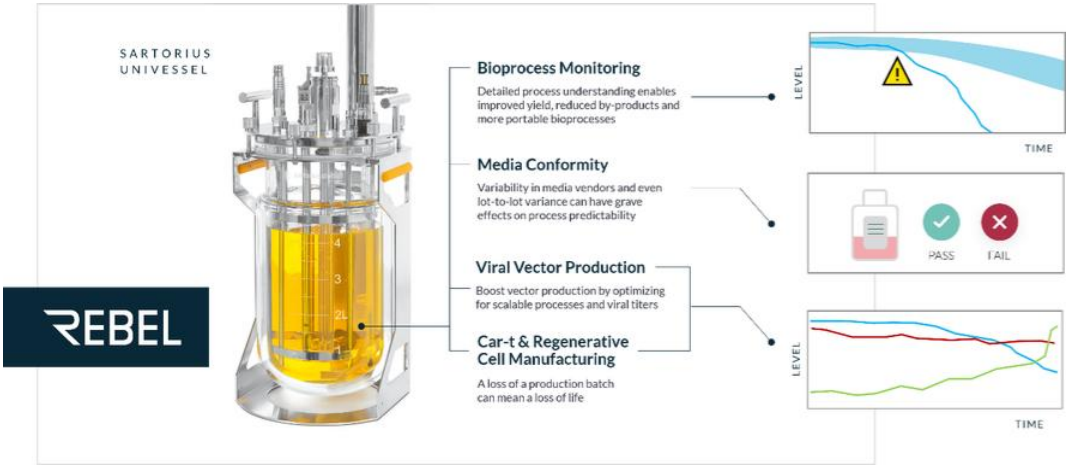
Rebel™

The Rebel is a small desktop analyzer providing real-time information on the extracellular environment in bioprocesses. Compared to a traditional central laboratory high-performance liquid chromatography, or HPLC, Mass Spec assay, Rebel's price per sample is up to 10 times lower, at approximately one-third of the capital cost, and delivers answers up to 2,000 times faster. Rebel provides results within seven minutes, enabling critical on-the-spot decisions regarding bioprocess media optimization, accelerating process-development cycles and maximizing bioreactor efficiency. Customers are using Rebel in environments subject to U.S. Food and Drug Administration, or FDA, and other regulatory guidelines regarding biological and pharmaceutical product quality, or GxP environments, to evaluate fresh media for conformity to standards, track the extracellular environment and metabolic flux during growth cycles, monitor performance during stress experiments, and characterize spent media.

Since the launch of the Rebel in November 2019, we have sold 100 units and 38 of those units have been placed with the top-20 pharmaceutical companies by revenue and 15 organizations have purchased multiple units. Our focus has been on increasing U.S. placements, but we also have a meaningful international opportunity and have recently sold Rebels in China, Japan, South Korea and Europe.

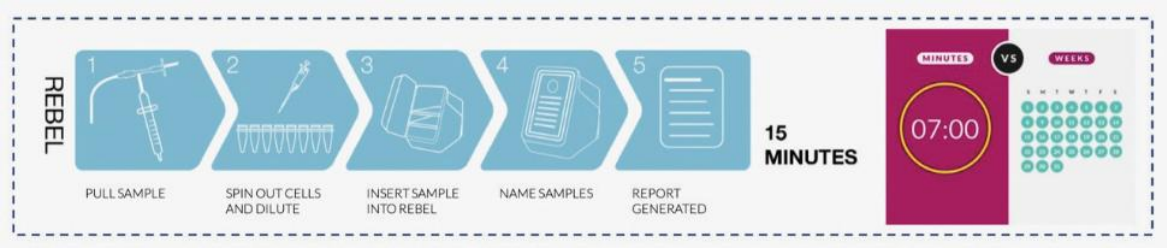
Cells have been harnessed to serve as microscopic factories producing myriad molecular species large and small. The markets for cellular-derived products include therapeutics, including cell therapy and personalized medicine, new and sustainable foods and beverages, and industrial materials. Many of these products, such as protein-based therapeutics, can only be economically produced by cells in a bioreactor. Making these products in an efficient and reproducible way remains a challenge to our customers in bioprocessing. Cell culture media forms the critical growth

environment for the cell. Our customers' measurement of this extracellular environment in bioprocesses is critical to their development and operational efficiency.



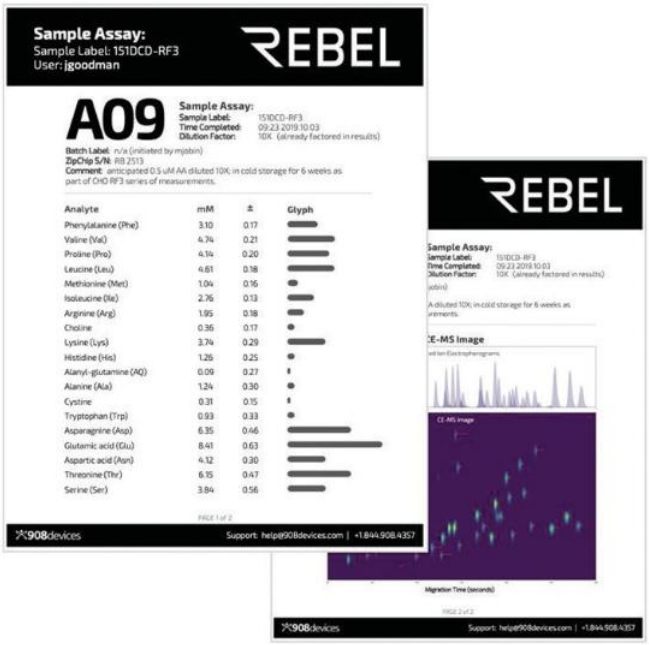
However, it is rare that researchers conducting these types of experiments have analytical tools for extracellular media characterization on their local bench, which means samples need to be frozen, packaged, and transported to core laboratories for analysis with large HPLC Mass Spec instruments. This adds substantial delays and cost and typically takes three to six weeks to produce lab reports equivalent to those produced by the Rebel in only 15 minutes. The following graphics illustrate the complexity and processing time of a traditional HPLC Mass Spec analysis compared to the Rebel process.

Rebel is currently configured to report concentrations of 32 critical extracellular metabolites in cell culture media, such as amino acids, vitamins, and biogenic amines, which are known to substantially affect the growth profile and properties of the resulting biological entities and their expressed materials. Incorporating our microfluidic sample handling and CE technology, as well as our microscale Mass Spec technology, Rebel's internal autosampler is capable of queueing approximately 96 such samples for unattended analysis and delivering reported concentrations for each sample.



A fit-for-purpose at-line system, the Rebel is designed to be located within the same laboratory as a bioreactor, enabling more frequent monitoring of key cell media parameters. To run this analysis, the Rebel requires as little as one microliter of cell culture media with little sample preparation. This allows customers to run more tests while preserving precious cell culture media, which is extremely valuable for small batches as used in cell therapy and personalized medicine.

The Rebel, using its onboard algorithms, eliminates the need for manual calibration and delivers processed and actionable results in real-time. As runs are completed, users can access the report either as a PDF print out or a laboratory information system compatible file exported to the network. The Rebel software is compliant for operation in GxP environments.



Consumables and Services

Rebel's operation requires a consumable kit that includes:

- one microfluidic preparation and separation chip;
- diluent electrolyte for samples, including internal standards;
- background electrolyte for separation; and
- performance qualification and calibration standards.

Currently, customers of Rebel who are actively utilizing the device are consuming on average one 200-sample kit per month. With continuous operation, the Rebel is capable of consuming approximately one 200-sample kit a day.

We also offer an annual certification kit and service plan. The certification kit is shipped to the customer, who loads the provided samples, and executes a certification protocol. The system is remotely qualified and certified based on the data acquired meeting factory specifications.

Annual and extended warranty and service plans are available for the Rebel.

ZipChip

Our ZipChip solution is a plug-and-play, high-resolution separation platform that optimizes Mass Spec sample analysis. Our ZipChip platform consists of a ZipChip Interface, which is installed into a conventional Mass Spec instrument, and consumable microfluidic chips, or ZipChips. We designed this technology to be compatible with third party Mass Spec instruments. Powered by our integrated microfluidic technology, the ZipChip platform allows researchers to consolidate a host of time-consuming biotherapeutic, metabolomic, and proteomic applications typically run on multiple instruments or configurations onto a single platform. With ZipChip, researchers can switch applications in minutes, instead of hours typical with an alternative such as liquid chromatography.

Leveraging our data analytics capabilities, we have also incorporated an automated software solution called DARWIN to expedite the analysis of the ZipChip and Mass Spec data for proteins and biotherapeutics. DARWIN eliminates most of the manual choices, selections, and decisions encumbering typical analysis software and directly and rapidly reports identified species, modifications and relative abundances.

Since launch of the ZipChip platform in March 2016, we have sold 185 ZipChip Interfaces and have established 21 multi-unit accounts in leading, global pharmaceutical organizations and academic institutions. Our ZipChip platform is compatible with market-leading conventional Mass Spec instruments currently installed in laboratories, and we intend to continue to expand the ZipChip platform to become compatible with any conventional Mass Spec instrument.

As an open-access discovery platform that can interface with more than 10,000 conventional Mass Spec instruments, ZipChip provides us the ability to leverage the growing list of newly established applications and publications from customers who have incorporated the device into their projects. By incorporating select assays investigated on the ZipChip by customers into our MX908 and Rebel devices, we can create an evolving pipeline of new customer-driven, point-of-need Mass Spec applications as the scope of analytes our devices can detect and analyze will continue to expand. We have already incorporated a number of the customer-driven assays in our MX908 and Rebel devices, and we are investigating several more for our future product pipeline.

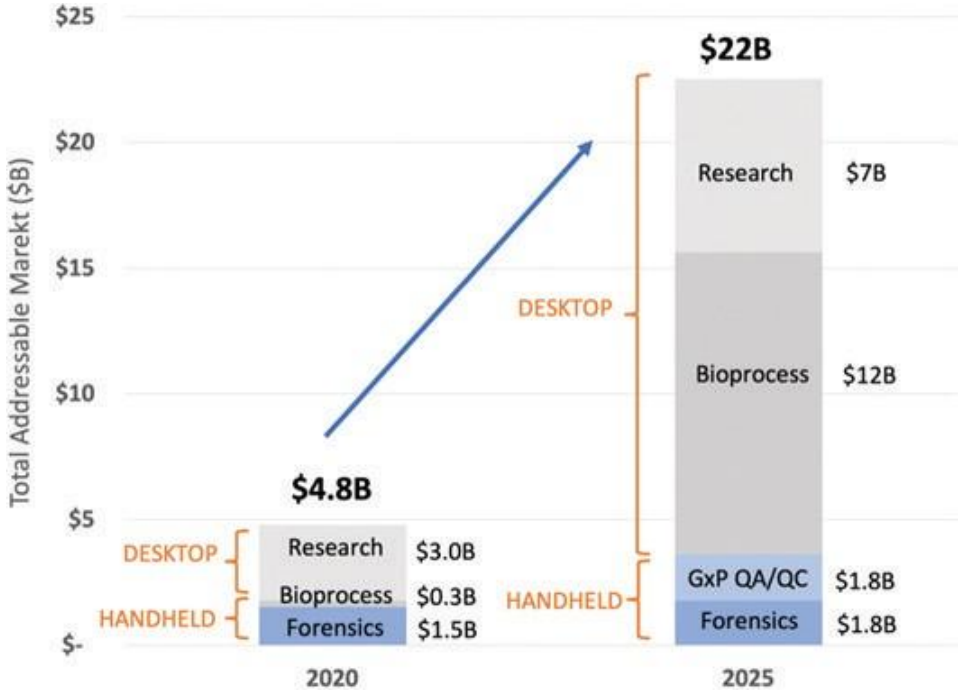
ZipChip Consumables

We offer a variety of kits for the ZipChip Interface that include microfluidic ZipChips and different reagents optimized for a wide scope of applications. These kits include intact antibody, metabolomics, peptide and others. We recently launched an oligonucleotides analysis kit for ZipChip. Oligonucleotides represent a distinct class of therapeutics that include RNA, DNA and their structural analogues, and are effective against a wide range of disease conditions. Traditional workflows for oligonucleotides analysis are lengthy, often requiring the use of extensive liquid chromatography method development along with ion pairing reagents, which are harsh chemicals. Our ZipChip device coupled with a mass spectrometer provides an easy method for simple and fast analysis of oligonucleotides with minimal

sample prep and no need for ion pairing reagents. We also expect to grow our revenue from warranty and annual certification related to the ZipChip platform as the product sales expand.

Market Opportunities

We have developed ultracompact, high-fidelity Mass Spec devices to interrogate the unknown and invisible and provide actionable results in critical-to-life point-of-need applications. Our first products are purpose-built handheld and desktop Mass Spec devices that currently address a range of applications and markets. We estimate our TAM for our devices was $4.8 billion in 2020, and is growing to an estimated $22 billion over the next few years. The TAM for our handhelds was estimated to be $1.5 billion in 2020 with expansion to over $3 billion with software application extensions into GxP facilities for raw material inspection, counterfeit and adulteration inspection, contamination and cleaning validation, and other quality assurance and quality control assays. Our desktop devices supporting bioprocess development represented a total addressable market of $260 million in 2020 expanding significantly to approximately $12 billion with execution of our roadmap and the rapid growth of cell therapy. We see additional future opportunity to address an estimated $3.0 billion in 2020 across the laboratory chromatography market space growing to more than $6.9 billion with further market growth and roadmap expansion into complex proteomics by 2025. Our estimates of our TAM are based on potential customer research and development spending, addressable aspects of potential customers' end product development process, and potential platform usage. We also utilize estimated penetration and placement rates for our platform with potential customers in our target markets and historical patterns for consumables usage.



Our TAM for all device placements in 2020 and expanding in 2025 with product roadmap and market growth

Our Initial Market—Field Forensics

Forensic labs have historically used conventional Mass Spec instruments to chemically analyze a diverse array of submitted samples. Testing for controlled substances is one of the major drivers for the use of Mass Spec in the field forensics setting. According to the latest available data from the Bureau of Justice, U.S. criminal forensic laboratories

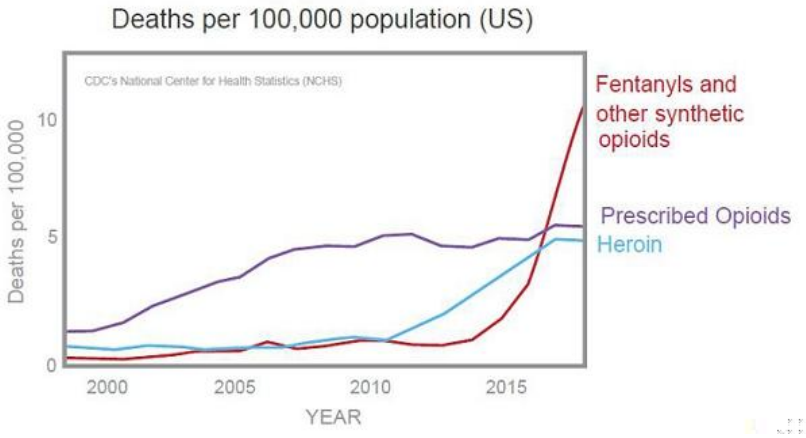
handled approximately 4 million requests, roughly 1.2 million of which were controlled substances-related. We believe that this increase in requests will be even more acute for the point-of-need setting.

In the field forensics setting, high accuracy and fidelity can be just as important at the point-of-need as it is in the laboratory. Simple and inexpensive colorimetric tests are being abandoned in many jurisdictions due to their extremely narrow and poor performance capabilities, in favor of handheld technologies with broad lab-like capabilities. This is creating an expanded market of individual users that is a multiple of the centralized laboratory Mass Spec instrument market.

The need for such field technologies is acute for controlled substances and identification of other priority chemicals and hazards at trace levels. The toxicity of fentanyl and its analogs is 100 to 10,000 times the potency of morphine, creating an opioid crisis of unprecedented scale and breadth.

Unfortunately, overdose deaths involving lethal drugs like fentanyl and methamphetamine are on the rise. At the end of September 2021, the Drug Enforcement Administration issued a public safety alert warning Americans of the sharp increase in fake prescription pills containing fentanyl and methamphetamine. This was the first advisory the DEA had issued in six years. According to the advisory, the number of DEA-seized counterfeit pills with fentanyl has jumped a staggering amount - by nearly 430 percent - since 2019. Today, two out of every five pills with fentanyl contain a potentially lethal dose.

The potency and diversity of these emerging classes pose a major challenge for point-of-need measurements, as depicted in the graph below. Near invisible quantities of opioids can be fatal, and street drugs are often heavily obscured with filler materials, making trace detection with high-fidelity technologies an imperative for success. The diversity of the problem also drives the need for agility with devices that can be rapidly updated in the field with new machine learning updates. There are thousands of variants of these highly potent opioids, and other emerging classes such as cathinones and cannabinoids that will further exacerbate the problem.



In addition to controlled substances, point-of-need Mass Spec instruments can address a wide variety of other use cases, including:

- first responders and local, state, and federal law enforcement;
- U.S. and international defense and homeland security;
- forensic laboratories' case management and triage;

- package inspection for postal services, couriers, customs agencies, and corporate mail rooms;
- facility safety for hotels, local, state and federal government facilities, and private enterprises; and
- quality assurance and control.

We estimate that the TAM for our handhelds was $1.5 billion per year in 2020 for trace detection of drugs, explosives, priority chemicals, and other hazards on surfaces and in the air. Our TAM expands to over $3 billion with use cases in GxP facilities for raw material inspection, counterfeit and adulteration inspection, contamination and cleaning validation, and other quality assurance and quality control assays. These use cases would be accessed through release of additional software apps or mission modes for our base hardware.

Life Sciences

Mass Spec addresses a significant number of applications along the life sciences research and biopharma value chain. It is integral in research and discovery, drug development, product validation and quality control. Biologic therapeutic modalities and all cell-based products more broadly, use bioreactors to manufacture product in two stages – process development and clinical and GXP manufacturing.

Within a cell, thousands of intertwined processes govern the cells ability to produce various proteins, its ability to perform a specific function, and its energy and waste expenditure. But efficient intracellular operations are also highly reliant on the extracellular environment – the cell culture media. In bioreactors, the timely influx of raw materials, environmental controls, and management of waste can be not only essential to efficiency, but literally to the life or death of the cells. The worldwide cell culture media market itself was estimated to be a $2 billion business in 2020. Regardless of how carefully the starting cell culture media has been designed and selected, bioprocessing is by definition a dynamic and inhomogeneous process. Cellular biology is complicated and unpredictable.

Due to issues with both the existing point-of-need solutions and alternative laboratory-based workflows, development scientists currently lack an ideal solution to accurately analyze the extracellular environment during or after the growth cycle without having to compromise between timing or completeness.

Democratization of Mass Spec will allow for significant efficiencies and new applications for the technology within life sciences. With real-time access to comprehensive media profiles, bioprocess development scientists can:

- accelerate their product development cycles with feedback in minutes rather than weeks;
- improve process yield and lower costs throughout their value chain;
- enable a broad range of complex therapeutic modalities in biopharmaceuticals; and
- increase the probability of successfully developing cell-based products.

We believe these efficiencies will lead to substantial growth opportunities in biologic-based therapeutics where a better understanding of the extracellular environment is a crucial element of bioprocessing.

For antibody therapeutics, a key requirement is that monoclonal production cell lines not only produce high titers of antibody but with acceptable Critical Quality Attributes, or CQAs. The extracellular media properties can greatly impact both the titer and the CQAs of the produced antibody. Likewise, for cell and gene therapeutics, management of the complex mammalian cell culture system and measurement and control of the extracellular environment is crucial. Historically, bioprocessing has been focused on large-scale batched production of monoclonal antibodies, or mAbs, using genetically stable clones, whose production has largely been optimized over many years of refinement. Today, newer advanced modalities, like cell and gene therapies, are fueling growth in the market while introducing variability of input materials (e.g., patient or donor cells, transient transfected cell lines), higher cost of goods sold, and the necessity

for small-batched production – driven by smaller patient populations and the need to scale out. This change is driving manufacturers toward increased monitoring and optimization at a level of intensity beyond what is seen historically.

End market sales of biologics across mAbs, cell, and gene therapies were estimated at $150 billion in 2020, growing to approximately $250 billion by 2025 at a 11% compounded annual growth rate according to third party reports and analyst sources. While mAbs are forecasted to continue to dominate end-product sales in 2025, it is estimated that the pipeline of cell and gene therapies will be nearly 6,000 assets, representing more than 50% of the total biologics pipeline. A massive expansion of global bioprocessing capacity is underway to accommodate the needed small batched production. We estimated Rebel's TAM to be $260 million in 2020, representing more than 1,700 device placements and 1.6 million media tests to support process development, and is expected to expand to approximately $12 billion TAM by 2025 with the execution of our roadmap and the rapid growth of cell therapy.

Our product development roadmap for the Rebel platform includes the extension of current capabilities and move to an online and, ultimately, a real-time "bioreactor brain". In process development today, smaller scale bioreactors are outfitted with a variety of disconnected multi-party simple sensors and controllers. With the increasing trend toward highly parallelized systems with many small-scale bioreactors running simultaneously, manual sampling becomes a significant bottleneck. The roadmap expansion of Rebel's analyte panel to address core culture kinetics (e.g., glucose, lactate, ammonium, pH, dissolved oxygen) and attributes like cell count, and viable cell density means that this future online Rebel system could have a uniquely comprehensive assessment of the present state and trajectory of the extracellular environment. Historical data profiles across parallel bioreactors and designed experiments form an excellent basis for machine learning and multivariable predictive control to optimize experimental variables to maximize yield, minimize risk of loss, and improve kinetics – the "bioreactor brain". An outsize portion of this opportunity is driven by testing in autologous cell therapies and is commensurate with the total expected cell batches produced.

Future Market Opportunities

The fastest and most convenient way to explore new applications incorporating our platform technology is through interfacing with a conventional general-purpose laboratory Mass Spec instrument. Our laboratory interface connects our proprietary microfluidic chips, called ZipChips, to conventional Mass Spec Instruments, in a simple and customer friendly manner to form a discovery platform. Our research customers incorporate our ZipChip Interface into their projects due to its preparation convenience and separation speed. These customers prove-out new assays spanning a range of markets from diagnostics to consumer health and beauty, to agrochemical, oil and gas, and defense. They measure such things as novel therapeutics, metabolites, and quality and process attributes, and explore complex proteomics. We estimate our ZipChip platform was able to address $3.0 billion in 2020 across the research chromatography market space growing to more than $6.9 billion with further market growth roadmap expansion into complex proteomics by 2025. The resulting pipeline and market multiplier for subsequent point-of-need products has not been considered and may be significant.

Customers

We sell our products worldwide through an experienced direct sales force as well as through domestic and international channel distribution partners. Representative organizations using our products in each of our primary markets are as follows:

Pharma/Biotech:

- Biogen Inc.
- Bristol-Myers Squibb Co.
- C.H. Boehringer Sohn AG & Ko. KG
- GlaxoSmithKline plc
- Medicines Discovery Catapult
- Novartis International AG
- Pfizer Inc.
- Sanofi S.A.
- Takeda Pharmaceutical Company Limited
- Teva Pharmaceutical Industries
- Transcenta Holding Limited
- WuXi AppTec

Government:

- Federal Emergency Management Agency Center for Domestic Preparedness
- The National Institute for BioProcessing Research and Training
- The National Institute for Innovation in Manufacturing Biopharmaceuticals
- United States Army
- United States Department of Homeland Security
- U.S. Centers for Disease Control and Prevention
- U.S. Food and Drug Administration United States
- United States Marine Corps

Academia:

- Clemson University
- Dana-Farber Cancer Institute
- Duke University
- Johns Hopkins University
- North Carolina State University
- Stanford University
- University of Kentucky
- The Ohio State University

We are always looking for new opportunities to engage directly with our customers. To that end, in September 2021, we hosted our first integrated user meeting, Critical MASS 2021, which covered the full breadth of our product platforms and their applications. This event brought more than 150 attendees together, both virtually and in person, to hear our customers share their success using our handheld and desktop devices to democratize access to mass spectrometry. These customer talks spanned the breadth of our customer base: from pharma – with Amgen, Merck, AstraZeneca and Sartorius – to top research institutions – with Johns Hopkins University and Dana Farber Cancer Institute – to government agencies – with the USDA, Maine Drug Enforcement Agency and the Quincy Police Department. The executive director of product integrity at Merck was the keynote speaker for the event and discussed the critical role forensic testing plays in criminal enforcement against counterfeit drugs.

It was inspiring to hear the impact our technology is having across a range of topics, from bioprocess monitoring to identification of counterfeit pharmaceuticals to high-throughput drug discovery. And, perhaps even most importantly, the event gave our customers the opportunity to engage in discussion together – not only to share their experiences but also to increase awareness and educate each other on the value of our technology across these different application areas.

Manufacturing and Supply

Our manufacturing strategy has two components: to outsource subassemblies or assemblies to domestic contract manufacturers where it is cost and capital favorable, and to use our internal manufacturing facilities for the balance of our production needs. Our in-house manufacturing facilities are located at our headquarters in Boston, Massachusetts. These facilities are ISO 9001:2015 certified and include approximately 5,100 square feet of configurable production assembly floor, 1,800 square feet of advanced machining space, and 2,000 square feet of configurable cleanroom. Inventory is held in our Boston facilities in a 700 square foot controlled-access cage.

Devices

The MX908, Rebel and ZipChip Interface are manufactured, tested and shipped from our Boston facility. Several custom components are fabricated by third party suppliers, including printed circuit boards and cables, and metal and plastic mechanical components. The assembly of technology-sensitive components such as our proprietary vacuum pumps and ion trap/ionization module is completed in-house.

Currently, our Boston manufacturing facility is capable of supporting the production of approximately 2,000 MX908, Rebel and ZipChip Interface units combined per year. When our annual sales exceed 2,000 units, we expect that we would need to either expand our in-house production operations, or transfer some or all aspects of assembly to contract manufacturers, to accommodate larger run-rates. We believe there are numerous domestic and international contract manufacturers that could be qualified to produce the MX908, Rebel and/or ZipChip Interface when third party

demand for our products outpace our current manufacturing capacity. The autosampler subassembly of the Rebel is supplied by a single supplier, Spark Holland B.V.

Volume manufacturing of the ZipChip Interface had been previously outsourced to Columbia Tech, an ISO 9001 wholly-owned subsidiary of Coghlin Companies, Inc., through September 30, 2021. Our Boston facility can and has manufactured ZipChip Interfaces, and upon review of our and Columbia Tech's manufacturing processes, we transitioned manufacturing of the ZipChip Interface back to our Boston facility beginning in the fourth quarter of 2021. The final testing and shipment of ZipChip Interfaces has been and will continue to be completed from our Boston facility. Additionally, we maintain resources to handle all warranty and service of our installed base.

We are continuously evaluating and updating our supply chain to ensure our ability to respond to customer demand for our products. For example, we have relationships with a number of machine shops and electronics suppliers that can provide components for our devices, including components currently provided by a single source. We plan to continue the diversification of our supply chain as we scale. We use our annual demand planning to assess initial device needs for each year, and we update and reassess those estimates as needed, including with respect to the levels of inventory that we believe will be required to support anticipated customer demand.

Consumables

The MX908 incorporates a number of non-proprietary consumables that are commercial-off-the-shelf available and sourced from a number of reputable suppliers. Sampling swabs that are used for the analysis of liquid and solid materials in the MX908 are currently single-sourced from DSA Detection. While we believe that alternatives are available, it would take time to identify and validate replacement swab samples, which could compromise our ability to supply these to our MX908 customers on a timely basis.

Consumable kits for the Rebel and ZipChip Interface include electrolytes, standards, and microfluidic chips. All assay kits and standards are assembled in our Boston cleanroom facilities. Component reagents and standards are widely available from multiple suppliers. Our microfluidic chips are produced and assembled in our Boston cleanroom facilities. The substrate is supplied by Micronit Microtechnologies B.V. While we believe that alternative suppliers would be available, it would take time to identify and qualify alternate suppliers and transfer design requirements to them, which could negatively affect our ability to supply these chips to our Rebel and ZipChip customers on a timely basis.

Sales and Marketing

We distribute our devices and consumables via direct field sales and support organizations located in North America and through a combination of our own sales force and more than 35 third party distributors in domestic and international markets which include Australia, Canada, China, Czech Republic, Germany, Japan, Singapore, Turkey, and the United Kingdom. In North America, we use distribution partners to provide our products to end customers where a contract vehicle is required. Since the commercial launch of our first handheld, the installed base of our devices has grown to more than 1,900 devices across 42 countries.

Our domestic sales force and international partners inform our current and potential customers of current product offerings, new target applications, and advances in our technologies and products. As our primary point of contact in the marketplace, our sales force focuses on delivering a consistent marketing message and high level of customer service, while also attempting to help us better understand the evolving market and customer needs.

As of December 31, 2021, we had 58 people employed in sales, sales support and marketing. This staff is primarily located in the United States and we have recently hired internationally, using a professional employment organization, to support our sales and applications efforts. We intend to significantly expand our sales, support, and marketing efforts in regions with a concentrated life sciences presence, including large pharmaceutical and biopharma companies. For example, we plan to establish a direct sales footprint in Europe, and to develop a distribution and support network in China. Additionally, we believe that there is significant opportunity in other Asia-Pacific countries such as India and South Korea as well as other areas such as Australia and South America. We plan to expand into these regions via initial penetration with distributors and then subsequent support with direct sales and support personnel.

Our business model is focused on driving the adoption of our products and maximizing use across our customers' value chains. This is enabled through customer trials and partnerships that allows us to further understand the critical applications for our technology and inform our future developments and market expansion.

Our MX908 devices often are sold to governmental institutions and other customers that require participation in a tender process that involves preparation of extensive documentation and a lengthy review process. As a result of these factors, and the budget cycles of our customers, our sales cycle can often be six to twelve months, or longer. Our Rebel devices are relatively new to the life science marketplace and require a capital investment by our customers. The sales process typically involves numerous interactions and demonstrations with multiple people within an organization. Some potential customers conduct in-depth evaluations of the system, including running experiments at our Boston headquarters and comparing results from alternative systems and technologies.

Service and Support

We offer warranty and extended warranty service plans, as well as on-site training, in order to improve customer adoption of our products. Support under warranty and extended service contracts include the following:

- *Technical support.* Customers can call a hot-line number 24 hours per day, 365 days per year for support on issues ranging from questions on proper usage of the device, to assistance in interpretation of chemical spectra to ensure the device is working as intended. We refer to this support as our Reachback program.

- *Software updates and library updates.* We periodically release updates to the embedded software in our products. These updates will ensure the ongoing functionality of our products and repair defects in the software. We also release updates and additions to our library of spectral images enabling identification of additional chemicals.

- *Warranty.* Our MX908 and ZipChip Interface devices are covered under a return-to-factory warranty model for repairs. Depending on availability, loaner units are made available to minimize downtime with our customers.

We provide training at the customer's location with the initial purchase of our devices. Each training event is between four to six hours and covers device functionality and hands-on training with the device. At the conclusion of the training, certificates are issued for all attendees. Additional training days are available on a per diem basis. For our desktop devices, we offer an advanced training and applications training to assist customers in implementing their required applications with our device.

Research and Development

Investment in research and development is at the core of our business strategy. Our research and development team is responsible for designing, developing and enhancing our products, as well as performing product testing and quality assurance activities. Members of our research and development team specialize in many functional areas including algorithms, machine learning, electrical and mechanical engineering as well as software development.

As of December 31, 2021, we had 56 full-time employees dedicated to research and development. Of these, approximately 40% have advanced degrees in engineering or the sciences. We have made substantial investments in product and technology development since our inception. Research and development expense totaled $13.1 million in the year ended December 31, 2021. We expect our research and development expense to increase significantly for the foreseeable future as we enhance our existing products, develop new products for our current markets and introduce new products in new markets.

We consider the holistic nature of our internal product development teams critical to our products' success. Accordingly, our research and development team possesses functional expertise in critical areas such as:

- chemistry, biochemistry, physics of Mass Spec and separations and sample processing;

- embedded, desktop and mobile software engineering;
- machine learning, high-speed digital signal processing, multivariate statistical learning, algorithms and decision theory;
- user experience design and user interface design;
- mechanical engineering and industrial design;
- analog, digital and mixed signal electronics engineering;
- ultra-efficient pumping and pneumatics engineering; and
- microfluidic design, and volume fabrication at the micro- and meso-scale.

The majority of our research and development operations are conducted in our Boston facility. We also conduct additional research and development operations out of a second facility in Chapel Hill (approximately 2,000 square feet), North Carolina to support assay development for Rebel and ZipChip.

Our R&D and marketing teams also receive input from two Scientific Advisory Boards (SAB) implemented in 2021, one SAB board with deep expertise in bioprocess development, and cell and gene therapy processes and production, and the other SAB board made up of thought leaders in proteomics who will be invaluable to the continued advancement of our platform mass spec and microfluidic technology and its application to contemporary problems in proteomics-oriented life science research.

Competition

We have a range of competitors extending from small, privately held companies with single-point solutions to large, publicly-held corporations, including those with a portfolio of Mass Spec products, such as Agilent, Bruker, Danaher, Inficon, FLIR, PerkinElmer, Shimadzu, Thermo Fisher Scientific, and Waters Corp. Many of these companies have greater resources and market presence than we do.

We expect the markets for our products to remain highly competitive and dynamic and to reflect rapid technological evolution and continually evolving customer requirements. Our ability to compete successfully will depend on a number of factors including our ability to:

- offer differentiated point-of-need Mass Spec devices;
- translate market requirements into an engineering roadmap of new software and hardware features to remain competitive;
- demonstrate the value of employing our products at the point-of-need through accelerated workflows; and
- provide pro-active support and service that delights our customers.

Intellectual Property

Protection of our intellectual property is fundamental to the long-term success of our business. We believe that our continued success depends in large part on our proprietary technology, the skills of our employees and the ability of our employees to continue to innovate and incorporate advances into our products. We regard our products and the internally developed software embedded in our products as proprietary.

We rely primarily on a combination of trade secret, patent, copyright and trademark laws, as well as contractual provisions with employees and third parties, to establish and protect our intellectual property rights. Our patent strategy is to seek broad protection on fundamental enabling technologies, and layer on additional patents on specific implementations or methods of operation critical to our present and anticipated products, and to prevent competitive operation. While our expertise in signal processing and machine learning is critical to our success, we typically keep these inventions as trade secrets to avoid public disclosure. Some high value consumables have been engineered with clandestine product integrity features to inhibit duplication or counterfeiting efforts of our intellectual property. We provide our products to customers pursuant to terms and conditions that impose restrictions on use and disclosure. We also seek to avoid disclosure of our intellectual property using contractual obligations, by requiring employees, consultants and contractors with access to our proprietary information to execute nondisclosure, non-competition and assignment of intellectual property agreements. In addition, we generally control access to our proprietary and confidential information through the use of internal and external controls.

Our foundational technology in the area of miniature Mass Spec originated as an effort at Oak Ridge National Laboratories led by our Scientific Founder J. Michael Ramsey, now a Professor of Chemistry at the University of North Carolina.

As of December 31, 2021, our owned patent assets included approximately 15 U.S. patents, one pending U.S. patent application, 15 foreign patents and five pending foreign patent applications in various foreign jurisdictions, including Australia, Canada, China, the European Union, Hong Kong, Israel, Japan, South Korea, Singapore and Taiwan. The subject matter covered by our owned patent assets includes core aspects of compact Mass Spec technology, a design for a handheld Mass Spec device, a design for a modular Mass Spec chamber, patents for multiple ionization modes and adaptive pressure operation within survey period, the determination of preferred ionization mode, adaptive resolution control, adaptive operation to reduce power consumption, and the detection of positive and negative ions.

As of December 31, 2021, our in-licensed patent assets included approximately 31 U.S. patents, two pending U.S. patent applications, 18 foreign patents, and five pending foreign patent applications. The subject matter covered by our in-licensed patent assets includes a microfabricated ionization source and a microfabricated ionizer chip, microscale Mass Spec systems, devices and related methods, a miniature charged particle trap with an elongated trapping region for Mass Spec, high pressure Mass Spec signal enhancement by means of convective transport, electrospray ionization interface to high pressure Mass Spec, a method of sample injection for chemical separations in microfluidic devices, integrated sample processing for electrospray ionization devices, and microchips with integrated multiple electrospray ionization emitters and related methods, systems and devices. Excluding any patent term extension, the currently issued 908 Devices-owned patents are expected to expire between 2032 to 2038. The currently issued in-licensed patents are expected to expire from 2022 to 2039. We do not expect any of the in-licensed patents that are set to expire in 2022 to have a material effect on our business as those patents relate to a prior design for the ion trap and we have since in-licensed new patents covering the current design.

We also seek to protect our brand through procurement of trademark rights. As of December 31, 2021, we owned eight registered trademarks in the United States, nine registered foreign trademarks, and one U.S. pending trademark application. Our registered trademarks and pending trademark applications include trademarks for 908 Devices, Rebel, MX908, and our logo. In order to supplement protection of our brand, we have also registered several internet domain names.

Licenses

UT-Battelle

In June 2012, we entered into two license agreements, which were subsequently amended in August 2013 with UT-Battelle, LLC, or UTB, which manages and operates the Oak Ridge National Laboratory under its prime contract with the U.S. Department of Energy, pursuant to which UTB granted us an exclusive, sublicensable, worldwide license under certain patent rights owned by UTB related to Mass Spec technology to develop, manufacture, use and commercialize products, services and methods that are covered by such patent rights, or the Licensed Products, in the defined fields of use within forensics, life sciences, industrial process monitoring and food and environmental testing and safety. The

patents are related to the design and operation of microscale ion traps and ion sources with flexible operating pressures, and were the first patents that enabled us to reduce the size of our Mass Spec platform. We refer to these two licenses as the UTB Agreements.

We paid UTB an upfront payment of $5,000 in connection with executing the UTB Agreements and made a payment of $15,000 in January 2013. In addition, we issued an aggregate of 73,750 shares of our common stock to UTB, which had an aggregate fair value at the time of issuance of approximately $25,200. Additionally, we must pay UTB a low-single digit percentage royalty on our net sales of Licensed Products that are covered by a valid claim of the licensed patents, subject to an annual minimum royalty payment owed to UTB of $70,000. We are also obligated to pay UTB a percentage of certain royalty income received from any sublicensees ranging from the lower- to mid-double-digit percentages. To date, we have not issued any sublicenses under the UTB Agreements. The are no future milestone payments to be made by the Company under the UTB Agreements.

We are obligated to use commercially reasonable efforts to develop, manufacture and commercialize the Licensed Products.

The UTB Agreements will continue until the expiration of the last to expire patent or last to be abandoned patent application that is licensed to us, unless terminated earlier in accordance with the terms of the UTB Agreements, which we currently expect will be in 2025. We may terminate the UTB Agreements by providing advance written notice of 60 days as specified in the UTB Agreements. UTB may terminate the UTB Agreements if we violate or fail to perform any terms of the UTB Agreements and we fail to cure such violation or failure within 90 days of notice thereof from UTB. Additionally, if we challenge the validity or enforceability of any of the licensed patents, the UTB Agreements will automatically terminate.

University of North Carolina, Chapel Hill

In June 2012, we entered into a license agreement, which was subsequently amended in April 2013 and August 2014, and then amended and restated in May 2015, which we refer to in this Annual Report on Form 10-K as the UNC Agreements, with the University of North Carolina, Chapel Hill, or UNC, pursuant to which UNC granted us an exclusive, sublicensable, worldwide license to develop, manufacture, use, and commercialize products, services and methods, covered by certain patent rights owned by UNC, including patents related to a microfabricated ionization source and a microfabricated ionizer chip.

We issued an aggregate of 110,626 shares of our common stock to UNC, which had an aggregate fair value at the time of issuance of approximately $37,800. Additionally, we must pay UNC a low single digit percentage royalty on our net sales of any products that are covered by a valid claim of the licensed patents, subject to an annual minimum royalty payment of $30,000. We are also obligated to pay UNC a low double-digit percentage of certain royalty income received from our sublicensees. To date, we have not issued any sublicenses under the UNC Agreements.

We are obligated to use commercially reasonable efforts to develop, manufacture and commercialize the Licensed Products and achieve defined milestones within the UNC Agreements. There are no future milestone payments to be made by the Company under the UNC Agreements.

We are responsible for all reasonable, documented patent expenses incurred during the life of the UNC Agreements and associated costs associated with the preparation, filing, prosecuting, issuance and maintenance of all patent applications and patents included within the patent rights covered by the UNC Agreements. In addition, we have the option to exclusively license UNC rights in improvements to the license patents and related portfolio, by paying $10,000 per improvement.

The UNC Agreement will continue until the expiration of the last to expire patent or last to be abandoned patent application that is licensed to us, unless terminated earlier in accordance with the terms of the UNC Agreements. There are current patent applications pending under the UNC Agreements so we expect the UNC Agreements will continue through at least 2039. We may terminate the UNC Agreements by providing advance written notice of 60 days as

specified therein. UNC may terminate the UNC Agreements if we violate or fail to perform any terms of the UNC Agreements and we fail to cure such violation or failure within 90 days of notice thereof from UNC.

Regulations

Chemical detection, identification, and authentication technologies are of value to military, governmental, and law enforcement organizations worldwide. As a result, our products and technologies are subject to export control laws and regulations, which are imposed to ensure that sensitive technologies are withheld from unfriendly governments, terrorists or criminal organizations.

Our current products are dual-use items with both military and civilian applications. These products are subject to the U.S. Export Administration Regulations, or EAR. The EAR imposes various documentation, recordkeeping and transaction screening requirements and may impose licensing requirements for certain countries, customers, or end-use applications of our products. Applicable U.S. export regulations will continue to apply to our products and technologies even after they are exported to non-U.S. customers or to any non-U.S. subsidiaries or affiliates.

Articles, services and technologies that have certain military applications or that are designed, developed, modified or adapted specifically for military applications may be subject to the International Traffic in Arms Regulations, or ITAR. When ITAR requirements apply, they apply in place of EAR. ITAR imposes registration requirements and broader, more stringent export licensing requirements than EAR. We must determine whether ITAR or EAR governs each of our products, services, and technologies. We may assume the risk of making these determinations on our own, or we may decide to request formal governmental jurisdictional rulings.

Although our current products and services are not subject to ITAR licensing requirements, such licensing requirements could apply to our future products and services.

Under generally applicable U.S. trade regulations administered by the Office of Foreign Assets Control, or OFAC, of the U.S. Department of the Treasury, we are generally prohibited from engaging in transactions involving sanctioned countries, as well as certain persons and entities that have been designated for targeted sanctions by OFAC. EAR and ITAR also impose export restrictions targeted at identified persons and entities, and we are required to comply with these restrictions as well.

Violations of the ITAR, EAR, and OFAC requirements can result in significant fines, penalties, denial of export privileges, and even terms of imprisonment for the individuals involved.

In addition, the U.S. Food and Drug Administration, or FDA, regulates, among other things, the research, development, testing, manufacturing, clearance, approval, labeling, storage, recordkeeping, advertising, promotion, marketing, distribution, post-market monitoring and reporting, and import and export of medical devices. Our products are currently marketed as research use only, or RUO. Products such as ours that are marketed for RUO are not intended for use in a clinical investigation or for clinical diagnostic use outside an investigation and must be labeled “For Research Use Only. Not for use in diagnostic procedures.” Products that are intended for RUO and are properly labeled as RUO are exempt from compliance with the FDA’s requirements applicable to medical devices more generally, including the requirements for clearance or approval and compliance with manufacturing requirements known as the Quality System Regulation.

A product labeled RUO but intended to be used diagnostically may be viewed by the FDA as adulterated and misbranded under the Federal Food, Drug, and Cosmetics Act and subject to FDA enforcement activities. 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 also evaluate the totality of the circumstances to determine if the product is intended for diagnostic purposes. 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 that will require clearance or approval prior to commercialization.

Although we currently market our products as RUO, we may in the future make the decision to market them for clinical or diagnostic purposes, or may develop other different products intended for clinical or diagnostic purposes, which would result in the application of a more onerous set of regulatory requirements.

Human Capital

As of December 31, 2021, we had 177 full-time employees, of which 58 work in sales, sales support and marketing, 56 work in engineering and research and development, 40 work in manufacturing, operations and service and 23 work in general and administrative. As of December 31, 2021, a substantial majority of our employees were located in the United States. None of our employees is represented by a labor union or is subject to a collective bargaining agreement. We consider our relationship with our employees to be good. Our human capital resources objectives include, as applicable, identifying, recruiting, retaining, incentivizing and integrating our existing and additional employees. The principal purposes of our equity incentive plans are to attract, retain and motivate selected employees, consultants and directors through the granting of stock-based compensation awards and cash-based performance bonus awards. The health and safety of our employees, customers and communities are of primary concern. During the COVID-19 pandemic, we have taken significant steps to protect our workforce including but not limited to, at various times during the pandemic, working remotely, enforcing vaccine and masking requirements, conducting weekly testing, and implementing social distancing and contact tracing protocols consistent with guidelines issued by federal, state, and local law.

Corporate Information

We were incorporated in Delaware in 2012 as 908 Devices Inc. Our offices are located at 645 Summer Street, Boston, Massachusetts 02210. Our telephone number is (857) 254-1500.

On December 22, 2020, we completed our initial public offering, or IPO, pursuant to which we issued and sold 7,475,000 shares of common stock, inclusive of 975,000 shares pursuant to the full exercise of the underwriters' option to purchase additional shares. We received net proceeds of $136.6 million after deducting underwriting discounts and commissions and other offering costs.

On November 15, 2021, we completed an underwritten public offering, pursuant to which we issued and sold 3,150,000 shares of common stock at a public offering price of $32.00 per share. We received net proceeds of $94.4 million after deducting underwriting discounts and commissions and other offering costs.

We are an "emerging growth company" as defined in the Jumpstart Our Business Startups Act of 2012, or the JOBS Act. As a result, we are permitted to rely on exemptions from certain disclosure requirements that are applicable to other companies that are not emerging growth companies. For so long as we are an emerging growth company, we will not be required to (i) engage an independent registered public accounting firm to report on our internal controls over financial reporting pursuant to Section 404(b) of the Sarbanes-Oxley Act, (ii) submit certain executive compensation matters to stockholder advisory votes, or (iii) disclose certain executive compensation related items.

We may continue to be an "emerging growth company" until December 31, 2025, though we may cease to be an "emerging growth company" earlier under certain circumstances, including if (i) we have more than $1.07 billion in annual revenue in any fiscal year, (ii) we become a "large accelerated filer" as a result of the market value of our common stock that is held by non-affiliates exceeding $700 million as of any June 30, or (iii) we issue more than $1.0 billion of non-convertible debt over a three-year period.

Section 107 of the JOBS Act also provides that an emerging growth company can take advantage of the extended transition period, provided in Section 13(a) of the Exchange Act, for complying with new or revised accounting standards. In other words, an emerging growth company can delay the adoption of certain accounting standards until those standards would otherwise apply to private companies. We have elected to use this extended transition period for complying with new or revised accounting standards until the earlier of the date we (i) are no longer an emerging growth company or (ii) affirmatively and irrevocably opt out of the extended transition period provided in the JOBS Act. As a result, our financial statements and the reported results of operations contained therein may not be directly comparable to those of other public companies.

We are also a “smaller reporting company,” as defined in Regulation S-K. We may continue to be a smaller reporting company if either (i) market value of our stock held by non-affiliates is less than $250 million as of the last business day of our second fiscal quarter or (ii) our annual revenue is less than $100 million during the most recently completed fiscal year and the market value of our stock held by non-affiliates is less than $700 million as of the last business day of our second fiscal quarter. If we are a smaller reporting company at the time, we cease to be an emerging growth company, we may continue to rely on exemptions from certain disclosure requirements that are available to smaller reporting companies. 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.

Available Information

Our Internet address is www.908devices.com. Our website and the information contained on, or that can be accessed through, the website will not be deemed to be incorporated by reference in, and are not considered part of, this Annual Report on Form 10-K. Our Annual Report on Form 10-K, Quarterly Reports on Form 10-Q, Current Reports on Form 8-K, including exhibits, proxy and information statements and amendments to those reports filed or furnished pursuant to Sections 13(a), 14, and 15(d) of the Securities Exchange Act of 1934, as amended, or the Exchange Act, are available through the “Investors” portion of our website free of charge as soon as reasonably practicable after we electronically file such material with, or furnish it to, the SEC. In addition, our filings with the SEC may be accessed through the SEC’s Electronic Data Gathering, Analysis and Retrieval system at http://www.sec.gov. All statements made in any of our securities filings, including all forward-looking statements or information, are made as of the date of the document in which the statement is included, and we do not assume or undertake any obligation to update any of those statements or documents unless we are required to do so by law.

Item 1A. Risk Factors.

An investment in our common stock involves risks. You should carefully consider the following risks and all of the other information contained in this Annual Report on Form 10-K before investing in our common stock. The risks described below are those that we believe are the material risks that we face. If any of the following risks actually occurs, our business, prospects, operating results and financial condition could suffer materially, the trading price of our common stock could decline, and you could lose all or part of your investment. The risks and uncertainties described below are not the only ones we face. Additional risks and uncertainties not presently known to us or that we currently believe to be immaterial may also adversely affect our business. See “Cautionary Note Regarding Forward-Looking Statements” in this Annual Report on Form 10-K.

Risks related to our business and industry

We have a history of net losses and may not be able to achieve profitability for any period in the future or sustain cash flow from operating activities.

We have had a history of net losses since our inception in 2012, and we may never achieve or maintain profitability. We cannot make any assurances that we will be able to increase our revenue to sustain cash flow from operating activities or reach profitability.

As we continue to expand and develop our business, we expect to incur significant additional expenditures in the areas of sales, marketing, research and development, and customer service and support. Additionally, as a public company, our legal, accounting and other expenses have been, and we expect will continue to be substantially higher than the expenses we incurred as a private company. Furthermore, we may encounter unforeseen issues that require us to incur additional costs. We will have to generate and sustain increased revenue to achieve profitability and positive cash flow as a result of these increased expenditures. Accordingly, if we are not able to achieve or maintain profitability and we incur significant losses in the future, the market price of our common stock may decline, and you could lose part or all of your investment.

Our operating results may fluctuate significantly from period-to-period and may fall below expectations in any particular period, which could adversely affect the market price of our common stock.

Our quarterly results of operations may fluctuate significantly from period-to-period. Accordingly, the results of any one quarter should not be relied upon as an indication of future performance. If our revenue or operating results fall below the expectations of investors or any securities analysts that follow our company in any period, the price of our common stock would likely decline. Each of the risks described in this section, as well as other factors, may affect our operating results. For example, factors that may cause our operating results to fluctuate include:

- our dependence on a limited number of large orders from U.S. government agencies for a substantial portion of our revenue in any quarterly period, whereby the loss of or delay in a customer order, or any delay in our fulfillment of deliverables under a customer order, could significantly reduce our revenue for that quarter;
- the addition of new customers or the loss of existing customers;
- the rates at which customers purchase additional products or consumables from us;
- our ability to enhance our products with new and better functionality that meets customer requirements;
- the length and unpredictability of our product sales cycle;
- the productivity and growth of our sales force and customer service team;
- the effectiveness of our distributors in securing new orders and fulfilling existing orders;
- service interruptions with any of our single source suppliers or subassembly manufacturers;
- unexpected costs or delays related to the COVID-19 pandemic;
- our ability to attain and maintain production volumes and quality levels for our products, and to accurately forecast customer demand for our products and consumables;
- the timing of our product releases or upgrades or related announcements by us or our competitors;
- the possibility of seasonality in demand for our products;
- changes in pricing by us or our competitors;
- the timing of investments in research and development related to new product releases or upgrades;
- our ability to control costs, including operating expenses and the costs of the components used in our products;
- future accounting pronouncements and changes in accounting policies;
- costs related to the acquisition and integration of companies, assets, or technologies; and
- general economic conditions.

Our operating expenses are heavily based on our anticipated product revenue growth, especially as we continue to invest significant resources in building out our sales and marketing channels and the development of future products. As a result, any shortfall in product revenue in relation to our expectations could cause significant changes in our operating results from period-to-period and could result in negative cash flow from operations and a decrease in the price of our common stock.

We have experienced a period of significant growth in recent years, and our inability to manage this growth could have a material adverse effect on our business, the quality of our products and services and our ability to retain key personnel.

We have experienced a period of significant growth in recent years. Our growth has placed increased demands on our management and other resources and will continue to do so in the future. We may not be able to maintain or accelerate our current growth rate, manage our expanding operations effectively or achieve planned growth on a timely or profitable basis. Managing our growth effectively will involve, among other things:

- continuing to retain, motivate, and manage our existing employees and attract and integrate new employees, particularly qualified sales personnel;
- continuing to provide a high level of service to an increasing number of customers;
- maintaining the quality of product and services offerings while controlling our expenses;
- growing our direct sales force and channel partners; and
- developing, implementing, and improving our operational, financial, accounting, and other internal systems and controls on a timely basis.

If demand for our products increases rapidly, we will need to expand internal production capacity or implement additional outsourcing of components and/or our assembled products. Success in developing, manufacturing and supporting products manufactured in small volumes does not guarantee comparable success in operations conducted on a larger scale. Modifying and reconfiguring our facility to increase production capacity may delay delivery of our products. In addition, component costs as well as additional production, financial, and management control costs may rise. If we are unable to meet the demand of our customers and deliver products quickly and cost effectively, customers may turn to our competitors. The costs associated with implementing new manufacturing technologies, methods and processes, including the purchase of new equipment, and any resulting delays, inefficiencies, and loss of sales, could harm our results of operations.

As we grow, we will also need to make corresponding improvements to other operational functions, such as our customer service and billing systems, compliance programs and our internal quality assurance programs. We will also need additional equipment, manufacturing and warehouse space and trained personnel to process higher volumes of products. We cannot assure you that any increases in scale, related improvements and quality assurance will be successfully implemented or that equipment, manufacturing and warehouse space and appropriate personnel will be available. As we develop additional products, we may need to bring new equipment on-line, implement new systems, technology, controls and procedures and hire personnel with different qualifications.

If we are unable to manage our growth effectively, there could be a material adverse effect on our ability to maintain or increase revenue and profitability, the quality of our products and services and our ability to retain key personnel. These factors could adversely affect our reputation in the market and our ability to generate future sales from new or existing customers.

We must develop new products, as well as enhancements to existing products, and adapt to rapid and significant technological change to remain competitive.

We sell our products in industries that are characterized by significant enhancements and evolving industry standards. As a result, our customers' needs are rapidly evolving. If we do not appropriately innovate and invest in new technologies, our offerings may become less desirable in the markets we serve, and our customers could move to new technologies offered by our competitors or make products themselves. To achieve market acceptance for our products, we must effectively anticipate customer requirements, and we must offer products that meet changing customer demands in a timely manner. Customers may require product features and capabilities that our current products do not have. Any of the current plans we have for future developments or enhancements are strategic in nature and not commitments to develop such capabilities for our customers. If we fail to develop products that satisfy customer requirements, our ability to create or increase demand for our products will be harmed.

Without the timely introduction of new products, services and enhancements, our offerings will likely become less competitive over time, in which case our competitive position and operating results could suffer. Accordingly, we focus significant efforts and resources on the development and identification of new technologies, products and markets to further broaden our offerings. In addition, the development cycle for our products and technologies can take multiple years and require significant investment, including substantial research and development, development of different engineering and manufacturing workflows, and adjustments to our data and analytics infrastructure. Even if these efforts are successful, the product or enhancement may not perform as expected. The ultimate success of our new products depends, in large part, on the accuracy of our assessments of the long-term needs of the industries and markets we serve, and it is difficult to quickly change the design or function of a planned new product if the market need does not develop as anticipated. As a result, to the extent we fail to accurately forecast the needs of our customers and timely introduce new and innovative products or services, or fail to obtain desired levels of market acceptance, our business may suffer and our operating results could be adversely affected. The challenge of identifying market trends and customer needs is even more demanding for markets that we have recently entered, such as the bioprocessing market, or that we intend to enter in the future, such as the GxP quality assurance market. There is no certainty that we will effectively identify these trends and needs or introduce products that are successful.

We have limited experience in marketing and sales and are in the early stages of building our sales channels in the life science market and internationally.

We may not be able to market, sell or distribute our current and future products effectively enough to support our planned growth. Currently, we sell our products through a combination of direct sales efforts and partnerships with distributors across all of our key markets. During 2021, our distributors accounted for a significant portion of our total revenue. We are in the process of broadening and diversifying our sales channels across all markets. In the future, if we fail to maintain good relationships with, or fail to successfully motivate any of our large distributors, our revenue may decline. If we do not diversify our sales channels and effectively utilize our direct sales force, we will continue to be susceptible to risks associated with having a large percentage of revenue concentrated with a limited number of distributors.

We have a direct sales force of 25 employees and we intend to increase the size and reach of our sales team in the future, particularly those focused on the life sciences market. Competition for employees capable of selling expensive instruments within the pharmaceutical and biotechnology industries is intense. We may not be able to attract and retain personnel or be able 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 a specialized sales, marketing and customer service force for a particular product or service may be difficult to justify in light of the revenue projected to be generated by such additional personnel and resources. We also intend to add additional distribution partners in the life science market, and if we are unable to do so successfully, it will adversely impact our ability to increase the revenue from our Rebel and ZipChip Interface.

We rely on distributors for the sale of our products in certain countries outside of the United States. We intend to continue to grow our business internationally and to do so we must attract additional distributors and retain existing distributors to maximize the commercial opportunity for our products. We exert limited control over existing distributors under our agreements with them, and if their sales and marketing efforts for our products in their particular region are not successful, our business would be materially and adversely affected. Locating, qualifying and engaging additional 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 platform 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.

Most of our distribution relationships are non-exclusive and permit such distributors to distribute competing products. As such, our distributors may not commit the necessary resources to market our products to the level of our expectations or may choose to favor marketing the products of our competitors. If current or future distributors do not perform adequately or we are unable to enter into effective arrangements with distributors in particular geographic areas, we may not realize long-term international revenue growth.

The continuing global COVID-19 pandemic, including resurgences and the emergence of new variants, has significantly affected our business and operations, and the pandemic and supply chain challenges may impact future operations and financial performance.

The COVID-19 pandemic, including resurgences and the emergence of new variants, and efforts to control its spread have significantly curtailed the movement of people, goods and services worldwide. In light of the uncertain and continually evolving situation relating to the spread of COVID-19, we have taken precautionary measures intended to minimize the risk of the virus to our employees, our customers and the communities in which we operate. These measures have included temporarily closing our offices to visitors and limiting the number of employees in our offices to those that are deemed essential for manufacturing and research purposes, as well as virtualizing, postponing or canceling customer, employee and industry events. While many of our employees have been able to return to working at our offices, many of these measures continue to be in place.

The COVID-19 pandemic has also created many negative headwinds that present risks to our business and results of operations. For example, it has generally disrupted the operations of our customers and prospective customers, and

may continue to disrupt their operations, including as a result of travel restrictions and/or business shutdowns, uncertainty in the financial markets or other harm to their business and financial results. These disruptions have caused reduced capital spend by our existing customers and potential new customers. These disruptions could result in further reductions to capital expenditure budgets, delayed purchasing decisions, longer sales cycles, extended payment terms or missed payments, and postponed or canceled projects, any of which would negatively impact our business and operating results, including sales and cash flows. We do not yet know the net impact that the COVID-19 pandemic may have on our business and cannot guarantee that it will not be materially negative. Although we continue to monitor the situation and may adjust our current policies as more information and public health guidance become available, the ongoing effects of the COVID-19 pandemic, including resurgences and the emergence of new variants, and/or the precautionary measures that we have adopted may create operational and other challenges, any of which could harm our business and results of operations.

Historically, a significant portion of our field sales, customer training events and other application services have been conducted in person, and the rollout of our new products has historically been supported by our participation at industry conferences. Currently, as a result of the work and travel restrictions related to the COVID-19 pandemic, and the precautionary measures that we have adopted, a significant portion of our field sales and professional services activities continue to be conducted remotely, which has resulted in a decrease in our travel expenditures. However, we have recently permitted certain of our employees to travel to our customers and industry conferences where permitted by local authorities, and expect that our travel expenditures will also begin to increase. Any prolonged restrictive measures put in place in order to control the spread of COVID-19, including new variants, or other adverse public health developments in any of our targeted markets may have a material and adverse effect on our business operations and results of operations. We do not yet know the extent to which such restrictions and precautionary measures, including the lifting of our travel restrictions in limited circumstances, will negatively impact on our ability to attract new customers or retain and expand our relationships with existing customers over the near and long term.

In addition, many of our suppliers are experiencing operational challenges as a result of COVID-19, which in turn may destabilize our supply chain or otherwise have an adverse effect on our ability to provide products to our customers. The strain on certain domestic and international supply chains has resulted in shortages, longer lead times and negative impacts on pricing for certain of our critical components, including, among other things, electronic and plastic components necessary to manufacture our products. Our suppliers may have to temporarily close a facility for disinfecting after employees tested positive for COVID-19, face staffing shortages, production slowdowns and stoppages, be overwhelmed by unexpected demand or face disruptions in delivery systems which may require suppliers to locate shipping routes that avoid delivery bottlenecks, all of which could cause delays in delivery. Thus far, through aggressive supply chain monitoring and management, and the dedication of significant personnel resources, the difficulties experienced by our suppliers have had minimal impact on our ability to timely source necessary supplies and to ship products to our customers; however, as the COVID-19 pandemic continues, including resurgences and the emergence of new variants, we may be forced to dedicate additional resources to obtain alternate suppliers and implement design or manufacturing changes to utilize such alternate products, and if such measures are not successful, it may negatively affect our inventory and delay delivery to our customers, which could lead to postponed revenue recognition for those transactions, and in turn could adversely affect our revenue and results of operations. If our suppliers are unable to deliver the components and subassemblies we require on a timely basis, we cannot guarantee that we will be able to locate alternative sources of supply for our products on acceptable terms, or at all. If we are unable to adequately purchase appropriate amounts of inventory, our business and results of operations may be materially and adversely affected.

Additionally, the COVID-19 pandemic has impacted, and may continue to impact, our headquarters, which is our primary corporate office, sales and marketing center and manufacturing location, including through the effects of facility closures, reductions in operating hours and other social distancing efforts. For example, if even a small number of our employees who work in clusters relating to critical functions such as manufacturing, procurement, supply chain, and research and development, test positive for COVID-19, the entire business function could be temporarily shut down to ensure the safety of our employees and the effectiveness of business would be severely impacted. Additionally, in light of resurgences of COVID-19 infection rates and the emergence of new variants, we cannot predict whether these conditions and concerns will continue or whether we will experience more significant or frequent disruptions in the

future, including the complete closure of one or more of our facilities. In addition, we do not know what impact the proposed Federal vaccine mandates for federal contractors and companies with more than 100 employees, both of which would be applicable to us if allowed to be implemented, or other past and future government actions and responsive measures may have on employee retention and our ability to conduct our business.

Furthermore, as a result of the COVID-19 pandemic, we initially required all employees who were able to do so to work remotely on a full-time or partial basis. While many of our employees have been able to return to working at our headquarters, we continue to have remote work arrangements which may have a negative impact on our operations, the execution of our business plans, the productivity and availability of key personnel and other employees necessary to conduct our business, and on third party service providers who perform critical services for us, or otherwise cause operational failures due to changes in our normal business practices necessitated by the COVID-19 pandemic and related governmental actions. If a natural disaster, power outage, connectivity issue or other event occurred that impacted our employees' ability to work remotely, it may be difficult or, in certain cases, impossible, for us to continue our business for a substantial period of time. The increase in remote working may also result in increased consumer privacy, data security and fraud risks, and our understanding of applicable legal and regulatory requirements, as well as the latest guidance from regulatory authorities in connection with the COVID-19 pandemic, including with respect to the collection of proof of vaccine status, may be subject to legal or regulatory challenge, particularly as regulatory guidance evolves in response to future developments.

More generally, the COVID-19 pandemic and associated supply chain challenges have had, and are expected to continue to have, an adverse effect on economies and financial markets globally, leading to an unpredictable and volatile economic environment, which may decrease technology spending generally, adversely affect demand for our platforms and services, lead to increased costs to source supplies and/or delayed delivery of our products, and require changes to the expected timing of revenue and gross margins. For example, Federal customers may divert funds to address their own supply chain or other COVID challenges, which could delay the progression of customer trials and pilots of our products into larger enterprise-wide justification, purchase and deployment of both of our devices and consumables. The long-term effects of COVID-19 to the global economy and to us are difficult to assess or predict and may lead to a decline in the market prices of our products, risks to employee health and safety, risks to our ability to manufacture and distribute our products and services and reduced sales in geographic locations impacted. It is not possible at this time to estimate the full impact that COVID-19, including resurgences and the emergence of new variants, will have on our business, as the impact will depend on future developments, which are highly uncertain and cannot be predicted.

To the extent the COVID-19 pandemic adversely affects our business, financial condition and results of operations, it may also have the effect of heightening many of the other risks described in this "Risk Factors" section, including but not limited to, those related to our ability to increase sales to existing and new customers, continue to perform on existing contracts, develop and deploy new technologies, expand our marketing capabilities and sales organization, generate sufficient cash flow to service our indebtedness, and comply with the covenants in the agreements that govern our indebtedness.

Labor shortages could adversely affect our results of operations.

In 2021, many companies experienced labor shortages and other labor-related issues, which were pronounced as a result of the COVID-19 pandemic. A number of factors may adversely affect the labor force available to us or increase labor costs, including high employment levels, federal unemployment subsidies, increased wages offered by other employers, vaccine mandates and other government regulations and our responses thereto. As more employers offer remote work, we may have more difficulty recruiting for jobs that require on-site attendance. We have recently observed an overall tightening and increasingly competitive labor market. If we are unable to hire and retain employees capable of performing at a high-level, our business could be adversely affected. A sustained labor shortage, lack of skilled labor, or increased turnover within our employee base, caused by COVID-19 or as a result of general macroeconomic factors, could have a material adverse impact on our business and operating results.

We face intense and growing competition from leading technology companies as well as from emerging companies. Our inability to compete effectively with any or all of these competitors could affect our ability to achieve our anticipated market penetration and achieve or sustain profitability.

The markets we serve are highly competitive, and we expect competition to intensify in the future. This competition may make it more difficult for us to sell our products, and may result in increased pricing pressure, reduced profit margins, increased sales and marketing expenses and failure to increase, or the loss of, market share, any of which would likely seriously harm our business, operating results and financial condition.

We face substantial competition from very large and experienced enterprises, both public and privately held, including Agilent Technologies, Bruker Corporation, Danaher Corporation, Inficon, Flir Systems, PerkinElmer, Shimadzu Corporation, Thermo Fisher Scientific, and Waters Corp. Our competitors also include many smaller companies, including companies established to pursue new and emerging technologies. We also expect additional competition in the future from new and existing companies with whom we do not currently compete directly. As our industry evolves, our current and potential competitors may establish cooperative relationships among themselves or with third parties, including companies with whom we have partnerships and whose products interoperate with our own, that could acquire significant market share, which could adversely affect our business. Any of these competitive threats, alone or in combination with others, could seriously harm our business, operating results and financial condition.

Many of our competitors have greater market presence, longer operating histories, stronger name recognition, larger customer bases and significantly greater financial, technical, sales and marketing, manufacturing, distribution and other resources than we have. In addition, many of our competitors have broader product offerings than we do. These companies may attempt to use their greater resources to better position themselves in the market, including by pricing their products at a discount or bundling them with other products and services in an attempt to rapidly gain market share. Moreover, many of our competitors have more extensive customer and partner relationships than we do, and may therefore be in a better position to identify and respond to market developments or changes in customer demands, including successfully developing technologies that outperform our technologies. Potential customers may also prefer to purchase from their existing suppliers rather than a new supplier regardless of product performance or features. Our larger competitors may be able to better manage large or complex contracts and maintain a broader geographic presence. Our smaller competitors typically focus on one or a few products, and they are often well entrenched in their chosen markets. Any of these competitors may respond more quickly to new technology, market developments or pursue new sales opportunities more effectively than we can. We cannot assure you that we will be able to compete successfully against existing or new competitors. Accordingly, our business may not grow as expected and our business may suffer.

Currently, we derive the majority of our revenue from our handheld products and are actively growing the revenue we derive from our desktop products, focused today in the life science market. If we fail to maintain significant market acceptance in existing markets or fail to successfully increase our penetration in new and expanding markets, we will not generate expected revenue and our prospects may be harmed.

In 2021, a majority of our product and service revenue was derived from sales of our handheld products, mainly the MX908. Today, this market consists primarily of first responders, firefighters, local, state and federal law enforcement, as well as military, customs and homeland security customers. Continued market acceptance of the products we sell to these organizations is critical to our future success, and the adoption of our products by these organizations worldwide is a key part of our growth strategy. If market demand for our MX908 product declines, if our products fail to maintain or achieve greater market acceptance, or if we fail to execute on our sales and customer service efforts in the field forensics market, we will not be able to grow our revenue sufficiently to achieve or maintain profitability.

We also derive a significant and growing portion of our revenue from our desktop devices, primarily in the life science market, specifically the antibody therapeutics, cell and gene therapy and synthetic biology markets, including sales to biopharmaceutical companies and research institutions. We recently introduced our Rebel product line and our future success will partially depend on our ability to successfully commercialize this product line. The life sciences scientific community is comprised of a small number of early adopters and key opinion leaders who significantly influence the rest of the community. The success of life sciences products is due, in large part, to acceptance by the scientific community and their adoption of certain products as best practice in the applicable field of research.

The sizes of the markets for our solutions may be smaller than estimated and new market opportunities may not develop as quickly as we expect, or at all, limiting our ability to successfully sell our products.

The markets for our products are rapidly evolving, making it difficult to predict with any accuracy the sizes of the markets for our current and future solutions. Our estimates of the annual total addressable market for our current and future solutions are based on a number of internal and third party estimates and assumptions. In addition, our growth strategy involves launching new solutions and expanding sales of existing solutions into new markets in which we have limited or no experience. Sales of new or existing solutions into new market opportunities may take several years to develop and mature, and we cannot be certain that these market opportunities will develop as we expect. For example, new life sciences technology is often not adopted by the relevant market until a sufficient amount of research conducted using such technology has been published in peer-reviewed publications. While we believe our assumptions and the data underlying our estimates of the total annual addressable market for our solutions are reasonable, these assumptions and estimates may not be correct and the conditions supporting our assumptions or estimates, or those underlying the third party data we have used, may change at any time, thereby reducing the accuracy of our estimates. As a result, our estimates of the annual total addressable market for our solutions may be incorrect.

We rely on assumptions and estimates and data to calculate certain of our key metrics, and real or perceived inaccuracies in such metrics may harm our reputation and negatively affect our business.

In addition to our financial results, our management regularly reviews a number of operating and financial metrics, including a breakdown of product and service revenue into device sales and consumables and service revenue (recurring revenue), product placements, cumulative product placements, revenue by customer market (government, pharmaceutical/biotechnology and academia), and status of pipeline opportunities that represent customers in test, trials, pilots and full deployments, to evaluate our business, measure our performance, identify trends affecting our business, formulate financial projections and make strategic decisions. As both the industry in which we operate and our businesses continue to evolve, so too might the metrics by which we evaluate our businesses and the company. In addition, while the calculation of the metrics we use is based on what we believe to be reasonable estimates, our internal tools are not independently verified by a third party and have a number of limitations and, furthermore, our methodologies for tracking these metrics may change over time, for example, the industry breakdown of our customer revenue by government, pharma/bio and academia sales. Accordingly, investors should not place undue reliance on these metrics.

Our sales cycles can be long and unpredictable, and our sales efforts require considerable time and expense, which contribute to the unpredictability and variability of our financial performance and may adversely affect our profitability.

The timing of our revenue is difficult to predict as we experience extended sales cycles, due in part to our need to educate our customers about our products, the significant purchase price of our products, the desire of some of our customers to do extended product testing and evaluations, including pilot studies, and our customers' willingness to replace their existing solutions and supplier relationships. Product purchases by our customers are often subject to a variety of other considerations that may extend the length of our sales cycle, including timing of their budget cycles and approval processes, budget constraints, extended negotiations, user surveys, administrative processing and other delays. In particular, government departments and agencies, both in the U.S. and in other countries, generally evaluate our products for critical, strategic applications. As a result, the piloting, testing and evaluation process can be extensive, and orders are often dependent on the availability of sufficient budgeted funds. The procurement processes for orders by government agencies may involve complex and time-consuming competitive bidding processes. Bid specifications and contract awards are subject to challenge by competitors, which can further extend the sales cycle. Furthermore, U.S. state and local hazardous material, emergency management and police organizations must often apply for grants to obtain the funds needed to procure our products, a process which is lengthy and unpredictable, particularly as to when and whether a grant will be awarded. As a result, our sales cycle ranges from several months to over a year, and it is difficult to predict when or if a sale to a potential customer will occur. All of these factors can contribute to fluctuations in our quarterly financial performance and increase the likelihood that our operating results in a particular quarter will fall below investor expectations. If we are unsuccessful in closing sales after expending significant resources, or if we experience delays for any of the reasons discussed above, our future revenue and operating expenses may be materially adversely affected.

Due to the significant resources required to enable access in new markets, we must make strategic and operational decisions to prioritize certain markets, technology offerings or partnerships and there can be no assurance that we will expend our resources in a way that results in meaningful revenue or capitalizes on potential new markets.

We believe our platform has potential applications across a wide range of markets and we have targeted certain markets in which we believe we have a higher probability of success or revenue opportunity or for which the path to commercialize products and realizing or achieving revenue is shorter. For example, in 2018 we entered into agreements regarding a specific government program opportunity to develop an aerosol vapor detector, and more recently we entered into several engagements related to the evaluation of our products within the cell therapy and gene therapy markets. We seek to continue to prioritize opportunities and allocate our resources among our programs 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 workflows for new markets, we must make decisions regarding 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 markets or workflows may not lead to the development of any viable product and may divert resources away from better opportunities. Similarly, our potential decisions to delay, terminate or collaborate with third parties in respect of certain markets may subsequently also prove to be suboptimal and could cause us to miss valuable opportunities. In particular, if we are unable to develop additional relevant products and applications for markets such as antibody therapeutics, cell therapy or the synthetic biology market, it could slow or stop our business growth and negatively impact our business, financial condition, results of operations, and prospects.

If we market our products for clinical or diagnostic purposes, our products could become subject to onerous regulation by the U.S. Food and Drug Administration, or FDA, or other regulatory agencies in the future, which could increase our costs and delay or prevent commercialization of our products, thereby materially and adversely affecting our business, financial condition, results of operations, and prospects.

We make our platform and devices, including our MX908, Rebel, and ZipChip Interface, available to customers as research-use-only, or RUO, products. Products that are labeled as RUO are exempt from compliance with most FDA requirements, including premarket clearance or approval, manufacturing requirements, and others. A product labeled RUO but which is actually intended for clinical diagnostic use may be viewed by the FDA as adulterated and misbranded under the Federal Food, Drug, and Cosmetic Act, or FDCA, and subject to FDA enforcement action. The FDA has indicated that when determining the intended use of a product labeled RUO, the FDA will consider the totality of the circumstances surrounding distribution and use of the product, including how the product is marketed and to whom. The FDA could disagree with our assessment that our products are properly marketed as RUOs, or could conclude that products labeled as RUO are actually intended for clinical diagnostic use, and could take enforcement action against us, including requiring us to stop distribution of our products until we are in compliance with applicable regulations, which would reduce our revenue, increase our costs and adversely affect our business, prospects, results of operations and financial condition. In the event that the FDA requires us to obtain marketing authorization of our RUO products in the future, there can be no assurance that the FDA will grant any clearance or approval requested by us in a timely manner, or at all. Furthermore, although we currently market our products as RUO, we may in the future make the decision to market them for clinical or diagnostic purposes, or may develop other different products intended for clinical or diagnostic purposes, which would result in the application of a more onerous set of regulatory requirements.

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 on our ability to recruit, train, retain and motivate key personnel, including our senior management, research and development, manufacturing and sales, customer service and marketing personnel. In particular, Dr. Knopp, our Chief Executive Officer and one of our co-founders, and Dr. Brown, our Chief Technology Officer and one of our co-founders, are critical to our vision, strategic direction, culture and products. Each of our employees may terminate his or her relationship with us at any time and the loss of the services of such persons could have an adverse effect on our business. We rely on our senior management to manage our existing business operations and to identify and pursue new growth opportunities. The loss of any member of senior management could significantly

delay or prevent the achievement of our business objectives and their replacement would likely involve significant time and expense.

As we continue to scale our business, we may find that certain of our products, certain customers or certain markets, including the biopharmaceutical market, may require a dedicated sales force or sales personnel with different experience than those whom we currently employ. Our continued growth will depend, in part, on attracting, retaining and motivating highly-trained sales personnel with the necessary scientific background and technical ability to understand our systems and effectively identify and sell to potential new customers. Identifying, recruiting and training additional qualified personnel will require significant time, expense and attention. In addition, the continued development of complementary software tools, such as our analysis tools and visualization software, requires us to compete for highly trained software engineers in the Boston area and for highly trained customer service personnel globally.

We do not have 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 would be free to work for a competitor, subject to the terms of their confidentiality, non-solicitation and intellectual property assignment agreements. Because of the complex and technical nature of our products and the dynamic market in which we compete, any failure to attract, train, retain and motivate qualified personnel could materially harm our operating results and growth prospects.

We may be unable to consistently manufacture our devices and consumables to the necessary specifications or in quantities necessary to meet demand at an acceptable cost or at an acceptable performance level.

Our products are integrated solutions with many different components that work together. As such, a quality defect in a single component can compromise the performance of the entire solution. As we continue to grow and introduce new products, and as our products incorporate increasingly sophisticated technology, it will be increasingly difficult to ensure our products are produced in the necessary quantities without sacrificing quality. There is no assurance that we or our third party manufacturers will be able to continue to manufacture our products so that they consistently achieve the product specifications and quality that our customers expect. Any future design issues, unforeseen manufacturing problems, such as contamination of our or such third party facilities, equipment malfunctions, aging components, quality issues with components and materials sourced from third party suppliers, or failures to strictly follow procedures or meet specifications, may have a material adverse effect on our brand, business, financial condition and operating results and could result in us or our third party manufacturers losing International Organization for Standardization, or ISO, quality management certifications. If we or our third party manufacturers fail to maintain ISO quality management certifications, our customers might choose not to purchase products from us. Furthermore, we or our third party manufacturers may not be able to increase manufacturing to meet anticipated demand or may experience downtime.

In order to meet our customers' needs, we attempt to forecast demand for our products and components used for the manufacture of our products. If we fail to accurately forecast this demand, we could incur additional costs or experience manufacturing delays and may experience lost sales or significant inventory carrying costs.

The risk of manufacturing defects or quality control issues is generally higher for new products, whether produced by us or a third party manufacturer, products that are transitioned from one manufacturer to another, particularly if manufacturing is transitioned or initiated with a manufacturer we have not worked with in the past, and products that are transferred from one manufacturing facility to another. We cannot assure investors that we and our third party manufacturers will be able to launch new products on time, transition manufacturing of existing products to new manufacturers, transition our manufacturing capabilities to a new location or transition manufacturing of any additional consumables in-house without manufacturing defects. An inability to manufacture products and components that consistently meet specifications, in necessary quantities and at commercially acceptable costs will have a negative impact and may have a material adverse effect on our business, financial condition and results of operations.

We depend on a continued supply of components and raw materials for our products from third party suppliers, and if shortages of these components or raw materials arise, we may not be able to secure enough components to build new products to meet customer demand or we may be forced to pay higher prices for these components.

We rely on a limited number of suppliers for several key components utilized in the assembly of our products, and in some cases, such as the glass in our microfluidic chips, swab samplers, and sensors within our products, we rely on a single supplier for a particular component, subassembly or consumable. Although in many cases we use standard components for our products, in some cases, components may only be purchased from a limited number of suppliers. In particular, we are dependent on single suppliers for our Rebel autosampler subassemblies and our MX908 consumables. If, for any reason, our access to these swab samplers is limited or delayed, we would need to quickly identify and qualify an alternate source of swab samplers. Identifying and qualifying an alternate source may take time and involve additional expense, and there is no guarantee that the alternate source will perform as expected. If our customers experienced a shortage or delay in consumables, such as swab samplers, microfluidic chips, or assay kits, or if these consumables do not perform at the levels our customers expect, our business could be materially and adversely impacted.

In addition, we maintain relatively low inventory and acquire components based upon anticipated annual demand. Neither we nor our contract manufacturers enter into long-term supply contracts for these components, and none of our third party suppliers is obligated to supply products to us for any specific period or in any specific quantities, except as may be provided in a particular purchase order. We are not a major customer of many of our suppliers, and these suppliers may therefore give other customers' needs higher priority than ours. Our industry has experienced component shortages and delivery delays in the past, and we may experience shortages or delays of critical components in the future as a result of strong demand in the industry or other factors. Many of the other components required to build our systems are also occasionally in short supply. Therefore, if shortages or delays arise, we may not be able to secure enough components at reasonable prices or of acceptable quality to build new products, resulting in an inability to meet customer demand or our own operating goals, which could adversely affect our customer relationships, business, operating results and financial condition.

Additionally, damage to a manufacturing facility or other property of any of our suppliers, due to fire, flood or other natural disaster or casualty event may have a material adverse effect on our business, financial condition and results of operations. For additional risks related to the supply of necessary components, refer to the risk factor entitled "*The continuing global COVID-19 pandemic, including resurgences and the emergence of new variants, has significantly affected our business and operations, and the pandemic and supply chain challenges may impact future operations and financial performance*" above.

Our current research and development efforts may not produce significant revenue for several years, if at all.

Developing our products is expensive, and the investment in product development may involve a long payback cycle. Our investment in research and development may not result in marketable products or may result in products that take longer to generate revenue, or generate less revenue, than we anticipate. Our future plans include significant investments in research and development of product opportunities for expansion of our handheld products and new application areas for our desktop products. We believe that we must continue to dedicate a significant amount of resources to our research and development efforts to maintain our competitive position. However, we may not receive significant revenue from these investments for several years, if at all.

Undetected errors or defects in our products, or errors made by the end users of our products, could harm our reputation and decrease market acceptance of our products.

Our devices and consumables, as well as the software that accompanies them, may contain undetected errors or defects when first introduced or as new versions are released. Disruptions or other performance problems with our products or software may adversely impact our customers' research or business, harm our reputation and result in reduced revenue or increased costs associated with product repairs or replacements. Further, in the event that an end user makes an error or fails to analyze a particular substance correctly, our product may be associated with a failure to identify a substance that ultimately turns out to be harmful, or, conversely, be associated with a false alarm raised over a substance that turns out to be benign. We also provide customer support services, such as in connection with our

"Reachback" program described in the "Business" section of our Annual Report on Form 10-K. It is possible that incorrect or inaccurate information may be delivered to a customer in the context of one or more support consultations. If any such errors or mistakes occur, we may also incur significant costs, the attention of our key personnel could be diverted or other significant customer relations problems may arise. We may also be subject to unwanted media attention, warranty claims or breach of contract for damages related to errors or defects in our products and solutions.

If we experience a significant disruption in our information technology systems or breaches of data security, our business could be adversely affected.

We rely on information technology systems to keep financial records, facilitate our research and development initiatives, manage our manufacturing operations, maintain quality control, fulfill customer orders, maintain corporate records, communicate with staff and external parties and operate other critical functions. Our information technology systems are potentially vulnerable to disruption due to breakdown, malicious intrusion and computer viruses or other disruptive events including, but not limited, to natural disasters and catastrophes. Cyberattacks and other malicious internet-based activity continue to increase and cloud-based platform providers of services have been and are expected to continue to be targeted. In addition to traditional computer hackers, malicious code (such as viruses and worms), employee theft or misuse, denial-of-service attacks and sophisticated nation-state and nation-state supported actors now engage in attacks (including advanced persistent threat intrusions). Despite significant efforts to create security barriers to such threats, it is virtually impossible for us to entirely mitigate these risks. If our security measures are meaningfully compromised as a result of third party action, employee or customer error, malfeasance, stolen or fraudulently obtained log-in credentials or otherwise, our reputation could be damaged, our business may be harmed and we could incur significant liability. If we were to experience a prolonged system disruption in our information technology systems or those of certain of our vendors, it could negatively impact our ability to serve our customers, which could adversely impact our business. If operations at our facilities were disrupted, it may cause a material disruption in our business if we are not capable of restoring functionality on an acceptable timeframe. In addition, our information technology systems (and those of our vendors and partners) are potentially vulnerable to data security breaches, whether by internal bad actors (e.g., employees) or external bad actors (attacks of which are becoming increasingly sophisticated, including social engineering and phishing scams), which could lead to the exposure of personal data, sensitive data and confidential information to unauthorized persons. Such data security breaches could lead to the loss of trade secrets or other intellectual property, or could lead to the exposure of personal information (including sensitive personal information) of our employees, customers and others, any of which could have a material adverse effect on our business, reputation, financial condition and results of operations.

In addition, any such access, disclosure or other loss or unauthorized use of information or data could result in legal claims or proceedings, regulatory investigations or actions, and other types of liability under laws that protect the privacy and security of personal information, including federal, state and foreign data protection and privacy regulations, violations of which could result in significant penalties and fines. In addition, although we seek to detect and investigate all data security incidents, security breaches and other incidents of unauthorized access to our information technology systems and data can be difficult to detect and any delay in identifying such breaches or incidents may lead to increased harm and legal exposure of the type described above.

The cost of investigating, mitigating and responding to potential data security breaches and complying with applicable breach notification obligations to individuals, regulators, partners and others can be significant. Our insurance policies may not be adequate to compensate us for the potential costs and other losses arising from such disruptions, failures or security breaches. In addition, such insurance may not be available to us in the future on economically reasonable terms, or at all. Further, defending a suit, regardless of its merit, could be costly, divert management attention and harm our reputation.

Our international operations may raise additional risks, which could have an adverse effect on our operating results.

We expect our international revenue and operations will continue to expand in the future. Our international operations are subject to a variety of risks that we do not face in the United States, including:

- the difficulty of increased travel, infrastructure and legal compliance costs associated with developing international revenue;
- difficulties in enforcing contracts, collecting accounts receivable and longer payment cycles, especially in emerging markets;
- many, if not most, foreign governments are investing less in safety and security and in technology to detect dangerous chemicals than the U.S. government;
- general economic conditions in the countries in which we operate;
- additional withholding taxes or other taxes on our foreign income, and tariffs or other restrictions on foreign trade or investment;
- compliance with privacy and data security requirements in foreign jurisdictions in which we operate;
- imposition of, or unexpected adverse changes in, foreign laws or regulatory requirements, many of which differ from those in the United States;
- costs and delays associated with developing products or technology in multiple languages, such as the software embedded in our products and the products' built-in library of chemical substances;
- compliance with foreign technical standards;
- increased length of time for shipping and acceptance of our products;
- increased exposure to foreign currency exchange rate risk;
- reduced protection for intellectual property rights in some countries; and
- political unrest, war, incidents of terrorism, natural disasters, and public health concerns or epidemics, such as the COVID-19 pandemic, or responses to such events.

As we continue to expand our business globally, our success will depend, in large part, on our ability to anticipate and effectively manage these and other risks associated with our international operations.

Our overall success in international markets depends, in part, on our ability to succeed in differing legal, regulatory, economic, social and political conditions. We may not be successful in developing and implementing policies and strategies that will be effective in managing these risks in each country where we do business. Our failure to manage these risks successfully could harm our international operations, reduce our international sales and increase our costs, thus adversely affecting our business, operating results and financial condition.

Compliance with global privacy and data security requirements could result in additional costs and liabilities to us or inhibit our ability to collect and process data globally, and the failure to comply with such requirements could subject us to significant fines and penalties, which may have a material adverse effect on our business, financial condition or results of operations.

The regulatory framework for the collection, use, safeguarding, sharing, transfer and other processing of information worldwide is rapidly evolving and is likely to remain uncertain for the foreseeable future. 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 European General Data Protection Regulation, or the GDPR, which took effect across all member states of the European Economic Area, or the EEA, in May 2018, greatly increased the European Commission's jurisdictional reach of its laws and adds a broad array of requirements for handling personal data. The GDPR, together with national legislation, regulations and guidelines of the EEA member states and the United Kingdom 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 obligations and restrictions concerning the consent and rights of individuals to whom the personal data relates, the transfer of personal data out of the European Economic Area or the United Kingdom, security breach notifications

and the security and confidentiality of personal data. The GDPR authorizes fines for certain violations of up to 4% of global annual revenue or €20 million, whichever is greater.

All of these evolving compliance and operational requirements may require us to modify our data processing practices and policies, which in turn could distract management or divert resources from other initiatives and projects. Any failure or perceived failure by us to comply with any applicable 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.

Our loan and security 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 March 11, 2021, we entered into an Amended and Restated Loan and Security Agreement, or the 2021 Revolver, with Signature Bank, or the Lender. This agreement created a revolving line of credit totaling $25.0 million and replaced the existing term loan. The 2021 Revolver subjects us to various customary covenants, including requirements as to financial reporting and financial covenants (including an unrestricted minimum cash level of $10.0 million), and restrictions on our ability to dispose of our business or property, to change our line of business, to liquidate or dissolve, to enter into any change in control transaction, to merge or consolidate with any other entity or to acquire all or substantially all the capital stock or property of another entity, to incur additional indebtedness, to incur liens on our property, to pay any dividends or make other distributions on capital stock other than dividends payable solely in capital stock, to redeem capital stock, to enter into in-bound licensing agreements, to engage in transactions with affiliates, and to encumber our intellectual property. Our business may be adversely affected by these restrictions on our ability to operate our business.

We are permitted to make interest-only payments on the revolving line of credit through March 11, 2024, at which time all outstanding indebtedness shall be immediately due and payable. However, we may be required to repay the outstanding indebtedness under the revolving line of credit if an event of default occurs under the 2021 Revolver. An event of default will occur if, among other things, we fail to make required payments under the 2021 Revolver; we breach any of our covenants under the 2021 Revolver, subject to specified cure periods with respect to certain breaches; the Lender determines that a material adverse change (as defined in the 2021 Revolver) 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 contracts with third parties which would permit the third party to accelerate the maturity of such indebtedness or that could have a material adverse change on us. 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 Lender could also exercise its rights as secured lender to take possession of and to dispose of the collateral securing the revolving line of credit, which collateral includes substantially all of our property (excluding intellectual property, which is subject to a negative pledge). Our business, financial condition, results of operations, and prospects could be materially adversely affected as a result of any of these events.

The majority of our operations are currently conducted at a single location and any disruption at our facility could negatively impact our operations and increase our expenses.

Our headquarters in Boston, Massachusetts contains nearly all of our corporate and administrative functions, the majority of our research, and all of our in-house manufacturing. A natural or other disaster, such as a fire or flood, could cause substantial delays in our operations, damage or destroy our manufacturing equipment or inventory, and cause us to incur additional expenses. The insurance we maintain against fires, floods and other natural disasters may not be adequate to cover our losses in any particular case. With or without insurance, damage to our manufacturing facility or our other property, or to any of our suppliers, due to fire, flood or other natural disaster or casualty event may have a material adverse effect on our business, financial condition and results of operations.

Risks related to sales of products to the U.S. Government

A significant percentage of our product and service revenues are generated from agencies and departments of the U.S. government. In addition, substantially all of our revenue from license and contracts revenue are derived from contracts or sub-contracts related to the U.S. government. We expect significant revenue from U.S. government contracts for the foreseeable future. There is considerable risk associated with deriving a material portion of our revenue from sales to the U.S. government, including the risks described below.

A significant portion of our business depends on sales to the public sector, and our failure to receive and maintain government contracts or changes in the contracting or fiscal policies of the public sector could have a material adverse effect on our business.

We derive a significant portion of our revenue from contracts that we have, either directly or through distribution partners, with federal, state, local and foreign governments and government agencies, and we believe that the success and growth of our business will continue to depend on our successful procurement of government contracts. For example, we have historically derived, and expect to continue to derive, a significant portion of our revenue from sales to agencies of the U.S. federal government, either directly by us or through other distribution partners.

Sales to such government agencies are subject to a number of challenges and risks. Selling to government agencies can be highly competitive, expensive and time-consuming, often requiring significant upfront time and expense, without any assurance that these efforts will generate a sale. We also must comply with laws and regulations relating to the formation, administration and performance of contracts, which provide public sector customers certain rights that are not typically found in commercial contracts.

Accordingly, our business, financial condition, results of operations, and prospects may be adversely affected by certain events or activities, including, but not limited to:

- changes in fiscal or contracting policies or decrease in available government funding;
- changes in government programs or applicable requirements;
- changes in the political environment, including before or after a change to the leadership within the government administration, and any resulting uncertainty or changes in policy or priorities and resultant funding;
- appeals, disputes or litigation relating to government procurement, including but not limited to bid protests by unsuccessful bidders on potential or actual awards of contracts to us or our partners by the government;
- the adoption of new laws or regulations or changes to existing laws or regulations;
- budgetary constraints, including automatic reductions as a result of “sequestration” or similar measures and constraints imposed by lapses in appropriations for the federal government or certain of its departments and agencies;
- influence by, or competition from, third parties with respect to pending, new or existing contracts with government customers;
- potential delays or changes in the government appropriations or procurement processes, including as a result of events such as war, incidents of terrorism, natural disasters, and public health concerns or epidemics, such as the COVID-19 pandemic; and
- increased or unexpected costs or unanticipated delays caused by other factors outside of our control, such as performance failures of our partners and subcontractors.

Any such event or activity, among others, could cause governments and governmental agencies to delay or refrain from purchasing our products and services in the future, reduce the size or payment amounts of purchases from existing or new government customers, or otherwise have an adverse effect on our business, results of operations, financial condition and prospects.

For additional risks related to government actions and responsive measures to the COVID-19 pandemic, refer to the risk factor entitled “*The continuing global COVID-19 pandemic, including resurgences and the emergence of new variants, has significantly affected our business and operations, and the pandemic and supply chain challenges may impact future operations and financial performance*” above.

U.S. government programs are limited by budgetary constraints and political considerations and are subject to uncertain future funding levels that could result in the termination of programs.

U.S. government agency and department purchases are often strategic in nature and large in size. Therefore, reductions in federal funding levels that impact our customers could negatively affect the size of our customers' orders or lead to cancellation of orders. Government contracts are often subject to more extensive scrutiny and publicity than commercial contracts. The number and terms of new government contracts signed can be affected significantly by political and economic factors, such as pending elections and revisions to government tax policies. Negative publicity related to our government contracts, regardless of its accuracy, may damage our business by affecting our ability to compete for new contracts. A decline in security-related government spending for any reason, or a shift away from programs that we address, could hurt our sales, put pressure on our prices and reduce our revenue and margins.

A multi-year U.S. government program may be implemented through the award of many different individual contracts, grants, cooperative agreements and subcontracts or other subawards. For U.S. government programs, program funding is subject to Congressional appropriations. Congress generally appropriates funds on a fiscal year basis even though a program may continue for several years. Government programs are often only partially funded initially, and additional funds are committed only as Congress makes further appropriations. The termination of a program or failure to commit funds to a program would result in a loss of anticipated future revenue attributable to that program, which could materially harm our business.

Our contracts with the U.S. government may impose requirements that may be unfavorable to us and that may have a material adverse effect on our growth prospects and operating results.

There are inherent risks in contracting with the U.S. government. The U.S. government can typically terminate, reduce orders under or otherwise modify any of its contracts with us for its convenience (i.e., without cause) whether or not we have failed to perform under the terms of the applicable contract. In such case, the government would not be required to pay us for the lost profits for the unperformed work. A termination arising out of our default could expose us to liability and harm our ability to compete for future contracts and orders. In addition to unfavorable termination provisions, our U.S. government contracts and related regulations contain provisions that allow the U.S. government to unilaterally suspend us from receiving new contracts pending resolution of alleged violations of procurement laws or regulations, reduce the value of existing contracts, issue modifications to a contract and potentially restrict exports of our products, services and associated materials.

Our contracts with government agencies may subject us to other risks and give the government additional rights and remedies not typically found in commercial contracts, including rights that allow the government to, for example:

- obtain detailed cost or pricing information;
- receive "most favored customer" pricing;
- perform routine audits;
- impose equal employment and hiring standards;
- require products to be manufactured in specified countries;
- restrict non-U.S. ownership or investment in our company; and/or
- pursue administrative, civil or criminal remedies for contractual violations.

These rights and remedies have the potential to limit our sales to, and increase our costs of, doing business with both government and commercial customers, which could materially adversely affect our growth prospects and operating results.

We are subject to audits by the U.S. government which could adversely affect our business.

U.S. government agencies routinely audit and investigate government contractors to monitor performance, cost allocations, cost accounting and compliance with applicable laws, regulations and standards. Since some of our contracts provide for cost reimbursement, the U.S. government has the right to audit our costs even after job completion and after we have billed and recognized the corresponding revenue. The U.S. government also may review the adequacy of, and a contractor's compliance with, its internal control systems and policies, including the contractor's purchasing, property, estimating, compensation and management information systems. Any costs found to be improperly allowed or

improperly allocated to a specific contract will not be reimbursed, and any such costs that have already been reimbursed must be refunded, which would affect associated revenue that had already been recognized. While we intend to implement uniform procurement and compliance programs for all of our business, we may be subject to more risks from these audits until we are able to implement such a program effectively.

Responding to governmental audits, inquiries or investigations may involve significant expense and divert the attention of our management. If a government review or investigation uncovers improper or illegal activities, we may be subject to civil and criminal penalties and administrative sanctions, including termination of contracts, forfeiture of profits, suspension of payments, damages, fines and suspension or debarment from doing business with U.S. government agencies. In addition, our reputation could be seriously harmed by allegations of impropriety, even if unfounded. Our internal controls may not prevent or detect all improper or illegal activities.

Our business is subject to laws and regulations that are more restrictive because we are a contractor and subcontractor to the U.S. government.

As a contractor and subcontractor to the U.S. government, we are subject to various laws and regulations that are more restrictive than those applicable to non-government contractors, including the Federal Acquisition Regulations and its supplements, which comprehensively regulate the formation, administration and performance of U.S. government contracts, and the Truth in Negotiations Act and various other laws, which require certain certifications and disclosures. These laws and regulations, among other things:

- require that we obtain and maintain material governmental authorizations and approvals to conduct our business as it is currently conducted;
- require certification and disclosure of cost and pricing data in connection with certain contract negotiations;
- impose rules that define allowable and unallowable costs and otherwise govern our right to reimbursement under certain cost-based U.S. government contracts;
- restrict the use and dissemination of information classified for national security purposes and the export of certain products and technical data; and
- impose requirements relating to ethics and business practices, which carry penalties for noncompliance ranging from monetary fines and damages to loss of the ability to do business with the U.S. government as a prime contractor or subcontractor.

In addition, we may be subject to industrial security regulations of the U.S. Department of Defense and other federal agencies that are designed to safeguard against unauthorized access by foreigners and others to classified and other sensitive U.S. government information. If we were to come under foreign ownership, control or influence, our U.S. government customers could terminate, or decide not to renew, our contracts, or we may be subjected to burdensome industrial security compliance measures. Such a situation could impair our ability to obtain new contracts and subcontracts. The government may also change its procurement practices or adopt new contracting rules and regulations that could be costly to satisfy or that could impair our ability to obtain new contracts.

Risks related to litigation and our intellectual property

We rely on in-bound licenses granted to us from third parties. If we lose these rights, our business may be materially adversely affected, our ability to develop improvements to our existing products and to develop new products may be negatively and substantially impacted, and if disputes arise, we may be subjected to future litigation as well as the potential loss of or limitations on our ability to develop and commercialize products and technology covered by these license agreements.

We are party to royalty-bearing license agreements and we may need to obtain additional licenses from others to advance our research, development and commercialization activities. Our current license agreements impose, and we expect that any future exclusive in-bound license agreements will impose, various development, diligence, commercialization and other obligations on us. We have also entered into engagements in the past, and may enter into engagements in the future, with other partners and customers under which we obtain certain intellectual property rights relating to our platform and technology. These engagements take the form of exclusive licenses, non-exclusive licenses, or assignment of actual ownership of intellectual property rights or technology from third parties. Our rights to use the

technology we license are subject to the continuation of and compliance with the terms of those agreements. In some cases, we may not control the prosecution, maintenance or filing of the patents and patent applications to which we hold licenses, or the enforcement of those patents against third parties.

Moreover, disputes may arise with respect to our licensing or other upstream agreements, including:

- the scope of rights granted under the agreements and other interpretation-related issues;
- the extent to which our systems and consumables, technology and processes infringe on intellectual property rights of the licensor that are not licensed under the licensing agreement;
- the sublicensing of patent and other rights under our collaborative development relationships;
- 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 us and our partners; and
- the priority of invention of patented technology.

In spite of our efforts to comply with our obligations under our in-bound license agreements, our licensors might conclude that we have materially breached our obligations under our license agreements and might therefore, including in connection with any aforementioned disputes, terminate the relevant license agreement, thereby removing or limiting our ability to develop and commercialize products and technology covered by these license agreements. If any such in-bound license is terminated, or if the licensed patents fail to provide the scope of exclusivity expected, competitors or other third parties might have the freedom to market, develop, or commercialize products similar to ours. In addition, absent the rights granted to us under such license agreements, we may infringe the intellectual property rights that are the subject of those agreements, we may be subject to litigation by the licensor, and if such litigation by the licensor is successful we may be required to pay damages to our licensor, or we may be required to cease our development and commercialization activities which are deemed infringing, and in such event we may ultimately need to modify our activities or products to design around such infringement, which may be time- and resource-consuming, and which may not be ultimately successful. Any of the foregoing could have a material adverse effect on our business, financial condition, results of operations, and prospects.

In addition, our rights to certain technologies are licensed to us on a non-exclusive basis. The owners of these non-exclusively licensed technologies are therefore free to license them to third parties, including our competitors, on terms that may be superior to those offered to us, which could place us at a competitive disadvantage. Moreover, our licensors may own or control intellectual property that has not been licensed to us and, as a result, we may be subject to claims, regardless of their merit, that we are infringing or otherwise violating the licensor's rights. In addition, certain of our agreements with third parties may provide that intellectual property arising under these agreements, such as data that could be valuable to our business, will be owned by the counterparty, in which case, we may not have adequate rights to use such data or have exclusivity with respect to the use of such data, which could result in third parties, including our competitors, being able to use such data to compete with us.

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. Various extensions may be available, but the life of a patent, and the protection it affords, is limited. 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, regulatory review and/or examination by a patent granting authority, 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.

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 U.S. Patent and Trademark Office, or the USPTO, and various governmental patent agencies outside of the United States at several stages over the lifetime of the patents and/or applications. We have systems in place to remind us to pay these fees, and we engage an outside service and rely on our outside counsel to pay these fees due to non-U.S. patent agencies. 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. We employ reputable law firms and other professionals to help us comply, and in some cases, an inadvertent lapse 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. In such an event, our competitors may be able to enter the market without infringing our patents and this circumstance may have a material adverse effect on our business.

Changes in patent law in the United States and other jurisdictions could diminish the value of patents in general, thereby impairing our ability to protect our products.

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. We cannot predict the breadth of claims that may be allowed or enforced in our patents or in third party patents. We may not develop additional proprietary products, methods and technologies that are patentable.

Assuming that other requirements for patentability are met, prior to March 16, 2013, in the United States, the first to invent the claimed invention was entitled to the patent, while outside the United States, the first to file a patent application was entitled to the patent. On or after March 16, 2013, under the Leahy-Smith America Invents Act, or the America Invents Act, enacted in September 16, 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 will be entitled to the patent on an invention regardless of whether a third party was the first to invent the claimed invention. A third party that files a patent application in the USPTO on or after March 16, 2013, but before us could therefore be awarded a patent covering an invention of ours, even if we had made the invention before it was made by such third party. This requires us to be cognizant of the time from invention to filing of a patent application. 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 (i) file any patent application related to our products or (ii) invent any of the inventions claimed in our or our licensor’s patents or patent applications.

The America Invents Act also includes a number of significant changes that affect the way patent applications are prosecuted and also affects patent litigation. These include allowing third party submission of prior art to the USPTO during patent prosecution and additional procedures to attack the validity of a patent by USPTO administered post-grant proceedings, including post-grant review, inter partes review and derivation proceedings. Because of a lower evidentiary standard in USPTO 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. Therefore, the America Invents Act and its implementation could increase the uncertainties and costs surrounding the prosecution of our owned or in-bound licensed patent applications and the enforcement or defense of our owned or in-bound licensed issued patents, all of which could have a material adverse effect on our business, financial condition, results of operations, and prospects.

In addition, the patent position of companies in the biotechnology field is particularly uncertain. Various courts, including the United States Supreme Court have rendered decisions that affect the scope of patentability of certain inventions or discoveries relating to biotechnology. These decisions state, among other things, that a patent claim that recites an abstract idea, natural phenomenon or law of nature are not themselves patentable. Precisely what constitutes a law of nature or abstract idea is uncertain, and it is possible that certain aspects of our technology could be considered

natural laws. Accordingly, the evolving case law in the United States may adversely affect our ability to obtain patents and may facilitate third party challenges to any owned or licensed patents.

Our ability to compete and the success of our business could be jeopardized if we are unable to protect our intellectual property adequately.

Our success depends to a degree upon the protection of our proprietary technology and obtaining, maintaining and enforcing our intellectual property and other proprietary rights. We rely on a combination of trade secrets, patents, copyrights, trademarks and contractual provisions with employees, contract manufacturers, consultants, customers and other third parties to establish and protect our intellectual property rights, all of which offer only limited protection. Other parties may not comply with the terms of their agreements with us, and we may not be able to enforce our rights adequately against these parties.

Although we enter into confidentiality, assignments of proprietary rights and license agreements, as appropriate, with our employees and third parties, including our contract manufacturers, contract engineering firms, and generally control access to and distribution of our technologies, documentation and other proprietary information, we cannot be certain that the steps we take to prevent unauthorized use of our intellectual property rights are sufficient to prevent their misappropriation, particularly in foreign countries where laws or law enforcement practices may not protect our intellectual property rights as fully as in the United States. In addition, we rely on trade secrets to protect certain of our technologies, especially where we do not believe patent protection is appropriate or obtainable. However, trade secrets are difficult to protect. Although we use reasonable efforts to protect our trade secrets, our employees and third parties to whom our trade secrets are disclosed may unintentionally or willfully disclose our information to competitors. Enforcing a claim that a third party entity illegally obtained and is using any of our trade secrets is expensive and time-consuming, and the outcome is unpredictable. In addition, courts outside the U.S. are sometimes less willing to protect trade secrets. Moreover, our competitors may independently develop equivalent knowledge, methods and know-how.

If competitors are able to use our technology, our ability to compete effectively could be harmed. For example, if a competitor were to gain use of certain of our proprietary technology, it might be able to develop and manufacture similarly designed solutions at a reduced cost, which would result in a decrease in demand for our products.

Furthermore, we have adopted a strategy of seeking limited patent protection both in the United States and in foreign countries with respect to the technologies used in or relating to our products. We do not know whether any of our pending patent applications will result in the issuance of patents or whether the examination process will require us to narrow our claims, and even if patents are issued, they may be contested, circumvented or invalidated over the course of our business. Moreover, the rights granted under any issued patents may not provide us with proprietary protection or competitive advantages, and, as with any technology, competitors may be able to develop and obtain patents for technologies that are similar to or superior to our technologies. If that happens, we may need to license these technologies and we may not be able to obtain licenses on reasonable terms, if at all, thereby causing great harm to our business. Additionally, the determination that a patent application or patent claim meets all of the requirements for patentability is a subjective determination based on the application of law and jurisprudence. The ultimate determination by the USPTO or by a court or other trier of fact in the U.S., or corresponding foreign national patent offices or courts, on whether a claim meets all requirements of patentability cannot be assured. Accordingly, we cannot predict the breadth of claims that may be allowed or enforced in our patents or patent applications, in our licensed patents or patent applications or in third party patents.

Even in those instances where we have determined that another party is breaching our intellectual property and other proprietary rights, enforcing our legal rights with respect to such breach may be expensive and difficult. We may need to engage in litigation to enforce or defend our intellectual property and other proprietary rights, which could result in substantial costs and diversion of management resources. Further, many of our current and potential competitors are substantially larger than we are and have the ability to dedicate substantially greater resources to defending any claims by us that they have breached our intellectual property rights.

Failure to protect our intellectual property could affect our ability to secure additional contracts or preserve market advantages when we commercialize our products.

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

Filing, prosecuting and defending patents on our products 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. In addition, 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 may encounter difficulties in protecting and defending such rights in foreign jurisdictions. Consequently, we 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 inventions in and into the United States or other jurisdictions. Competitors may use our technologies in jurisdictions where we have not obtained patent protection to develop their own products 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 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, particularly those relating to biotechnology, 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. Proceedings to enforce our 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 patents at risk of being invalidated or interpreted narrowly and our patent applications at risk of not issuing, and could provoke third parties to assert claims against us. We may not prevail in any lawsuits that we initiate, or that are initiated against us, 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.

We may be obligated to disclose our proprietary technology to our customers, which may limit our ability to protect our intellectual property.

Certain customer agreements contain provisions permitting the customer to become a party to, or a beneficiary of, a technology escrow agreement under which we place proprietary know-how and source code for our products in escrow with a third party. Under these escrow agreements, the know-how and source code to the applicable product may be released to the customer, typically for its use to further develop, maintain, modify and enhance the product, upon the occurrence of specified events, such as our filing for bankruptcy and breaching our representations, warranties or covenants of our agreements with our customers. Disclosing this know-how and source code may limit the intellectual property protection we can obtain or maintain for that know-how or source code or the products embodying or containing that know-how or source code, and may facilitate intellectual property infringement claims against us. Each of these could harm our business, results of operations and financial condition.

Issued patents covering our products could be found invalid or unenforceable if challenged.

Although patents granted by the USPTO or other patent granting authority are generally entitled to a presumption of validity and enforceability, a granted patent’s scope, validity or enforceability can still be challenged. Some of our patents or patent applications (including in-bound licensed patents) have been or may be challenged at a future point in time in opposition, derivation, reexamination, inter partes review, post-grant review or interference. Any successful third party challenge to our 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 harm our business. In addition, in patent litigation in the United States, defendant counterclaims alleging invalidity or unenforceability are commonplace. The outcome following legal assertions of invalidity and unenforceability during patent litigation is unpredictable. If a

defendant 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 platform technologies. 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, 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. Moreover, we may not search for or identify all relevant third party patents or we may incorrectly interpret the relevance, scope or expiration of a third party patent of which we are aware. 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 that could result in substantial cost to us. 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, we could experience significant costs and management distraction.

Claims by other parties that we infringe or misuse their proprietary technology could subject us to significant liability and could force us to redesign our products or to incur significant costs.

Our competitors protect their intellectual property rights by means such as trade secrets, patents, copyrights and trademarks. Although we have not been involved in any litigation related to intellectual property rights of others, from time to time we receive letters from other parties alleging, or inquiring about, breaches of their intellectual property rights. Any party asserting that our products infringe their proprietary rights would force us to defend ourselves, and possibly our customers, against the alleged infringement. These claims and any resulting lawsuit, if successful, could subject us to significant liability for damages and invalidation of our proprietary rights. The risk of such a lawsuit will likely increase as our size and the number and scope of our products increase, as our geographic presence and market share expand and as the number of competitors in our market increases. Any such claims or litigation could:

- be time-consuming and expensive to defend, whether meritorious or not;
- require us to stop selling, incorporating or using our products that use the other party’s intellectual property;
- divert the attention of our technical and managerial resources;
- require us to enter into royalty or licensing agreements with third parties, which may not be available on terms that we deem acceptable, if at all;
- prevent us from operating all or a portion of our business or force us to redesign our products, which could be difficult and expensive and may degrade performance of our products, or withdraw one or more of our products altogether;
- subject us to significant liability for damages or result in significant settlement payments;
- require us to indemnify our customers, distribution partners or suppliers; and
- refund deposits and other amounts received for allegedly infringing technology or products.

Intellectual property litigation can be costly. Even if we prevail, the cost of such litigation could deplete our financial resources. Litigation is also time-consuming and could divert management’s attention and resources away from our business. Furthermore, during the course of litigation, confidential information may be disclosed in the form of documents or testimony in connection with discovery requests, depositions or trial testimony. Disclosure of our confidential information and our involvement in intellectual property litigation could materially adversely affect our business. Some of our competitors may be able to sustain the costs of complex intellectual property litigation more effectively than we can because they have substantially greater resources. In addition, any uncertainties resulting from the initiation and continuation of any litigation could significantly limit our ability to continue our operations. Any of the foregoing could disrupt our business and have a material adverse effect on our operating results and financial condition.

In the future we may be involved in litigation related to intellectual property, which could be time-intensive and costly and may adversely affect our business, financial condition, results of operations, and prospects.

In recent years, there has been significant litigation in the United States involving intellectual property rights. We may in the future be, involved with litigation or actions at the USPTO or a foreign patent office with various third parties that claim we or our partners or customers using our solutions and services have misappropriated or misused other parties' intellectual property rights. We expect that the number of such claims may increase as the number of our systems, workflows, consumables and kits, and the level of competition in our industry segments, grow. Any infringement claim, regardless of its validity, could harm our business by, among other things, resulting in time-consuming and costly litigation, diverting management's time and attention from the development of the business, requiring the payment of monetary damages (including treble damages, attorneys' fees, costs and expenses) or royalty payments, or result in potential or existing customers delaying purchases of our products or entering into engagements with us pending resolution of the dispute.

As we move into new markets and applications for our products, incumbent participants in such markets may assert their patents and other proprietary rights against us as a means of slowing our entry into such markets or as a means to extract substantial license and royalty payments from us. Our competitors and others may now and in the future have significantly larger and more mature patent portfolios than we currently have. In addition, future litigation may involve patent holding companies or other adverse patent owners who have no relevant product or service revenue and against whom our own patents may provide little or no deterrence or protection. Therefore, our commercial success may depend in part on our non-infringement of the patents or proprietary rights of third parties, or the invalidity of such patents or proprietary rights.

Our research, development and commercialization activities may in the future be subject to claims that we infringe or otherwise violate patents or other intellectual property rights owned or controlled by third parties. There is a substantial amount of litigation and other patent challenges, both within and outside the United States, involving patent and other intellectual property rights in the biotechnology industry, including patent infringement lawsuits, interferences, oppositions and inter partes review proceedings before the USPTO, and corresponding foreign patent offices. Numerous U.S. and foreign issued patents and pending patent applications, which are owned by third parties, exist in the fields in which we are developing products. As the biotechnology industry expands and more patents are issued, the risk increases that our products may be subject to claims of infringement of the patent rights of third parties. Numerous significant intellectual property issues have been litigated, are being litigated and will likely continue to be litigated, between existing and new participants in our existing and targeted markets, and one or more third parties may assert that our products or services infringe their intellectual property rights as part of a business strategy to impede our successful entry into or growth in those markets.

There can be no assurance that we will prevail in any suit initiated against us by third parties, successfully settle or otherwise resolve patent infringement claims. Third parties making claims against us may be able to obtain injunctive or other relief, which could block our ability to develop, commercialize and sell products or services, and could result in the award of substantial damages against us, including treble damages, attorneys' fees, costs and expenses if we are found to have willfully infringed. In the event of a successful claim of infringement against us, we may be required to pay damages and ongoing royalties, and obtain one or more licenses from third parties, or be prohibited from selling certain products or services. We may not be able to obtain these licenses on acceptable or commercially reasonable terms, if at all, or these licenses may be non-exclusive, which could result in our competitors gaining access to the same intellectual property. In addition, we could encounter delays and incur significant costs, in product or service introductions while we attempt to develop alternative products or services, or redesign our products or services, to avoid infringing third party patents or proprietary rights. Defense of any lawsuit or failure to obtain any of these licenses or to develop a workaround could prevent us from commercializing products or services, and the prohibition of sale or the threat of the prohibition of sale of any of our products or services could materially affect our business and our ability to gain market acceptance for our products or services.

In addition, our agreements with some of our customers, suppliers or other entities with whom we do business require us to defend or indemnify these parties to the extent they become involved in infringement claims, including the types of claims described above. We could also voluntarily agree to defend or indemnify third parties in instances where

we are not obligated to do so if we determine it would be important to our business relationships. If we are required or agree to defend or indemnify third parties in connection with any infringement claims, we could incur significant costs and expenses that could adversely affect our business, financial condition, results of operations, and prospects.

Our use of open source software could compromise our ability to offer our services and subject us to possible litigation.

We use open source software in connection with our products and services. Companies that incorporate open source software into their products have, from time to time, faced claims challenging their use of open source software and compliance with open source license terms. As a result, we could be subject to lawsuits and other allegations by parties claiming ownership of what we believe to be open source software or claiming noncompliance with open source licensing terms. Some open source software licenses require users who distribute software containing open source software to publicly disclose all or part of the source code to the licensee's software that incorporates, links or uses such open source software, and make available to third parties for no cost, any derivative works of the open source code created by the licensee, which could include the licensee's own valuable proprietary code. While we monitor our use of open source software and try to ensure that none is used in a manner that would require us to disclose our proprietary source code or that would otherwise breach the terms of an open source agreement, such use could inadvertently occur, or could be claimed to have occurred, in part because open source license terms can be ambiguous. Legal precedent in this area is not well established and any actual or claimed requirement to disclose our proprietary source code or pay damages for breach of contract could harm our business and could help third parties, including our competitors, develop products and services that are similar to or better than ours. Any of the foregoing could harm our business, financial condition, results of operations, and prospects.

Risks related to ownership of our common stock

If securities or industry analysts do not publish research or reports about our business or if they issue unfavorable commentary or downgrade our common stock, the price of our common stock could decline.

The trading market for our common stock relies in part on the research and reports that equity research analysts publish about us and our business. The price of our stock could decline if one or more equity analysts downgrade our stock or if those analysts issue other unfavorable commentary or cease publishing reports about us or our business.

The trading market for our common stock depends in part on research reports that securities or industry analysts publish about us or our business. We do not control these analysts. If securities or industry analysts fail to maintain coverage of our company, the trading price for our stock may be negatively affected. In the event one or more of these analysts downgrade our stock or publish unfavorable reports about our business, our stock price will likely decline. In addition, if any securities or industry analysts cease coverage of our company or fail to publish reports on us regularly, demand for our stock could decrease, which could cause our stock price to decline.

The market price of our common stock has been volatile and could continue to be volatile.

Since the shares were sold in our initial public offering in December 2020 at a price of $20.00 per share, the price per share of our common stock has experienced significant fluctuations. Some of the factors that may cause the market price of our common stock to fluctuate, many of which may be beyond our control, include:

- actual or anticipated fluctuations in our quarterly financial results or the quarterly financial results of companies perceived to be similar to us;
- fluctuations in our revenue as a result of our revenue recognition policy, even during periods of significant sales activity;
- the financial guidance that we may provide to the public, any changes in such guidance, or our failure to meet such guidance;
- changes in financial estimates by securities analysts, our failure to meet such estimates, or failure of analysts to initiate or maintain coverage of our stock;
- the public's response to our press releases or other public announcements by us, including our filings with the SEC;

- announcements by us or our competitors of significant technical innovations, products, contracts, acquisitions, strategic partnerships, joint ventures, or capital commitments;
- failure of any of our products to achieve or maintain market acceptance;
- introduction of technologies or product enhancements that reduce the need for our products;
- changes in our capital structure, such as future issuances of securities or the incurrence of debt;
- regulatory developments in the United States, foreign countries or both;
- litigation involving our company, our general industry or both;
- additions or departures of key personnel;
- changes in market valuations of similar companies in reaction to industry events, even if these events do not directly affect us;
- investors' general perception of us;
- changes in general economic, industry and market conditions including those resulting from political unrest, war, incidents of terrorism, or responses to such events;
- the sustainability of an active trading market for our common stock; and
- future sales of our common stock by our officers, directors or affiliates.

In addition, if the market for technology stocks or the stock market in general experiences a loss of investor confidence, the trading price of our common stock could decline for reasons unrelated to our business, financial condition or results of operations. If any of the foregoing occurs, it could cause our stock price to fall and may expose us to class action lawsuits that, even if unsuccessful, could be costly to defend and divert management's attention and resources.

Our actual operating results may differ significantly from any operating guidance we may provide.

From time to time, we may release guidance in our quarterly or annual earnings conference calls, quarterly or annual earnings releases, or otherwise, regarding our future performance that represents our management's estimates as of the date of release. This guidance, which will include forward-looking statements, will be based on projections prepared by our management. These projections may not be prepared with a view toward compliance with published guidelines of the American Institute of Certified Public Accountants, or AICPA, and neither our independent registered public accounting firm nor any other independent expert or outside party compiles or examines the projections. Accordingly, no such person will express any opinion or any other form of assurance with respect to the projections.

Projections are based upon a number of assumptions and estimates that, while presented with numerical specificity, are inherently subject to significant business, economic and competitive uncertainties and contingencies, many of which are beyond our control and are based upon specific assumptions with respect to future business decisions, some of which will change. The principal reason that we may release guidance is to provide a basis for our management to discuss our business outlook with analysts and investors. We do not accept any responsibility for any projections or reports published by any such third parties.

Guidance is necessarily speculative in nature, and it can be expected that some or all of the assumptions underlying the guidance furnished by us will not materialize or will vary significantly from actual results. Accordingly, our guidance is only an estimate of what management believes is realizable as of the date of release. Actual results may vary from our guidance and the variations may be material. Any failure to successfully implement our operating strategy or the occurrence of any of the events or circumstances set forth in this "Risk Factors" section could result in actual operating results being different from our guidance, and the differences may be adverse and material.

Insiders own a significant portion of our outstanding common stock and therefore have substantial control over us and are able to influence corporate matters.

Our executive officers, directors and their affiliates beneficially own, in the aggregate, a significant portion of our outstanding common stock. As a result, these stockholders, if they act together and/or in coordination with other affiliates, are able to influence our management and affairs and all matters requiring stockholder approval, including the election of directors and approval of significant corporate transactions, such as a merger or other sale of our company or its assets. This concentration of ownership could limit your ability to influence corporate matters and may have the effect of delaying or preventing a change in control of our company and might affect the market price of our common stock.

Raising additional capital may cause dilution to our existing stockholders or restrict our operations.

We anticipate that we will seek additional capital through a combination of public and private equity offerings, debt financings, strategic partnerships and alliances and licensing arrangements in the future to fund our operations. We, and indirectly, our stockholders, will bear the cost of issuing and servicing such securities. Because our decision to issue debt or equity securities in any future offering will depend on market conditions and other factors beyond our control, we cannot predict or estimate the amount, timing, or nature of any future offerings. Our decision to issue debt or equity securities will also depend on contractual, legal, and other restrictions that may limit our ability to raise additional capital. For example, the terms of our 2021 Revolver prohibit, subject to certain exceptions, our ability to incur additional indebtedness. To the extent that we raise additional capital through the sale of equity or debt securities, your ownership interest will be diluted and the terms may include liquidation or other preferences that adversely affect your rights as a stockholder. The incurrence of indebtedness would result in increased fixed payment obligations and could involve restrictive covenants, such as limitations on our ability to incur additional debt, limitations on our ability to acquire, sell or license intellectual property rights, and other operating restrictions that could adversely impact our ability to conduct our business. Certain of the foregoing transactions may require us to obtain stockholder approval, which we may not be able to obtain.

Sales of a significant number of shares of our common stock in the public markets, or the perception that such sales could occur, could depress the market price of our common stock.

Sales of a substantial number of shares of our common stock in the public markets, or the perception in the market that the holders of a large number of shares of common stock intend to sell shares, could depress the market price of our common stock and impair our ability to raise capital through the sale of additional equity securities. We cannot predict the effect that future sales of our common stock would have on the market price of our common stock.

Certain holders of our common stock have rights, subject to 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. We also filed a registration statement on Form S-8 registering the issuance of shares of common stock issued or reserved for future issuance under our equity compensation plans. Shares registered under such registration statement on Form S-8 can be freely sold in the public market upon issuance and once vested, subject to volume limitations applicable to affiliates and the lock-up agreements described above. If any of these additional shares are sold, or if it is perceived that they will be sold, in the public market, the market price of our common stock could decline.

We do not currently intend to pay dividends on our common stock and, consequently, your ability to achieve a return on your investment will depend on appreciation in the price of our common stock.

We have never declared or paid any cash dividends on our common stock and we do not currently expect to pay any cash dividends for the foreseeable future. Our credit agreements with our lenders contain provisions prohibiting us from paying any dividends during the term of the agreements without our lenders' prior written consent. We intend to use our future earnings, if any, in the operation and expansion of our business. Accordingly, you are not likely to receive any dividends on your common stock for the foreseeable future, and your ability to achieve a return on your investment will, therefore, depend on appreciation in the price of our common stock.

We are incurring significant increased costs to implement and maintain an effective system of internal controls, and our management is required to devote substantial time to public company compliance initiatives. If we are unable to absorb these increased costs or maintain management focus on development and sales of our product offerings and services, we may not be able to achieve our business plan.

We are incurring significant legal, accounting and other expenses that we did not incur as a private company. In addition, the Sarbanes-Oxley Act, as well as rules subsequently implemented by the SEC and Nasdaq, impose a variety of corporate governance requirements on public companies. Our management and other personnel devote a substantial amount of time to these compliance initiatives. Moreover, these rules and regulations are increasing our legal and financial compliance costs and making some activities more time-consuming and costly. For example, these rules and regulations have made it more difficult and expensive for us to obtain director and officer liability insurance, and we are incurring substantial costs to maintain the same or similar coverage.

In addition, the Sarbanes-Oxley Act requires, among other things, that we maintain effective internal control over financial reporting and disclosure controls and procedures. In particular, we must perform system and process evaluation and testing of our internal control over financial reporting to allow management and, after we are no longer an "emerging growth company," our independent registered public accounting firm to report on the effectiveness of our internal control over financial reporting, as required by Section 404 of the Sarbanes-Oxley Act, or Section 404. Our testing, or the subsequent testing by our independent registered public accounting firm, may reveal deficiencies in our internal control over financial reporting that are deemed to be material weaknesses. Our compliance with Section 404 requires that we incur substantial accounting expense and expend significant management efforts, including hiring additional accounting and financial staff with appropriate public company experience and technical accounting knowledge. Moreover, if we are not able to comply with the requirements of Section 404 in a timely manner, or if we or our independent registered public accounting firm identifies deficiencies in our internal control over financial reporting that are deemed to be material weaknesses, the market price of our stock could decline and we could be subject to sanctions or investigations by Nasdaq, the SEC or other regulatory authorities, which would require additional financial and management resources.

The increased costs associated with operating as a public company may decrease our net income or increase our net loss and may require us to reduce costs in other areas of our business or increase the prices of our products or services. Additionally, if these requirements divert our management's attention from other business concerns, they could have a material adverse effect on our business, financial condition, results of operations, and prospects.

We are an "emerging growth company" and the reduced disclosure requirements applicable to "emerging growth companies" may make our common stock less attractive to investors.

We are an "emerging growth company," as defined in the JOBS Act, and we may take advantage of certain exemptions and relief from various reporting requirements that are applicable to other public companies that are not "emerging growth companies." In particular, while we are an "emerging growth company," we will not be required to comply with the auditor attestation requirements of Section 404(b) of the Sarbanes-Oxley Act of 2002, or the Sarbanes-Oxley Act; we will be subject to reduced disclosure obligations regarding executive compensation in our periodic reports and proxy statements; and we will not be required to hold nonbinding advisory votes on executive compensation or stockholder approval of any golden parachute payments not previously approved.

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 not to "opt out" of such extended transition period, which means that when a standard is issued or revised and it has different application dates for public or private companies, we will adopt the new or revised standard at the time private companies adopt the new or revised standard and will do so 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.

We may be an "emerging growth company" until December 31, 2025, though we may cease to be an "emerging growth company" earlier under certain circumstances, including if (i) we have more than $1.07 billion in annual revenue in any fiscal year, (ii) the market value of our common stock that is held by non-affiliates exceeds $700 million as of any June 30, or (iii) we issue more than $1.0 billion of non-convertible debt over a three-year period.

The exact implications of the JOBS Act are subject to interpretation and guidance by the SEC and other regulatory agencies, and we cannot assure you that we will be able to take advantage of all of the benefits of the JOBS Act. In addition, investors may find our common stock less attractive to the extent we rely on the exemptions and relief granted by the JOBS Act. 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 decline or become more volatile.

Provisions in our certificate of incorporation, our by-laws or Delaware law 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 certificate of incorporation, our by-laws or Delaware law may discourage, delay or prevent a merger, acquisition or other change in control that stockholders may consider favorable, including transactions in which you might otherwise receive a premium for your shares of our common stock. These provisions may also prevent or frustrate attempts by our stockholders to replace or remove our management. These provisions:

- establish a classified board of directors so that not all members of our board are elected at one time;
- place limitations on the removal of directors;
- eliminate the ability of our stockholders to call special meetings of stockholders;
- prohibit stockholder action by written consent, which has the effect of requiring all stockholder actions to be taken at a meeting of stockholders;
- establish advance notice requirements for nominations for election to our board of directors or for proposing matters that can be acted upon by stockholders at stockholder meetings; and
- enable our board of directors to designate the terms of and issue new series of preferred stock without stockholder approval, which could be used to institute a rights plan, or a poison pill, that would work to dilute the stock ownership of a potential hostile acquirer, likely preventing acquisitions that have not been approved by our board of directors.

In addition, Section 203 of the Delaware General Corporation Law may discourage, delay or prevent a change in control of our company by prohibiting stockholders owning in excess of 15% of our outstanding voting stock from merging or combining with us during a specified period unless certain approvals are obtained.

The existence of the foregoing provisions and anti-takeover measures could limit the price that investors might be willing to pay in the future for shares of our common stock. They could also deter potential acquirers of our company, thereby reducing the likelihood that you could receive a premium for your common stock in an acquisition.

Our sixth amended and restated certificate of incorporation provides that the Court of Chancery of the State of Delaware is the exclusive forum for certain disputes between us and our stockholders, which could limit our stockholders' ability to obtain a favorable judicial forum for disputes with us or our directors, officers or employees.

Our amended and restated certificate of incorporation specifies that, unless we consent in writing to the selection of an alternative forum, the Court of Chancery of the State of Delaware is the sole and exclusive forum for most legal actions involving actions brought against us by stockholders; provided that, if and only if the Court of Chancery of the State of Delaware dismisses any such action for lack of subject matter jurisdiction, such action may be brought in another state or federal court sitting in the State of Delaware. Our amended and restated certificate of incorporation also provides that the federal district courts of the United States 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. We believe these provisions may benefit us by providing increased consistency in the application of Delaware law and federal securities laws by chancellors and judges, as applicable, particularly experienced in resolving corporate disputes, efficient administration of cases on a more expedited schedule relative to other forums and protection against the burdens of multi-forum litigation. However, these provisions may have the effect of discouraging lawsuits against our directors and officers. The choice of forum provision requiring that the Court of Chancery of the State of Delaware be the exclusive forum for certain actions would not apply to suits brought to enforce any liability or duty created by the Exchange Act.

There is uncertainty as to whether a court would enforce such provisions, and the enforceability of similar choice of forum provisions in other companies' charter documents has been challenged in legal proceedings. While the Delaware courts have determined that such choice of forum provisions are facially valid, a stockholder may nevertheless seek to bring a claim in a venue other than those designated in the exclusive forum provisions, and there can be no assurance that such provisions will be enforced by a court in those other jurisdictions. If a court were to find these types of provisions to be inapplicable or unenforceable, and if a court were to find the exclusive forum provision in our amended and restated certificate of incorporation to be inapplicable or unenforceable in an action, we may incur

additional costs associated with resolving the dispute in other jurisdictions, which could materially adversely affect our business.

Our fourth amended and restated bylaws designate specific courts in as the exclusive forum for certain litigation that may be initiated by the Company's stockholders, which could limit our stockholders' ability to obtain a favorable judicial forum for disputes with us.

Pursuant to our fourth amended and restated bylaws, unless we consent in writing to the selection of an alternative forum, the Court of Chancery of the State of Delaware is the sole and exclusive forum for state law claims for (1) any derivative action or proceeding brought on our behalf; (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 arising pursuant to any provision of the Delaware General Corporation Law or our sixth amended and restated certificate of incorporation or fourth amended and restated bylaws; (4) any action to interpret, apply, enforce or determine the validity of our certificate of incorporation or bylaws; or (5) any action asserting a claim governed by the internal affairs doctrine, or the Delaware Forum Provision. The Delaware Forum Provision would not apply to any causes of action arising under the Securities Act or the Exchange Act. Our amended and restated bylaws further provide that unless we consent in writing to the selection of an alternative forum, the United States District Court for the District of Massachusetts shall be the sole and exclusive forum for resolving any complaint asserting a cause of action arising under the Securities Act, or the Federal Forum Provision, as our headquarters are located in Boston, Massachusetts. In addition, our amended and restated bylaws provide that any person or entity purchasing or otherwise acquiring any interest in shares of our capital stock is deemed to have notice of and consented to the Delaware Forum Provision and the Federal Forum Provision; provided, however, that stockholders cannot and will not be deemed to have waived our compliance with the U.S. federal securities laws and the rules and regulations thereunder.

The Delaware Forum Provision and the Federal Forum Provision in our bylaws may impose additional litigation costs on stockholders in pursuing any such claims. Additionally, these forum selection clauses may limit our stockholders' ability to bring a claim in a judicial forum that they find favorable for disputes with us or our directors, officers or employees, which may discourage the filing of lawsuits against us and our directors, officers and employees, even though an action, if successful, might benefit our stockholders. In addition, while the Delaware Supreme Court ruled in March 2020 that federal forum selection provisions purporting to require claims under the Securities Act be brought in federal court are "facially valid" under Delaware law, there is uncertainty as to whether other courts will enforce our Federal Forum Provision. If the Federal Forum Provision is found to be unenforceable, we may incur additional costs associated with resolving such matters. The Federal Forum Provision may also impose additional litigation costs on stockholders who assert that the provision is not enforceable or invalid. The Court of Chancery of the State of Delaware and the United States District Court for the District of Massachusetts 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 to our stockholders.

General risks related to our business

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

We differentiate ourselves from our competition through our commitment to an exceptional customer experience. Accordingly, 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. 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 staff quickly enough or to the extent necessary to accommodate increases in demand. Providing an exceptional customer experience requires significant time and resources from our customer service team. Therefore, failure to scale our customer service organization adequately may adversely impact our business results and financial condition.

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, and how to resolve technical, analysis, and operational issues if and when they arise. 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. 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.

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.

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. A product liability claim could result in substantial damages and be costly and time-consuming for us to defend. We maintain product liability insurance, but this insurance 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. Additionally, any product liability lawsuit could damage our reputation, or cause current customers to terminate existing agreements and potential clinical partners to seek other partners, any of which could impact our business, financial condition, results of operations, and prospects.

Repair or replacement costs due to warranties we provide on our products and consumables 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 products and consumables. 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. 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 costs, unforeseen quality issues or component failure rates could result in future costs in excess of such estimates, or alternatively, improved quality and reliability in our products and consumables could result in actual expenses that are below those currently estimated. Substantial amounts of warranty claims could have a material adverse effect on our business, financial condition, and results of operations.

Our business has inherent operational risks that cannot be adequately covered by insurance or indemnity.

We may face unanticipated risks of legal liability for damages caused by the actual or alleged failure of our products. Our products may be deployed in response to an emergency or terrorist attack, which may increase our exposure to third party claims. While we have attempted to secure business liability insurance coverage at appropriate cost, it is impossible to insure against all risks inherent in our industry, nor can we assure you that our insurers will pay a particular claim, or that we will be able to maintain coverage at reasonable rates in the future. Our insurance policies also contain deductibles, limitations and exclusions, which increase our costs in the event of a claim. Substantial claims resulting from an accident in excess of or not otherwise covered by indemnity or insurance could harm our financial condition and operating results.

We may be subject to governmental export controls that could impair our ability to compete in international markets.

We are subject to governmental export controls that could impair our ability to compete in international markets.

Our products are or may be subject to U.S. export controls, including the International Traffic in Arms Regulations, or ITAR, the Export Administration Regulations, or EAR, the Office of Foreign Assets Control, or OFAC, and other similar laws and regulations of our products and associated technology. Obtaining export licenses can be a

costly and time-consuming process, often three to six months in duration. In addition, in some cases, a license might not be granted for shipment to a particular customer in a particular country. Further, ascertaining the proper export classifications for our products is time-consuming and may lead to unpredictable results. A product's export classification may be very broad with export licenses required for only a small number of countries or very restrictive with licenses required for many countries. It is also possible that a competitor may obtain a less restrictive classification than we do for a competitive product, giving them a significant competitive advantage in international markets. Changes in our products or changes in export regulations may require reclassification and create delays in the introduction and sale of our products in international markets, prevent our customers with international operations from deploying our products throughout their global systems or, in some cases, constrain in some way the export of our products to additional countries. Any change in export regulations or related legislation, shift in approach to the enforcement or scope of existing regulations or change in the countries, persons or technologies targeted by these regulations could result in decreased use of our products by, or in our decreased ability to export or sell our products to, existing or potential customers with international operations.

We may also be required to obtain licenses from the U.S. government before we can work with foreign entities on the development of our products.

Export control laws may also inhibit the free interchange of technical discussions among our employees. Absent license authorization from the appropriate agency, some technical information related to our products and technologies cannot be discussed with or otherwise disclosed to our foreign national employees, or with our foreign distributors. Export licensing requirements may delay product development and other engineering activities.

Violations of export control requirements are subject to criminal, civil and administrative penalties. Export control agencies are authorized to impose monetary penalties or even to suspend export privileges. While such actions have not been taken against our company to date, such risks exist in this highly regulated field, and we cannot entirely eliminate the possibility that such agency action may occur in the future.

We could be adversely affected by violations of the Foreign Corrupt Practices Act of 1977, as amended, or the FCPA, and the anti-bribery and anti-corruption laws of the United States or other countries.

We are subject to the FCPA, which among other things prohibits companies and their intermediaries from making payments in violation of law to non-U.S. government officials for the purpose of obtaining or retaining business or securing any other improper advantage. We have engaged independent distributors in the past and currently use independent distributors to sell our products outside of the United States. Our reliance on independent distributors to sell our products internationally demands a high degree of vigilance in maintaining our policy against participation in corrupt activity, because these distributors could be deemed to be our agents and we could be held responsible for their actions. Other U.S. companies in our markets have faced criminal penalties under the FCPA for allowing their agents to deviate from appropriate practices in doing business with these individuals. We are also subject to similar anti-bribery laws in the jurisdictions in which we operate, including the United Kingdom's Bribery Act of 2010, which also prohibits commercial bribery and makes it a crime for companies to fail to prevent bribery, and the People's Republic of China anti-bribery laws, including the PRC Anti-Unfair Competition Law amended in 2017 and the PRC Criminal Law amended in 2017. These laws are complex and far-reaching in nature, and, as a result, we cannot assure you that we would not be required in the future to alter one or more of our practices to be in compliance with these laws or any changes in these laws or the interpretation thereof. Any violations of these laws, or allegations of such violations, could disrupt our operations, involve significant management distraction, involve significant costs and expenses, including legal fees, and could result in a material adverse effect on our business, financial condition, results of operations, and prospects. We could also suffer severe penalties, including criminal and civil penalties, disgorgement, and other remedial measures.

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.

Our business is subject to environmental regulation and regulations relating to the protection of health and safety matters that could result in compliance costs. Any violation or liability under environmental laws or health and safety regulations could harm our business.

We are subject to environmental and safety laws and regulations governing the use, storage and disposal of hazardous substances or wastes and imposing liability for the cleanup of contamination from these substances. We handle hazardous substances in our manufacturing processes and in the compilation of our chemical library, and we could be liable for any improper use, storage, or disposal of such substances. We cannot completely eliminate the risk of contamination or injury from hazardous substances or wastes, and, in the event of such an incident, we could be held liable for any damages that result. In addition, we may be required to incur significant additional costs to comply with environmental laws and regulations in the future.

The Occupational Safety and Health Act of 1970, or OSHA, establishes certain employer responsibilities, including maintenance of a workplace free of recognized hazards likely to cause death or serious injury, compliance with standards promulgated by the Occupational Safety and Health Administration and various record keeping, disclosure and procedural requirements. Various OSHA standards may apply to our operations. We have incurred, and will continue to incur, capital and operating expenditures and other costs in the ordinary course of our business in complying with OSHA and other state and local laws and regulations.

The failure to comply with these regulations could result in fines by government authorities and payment of damages to private litigants, which could harm our business.

If we fail to maintain effective internal control over financial reporting and effective disclosure controls and procedures, we may not be able to accurately report our financial results in a timely manner or prevent fraud, which may adversely affect investor confidence in our company.

We are required to comply with the SEC's rules implementing Sections 302 and 404 of the Sarbanes-Oxley Act, which require management to certify financial and other information in our quarterly and annual reports and provide an annual management report on the effectiveness of controls over financial reporting. We are required to disclose changes made in our internal controls and procedures on a quarterly basis, and beginning with this Annual Report on Form 10-K, we are required to provide our annual management assessment of our internal control over financial reporting pursuant to Section 404. As an emerging growth company, our independent registered public accounting firm is not required to formally attest to the effectiveness of our internal control over financial reporting pursuant to Section 404 until the later of the year following our first annual report required to be filed with the SEC or the date we are no longer an emerging growth company. At such time, our independent registered public accounting firm may issue a report that is adverse in the event it is not satisfied with the level at which our controls are documented, designed or operating.

To comply with the requirements of being a public company, we may need to undertake actions, such as implementing new internal controls and procedures and hiring additional accounting or internal audit staff. Testing and maintaining internal control can divert our management's attention from other matters that are important to the operation of our business. In addition, when evaluating our internal control 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. If we identify any material weaknesses in our internal controls over financial reporting or we are unable to comply with the requirements of Section 404 in a timely manner or assert that our

internal control over financial reporting is effective, or if our independent registered public accounting firm is unable to express an opinion as to the effectiveness of our internal control over financial reporting once we are no longer an emerging growth company, investors may lose confidence in the accuracy and completeness of our financial reports. As a result, the market price of our common stock could be materially adversely affected.

We may need additional capital in the future, which may not be available to us, and if it is available, may dilute your ownership of our common stock and have a material adverse effect on our business, operating results and financial condition.

We may need to raise additional funds in the future, through public or private debt or equity financings, if we are presented with unforeseen circumstances or opportunities in order to, among other things:

- develop or enhance our products;
- support additional capital expenditures;
- respond to competitive pressures;
- fund operating losses in future periods; or
- take advantage of acquisition or expansion opportunities.

Any required additional financing may not be available on terms acceptable to us, or at all. A failure to obtain additional funding could prevent us from making expenditures that may be required to grow or maintain our operations.

If we raise additional funds by issuing equity securities, you may experience significant dilution of your ownership interest, and the newly-issued securities may have rights senior to those of the holders of our common stock. If we raise additional funds by obtaining loans from third parties, the terms of those financing arrangements may include negative covenants or other restrictions on our business that could impair our operational flexibility and would also require us to fund additional interest expense, which could harm our profitability. Holders of debt would also have rights, preferences or privileges senior to those of holders of our common stock.

We may engage in future acquisitions that could disrupt our business, cause dilution to our stockholders and harm our financial condition and operating results.

In the future, we may acquire companies, assets or technologies in an effort to complement our existing offerings or enhance our market position. We have not made any acquisitions to date and we currently have no plans, proposals or arrangements with respect to any acquisition. We may not be able to find suitable acquisition candidates and we may not be able to complete acquisitions on favorable terms, if at all. Any future acquisitions we make could subject us to a number of risks, including:

- the purchase price we pay could significantly deplete our cash reserves, impair our future operating flexibility or result in dilution to our existing stockholders;
- we may find that the acquired company, assets or technology does not further improve our financial and strategic position as planned;
- we may find that we overpaid for the company, asset or technology, or that the economic conditions underlying our acquisition have changed;
- we may have difficulty integrating the operations and personnel of the acquired company;
- we may have difficulty retaining the employees with the technical skills needed to enhance and provide services with respect to the acquired assets or technologies;
- the acquisition may be viewed negatively by customers, financial markets, or investors;
- we may have difficulty incorporating the acquired technologies or products with our existing products;
- we may encounter difficulty entering and competing in new product or geographic markets;
- we may encounter a competitive response, including price competition or intellectual property litigation;
- we may have product liability, customer liability or intellectual property liability associated with the sale of the acquired company’s products;
- we may be subject to litigation by terminated employees or third parties;
- we may incur debt and restructuring charges;

- we may acquire goodwill and other intangible assets that are subject to impairment tests, which could result in future impairment charges;
- our ongoing business and management's attention may be disrupted or diverted by transition or integration issues and the complexity of managing geographically or culturally diverse enterprises; and
- our due diligence process may fail to identify significant existing issues with the target company's product quality, product architecture, financial disclosures, accounting practices, internal controls, legal contingencies, intellectual property and other matters.

Any acquisitions of businesses, technologies, products or services may not generate sufficient revenue to offset the associated costs of the acquisitions or may result in other adverse effects, which could have a material adverse effect on our business, operating results, and financial condition.

In addition, negotiations for acquisitions or investments that are not ultimately consummated could result in significant diversion of management time, as well as substantial out-of-pocket costs, any of which could have a material adverse effect on our business, operating results and financial condition.

We may face exposure to foreign currency exchange rate fluctuation.

Our results of operations and cash flows are subject to fluctuations due to changes in foreign currency exchange rates, particularly changes in the Euro, the GBP and the Chinese Yuan. We expect our non-U.S. operations to continue to grow in the near term and we are continually monitoring our foreign currency exposure to determine if we should consider a hedging program. Today, our non-U.S. contracts are denominated in either U.S. dollars or local currency, while our non-U.S. operating expenses are often denominated in local currencies. Additionally, as we expand our non-U.S. operations, a larger portion of our operating expenses may be denominated in local currencies. Therefore, increases in the value of the U.S. dollar and decreases in the value of foreign currencies could result in the dollar equivalent of our revenue being lower.

We generally recognize revenue from extended warranty and service contracts over the contract term, and changes in sales of such contracts may not be immediately reflected in our operating results.

We offer our customers the option to purchase extended warranty and service for regular system maintenance and system optimization on a fixed fee basis. We generally recognize revenue from our extended warranty and service plans ratably over the contract terms, which typically range from one additional year to four additional years and could in some cases be subject to an early termination right. A portion of the revenue we report in each quarter is derived from the recognition of deferred revenue relating to extended warranty and service contracts entered into during previous quarters. Consequently, a decline in new or renewed extended warranty and service contracts by our customers in any one quarter may not be immediately reflected in our revenue for that quarter. Such a decline, however, will negatively affect our revenue in future quarters. Accordingly, the effect of significant downturns in sales and market acceptance of our services and potential changes in our rate of renewals may not be fully reflected in our operating results until future periods.

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

Under legislation enacted in 2017, informally titled the Tax Cuts and Jobs Act, as modified by the Coronavirus Aid, Relief, and Economic Security Act, or CARES Act, unused federal net operating losses, or NOLs, generated in tax years beginning after December 31, 2017, will not expire and may be carried forward indefinitely, and generally may not be carried back to prior taxable years, except that under the CARES Act, net operating losses generated in 2018, 2019 and 2020 may be carried back five taxable years. Additionally, the deductibility of such federal NOLs in tax years beginning after December 31, 2020, is limited to 80% of taxable income. It is uncertain if and to what extent various states will conform to the Tax Cuts and Jobs Act, or the CARES Act. In addition, under Sections 382 and 383 of the Internal Revenue Code of 1986, as amended, or the Code, if a corporation undergoes an "ownership change," generally defined as a cumulative change of more than 50 percentage points (by value) in its equity ownership by certain stockholders over a three-year period, the corporation's ability to use its pre-change NOL carryforwards and other pre-change tax attributes (such as research tax credits) to offset its post-change income or taxes may be limited. We may experience ownership changes in the future as a result of shifts in our stock ownership (some of which may be outside

our control). As a result, if we earn net taxable income, our ability to use our pre-change NOL carryforwards to offset such taxable income may be subject to limitations. Similar provisions of state tax law may also apply to limit our use of accumulated state tax attributes. For example, California recently imposed limits on the usability of California state NOLs to offset taxable income in tax years beginning after 2019 and before 2023. As a result, even if we attain profitability, we may be unable to use a material portion of our NOL carryforwards and other tax attributes, which could adversely affect our future cash flows.

Changes in tax laws or regulations that are applied adversely to us or our customers may have a material adverse effect on our business, cash flow, financial condition or results of operations.

New income, sales, use or other tax laws, statutes, rules, regulations or ordinances could be enacted at any time, which could affect the tax treatment of our domestic and foreign earnings. Any new taxes could adversely affect our domestic and international business operations and our business and financial performance. Further, existing tax laws, statutes, rules, regulations or ordinances could be interpreted, changed, modified or applied adversely to us. For example, the Tax Cuts and Jobs Act significantly revised the Code. Future guidance from the Internal Revenue Service and other tax authorities with respect to the Tax Cuts and Jobs Act may affect us, and certain aspects of the Tax Cuts and Jobs Act could be repealed or modified in future legislation. For example, the CARES Act modified certain provisions of the Tax Cuts and Jobs Act. In addition, it is uncertain if and to what extent various states will conform to the Tax Cuts and Jobs Act, the CARES Act, or any newly enacted federal tax legislation. Changes in corporate tax rates, the realization of net deferred tax assets relating to our operations, the taxation of foreign earnings, and the deductibility of expenses under the Tax Cuts and Jobs Act or future tax reform legislation could have a material impact on the value of our deferred tax assets, could result in significant one-time charges, and could increase our future U.S. tax expense.

We are subject to risks related to taxation in the United States.

Significant judgments based on interpretations of existing tax laws or regulations are required in determining our provision for income taxes. Our effective income tax rate could be adversely affected by various factors, including, but not limited to, changes in the mix of earnings in tax jurisdictions with different statutory tax rates, changes in the valuation of deferred tax assets and liabilities, changes in existing tax policies, laws, regulations or rates, changes in the level of non-deductible expenses (including share-based compensation), changes in the location of our operations, changes in our future levels of research and development spending, mergers and acquisitions or the result of examinations by various tax authorities. Although we believe our tax estimates are reasonable, if the United States Internal Revenue Service or other taxing authority disagrees with the positions taken on our tax returns, we could have additional tax liability, including interest and penalties. If material, payment of such additional amounts upon final adjudication of any disputes could have a material impact on our results of operations and financial position.

Future interpretations of existing accounting standards could adversely affect our operating results.

Generally accepted accounting principles in the United States, or GAAP, are subject to interpretation by the Financial Accounting Standards Board, or FASB, the American Institute of Certified Public Accountants, or AICPA, the SEC and various other bodies formed to promulgate and interpret appropriate accounting principles. A change in these principles or interpretations could have a significant effect on our reported financial results, and they could affect the reporting of transactions completed before the announcement of a change.

Item 1B. Unresolved Staff Comments.

None.

Item 2. Properties.

Our corporate headquarter is located in Boston, Massachusetts, where we lease and occupy approximately 37,500 square feet of space for office, research and development laboratories, assembly, high tech manufacturing and light manufacturing uses. The lease for this facility expires on October 7, 2025. We have an office located in Chapel Hill, North Carolina that is approximately 2,000 square feet and supports assay development for Rebel and ZipChip. The

lease for this facility expires on November 30, 2022. We also operated additional remote offices in Campbell, California and Pittsburgh, Pennsylvania, which occupy a total of approximately 1,800 square feet. We believe that our current and expected facilities meet our current and future anticipated needs for the foreseeable future.

Item 3. Legal Proceedings.

We are not currently subject to any material legal proceedings. From time to time, we may be involved in legal proceedings or investigations, which could have an adverse impact on our reputation, business and financial condition and divert the attention of our management from the operation of our business.

Item 4. Mine Safety Disclosures.

Not applicable.

PART II

Item 5. Market for Registrant's Common Equity, Related Stockholder Matters and Issuer Purchases of Equity Securities.

Certain Information Regarding the Trading of Our Common Stock

Our common stock trades under the symbol "MASS" on the Nasdaq Global Market. Trading of our common stock commenced on December 18, 2020 in connection with our initial public offering, or IPO. Prior to that time, there was no established public market for our common stock.

Holders of Our Common Stock

As of March 4, 2022, there were approximately 28 holders of record of our common stock. The actual number of holders of our common stock is greater than this number of record holders and includes stockholders who are beneficial owners, but whose shares are held in "street name" by brokers or held by other "nominees". The number of holders of record also does not include stockholders whose shares may be held in trust by other entities.

Securities Authorized for Issuance Under Equity Compensation Plans

Information about our equity compensation plans will be included in our definitive proxy statement to be filed with the SEC with respect to our 2022 Annual Meeting of Stockholders and is incorporated herein by reference.

Recent Sales of Unregistered Equity Securities

We did not issue or grant any equity securities during the period covered by this Annual Report on Form 10-K that were not registered under the Securities Act.

Use of Proceeds from Initial Public Offering

On December 22, 2020, we completed the IPO of our common stock pursuant to which we issued and sold 7,475,000 shares of our common stock, inclusive of 975,000 shares we sold pursuant to the full exercise of the underwriters' option to purchase additional shares, at a price to the public of $20.00 per share.

The offer and sale of all of the shares of our common stock in our IPO were registered under the Securities Act pursuant to a registration statement on Form S-1, as amended (File No. 333-250954), which was declared effective by the SEC on December 17, 2020, and a registration statement on Form S-1MEF (File No. 333-251441), which was automatically effective upon filing with the SEC on December 17, 2020. Following the sale of all of the shares offered in connection with the closing of our IPO, the offering terminated. Cowen and Company, LLC and SVB Leerink LLC acted as lead book-running managers, and William Blair & Company, L.L.C. and Stifel, Nicolaus & Company, Incorporated acted as book-running managers for the IPO.

We received aggregate gross proceeds from our IPO of $149.5 million, or aggregate net proceeds of $136.6 million after deducting underwriting discounts and commissions and other offering expenses. None of the underwriting discounts and commissions or offering expenses were incurred or paid, directly or indirectly, to directors or officers of ours or their associates or to persons owning 10% or more of our common stock or to any of our affiliates. Cash used since the IPO is described elsewhere in the "Management's Discussion and Analysis of Financial Condition and Results of Operations" section of our periodic reports filed with the SEC. There has been no material change in the planned use of IPO proceeds from that described in the final prospectus for the IPO filed with the SEC pursuant to Rule 424(b)(4) under the Securities Act of 1933, as amended, on December 18, 2020.

Issuer Purchases of Equity Securities

We did not purchase any of our registered equity securities during the period covered by this Annual Report on Form 10-K.

Dividends

We have never declared or paid any cash dividends on our common stock or any other securities. We anticipate that we will retain all available funds and any future earnings, if any, for use in the operation of our business and do not anticipate paying cash dividends in the foreseeable future. Our ability to pay cash dividends is currently restricted by the terms of our 2021 Revolver with Signature Bank. In addition, the terms of any future debt instruments may also materially restrict our ability to pay dividends on our common stock. Payment of future cash dividends, if any, will be at the discretion of the board of directors after taking into account various factors, including our financial condition, operating results, current and anticipated cash needs, the requirements of current or then-existing debt instruments and other factors the board of directors deems relevant.

Item 6. Reserved.

Not applicable.

Item 7. 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 in conjunction with our consolidated financial statements and related notes appearing in Part II, Item 8 of this Annual Report on Form 10-K. Some of the information contained in this discussion and analysis or set forth elsewhere in this Annual Report on Form 10-K, including information with respect to our plans and strategy for our business, 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 Annual Report on Form 10-K, 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 have developed an innovative suite of purpose-built handheld and desktop mass spectrometry, or Mass Spec, devices for the point-of-need. Leveraging our proprietary platform technology, we make the extraordinary analytical power of Mass Spec available in devices that are significantly smaller and more accessible than conventional laboratory instruments. Our Mass Spec devices are used at the point-of-need to interrogate unknown and invisible materials and provide quick, actionable answers to directly address some of the most critical problems in life sciences research, bioprocessing, industrial biotech, forensics and adjacent markets.

We create simplified measurement devices that our customers can use as accurate tools where and when their work needs to be done, rather than overly complex and centralized analytical instrumentation. We believe the insights and answers our devices provide will accelerate workflows, reduce costs, and offer transformational opportunities for our end users.

Front-line workers rely upon our handheld devices to combat the opioid crisis and detect counterfeit pharmaceuticals and illicit materials in the air or on surfaces at levels 1,000 times below their lethal dose. Our desktop devices are accelerating development and production of biotherapeutics by identifying and quantifying extracellular species in bioprocessing critical to cell health and productivity. They sit alongside bioreactors and fermenters producing drug candidates, functional proteins, cell and gene therapies, and synthetic biology derived products. We believe the insights and answers our devices provide accelerate workflows, reduce costs, and offer transformational opportunities for our end users. The term "products" as used in this "Management's Discussion and Analysis of Financial Condition and Results of Operations" refers to the MX908, Rebel and ZipChip Interface.

Since inception, we have focused substantially all of our resources on designing, developing and building our proprietary Mass Spec platform and associated technologies, supporting software improvements and data analysis, organizing and staffing our company, planning our business, raising capital, and providing general and administrative support for these operations. To date, we have funded our operations primarily with proceeds from sales of preferred stock and borrowings under loan agreements and, more recently, with the proceeds from two public equity offerings. On December 22, 2020, we completed our initial public offering, or IPO, pursuant to which we issued and sold 7,475,000 shares of common stock, inclusive of 975,000 shares pursuant to the full exercise of the underwriters' option to purchase additional shares. We received net proceeds of $136.6 million after deducting underwriting discounts and commissions and other offering costs. On November 15, 2021, we completed an underwritten public offering, pursuant to which we issued and sold 3,150,000 shares of common stock at a public offering price of $32.00 per share. We received net proceeds of $94.4 million after deducting underwriting discounts and commissions and other offering costs.

Since our inception, we have incurred significant operating losses. Our ability to generate revenue sufficient to achieve profitability will depend on the successful further development and commercialization of our products. We generated revenue of $42.2 million and $26.9 million for the years ended December 31, 2021 and 2020, respectively, and incurred net losses of $22.2 million and $12.8 million for those same years. As of December 31, 2021, we had an accumulated deficit of $100.6 million. We expect to continue to incur net losses as we focus on growing commercial sales of our products in both the United States and international markets, including growing our sales teams, scaling our manufacturing operations, continuing research and development efforts to develop new products and further enhance our existing products. Further, we expect to incur additional costs associated with operating as a public company. As a

result, we may need additional funding for expenses related to our operating activities, including selling, general and administrative expenses and research and development expenses.

Because of the numerous risks and uncertainties associated with product development and commercialization, we are unable to accurately predict the timing or amount of increased expenses or when, or if, we will be able to achieve or maintain profitability. Until such time, if ever, as we can generate substantial revenue sufficient to achieve profitability, we expect to finance our operations through a combination of equity offerings, debt financings and strategic alliances. We may be unable to raise additional funds or enter into such other agreements or arrangements when needed on favorable terms, or at all. If we are unable to raise capital or enter into such agreements as, and when, needed, we may have to significantly delay, scale back or discontinue the further development and commercialization efforts of one or more of our products, or may be forced to reduce or terminate our operations.

We believe that our existing cash and cash equivalents, will enable us to fund our operating expenses, capital expenditure requirements and debt service payments for at least the next 12 months. 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*."

COVID-19

In December 2019, a novel strain of coronavirus, or COVID-19, emerged in Wuhan, Hubei Province, China. Less than four months later, in March 2020, the World Health Organization declared COVID-19 a pandemic, and the virus has now spread to many other countries and regions and every state within the United States, including Massachusetts, where our primary offices and manufacturing facility are located. The impact of this pandemic has been and will likely continue to be extensive in many aspects of society, which has resulted in and will likely continue to result in significant disruptions to the global economy, as well as businesses and capital markets around the world.

In 2020, we had impacts to our business as a result of COVID-19 including disruptions to our manufacturing operations and supply chain caused by facility closures, reductions in operating hours, staggered shifts and other social distancing efforts, decreased productivity and unavailability of materials or components, limitations on our employees' and customers' ability to travel, and delays in product installations, trainings or shipments to and from affected countries and within the United States.

In 2021, we saw an increase in desktop customer activity in the lab and customers enabling on site installations and trainings. However, we continued to experience extended lead times on our supply chain and limitations on travel, among other disruptions we experienced in 2020. The ongoing effects of the COVID-19 pandemic, including resurgences and the emergence of new variants, the precautionary measures that we adopt, and/or the need to dedicate additional resources to obtain alternate suppliers and implement design or manufacturing changes to utilize such alternate products, may continue to create operational and other challenges.

We do not yet know the net impact that the COVID-19 pandemic may have on our business and cannot guarantee that it will not be materially negative. For example, in 2021, we recorded an increase to our allowance for doubtful accounts of $1.7 million for a customer in the Middle East where due to the credit and economic conditions, including the impact of COVID-19, we determined that it is probable that collection will not occur. Although we continue to monitor the situation and may adjust our current policies as more information and public health guidance become available, the ongoing effects of the COVID-19 pandemic and/or the precautionary measures that we have adopted may create operational and other challenges, any of which could harm our business and results of operations. While we maintain an inventory of finished products and raw materials used in our products, a prolonged pandemic could lead to shortages in the raw materials necessary to manufacture our products. If we experience a prolonged disruption in our manufacturing, supply chains or commercial operations, or if demand for our products or our customers' ability to make payments is significantly reduced as a result of the COVID-19 pandemic, we would expect to experience a material adverse impact on our business, financial condition, results of operations and prospects.

Historically, a significant portion of our field sales, customer training events and other application services have been conducted in person, and the rollout of our new products has historically been supported by our participation at

industry conferences. Currently, as a result of the work and travel restrictions related to the COVID-19 pandemic, and the precautionary measures that we have adopted, a significant portion of our field sales and professional services activities continue to be conducted remotely, which has resulted in a decrease in our travel expenditures. However, we have recently permitted certain of our employees to travel to our customers and industry conferences where permitted by local authorities, and expect that our travel expenditures will also begin to increase. Any prolonged restrictive measures put in place in order to control the spread of COVID-19, including new variants, or other adverse public health developments in any of our targeted markets may have a material and adverse effect on our business operations and results of operations. We do not yet know the extent of the negative impact of such restrictions and precautionary measures, including the lifting of our travel restrictions in limited circumstances, on our ability to attract new customers or retain and expand our relationships with existing customers over the near and long term.

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 sustain our growth and improve our results of operations. Our ability to successfully address the factors below is subject to various risks and uncertainties, including those described under the heading "*Risk Factors.*"

Device sales

Our financial performance has largely been driven by, and in the future will continue to be impacted by, the rate of sales of our handheld and desktop devices. Management focuses on device sales as an indicator of current business success and a leading indicator of likely future recurring revenue from consumables and services. We expect our device sales to continue to grow as we increase penetration in our existing markets and expand into, or offer new features and solutions that appeal to, new markets.

We plan to grow our device sales in the coming years through multiple strategies including expanding our sales efforts domestically and globally and continuing to enhance the underlying technology and applications for life sciences research related to our Rebel and ZipChip Interface. We regularly solicit feedback from our customers and focus our research and development efforts on enhancing our devices and enabling our customers to use additional applications that address their needs, which we believe in turn helps to drive additional sales of our devices and consumables.

Our sales process varies considerably depending upon the type of customer to whom we are selling. Historically, our handheld devices have been used by state, federal and foreign governments and governmental agencies. Our sales process with government customers is often long and involves multiple levels of approvals, testing and, in some cases, trials. Device orders from a government customer are typically large orders and can be impacted by the timing of their capital budgets. As a result, the revenue for our handheld devices can vary significantly from period-to-period and has been and may continue to be concentrated in a small number of customers in any given period.

Our desktop devices are typically used by the pharmaceutical, biotechnology and academia markets. Our sales cycles within these markets tend to vary based on the size of the customer and the number of devices they purchase. Our shortest sales cycles are typically for small laboratories and individual researchers where, in some cases, we receive purchase orders from these customers within three months. Our sales process with other institutions can be longer with most customers submitting purchase orders within six to twelve months. Given the variability of our sales cycle, we have in the past experienced, and likely will in the future experience, fluctuations in our desktop device sales on a period-to-period basis. Additionally, we have experienced and may continue to experience the impact of laboratory shutdowns related to COVID-19 on device and consumable sales to these markets.

Recurring revenue

We regularly assess trends relating to recurring revenue which includes consumables and services based on our product offerings, our customer base and our understanding of how our customers use our products. Recurring revenue was 19% and 14% of total product and service revenue for the years ended December 31, 2021 and 2020, respectively.

Our recurring revenue as a percentage of total product and service revenue will vary based upon new device placements in the period. As our device installed base expands, recurring revenue on an absolute basis is expected to increase and over time should be an increasingly important contributor to our revenue.

Revenue from the sales of consumables will vary by type of device. We expect that recurring revenue as a percentage of the original device price to be higher for our desktop devices (Rebel and ZipChip Interface) than for our handheld device (MX908). While we sell single-use swab samplers for MX908 to be used in liquid and solid materials analysis, there are a number of other applications that the MX908 can be used for that do not require consumables. Rebel and ZipChip Interface require consumables kits for all areas of operations. Currently, Rebel customers, who are actively utilizing the device, are consuming on average one 200-sample kit per month; however, Rebel is a new product and purchasing patterns related to our consumables kits are evolving. We expect that the number of kits sold per month will vary over the short term. In time, we expect Rebel consumables kits sales to become more consistent as our installed base grows and our customers establish usage patterns. At maximum potential capacity, with continuous operation, the Rebel can consume approximately one 200-sample kit per day.

Revenue mix and gross margin

Our revenue is derived from sales of our devices, consumables and services. There will be fluctuations in mix between devices and consumables from period-to-period. Over time, as our device installed base grows and we see adoption of Rebel, we expect consumables revenue to constitute a larger percentage of product and service revenue. However, the percentage will be subject to fluctuation based upon our handheld sales in a period. In addition, our selling price and, consequently, our margins, are higher for those devices and consumables that we sell directly to customers as compared to those that we sell through distributors. While we expect the mix of direct sales as compared to sales through distributors to remain relatively constant in the near term, we are currently evaluating increasing our direct sales capabilities in certain geographies.

Future device and consumable selling prices and gross margins may fluctuate due to a variety of factors, including the introduction by others of competing products and solutions. We aim to mitigate downward pressure on our average selling prices by increasing the value proposition offered by our devices and consumables, primarily by expanding the applications for our devices and increasing the quantity and quality of data that can be obtained using our consumables.

Product adoption

We monitor our customers' stage of adoption of our products to provide insight into the timing of future potential sales and to help us formulate financial projections. Typical stages of adoption include testing, trials, pilot and deployment as follows:

- Testing—a customer is actively engaged with internal or external testing of our products. This may include an onsite or virtual demonstration with a salesperson, a customer submitting samples for testing in one of our facilities or testing by a third party.
- Trials—a customer has committed to a trial of one of our products, which may include a defined period to assess functionality of the device in their operational environment (in the field or onsite within the customer's facility).
- Pilot—a customer commits to the purchase of an initial quantity of devices to deploy in their operational environment to assess a broader opportunity that may grow to tens or hundreds of devices.
- Deployment—a customer has completed testing, a trial, and/or a pilot and intends to roll out the technology across their enterprise (either at a site or throughout the entire organization).

Key Business Metrics

We regularly review the number of product placements and cumulative product placement as key metrics to evaluate our business, measure our performance, identify trends affecting our business, formulate financial projections, and make strategic decisions. We believe that these metrics are representative of our current business; however, we anticipate these will change or may be substituted for additional or different metrics as our business grows.

During the years ended December 31, 2021 and 2020, our product placements (units recognized as revenue) by device type were as follows:

	Year Ended December 31,	
	2021	2020
Product Placements:		
MX908	492	331
Rebel	54	33
ZipChip Interface	28	26
Total Product Placements	574	390

The number of product placements vary considerably from period-to-period due to the type and size of our customers and concentrations among larger government customers as described above. We also have been impacted by laboratory shutdowns related to COVID-19, especially with our ZipChip Interface device. We expect continued fluctuations in our period-to-period number of product placements.

Our cumulative product placements consist of the following number of devices:

	December 31,	
	2021	2020
Cumulative Product Placements:		
MX908	1,650	1,158
Rebel	100	46
ZipChip Interface	185	157
Cumulative Product Placements	1,935	1,361

Components of Our Results of Operations

Revenue

Product and Service Revenue

We generate product and service revenue from the sale of our devices and recurring revenue from the sale of consumables and services. Device sales accounted for 81% and 86% of our product and service revenue for the years ended December 31, 2021 and 2020, respectively. Consumables and service revenue accounted for 19% and 14% of our product and service revenue for the years ended December 31, 2021 and 2020, respectively.

Our current device offerings include:

- Handheld devices—MX908; and
- Desktop devices—Rebel and ZipChip Interface.

We sell our devices directly to customers and through distributors. Each of our device sales drives various streams of recurring revenue comprised of consumable product sales and service revenue.

Our consumables consist of:

- MX908—accessories and swabs;
- Rebel—consumables kit with a microfluidic chip and standards; and
- ZipChip Interface—microfluidic chip, reagent and assay kits.

Rebel and ZipChip Interface consumables can only be used with our devices and there are no alternative after-market options that can be used as a substitute. Each chip is used for a defined number of samples (or runs). We recognize revenue from the sale of consumables as the consumable products are shipped.

We also offer our customers extended warranty and service plans. Our extended warranty and service plans are offered for periods beyond the standard one-year warranty that all of our customers receive. These extended warranty and service plans generally have fixed fees and terms ranging from one additional year to four additional years. We recognize revenue from the sale of extended warranty and service plans over the respective coverage period, which approximates the service effort provided by us.

We expect consumables and service revenue to increase in future periods as our installed base grows and we are able to generate recurring sales.

Licenses and contract revenue

License and contract agreements are arrangements whereby we provide engineering services for the development of our technology platform for specific programs or new and expanding applications of our technologies for future commercial endeavors. Our license and contract agreements are with the U.S. government and commercial entities (who may be contracting with the government). Contracts typically include compensation for labor effort and materials incurred related to the deliverables under the contract. Our license and contract revenue was primarily related to one customer during the years ended December 31, 2021 and 2020.

During the years ended December 31, 2021 and 2020, our revenue was comprised of revenue from the following sources:

	Year Ended December 31,	
	2021	2020
	(in thousands)	
Product and service revenue:		
Device sales revenue	$ 33,287	$ 21,269
Consumables and service revenue	7,821	3,487
Total product and service revenue	41,108	24,756
License and contract revenue	1,098	2,138
Total revenue	$ 42,206	$ 26,894

Our product and service revenue is comprised of sales of our handheld and desktop devices and related consumables and service contracts to end-users in the government, pharmaceuticals/biotechnology and academia markets as follows:

	Year Ended December 31,	
	2021	2020
	(in thousands)	
Product and Service Revenue by Device:		
Handheld	$ 29,160	$ 17,613
Desktop	11,948	7,143
Total product and service revenue	$ 41,108	$ 24,756

	Year Ended December 31,	
	2021	2020
	(in thousands)	
Product and Service Revenue by Market:		
Government	$ 29,755	$ 17,382
Pharmaceutical/Biotechnology	11,264	7,096
Academia	89	278
Total product and service revenue	$ 41,108	$ 24,756

We sell our products primarily in the United States; however, we are expanding our global sales efforts as we see traction in our products and assess global market needs. The majority of our international sales are through a distribution channel.

Cost of Revenue, Gross Profit and Gross Margin

Product cost of revenue primarily consists of costs for raw material parts and associated freight, shipping and handling costs, royalties, contract manufacturer costs, salaries and other personnel costs, overhead and other direct costs related to those sales recognized as product revenue in the period. Cost of revenue for services primarily consists of salaries and other personnel costs, travel related to services provided, facility costs associated with training, warranties and other costs of servicing equipment on a return-to-factory basis and at customer sites.

License and contract cost of revenue primarily consists of salaries and other personnel costs, materials, travel and other direct costs related to the revenue recognized in the period. The license and contract cost of revenue will vary based upon the type of contract, including whether it is primarily for development services or for both materials and development services. We expect that our cost of revenue will increase or decrease to the extent that our revenue increases and decreases and depending on how many contracts we have ongoing at any given point in time and the stage of those contracts.

Gross profit is calculated as revenue less cost of revenue. Gross profit margin is gross profit expressed as a percentage of revenue. Our gross profit in future periods will depend on a variety of factors, including market conditions that may impact our pricing, sales mix among devices, sales mix changes among consumables, excess and obsolete inventories, our cost structure for manufacturing operations relative to volume, and product warranty obligations. Our gross profit in future periods will vary based upon our channel mix and may decrease based upon our distribution channels and the potential to establish original equipment manufacturing channels for certain components of our technology platform which would have a lower gross margin.

We expect that our gross profit margin for product and service will increase over the long term as our sales and production volumes increase and our cost per unit decreases due to efficiencies of scale. We intend to use our design, engineering and manufacturing capabilities to further advance and improve the efficiency of our manufacturing, which we believe will reduce costs and increase our gross margin. We expect that our gross profit margin for license and contract will remain consistent for our contracts that are cost reimbursement contracts.

Operating Expenses

Research and development expenses

Research and development expenses consist primarily of costs incurred for our research activities, product development, hardware and software engineering and consultant services and other costs associated with our technology platform and products, which include:

- employee-related expenses, including salaries, related benefits and stock-based compensation expense for employees engaged in research and hardware and software development functions;
- the cost of maintaining and improving our product designs, including third party development costs for new products and materials for prototypes;
- research materials and supplies; and
- facilities, depreciation and other expenses, which include direct and allocated expenses for rent and maintenance of facilities and insurance.

We believe that our continued investment in research and development is essential to our long-term competitive position and expect these expenses to increase in future periods.

Selling, general and administrative expenses

Selling, general and administrative expenses consist primarily of salaries and other personnel costs, and stock-based compensation for our sales and marketing, finance, legal, human resources and general management, as well as professional services, such as legal, audit and accounting services. We expect selling, general and administrative expenses to increase in future periods as the number of sales, sales application specialists and marketing and administrative personnel grows and we continue to introduce new products, invest in demonstration equipment, broaden our customer base and grow our business. We also anticipate that we will incur increased accounting, audit, legal, regulatory, compliance and director and officer insurance costs as well as investor and public relations expenses associated with operating as a public company.

Other Income (Expense)

Interest expense

Interest expense consists of interest expense associated with outstanding borrowings under our loan and security agreements and the amortization of deferred financing costs and debt discounts associated with such arrangements.

Other income (expense), net

Other income (expense), net consists primarily of the change in fair value of our redeemable convertible preferred stock warrants. We classified warrants for the purchase of shares of our redeemable convertible preferred stock as a liability on our consolidated balance sheets as these warrants were freestanding financial instruments that may have required us to transfer assets upon exercise. The warrant liability was initially recorded at fair value upon the date of issuance of each warrant and was subsequently remeasured to fair value at each reporting date. Changes in the fair value of the warrant liability were recognized as a component of other income (expense), net in the consolidated statements of operations and comprehensive loss. On December 22, 2020, immediately prior to the closing of our IPO, the warrants to purchase preferred stock were converted into warrants to purchase common stock, and the fair value of the warrant liability at that time was reclassified to additional paid-in capital. As a result, subsequent to the closing of our IPO, we no longer remeasure the fair value of the warrant liability at each reporting date.

Other income (expense), net also consists of miscellaneous other income and expense unrelated to our core operations.

Provision for Income Taxes

We have not recorded any U.S. federal or state income tax benefits for the net operating losses we have incurred in each year or for the research and development tax credits we generated in the United States, as we believe, based upon the weight of available evidence, that it is more likely than not that all of our net operating loss carryforwards and tax credits will not be realized. As of December 31, 2021, we had U.S. federal and state net operating loss carryforwards of $80.4 million and $52.3 million, respectively, which may be available to offset future taxable income and begin to expire in 2032 and 2025, respectively, of which $46.0 million of federal net operating losses do not expire. As of December 31, 2021, we also had U.S. federal and state research and development tax credit carryforwards of $4.8 million and $2.7 million, respectively, which may be available to offset future tax liabilities and begin to expire in 2032 and 2029, respectively. We have recorded a full valuation allowance against our net deferred tax assets at each balance sheet date.

Results of Operations

The results of operations presented below should be reviewed in conjunction with the consolidated financial statements and notes included elsewhere in this Annual Report on Form 10-K. The following tables set forth our results of operations for the periods presented:

Comparison of the Years ended December 31, 2021 and 2020

The following table summarizes our results of operations for the years ended December 31, 2021 and 2020:

	Year Ended December 31,		Change
	2021	2020	
	(in thousands)		
Revenue:			
Product and service revenue	$ 41,108	$ 24,756	$ 16,352
License and contract revenue	1,098	2,138	(1,040)
Total revenue	42,206	26,894	15,312
Cost of revenue:			
Product and service cost of revenue	18,654	11,114	7,540
License and contract cost of revenue	319	857	(538)
Total cost of revenue	18,973	11,971	7,002
Gross profit	23,233	14,923	8,310
Operating expenses:			
Research and development	13,067	8,235	4,832
Selling, general and administrative	32,235	12,503	19,732
Total operating expenses	45,302	20,738	24,564
Loss from operations	(22,069)	(5,815)	(16,254)
Other income (expense):			
Interest expense	(486)	(976)	490
Other income (expense), net	386	(6,028)	6,414
Total other expense, net	(100)	(7,004)	6,904
Net loss	$ (22,169)	$ (12,819)	$ (9,350)

Revenue, Cost of revenue and Gross profit

Product and service

	Year Ended December 31,		Change	
	2021	2020	Amount	%
	(dollars in thousands)			
Product and service revenue	$ 41,108	$ 24,756	$ 16,352	66 %
Product and service cost of revenue	18,654	11,114	7,540	68 %
Gross profit	$ 22,454	$ 13,642	$ 8,812	65 %
Gross profit margin	55 %	55 %	— %	

Our product and service revenue is comprised of revenue from sales of devices and related consumables and service as follows:

	Year Ended December 31,		Change	
	2021	2020	Amount	%
	(dollars in thousands)			
Device sales revenue	$ 33,287	$ 21,269	$ 12,018	57 %
Consumables and service revenue	7,821	3,487	4,334	124 %
Total product and service revenue	$ 41,108	$ 24,756	$ 16,352	66 %

Product and service revenue increased by $16.4 million, or 66%, for the year ended December 31, 2021, compared to the year ended December 31, 2020. Device sales accounted for 81% and 86% of our product and service revenue for the years ended December 31, 2021 and 2020, respectively. Consumables and service revenue accounted for 19% and 14% of our product and service revenue for the years ended December 31, 2021 and 2020, respectively. The increase in device sales of $12.0 million was primarily due to an increase of $9.0 million in handheld device sales driven by a 161

unit increase in MX908 devices sold, primarily related to sales to United States government customers in the year ended December 31, 2021. We also had a $3.0 million increase in device sales related to our desktop products primarily due to a 21 unit increase in Rebel sales in the year ended December 31, 2021. We increased our Rebel customer base with multi-unit accounts to fifteen as of December 31, 2021 from six as of December 31, 2020. Consumables and service revenue increased by $4.3 million due to an increase in service revenue of $2.0 million, a $1.2 million increase in desktop consumables, mainly from Rebel kit sales and an increase of $1.1 million from handheld accessories and consumables, primarily related to the launch of the Aero module in 2021.

Product and service cost of revenue increased by $7.5 million, or 68%, for the year ended December 31, 2021, compared to the year ended December 31, 2020. The increase in product and service cost of revenue was primarily related to the increased material costs related to the higher product volume from devices and consumables shipped but is also due to a $1.8 million increase in personnel related costs, a $0.6 million increase in facility related costs and a $0.3 million increase in travel expenses as we build out the capacity within operations and service resources.

Product and service gross profit increased by $8.8 million, or 65%, for the year ended December 31, 2021 as compared to the year ended December 31, 2020, primarily due to the increase in devices and consumable sales volume, offset in part by investments in our service resources of $0.4 million to support our growing installed base and increases in manufacturing infrastructure. Gross profit margin was relatively unchanged at 55% for the years ended December 31, 2021 and 2020.

License and contract

	Year Ended December 31,		Change	
	2021	2020	Amount	%
	(dollars in thousands)			
License and contract revenue	$ 1,098	$ 2,138	$ (1,040)	(49)%
License and contract cost of revenue	319	857	(538)	(63)%
Gross profit	$ 779	$ 1,281	$ (502)	(39)%
Gross profit margin	71 %	60 %	11 %	

License and contract revenue decreased by $1.0 million, or 49%, for the year ended December 31, 2021, compared to the year ended December 31, 2020. The decrease in license and contract revenue was primarily related to decreased activities under our subcontract agreement with a commercial entity that holds a U.S. government prime contract resulting in $0.9 million lower contract revenue in the year ended December 31, 2021 compared to the year ended December 31, 2020.

License and contract cost of revenue decreased $0.5 million, or 63% for the year ended December 31, 2021, compared to the year ended December 31, 2020 due to the decrease in activities under the subcontract agreement and the mix within the subcontract where the year ended December 31, 2020 had higher material costs within the contract deliverables.

License and contract gross profit decreased by $0.5 million, or 39%, and gross profit margin decreased by 11 percentage points for the year ended December 31, 2021 as compared to the year ended December 31, 2020, primarily due to the mix in contract deliverables, including a higher mix of materials during the year ended December 31, 2020, which resulted in a lower gross profit margin.

Operating Expenses

Research and development

	Year Ended December 31,		Change	
	2021	2020	Amount	%
	(dollars in thousands)			
Research and development expenses	$ 13,067	$ 8,235	$ 4,832	59 %
Percentage of total revenue	31 %	31 %		

Our research and development expenses were $13.1 million for the year ended December 31, 2021, an increase of $4.8 million from research and development expenses of $8.2 million for the year ended December 31, 2020. The increase was due primarily to a $2.6 million increase in personnel costs due to increased headcount, a $0.8 million increase related to facility allocations due to the increase in headcount and additional costs incurred related to workforce safety during the COVID-19 pandemic in the year ended December 31, 2021, a $0.6 million increase in materials and consulting spend related to product enhancement initiatives for our MX908 and Rebel and a $0.4 million shift in resources focused on internal research and development activities rather than funded contract development.

Selling, general and administrative expenses

	Year Ended December 31,		Change	
	2021	2020	Amount	%
	(dollars in thousands)			
Selling, general and administrative expenses	$ 32,235	$ 12,503	$ 19,732	158 %
Percentage of total revenue	76 %	46 %		

Our selling, general and administrative expenses were $32.2 million for the year ended December 31, 2021, an increase of $19.7 million from selling, general and administrative expenses of $12.5 million for the year ended December 31, 2020. The increase was due primarily to a $10.0 million increase in salaries from growing headcount, as well as an increase in commissions and bonus expense, recruiting fees and stock-based compensation. The increase was also due to a $1.7 million charge related to our allowance for bad debts for a customer in the Middle East, where due to the credit and economic conditions, including the impact of COVID-19, the Company had determined during the second quarter of 2021 that it was probable that collection will not occur, and recorded the expense. The remaining $8.0 million increase during the year ended December 31, 2021 was due primarily to a $2.5 million increase in insurance, a $2.4 million increase in consulting and related fees, a $1.3 million increase related to marketing activities, a $0.7 million increase in travel expenses, a $0.3 million increase in audit and legal fees, and a $0.8 million increase related to all other selling, general and administrative expenses.

Other Income (Expense)

Interest expense

Interest expense was $0.5 million for the year ended December 31, 2021, a decrease of $0.5 million from interest expense of $1.0 million for the year ended December 31, 2020. Interest expense decreased in 2021 as a result of the 2021 Revolver that was signed in March 2021 and the reduced borrowings within the quarters of 2021. This decrease was offset in part by a loss on extinguishment of debt of $0.2 million that was incurred in 2021.

Other income (expense), net

Other income (expense), net increased $6.4 million, primarily due to a $6.1 million expense related to the change in the fair value of our preferred stock warrant liability during the year ended December 31, 2020. The decrease in fair value of the warrant liability during the year ended December 31, 2020 was due to the increase in the value of the underlying shares from January 1, 2020 through December 22, 2020, the date of the conversion of the warrants.

On December 22, 2020, immediately prior to the closing of our IPO, the warrants to purchase preferred stock were converted into warrants to purchase common stock, and the fair value of the warrant liability at that time was reclassified to common stock. As a result, subsequent to the closing of our IPO, we no longer remeasure the fair value of the warrant liability at each reporting date.

Other income (expense), net also included interest income of $0.5 million and $0.1 million for the years ended December 31, 2021 and 2020, respectively. The increase in interest income in the year ended 2021 is due to the proceeds from the IPO in December 2020 and the follow on offering in November 2021.

Liquidity and Capital Resources

Since our inception, we have incurred significant operating losses. To date, we have funded our operations primarily with proceeds from sales of redeemable preferred stock, borrowings under loan agreements and revenue from sales of our products and services and license and contract revenue, proceeds from our IPO in December 2020, and, most recently, with proceeds from our underwritten public offering in November 2021. As of December 31, 2021, we had cash and cash equivalents of $224.1 million. We believe that our existing cash and cash equivalents will enable us to fund our operating expenses, capital expenditure requirements and debt service payments for at least the next twelve months.

We have based this estimate on assumptions that may prove to be wrong, and we could utilize our available capital resources sooner than we expect. Our future funding requirements will depend on many factors, including:

- market uptake of our products and growth into new and existing markets:
- the cost of our research and development efforts to expand the applications of our current devices and to create enhanced products with our platform of technologies;
- the cost of expanding our commercial operations, including distribution capabilities, and accelerating planned investments, such as hiring additional support, service, and sales management in Europe, Asia Pacific and Latin America, bolstering our infrastructure in these regions;
- the cost of acquiring complementary businesses, products, services or technologies, when and if required;
- the success of our existing collaborations and our ability to enter additional collaborations in the future;
- the effect of competing technological and market developments; and
- the level of our selling, general and administrative expenses.

As of December 31, 2020, we had a Loan and Security Agreement entered in August 2019, or the 2019 Loan, with Signature Bank, or the Lender. The 2019 Loan provided for up to $15.0 million in borrowings, of which the entire $15.0 million was borrowed in 2019. The 2019 Loan called for monthly interest-only payments through February 28, 2021, followed by 30 monthly payments of principal and interest commencing March 1, 2021. The 2019 Loan was scheduled to mature on August 1, 2023 and bore interest at an annual rate equal to the greater of (i) 0.5% plus the Wall Street Journal prime rate, or (ii) 6.0%. The 2019 Loan was secured by a lien on our assets. The 2019 Loan included financial covenants and required us to maintain a balance of unrestricted cash at the Lender in an amount not less than $3.0 million. The 2019 Loan also contained negative covenants restricting our activities, including limitations on dispositions, mergers or acquisitions; encumbering or granted in a security interest in our intellectual property, incurring indebtedness or liens, paying dividends, making certain investments and certain other business transactions. As of December 31, 2020, we were in compliance with all covenants under the 2019 Loan.

On March 11, 2021, we entered into an Amended and Restated Loan and Security Agreement, or the 2021 Revolver, with the Lender to replace the 2019 Loan. This agreement created a revolving line of credit totaling $25.0 million and

eliminated the existing term loan. Borrowings under the revolving line of credit bear interest at an annual rate equal to the greater of (i) one-half percent (0.5%) above the prime rate or (ii) 4.0% and mature on March 11, 2024. Borrowings are collateralized by substantially all of our property, excluding intellectual property, which is subject to a negative pledge. The 2021 Revolver subjects us to various customary covenants, including requirements as to financial reporting and financial covenants (including an unrestricted minimum cash level of $10.0 million), and restrictions on our ability to dispose of our business or property, to change our line of business, to liquidate or dissolve, to enter into any change in control transaction, to merge or consolidate with any other entity or to acquire all or substantially all the capital stock or property of another entity, to incur additional indebtedness, to incur liens on our property, to pay any dividends or make other distributions on capital stock other than dividends payable solely in capital stock, to redeem capital stock, to enter into in-bound licensing agreements, to engage in transactions with affiliates, and to encumber our intellectual property. Events of default under the 2021 Revolver include failure to make payments when due, insolvency events, failure to comply with covenants or material adverse events with respect to us. Upon the occurrence of an event of default and until such event of default is no longer continuing, the annual interest rate will be 5.0% above the otherwise applicable rate. As of December 31, 2021, we were in compliance with all covenants under the 2021 Revolver.

The terms of the 2021 Revolver required that the existing term loan outstanding under the 2019 Loan be repaid with an advance under the line of credit. Accordingly, on March 11, 2021, we used $14.5 million of proceeds from the revolving line of credit to repay all amounts then due on the existing term loan. As of December 31, 2021, we have $10.0 million availability at the revolving line of credit.

We may seek additional funding through private or public equity financings, debt financings, collaborations, strategic alliances and marketing, distribution or licensing arrangements. We cannot assure you that we will be able to obtain additional funds on acceptable terms, or at all. If we raise additional funds by issuing equity or equity-linked securities, our stockholders may experience dilution. Future debt financing, if available, may involve covenants, in addition to our existing covenants, restricting our operations or our ability to incur additional debt or potentially limiting our ability to obtain new debt financing or the refinance of our existing debt. Any debt or equity financing that we raise may contain terms that are not favorable to us or our stockholders. If we raise additional funds through collaboration and licensing arrangements with third parties, it may be necessary to relinquish some rights to our technologies or our products, or grant licenses on terms that are not favorable to us. If we do not have or are not able to obtain sufficient funds, we may have to delay development or commercialization of our products. We also may have to reduce marketing, customer support or other resources devoted to our products or cease operations.

Cash Flows

The following table summarizes our sources and uses of cash for each of the periods presented:

	Year Ended December 31,	
	2021	2020
	(in thousands)	
Cash provided by (used in) operating activities	$ (29,082)	$ 4,131
Cash used in investing activities	(737)	(9)
Cash provided by financing activities	94,725	137,192
Net increase in cash, cash equivalents and restricted cash	$ 64,906	$ 141,314

Operating Activities

During the year ended December 31, 2021, net cash used in operating activities was $29.1 million, primarily consisting of net cash used in changes in our operating assets and liabilities of $12.4 million and our net loss of $22.2 million, partially offset by $5.5 million in non-cash charges which include a $2.5 million stock-based compensation expense and a $1.7 million provision for doubtful accounts. Net cash used in changes in our operating assets and liabilities for the year ended December 31, 2021 consisted primarily of an increase in account receivable of $11.3 million and an increase in inventory of $4.5 million and an increase in prepaid expenses and other current assets of $4.1 million, partially offset by a $5.4 million increase in deferred revenue and a $2.8 million increase in account payable and accrued expenses.

During the year ended December 31, 2020, net cash provided by operating activities was $4.1 million, primarily consisting of net cash provided by changes in our operating assets and liabilities of $10.0 million and non-cash charges of $6.9 million, partially offset by our net loss of $12.8 million. Net cash provided by changes in our operating assets and liabilities for the year ended December 31, 2020 consisted primarily of an increase in deferred revenue of $9.6 million and an increase in accounts payable and accrued expenses of $2.0 million, partially offset by a $1.8 million increase in accounts receivable.

Investing Activities

During the year ended December 31, 2021, net cash used in investing activities was $0.7 million, due to purchases of laboratory and demonstration equipment.

During the year ended December 31, 2020, net cash used in investing activities was less than $0.1 million, due to purchases of property and equipment.

Financing Activities

Cash provided by financing activities during the year ended December 31, 2021, was $94.7 million, consisting primarily of proceeds of $94.8 million from the issuance of common stock in an underwritten public offering that closed in November 2021, partially offset by $0.8 million payments of offering costs related to our public offering. We also received net proceeds from borrowings under the 2021 Revolver of $15.0 million. We used proceeds of $14.5 million from the revolving line of credit to repay our previously outstanding borrowings under our loan and security agreement. Prior to repayment of our loan and security agreement, we had made principal payments of $0.5 million.

Cash provided by financing activities during the year ended December 31, 2020, was $137.2 million, consisting primarily of net proceeds of $139.0 million from the issuance of common stock in our IPO that closed in December 2020, partially offset by payments of offering costs related to our IPO. We also received proceeds from a Paycheck Protection Program loan of $2.2 million in the second quarter of 2020, which we then fully repaid in the same period.

Contractual Obligations

We have operating lease obligations for office space and certain equipment, which have remaining lease terms ranging from less than one year to approximately four years. The total future minimum payments under such leases are $7.0 million as of December 31, 2021.

At times, we have purchase orders or contracts for the purchase of supplies and other goods and services. We are not able to determine the aggregate amount of such purchase orders that represent contractual obligations, as purchase orders may represent authorizations to purchase rather than binding agreements. Our purchase orders are based on our current procurement or development needs and are fulfilled by our vendors within short time horizons.

We have also entered into license agreements under which we are obligated to make royalty payments in the 2% to 5% range, subject to a minimum royalty fee of $0.1 million annually. We have not included future payments under these agreements in the table of contractual obligations above since the payment obligations under these agreements are contingent upon generating product sales. We have not included annual minimum royalty payments in the table above because, although the amounts and timing are known, we cannot currently determine the final termination date of the agreement and, as a result, we cannot determine the total amounts of such payments we will be required to make under the agreements.

Critical Accounting Policies and Significant Judgments and Estimates

Our consolidated financial statements are prepared in accordance with generally accepted accounting principles in the United States, or GAAP. The preparation of our consolidated financial statements and related disclosures requires us to make estimates and judgments that affect the reported amounts of assets, liabilities, revenue, costs and expenses and

the disclosure of contingent assets and liabilities in our consolidated financial statements. We base our estimates on historical experience, known trends and events and various other factors that we believe are reasonable under the circumstances, the results of which form the basis for making judgments about the carrying values of assets and liabilities that are not readily apparent from other sources. We evaluate our estimates and assumptions on an ongoing basis. Our actual results may differ from these estimates under different assumptions or conditions.

While our significant accounting policies are described in more detail in Note 2 to our consolidated financial statements included elsewhere in this Annual Report on Form 10-K, we believe that the following accounting policies are those most critical to the judgments and estimates used in the preparation of our consolidated financial statements.

Revenue Recognition

We recognize revenue from sales to customers under Accounting Standards Codification 606, Revenue from Contracts with Customers, or ASC 606 by applying the following five steps: (1) identification of the contract, or contracts, with a customer, (2) identification of the performance obligations in the contract, (3) determination of the transaction price, (4) allocation of the transaction price to the performance obligations in the contract and (5) recognition of revenue when, or as, performance obligations are satisfied.

For a contract with multiple performance obligations, we allocate the contract's transaction price to each performance obligation on a relative standalone selling price basis using our best estimate of the standalone selling price of each distinct product or service in the contract. The primary method used to estimate standalone selling price is the price observed in standalone sales to customers; however, when prices in standalone sales are not available we may use third party pricing for similar products or services or estimate the standalone selling price, which is set by management. Allocation of the transaction price is determined at the contract's inception and is not updated to reflect changes between contract inception and when the performance obligations are satisfied.

Product and Service Revenue

We derive revenue primarily from the sale of handheld and desktop products and related consumables and services. Revenue is recognized when control of the promised products consumables or services is transferred to our customers, in an amount that reflects the consideration we expect to be entitled to in exchange for those products, consumables or services (the transaction price). A performance obligation is a promise in a contract to transfer a distinct product or service to a customer and is the unit of accounting under ASC 606. For devices and consumables sold by us, control transfers to the customer at a point in time. To indicate the transfer of control, we must have a present right to payment, legal title must have passed to the customer, the customer must have the significant risks and rewards of ownership, and where acceptance is other than perfunctory, the customer must have accepted the product or service. Our principal terms of sale are freight on board, or FOB, shipping point, or equivalent, and, as such, we primarily transfer control and record revenue for product sales upon shipment. Sales arrangements with delivery terms that are not FOB shipping point are not recognized upon shipment and the transfer of control for revenue recognition is evaluated based on the associated shipping terms and customer obligations. If a performance obligation to the customer with respect to a sales transaction remains to be fulfilled following shipment (typically installation or acceptance by the customer), revenue recognition for that performance obligation is deferred until such commitments have been fulfilled. For extended warranty and support, control transfers to the customer over the term of the arrangement. Revenue for extended warranty and support is recognized based upon the period of time elapsed under the arrangement as this period represents the transfer of benefits or services under the agreement.

License and Contract Revenue

We generate revenue from short and long-term contracts associated with the design and development and delivery of detection devices or related design and support services. To date, these contracts are primarily with the U.S. government or commercial entities contracting with the U.S. government, but we have also had such contracts with commercial partners. Our contracts with the U.S. government typically are subject to the Federal Acquisition Regulation, or FAR, and are priced based on estimated or actual costs of producing goods or providing services. The FAR provides guidance on the types of costs that are allowable in establishing prices for goods or services provided under U.S.

government contracts. The pricing for non-U.S. government contracts is based on the specific negotiations with each customer.

Under the typical payment terms of U.S. government fixed-price contracts, the customer pays in accordance with the terms of the specific agreement, but generally through progress payments. If these progress payments are made in advance, these payments are recorded as a contract liability, classified as deferred revenue within the accompanying consolidated balance sheet, until we provide the underlying services. For U.S. government cost-type contracts, the customer generally pays for actual costs incurred within a short period of time. For contracts with commercial partners, payments are made in accordance with the terms of the specific agreement. For agreements which call for milestone payments, to the extent we do not conclude that it is probable that a significant reversal of cumulative revenue will occur, a contract asset is generated until we are permitted to bill for costs incurred, which is classified as unbilled receivables in the accompanying consolidated balance sheet. In some cases, payments received in advance under license agreements are recorded as deferred revenue and recognized over the respective contract term, absent any other performance obligations.

Generally, revenue for long-term contracts is recognized based upon the cost-to-cost measure of progress, provided that we meet the criteria associated with transferring control of the good or service over time such as not creating an asset with an alternative use and having an enforceable right to payment for completed performance. However, we evaluate the proper revenue recognition on a contract by contract basis, as each contract generally contains terms specific to the underlying agreement which result in differing performance obligations and payment terms (cost plus, fixed price agreements among others). For revenue recognized under the cost-to-cost measure of progress basis, we continually assess total costs expected to be incurred and if such costs require adjustment to the measure of progress, we record such adjustment as a change in estimate on a cumulative catch-up basis in the period of adjustment.

We include the unconstrained amount of consideration in the transaction price. The amount included in the transaction price is constrained to the amount for which it is probable that a significant reversal of cumulative revenue recognized will not occur. At the end of each subsequent reporting period, as required by ASC 606, we re-evaluate the estimated consideration included in the transaction price and any related constraint, and if necessary, adjust our estimate of the overall transaction price. Any such adjustments are recorded on a cumulative catch-up basis in the period of adjustment.

Distribution Channels

A majority of our revenue is generated by sales in conjunction with our distribution partners, such as our international distributors and in the United States for end customers where a government contract is required or a customer has a pre-existing relationship. When we transact with a distribution partner, our contractual arrangement is with the partner and not with the end-use customer. Whether we transact business with and receive the order from a distribution partner or directly from an end-use customer, our revenue recognition policy and resulting pattern of revenue recognition for the order are the same.

Stock-Based Compensation

We measure stock-based option awards granted to employees, consultants and directors based on their fair value on the date of grant using the Black-Scholes option-pricing model. Compensation expense for those awards is recognized, net of estimated forfeitures, over the requisite service period, which is generally the vesting period of the respective award. The straight-line method of expense recognition is applied to all awards with service-only conditions, while the graded vesting method is applied to all grants with both service and performance conditions. Forfeitures are recorded as they occur instead of estimating forfeitures that are expected to occur.

The Black-Scholes option-pricing model uses as inputs the fair value of our common stock and assumptions we make for the volatility of our common stock, the expected term of our common stock options, the risk-free interest rate for a period that approximates the expected term of our common stock options, and our expected dividend yield.

Valuation of Inventory

Inventory is valued at the lower of cost or net realizable value. Cost is computed using the first-in, first-out method. We regularly review inventory quantities on-hand for excess and obsolete inventory and, when circumstances indicate, record charges to write down inventories to their estimated net realizable value, after evaluating historical sales, future demand, market conditions and expected product life cycles. Such charges are classified as cost of revenue in the consolidated statements of operations and comprehensive loss. Any write-down of inventory to net realizable value creates a new cost basis.

Recently Issued Accounting Pronouncements

A description of recently issued accounting pronouncements that may potentially impact our financial position and results of operations is disclosed in Note 2 to our audited consolidated financial statements appearing in Part II, Item 8 of this Annual Report on Form 10-K.

Inflation Risk

During the last two years, inflation and changing prices have not had a material effect on our business. We are unable to predict whether inflation or changing prices will materially affect our business in the foreseeable future.

Item 7A. Quantitative and Qualitative Disclosures About Market Risk.

We are a smaller reporting company, as defined in Rule 12b-2 under the Securities Exchange Act of 1934, as amended, for this reporting period and are not required to provide the information required under this item.

Item 8. Financial Statements and Supplementary Data.

908 DEVICES INC.

Index to Consolidated Financial Statements

Report of Independent Registered Public Accounting Firm

To the Board of Directors and Stockholders of 908 Devices Inc.

Opinion on the Financial Statements

We have audited the accompanying consolidated balance sheets of 908 Devices Inc. and its subsidiary (the "Company") as of December 31, 2021 and 2020, and the related consolidated statements of operations and comprehensive loss, of redeemable convertible preferred stock and stockholders' equity (deficit) and of cash flows for the years then ended, including the related notes (collectively referred to as the "consolidated financial statements"). In our opinion, the consolidated financial statements present fairly, in all material respects, the financial position of the Company as of December 31, 2021 and 2020, and the results of its operations and its cash flows for the years then ended in conformity with accounting principles generally accepted in the United States of America.

Basis for Opinion

These consolidated financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on the Company's consolidated 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 of these consolidated financial statements in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the consolidated 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 consolidated 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 consolidated 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 consolidated financial statements. We believe that our audits provide a reasonable basis for our opinion.

/s/ PricewaterhouseCoopers, LLP

Boston, Massachusetts
March 11, 2022

We have served as the Company's auditor since 2013.

908 DEVICES INC.
Consolidated Balance Sheets
(in thousands, except share and per share amounts)

	December 31, 2021	December 31, 2020
Assets		
Current assets:		
Cash and cash equivalents	$ 224,073	$ 159,227
Accounts receivable, net of allowance for doubtful accounts of $1,750 and $25, respectively	16,375	6,825
Inventory	7,918	4,568
Prepaid expenses and other current assets	4,527	347
Total current assets	252,893	170,967
Operating lease, right-of-use assets	5,182	6,287
Property and equipment, net	1,603	850
Other long-term assets	1,228	723
Total assets	$ 260,906	$ 178,827
Liabilities and Stockholders' Equity		
Current liabilities:		
Accounts payable	$ 1,371	$ 1,004
Accrued expenses	6,961	5,038
Deferred revenue	5,160	3,104
Operating lease liabilities	1,344	1,187
Current portion of long-term debt	—	500
Total current liabilities	14,836	10,833
Long-term debt, net of discount and current portion	15,000	14,332
Operating lease liabilities, net of current portion	4,508	5,839
Deferred revenue, net of current portion	11,958	8,588
Other long-term liabilities	—	194
Total liabilities	46,302	39,786
Commitments and contingencies (Note 9)		
Stockholders' equity:		
Preferred stock, $0.001 par value; 5,000,000 shares authorized, no shares issued or outstanding at December 31, 2021 and December 31, 2020, respectively	—	—
Common stock, $0.001 par value; 100,000,000 shares authorized; 31,077,004 shares and 27,273,095 shares issued and outstanding at December 31, 2021 and December 31, 2020, respectively	31	27
Additional paid-in capital	315,210	217,482
Accumulated deficit	(100,637)	(78,468)
Total stockholders' equity	214,604	139,041
Total liabilities and stockholders' equity	$ 260,906	$ 178,827

The accompanying notes are an integral part of these consolidated financial statements.

908 DEVICES INC.
Consolidated Statements of Operations and Comprehensive Loss
(in thousands, except share and per share amounts)

	Year Ended December 31,	
	2021	2020
Revenue:		
Product and service revenue	$ 41,108	$ 24,756
License and contract revenue	1,098	2,138
Total revenue	42,206	26,894
Cost of revenue:		
Product and service cost of revenue	18,654	11,114
License and contract cost of revenue	319	857
Total cost of revenue	18,973	11,971
Gross profit	23,233	14,923
Operating expenses:		
Research and development	13,067	8,235
Selling, general and administrative	32,235	12,503
Total operating expenses	45,302	20,738
Loss from operations	(22,069)	(5,815)
Other income (expense):		
Interest expense	(486)	(976)
Other income (expense), net	386	(6,028)
Total other expense, net	(100)	(7,004)
Net loss and comprehensive loss	(22,169)	(12,819)
Accretion of redeemable convertible preferred stock to redemption value	—	(90)
Net loss attributable to common stockholders	$ (22,169)	$ (12,909)
Net loss per share attributable to common stockholders	$ (0.79)	$ (2.35)
Weighted average common shares outstanding	27,957,904	5,485,032

The accompanying notes are an integral part of these consolidated financial statements.

908 DEVICES INC.
Consolidated Statements of Redeemable Convertible Preferred Stock and Stockholders' Equity (Deficit)
(in thousands, except share amounts)

	Redeemable Convertible Preferred Stock		Common Stock		Additional Paid-in Capital	Accumulated Deficit	Total Stockholders' Equity (Deficit)
	Shares	Amount	Shares	Amount			
Balances at December 31, 2019	23,905,267	$ 71,017	4,990,702	$ 5	$ 2,476	$ (65,649)	$ (63,168)
Accretion of redeemable convertible preferred stock to redemption value	—	90	—	—	(90)	—	(90)
Conversion of preferred stock to common stock upon initial public offering	(23,905,267)	(71,107)	14,691,929	15	71,092	—	71,107
Issuance of common stock upon initial public offering, net of issuance costs of $2,472	—	—	7,475,000	7	136,556	—	136,563
Conversion of preferred stock warrants into common stock warrants upon initial public offering	—	—	—	—	6,870	—	6,870
Issuance of common stock upon exercise of common stock warrants	—	—	55,994	—	—	—	—
Issuance of common stock upon exercise of stock options	—	—	59,470	—	53	—	53
Stock-based compensation expense	—	—	—	—	525	—	525
Net loss	—	—	—	—	—	(12,819)	(12,819)
Balances at December 31, 2020	—	—	27,273,095	27	217,482	(78,468)	139,041
Issuance of common stock upon exercise of stock options	—	—	653,735	1	851	—	852
Issuance of common stock, net of issuance costs of $ 376	—	—	3,150,000	3	94,373	—	94,376
Stock-based compensation expense	—	—	—	—	2,504	—	2,504
Vesting of restricted stock units	—	—	174	—	—	—	—
Net loss	—	—	—	—	—	(22,169)	(22,169)
Balances at December 31, 2021	—	$ —	31,077,004	$ 31	$ 315,210	$ (100,637)	$ 214,604

The accompanying notes are an integral part of these consolidated financial statements.

908 DEVICES INC.
Consolidated Statements of Cash Flows
(in thousands)

	Year Ended December 31, 2021	2020
Cash flows from operating activities:		
Net loss	$ (22,169)	$ (12,819)
Adjustments to reconcile net loss to net cash used in operating activities:		
Depreciation and amortization expense	925	831
Stock-based compensation expense	2,504	525
Change in fair value of preferred stock warrant liability	—	6,142
Change in fair value of commercial services agreement liability – related party	—	(750)
Noncash interest expense and loss on extinguishment of debt	178	63
Provision for inventory obsolescence	191	—
Provision for doubtful accounts	1,725	100
Changes in operating assets and liabilities:		
Accounts receivable, net	(11,275)	(1,820)
Inventory	(4,481)	223
Prepaid expenses and other current assets	(4,120)	78
Other long-term assets	(476)	(212)
Accounts payable and accrued expenses	2,753	1,980
Deferred revenue	5,426	9,631
Right-of-use operating lease assets	1,121	1,050
Operating lease liabilities	(1,190)	(1,085)
Other long-term liabilities	(194)	194
Net cash provided by (used in) operating activities	(29,082)	4,131
Cash flows from investing activities:		
Purchases of property and equipment	(737)	(9)
Net cash used in investing activities	(737)	(9)
Cash flows from financing activities:		
Proceeds from public offerings, net of underwriting discounts and commissions	94,752	139,035
Payments of public offering costs	(840)	(1,896)
Proceeds from issuance of common stock upon option exercise	852	53
Proceeds from borrowings on revolving line of credit	30,000	—
Repayment of borrowings on revolving line of credit	(15,000)	—
Repayment of notes payable	(15,000)	—
Payments of debt issuance costs	(39)	—
Proceeds from Paycheck Protection Program loan	—	2,202
Repayment of Paycheck Protection Program loan	—	(2,202)
Net cash provided by financing activities	94,725	137,192
Net increase in cash, cash equivalents and restricted cash	64,906	141,314
Cash, cash equivalents and restricted cash at beginning of period	159,227	17,913
Cash, cash equivalents and restricted cash at end of period	$ 224,133	$ 159,227
Supplemental disclosure of noncash investing and financing information:		
Public offering costs included in accounts payable and accrued expenses	$ 112	$ 576
Transfers of inventory to property and equipment	$ 940	$ 346
Accretion of redeemable convertible preferred stock to redemption value	$ —	$ 90
Conversion of convertible preferred stock to common stock upon initial public offering	$ —	$ 71,107
Reclassification of warrant liability to equity upon initial public offering	$ —	$ 6,870
Reconciliation of cash, cash equivalents and restricted cash:		
Cash and cash equivalents	$ 224,073	$ 159,227
Restricted cash included in prepaid expenses and other current assets	60	—
Total cash, cash equivalents and restricted cash shown in the statement of cash flows	$ 224,133	$ 159,227
Supplemental disclosure of cash flow information:		
Cash paid for interest	$ 366	$ 913

The accompanying notes are an integral part of these consolidated financial statements.

908 DEVICES INC.
Notes to Consolidated Financial Statements

1. Nature of the Business and Basis of Presentation

908 Devices Inc. (the "Company") was incorporated in the State of Delaware on February 10, 2012. The Company is a commercial-stage technology company providing a suite of purpose-built handheld and desktop mass spectrometry devices for the point-of-need to interrogate unknown and invisible materials in a broad array of markets including life sciences research, bioprocessing, industrial biotech, forensics and adjacent markets.

The Company is subject to risks and uncertainties common to technology companies in the device industry and of similar size, including, but not limited to, development by competitors of new technological innovations, dependence on key personnel, protection of proprietary technology, compliance with government regulations, uncertainty of market acceptance of products, and the need to obtain additional financing to fund operations. Potential risks and uncertainties also include, without limitation, uncertainties regarding the duration and magnitude of the impact of the COVID-19 pandemic on the Company's business and the economy generally. Products currently under development will require additional research and development efforts prior to commercialization and will require additional capital and adequate personnel and infrastructure. The Company's research and development may not be successfully completed, adequate protection for the Company's technology may not be obtained, the Company may not obtain necessary government regulatory approval, and approved products may not prove commercially viable. The Company operates in an environment of rapid change in technology and competition.

In March 2020, the World Health Organization declared the global novel coronavirus disease 2019 ("COVID-19") outbreak a pandemic. The impact of this pandemic has been and will likely continue to be extensive in many aspects of society, which has resulted in and will likely continue to result in significant disruptions to the global economy, as well as businesses and capital markets around the world. The Company cannot at this time predict the specific extent, duration, or full impact that the COVID-19 pandemic will have on its future financial condition and operations. The impact of the COVID-19 coronavirus outbreak on the Company's financial performance will depend on future developments, including the duration and spread of the pandemic and related governmental advisories and restrictions. These developments and the impact of COVID-19 on the financial markets and the overall economy are highly uncertain and cannot be predicted. If the financial markets and/or the overall economy are impacted for an extended period, the Company's results may be materially adversely affected.

Future impacts to the Company's business as a result of COVID-19 could include disruptions to the Company's manufacturing operations and supply chain caused by facility closures, reductions in operating hours, staggered shifts and other social distancing efforts; labor shortages; decreased productivity and unavailability of materials or components; limitations on its employees' and customers' ability to travel, and delays in shipments to and from affected countries and within the United States.

While the Company maintains an inventory of finished products and raw materials used in its products, a prolonged pandemic could lead to shortages in the raw materials necessary to manufacture its products, a prolonged pandemic could lead to shortages in the raw materials necessary to manufacture its products. An additional potential impact to the Company's business is the negative impact to the Company's customers' and potential customer's inability to make investments and timely payments for purchased products as a result of allocating resources to address COVID-19 issues.

On December 22, 2020, the Company completed its initial public offering ("IPO"), pursuant to which it issued and sold 7,475,000 shares of common stock, inclusive of 975,000 shares pursuant to the full exercise of the underwriters' option to purchase additional shares. The Company received net proceeds of $136.6 million after deducting underwriting discounts and commissions and other offering costs. Upon the closing of the IPO, all of the shares of the Company's outstanding redeemable convertible preferred stock then outstanding automatically converted into 14,691,929 shares of common stock.

On November 15, 2021, the Company completed an underwritten public offering, pursuant to which it issued and sold 3,150,000 shares of common stock at a public offering price of $32.00 per share. The Company received net proceeds of $94.4 million after deducting underwriting discounts and commissions and other offering costs.

Basis of Presentation

The Company's consolidated financial statements have been prepared in conformity with accounting principles generally accepted in the United States of America ("GAAP"). Any reference in these notes to applicable guidance is meant to refer to the authoritative GAAP as found in the Accounting Standards Codification ("ASC") and Accounting Standards Update ("ASU") of the Financial Accounting Standards Board ("FASB").

The consolidated financial statements include the accounts of the Company and its wholly owned subsidiary, 908 Devices Securities Corporation. All intercompany balances and transactions have been eliminated.

The accompanying consolidated financial statements have been prepared on the basis of continuity of operations, realization of assets and the satisfaction of liabilities and commitments in the ordinary course of business. The Company has incurred recurring losses since inception, including net losses of $22.2 million and $12.8 million for the years ended December 31, 2021 and 2020, respectively. As of December 31, 2021, the Company had an accumulated deficit of $100.6 million. The Company expects to continue to generate operating losses in the foreseeable future. As of March 11, 2022, the issuance date of the consolidated financial statements, the Company expects that its cash and cash equivalents will be sufficient to fund its operating expenses and capital expenditure requirements for at least 12 months from the issuance date of the consolidated financial statements. The Company may seek additional funding through private or public equity financings, debt financings, collaborations, strategic alliances and marketing, distribution or licensing arrangements. The Company may not be able to obtain financing on acceptable terms, or at all, and the Company may not be able to enter into collaborations or other arrangements. The terms of any financing may adversely affect the holdings or the rights of the Company's stockholders. If the Company is unable to obtain funding, the Company could be forced to delay, reduce or eliminate some or all of its research and development programs, product expansion or commercialization efforts, or the Company may be unable to continue operations. Although management continues to pursue these financing plans, there is no assurance that the Company will be successful in obtaining sufficient funding on terms acceptable to the Company to fund continuing operations, if at all.

2. Summary of Significant Accounting Policies

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, the disclosure of contingent assets and liabilities at the date of the financial statements, and the reported amounts of revenue and expenses during the reporting periods. Significant estimates and assumptions reflected in these consolidated financial statements include, but are not limited to, revenue recognition, the valuation of inventory and the valuation of common stock and stock-based awards. The Company bases its estimates on historical experience, known trends and other market-specific or other relevant factors that it believes to be reasonable under the circumstances. Due to the COVID-19 pandemic, there has been uncertainty and disruption in the global economy and financial markets. The Company is not aware of any specific event or circumstance that would require an update to its estimates or judgments or a revision of the carrying value of its assets or liabilities as of March 11, 2022, the date of issuance of these consolidated financial statements. These estimates may change, as new events occur and additional information is obtained. On an ongoing basis, management evaluates its estimates as there are changes in circumstances, facts and experience. Changes in estimates are recorded in the period in which they become known. Actual results may differ from those estimates or assumptions.

Risk of Concentrations of Credit, Significant Customers and Significant Suppliers

Financial instruments that potentially expose the Company to concentrations of credit risk consist primarily of cash and cash equivalents and accounts receivable. The Company maintains its cash and cash equivalents with two financial

institutions that management believes to be of high credit quality. The Company has not experienced any other-than-temporary losses with respect to its cash and cash equivalents and does not believe that it is subject to unusual credit risk beyond the normal credit risk associated with commercial banking relationships.

Significant customers are those that accounted for 10% or more of the Company's total revenue or accounts receivable. One customer represented 43% and 33% of total revenue, respectively, for the year ended December 31, 2021 and 2020. As of December 31, 2021, two customers accounted for 63% and 11% of gross accounts receivable. As of December 31, 2020, three customers accounted for 27%, 11% and 11%, respectively, of gross accounts receivable.

The credit and economic conditions within countries in Europe, Middle East and Africa that the Company does business with have been weak in recent years. These conditions have continued to deteriorate as a result of COVID-19 and may continue to increase the average length of time that it takes to collect on the accounts receivables outstanding in these countries. As of December 31, 2021, the gross accounts receivable balance from these countries amounted to $3.0 million, of which $1.7 million is more than 90 days past due and for which the Company has provided for an allowance for doubtful accounts of $1.7 million.

Certain of the components included in the Company's products are obtained from a sole source, a single source or a limited group of suppliers. Although the Company seeks to reduce dependence on those limited sources of suppliers and manufacturers, the partial or complete loss of certain of these sources, or the requirement to establish a new supplier for the components, could have a material adverse effect on the Company's operating results, financial condition and cash flows and damage its customer relationships.

Deferred Financing Costs

Deferred financing costs related to a recognized debt liability are recorded as a reduction of the carrying amount of the debt liability and amortized to interest expense using the effective interest method over the repayment term of the debt.

Cash Equivalents

The Company considers all highly liquid investments with original maturities of three months or less at the date of purchase to be cash equivalents.

Accounts Receivable, net

Accounts receivable are presented net of a provision for doubtful accounts, which is an estimate of amounts that may not be collectible. The allowance for doubtful accounts is the best estimate of the amount of probable credit losses in the existing accounts receivable. An allowance for doubtful accounts is established when it is probable a credit loss has been incurred based on historical collection information, a review of major customer accounts receivable balances and an assessment of current economic conditions. The Company writes off accounts receivable against the allowance when it determines a balance is uncollectible and no longer actively pursues collection of the receivable. During the year ended December 31, 2021, the Company deemed certain receivables from a customer in the Middle East uncollectible due to credit and economic conditions, including the impact of COVID-19, and recorded a provision for bad debts of $1.7 million. As of December 31, 2021 and 2020, the Company's allowance for doubtful accounts were $1.8 million and less than $0.1 million, respectively.

Inventory

Inventory is valued at the lower of cost or net realizable value. Cost is computed using the first-in, first-out method. The Company regularly reviews inventory quantities on-hand for excess and obsolete inventory and, when circumstances indicate, records charges to write down inventories to their estimated net realizable value, after evaluating historical sales, future demand, market conditions and expected product life cycles. Such charges are classified as cost of revenue in the consolidated statements of operations and comprehensive loss. Any write-down of inventory to net realizable value creates a new cost basis.

Assets Recognized from Costs to Obtain a Contract with a Customer

The Company recognizes an asset for the incremental costs of obtaining a contract with a customer if the Company expects the benefit of those costs to be longer than one year. The Company has determined that certain sales incentive programs meet the requirements to be capitalized. Total capitalized costs to obtain a contract were not significant during the periods presented and are included in other current assets and other long-term assets in the Company's consolidated balance sheets.

Leases

The Company accounts for leases under ASC 842, *Leases* ("ASC 842"). In accordance with ASC 842, the Company accounts for a contract as a lease when it has the right to control the asset for a period of time while obtaining substantially all of the asset's economic benefits. The Company determines if an arrangement is a lease or contains an embedded lease at inception. For arrangements that meet the definition of a lease, the Company determines the initial classification and measurement of its right-of-use asset and lease liability at the lease commencement date and thereafter if modified. The lease term includes any renewal options that the Company is reasonably assured to exercise. The present value of lease payments is determined by using the interest rate implicit in the lease, if that rate is readily determinable; otherwise, the Company uses its estimated secured incremental borrowing rate for that lease term. The Company's policy is to not record leases with an original term of twelve months or less on its consolidated balance sheets and recognizes those lease payments in the consolidated statements of operations and comprehensive loss on a straight-line basis over the lease term. The Company's existing leases are for office and laboratory space. In addition to rent, the leases may require the Company to pay additional costs, such as utilities, maintenance and other operating costs, which are generally referred to as non-lease components. The Company has elected to not separate lease and non-lease components. Only the fixed costs for lease components and their associated non-lease components are accounted for as a single lease component and recognized as part of a right-of-use asset and liability. Rent expense for operating leases is recognized on a straight-line basis over the reasonably assured lease term based on the total lease payments and is included in operating expense in the consolidated statements of operations and comprehensive loss.

Property and Equipment

Property and equipment are stated at cost less accumulated depreciation and amortization.

Depreciation and amortization expense is recognized using the straight-line method over the estimated useful life of each asset as follows:

	Estimated Useful Life
Laboratory and demonstration equipment	2 to 5 years
Computer equipment and software	3 years
Furniture and fixtures	7 years
Leasehold improvements	Shorter of remaining life of lease or useful life

Costs for capital assets not yet placed into service are capitalized as construction-in-progress and depreciated once placed into service. Upon retirement or sale, the cost of assets disposed of and the related accumulated depreciation and amortization are removed from the accounts and any resulting gain or loss is included in loss from operations. Expenditures for repairs and maintenance are charged to expense as incurred.

Impairment of Long-Lived Assets

Long-lived assets consist of operating lease right-of-use assets and property and equipment. Long-lived assets to be held and used are tested for recoverability whenever events or changes in business circumstances indicate that the carrying amount of the assets may not be fully recoverable. Factors that the Company considers in deciding when to perform an impairment review include significant underperformance of the business in relation to expectations, significant negative industry or economic trends and significant changes or planned changes in the use of the assets. If an impairment review is performed to evaluate a long-lived asset group for recoverability, the Company compares forecasts

of undiscounted cash flows expected to result from the use and eventual disposition of the long-lived asset group to its carrying value. An impairment loss can be recognized in loss from operations when estimated undiscounted future cash flows expected to result from the use of an asset group are less than its carrying amount. The impairment loss is based on the excess of the carrying value of the impaired asset group over its fair value, determined based on discounted cash flows. The Company did not record any impairment losses on long-lived assets during the years ended December 31, 2021 and 2020.

Software Development Costs

The Company incurs costs to develop computer software that is embedded in the hardware components of the Company's products. Research and development costs related to this software are expensed as incurred, except for costs of internally developed or externally purchased software that qualify for capitalization. Software development costs incurred subsequent to the establishment of technological feasibility, but prior to the general release of the product, are capitalized and, upon general release, are amortized based upon the pattern in which economic benefits related to such assets are realized. Due to the short time period between achieving technological feasibility and product release and the insignificant amount of costs incurred during such periods, the Company did not capitalize any software development costs during the years ended December 31, 2021 and 2020.

Fair Value Measurements

Certain assets and liabilities are carried at fair value under GAAP. Fair value is defined as 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 must maximize the use of observable inputs and minimize the use of unobservable inputs. Financial assets and liabilities carried at fair value are to be classified and disclosed in one of the following three levels of the fair value hierarchy, of which the first two are considered observable and the last is considered unobservable:

- Level 1 — Quoted prices in active markets for identical assets or liabilities.
- Level 2 — Observable inputs (other than Level 1 quoted prices), such as quoted prices in active markets for similar assets or liabilities, quoted prices in markets that are not active for identical or similar assets or liabilities, or other inputs that are observable or can be corroborated by observable market data.
- Level 3 — Unobservable inputs that are supported by little or no market activity and that are significant to determining the fair value of the assets or liabilities, including pricing models, discounted cash flow methodologies and similar techniques.

The Company's cash equivalents are carried at fair value, determined according to the fair value hierarchy described above (see Note 3). The carrying values of the Company's accounts receivable, unbilled receivables, accounts payable and accrued expenses approximate their fair values due to the short-term nature of these assets and liabilities. The carrying value of the Company's long-term debt approximates its fair value (a level 2 measurement) at each balance sheet date due to its variable interest rate, which approximates a market interest rate.

Product Warranties

The Company offers a one-year limited warranty on most products, which is included in the selling price. The Company's standard limited warranty covers repair or replacement. The Company provides for estimated warranty expenses as a component of cost of revenue at the time product revenue is recognized. Warranty costs are estimated based on the current expected product replacement or repair cost and expected replacement or repair rates based on historical experience. The Company evaluates its warranty accrual at the end of each reporting period and makes adjustments as necessary.

Classification and Accretion of Redeemable Convertible Preferred Stock

In periods prior to the IPO, the Company classified redeemable convertible preferred stock outside of stockholders' equity (deficit) because the shares contained certain redemption features that were not solely within the control of the Company. Costs incurred in connection with the issuance of each series of redeemable convertible preferred stock were recorded as a reduction of gross proceeds from issuance. The Company recorded periodic accretion to the values of its outstanding redeemable convertible preferred stock such that the carrying value of the redeemable convertible preferred stock would equal to the redemption value at the earliest date of redemption. Adjustments to the carrying values of the redeemable convertible preferred stock at each reporting date resulted in an increase or decrease to net income (loss) attributable to common stockholders.

Preferred Stock Warrant Liability

The Company classified warrants for the purchase of shares of its redeemable convertible preferred stock (see Notes 3 and 9) as a liability on its consolidated balance sheets as these warrants were freestanding financial instruments that could have required the Company to transfer assets upon exercise. The warrant liability was initially recorded at fair value upon the date of issuance of each warrant and was subsequently remeasured to fair value at each reporting date. Changes in the fair value of the warrant liability were recognized as a component of other income (expense) in the consolidated statements of operations and comprehensive loss. On December 22, 2020, immediately prior to the closing of the IPO, these warrants were converted into warrants to purchase common stock and the fair value of the warrant liability at that time was reclassified to common stock. As a result, subsequent to the closing of the IPO, the Company no longer remeasures the fair value of the warrant liabilities at each reporting date.

Segment Information

The Company manages its operations as a single segment for the purposes of assessing performance and making operating decisions. The Company provides a suite of purpose-built handheld and desktop mass spectrometry devices for use in a broad array of markets. Operating segments are defined as components of an enterprise for which separate financial information is regularly evaluated by the Company's chief operating decision maker, or decision-making group, in deciding how to allocate resources and assess performance. The Company has determined that its chief operating decision maker is its Chief Executive Officer. All of the Company's long-lived assets are held in the United States.

Revenue Recognition

The Company recognizes revenue from sales to customers under ASC 606, *Revenue from Contracts with Customers* ("ASC 606"), by applying the following five steps: (1) identification of the contract, or contracts, with a customer, (2) identification of the performance obligations in the contract, (3) determination of the transaction price, (4) allocation of the transaction price to the performance obligations in the contract and (5) recognition of revenue when, or as, performance obligations are satisfied.

For a contract with multiple performance obligations, the Company allocates the contract's transaction price to each performance obligation on a relative standalone selling price basis using the Company's best estimate of the standalone selling price of each distinct product or service in the contract. The primary method used to estimate standalone selling price is the price observed in standalone sales to customers; however, when prices in standalone sales are not available the Company may use third party pricing for similar products or services or estimate the standalone selling price, which is set by management. Allocation of the transaction price is determined at the contract's inception and is not updated to reflect changes between contract inception and when the performance obligations are satisfied.

Product and Service Revenue

The Company derives product and service revenue primarily from the sale of handheld and desktop products and related consumables and services. Revenue is recognized when control of the promised products, consumables or services is transferred to the Company's customers, in an amount that reflects the consideration the Company expects to

be entitled to in exchange for those products, consumables or services (the transaction price). A performance obligation is a promise in a contract to transfer a distinct product or service to a customer and is the unit of accounting under ASC 606. For devices and consumables sold by the Company, control transfers to the customer at a point in time. To indicate the transfer of control, the Company must have a present right to payment, legal title must have passed to the customer, the customer must have the significant risks and rewards of ownership, and where acceptance is other than perfunctory, the customer must have accepted the product or service. The Company's principal terms of sale are freight on board ("FOB") shipping point, or equivalent, and, as such, the Company primarily transfers control and records revenue for product sales upon shipment. Sales arrangements with delivery terms that are not FOB shipping point are not recognized upon shipment and the transfer of control for revenue recognition is evaluated based on the associated shipping terms and customer obligations. If a performance obligation to the customer with respect to a sales transaction remains to be fulfilled following shipment (typically installation or acceptance by the customer), revenue recognition for that performance obligation is deferred until such commitments have been fulfilled. For extended warranty and support, control transfers to the customer over the term of the arrangement. Revenue for extended warranty and support is recognized based upon the period of time elapsed under the arrangement as this period represents the transfer of benefits or services under the agreement.

The Company recognizes a receivable at the point in time at which it has an unconditional right to payment. Such receivables are not contract assets. Payment terms for customer orders, including for each of the Company's primary performance obligations, are typically 30 to 90 days after the shipment or delivery of the product, and such payments typically do not include payments that are variable, dependent on specified factors or events. In limited circumstances, there exists a right of return for product if agreed to by the Company. Revenue is only recognized for those goods that are not expected to be returned such that it is probable that there will not be a significant reversal of cumulative revenue. Service arrangements commonly call for payments in advance of performing the work (e.g., extended warranty/service contracts), upon completion of the service or a mix of both. The Company does not enter into significant financing agreements or other forms of variable consideration.

Contract assets arise from unbilled amounts in customer arrangements when revenue recognized exceeds the amount billed to the customer and the Company's right to payment is not only subject to the passage of time. The Company had no contract assets related to product or service revenue as of December 31, 2021 or 2020.

Contract liabilities represent the Company's obligation to transfer goods or services to a customer for which it has received consideration (or the amount is due) from the customer. The Company has determined that its only contract liability related to product and service revenue is deferred revenue, which consists of amounts that have been invoiced but that have not been recognized as revenue. Amounts expected to be recognized as revenue within 12 months of the balance sheet date are classified as current deferred revenue and amounts expected to be recognized as revenue beyond 12 months of the balance sheet date are classified as noncurrent deferred revenue.

The following is a summary of the activity of the Company's deferred revenue related to product and service revenue (in thousands):

	Year Ended December 31,	
	2021	2020
Balances at beginning of period	$ 8,938	$ 1,509
Recognition of revenue included in balance at beginning of the period	(2,363)	(666)
Other adjustments	(110)	—
Revenue deferred during the period, net of revenue recognized	8,056	8,095
Balances at end of period	$ 14,521	$ 8,938

The amount of deferred revenue equals the transaction price allocated to unfulfilled performance obligations for the period presented. Such deferred revenue amounts related to product and service revenue are expected to be recognized in the future as follows (in thousands):

	Year Ended December 31,	
	2021	2020
Deferred revenue expected to be recognized in:		
One year or less	$ 5,063	$ 2,850
One to two years	3,731	1,934
Three years and beyond	5,727	4,154
	$ 14,521	$ 8,938

As of December 31, 2021, the Company's wholly- or partially-unsatisfied performance obligations totaled $7.6 million related to product and service agreements entered prior to year end, which the Company expects to recognize through 2024.

License and Contract Revenue

The Company generates revenue from short and long-term contracts associated with the design and development and delivery of detection devices or related design and support services. To date, these contracts are primarily with the U.S. government or commercial entities contracting with the U.S. government, but the Company has also had such contracts with commercial partners. The Company's contracts with the U.S. government typically are subject to the Federal Acquisition Regulation ("FAR") and are priced based on estimated or actual costs of producing goods or providing services. The FAR provides guidance on the types of costs that are allowable in establishing prices for goods or services provided under U.S. government contracts. The pricing for non-U.S. government contracts is based on the specific negotiations with each customer.

Under the typical payment terms of U.S. government fixed-price contracts, the customer pays in accordance with the terms of the specific agreement, but generally through progress payments. If these progress payments are made in advance, these payments are recorded as a contract liability, classified as deferred revenue within the accompanying consolidated balance sheet, until the Company provides the underlying services. For U.S. government cost-type contracts, the customer generally pays for actual costs incurred within a short period of time. For contracts with commercial partners, payments are made in accordance with the terms of the specific agreement. For agreements which call for milestone payments, to the extent the Company does not conclude that it is probable that a significant reversal of cumulative revenue will occur, a contract asset is generated until the Company is permitted to bill for costs incurred, which is classified as prepaid expense and other current assets in the accompanying consolidated balance sheet. In some cases, payments received in advance under license agreements are recorded as deferred revenue and recognized over the respective contract term, absent any other performance obligations.

Generally, revenue for long-term contracts is recognized based upon the cost-to-cost measure of progress, provided that the Company meets the criteria associated with transferring control of the good or service over time such as not creating an asset with an alternative use and having an enforceable right to payment for completed performance. However, the Company evaluates the proper revenue recognition on a contract by contract basis, as each contract generally contains terms specific to the underlying agreement which result in differing performance obligations and payment terms (cost plus, fixed price agreements among others). For revenue recognized under the cost-to-cost measure of progress basis, the Company continually assesses total costs expected to be incurred and if such costs require adjustment to the measure of progress, the Company records such adjustment as a change in estimate on a cumulative catch-up basis in the period of adjustment.

The Company includes the unconstrained amount of consideration in the transaction price. The amount included in the transaction price is constrained to the amount for which it is probable that a significant reversal of cumulative

revenue recognized will not occur. At the end of each subsequent reporting period, as required under ASC 606, the Company re-evaluates the estimated consideration included in the transaction price and any related constraint, and if necessary, adjusts its estimate of the overall transaction price. Any such adjustments are recorded on a cumulative catch-up basis in the period of adjustment.

Contract assets arise from unbilled amounts in customer arrangements when revenue recognized exceeds the amount billed to the customer and the Company's right to payment is not just subject to the passage of time. The Company includes contract assets within prepaid and other current assets in the accompanying consolidated balance sheet. The Company had contract assets related to contract or license revenue totaling $0.2 million and less than $0.1 million, respectively, for the years ended December 31, 2021 and 2020.

Contract liabilities represent the Company's obligation to transfer goods or services to a customer for which it has received consideration (or the amount is due) from the customer. As of December 31, 2021, the Company had contract liabilities totaling $2.6 million related to contract and license revenue, which the Company expects to recognize during the years ended December 31, 2022 and 2023. As of December 31, 2020, the Company had contract liabilities totaling $2.8 million related to contract and license revenue, of which the Company recognized $0.2 million during the year ended December 31, 2021. The Company recognizes deferred revenue by first allocating from the beginning deferred revenue balance to the extent that the beginning deferred revenue balance exceeds the revenue to be recognized. Billings during the period are added to the deferred revenue balance to be recognized in future periods. As of December 31, 2021, the Company's wholly- or partially-unsatisfied performance obligations totaled $0.7 million related to contract and license agreements entered into prior to year end, which the Company expects to recognize during the years ended December 31, 2022 and 2023.

Distribution Channels

A majority of the Company's revenue is generated by sales in conjunction with its distribution partners, such as its international distributors and, in the United States, for end customers where a government contract is required or a customer has a pre-existing relationship. When the Company transacts with a distribution partner, its contractual arrangement is with the partner and not with the end-use customer. Whether the Company transacts business with and receives the order from a distribution partner or directly from an end-use customer, its revenue recognition policy and resulting pattern of revenue recognition for the order are the same.

Disaggregated Revenue

The Company's product and service revenue consists of sales of devices and consumables and the sale of service and extended warranty plans. The following table presents the Company's revenue by revenue stream (in thousands):

	Year Ended December 31,	
	2021	2020
Product and service revenue:		
Device sales revenue	$ 33,287	$ 21,269
Consumables and service revenue	7,821	3,487
Total product and service revenue	41,108	24,756
License and contract revenue	1,098	2,138
Total revenue	$ 42,206	$ 26,894

The following table presents the Company's product and service revenue by device type (in thousands):

	Year Ended December 31,	
	2021	2020
Handheld	$ 29,160	$ 17,613
Desktop	11,948	7,143
Total product and service revenue	$ 41,108	$ 24,756

Revenue based on the end-user entity type for the Company's product and service revenue are presented below (in thousands):

	Year Ended December 31,	
	2021	2020
Government	$ 29,755	$ 17,382
Pharmaceutical/Biotechnology	11,264	7,096
Academia	89	278
Total product and service revenue	$ 41,108	$ 24,756

The following table disaggregates the Company's revenue from contracts with customers by geography, which are determined based on the customer location (in thousands):

	Year Ended December 31,	
	2021	2020
Americas	$ 35,502	$ 22,166
Europe, Middle East and Africa	4,460	2,844
Asia Pacific	2,244	1,884
	$ 42,206	$ 26,894

International sales are comprised of product and service revenue, with all license and contract revenue being attributable to North America.

Shipping and Handling Fees and Costs

Shipping and handling fees billed to customers for product shipments are recorded in product and service revenue in the accompanying consolidated statements of operations and comprehensive loss. Shipping and handling costs incurred for inventory purchases and product shipments are recorded in cost of revenue in the accompanying consolidated statements of operations and comprehensive loss.

Cost of Revenue

Product cost of revenue primarily consists of costs for raw material parts and associated freight, shipping and handling costs, royalties, contract manufacturer costs, salaries and other personnel costs, overhead and other direct costs related to those sales recognized as product revenue in the period.

Cost of revenue for services primarily consists of salaries and other personnel costs, travel related to services provided, facility costs associated with training, warranties and other costs of servicing equipment on a return-to-factory basis and at customer sites. License and contract cost of revenue primarily consists of salaries and other personnel costs, materials, travel and other direct costs related to those revenue recognized as license and contract in the period.

Research and Development Expenses

Research and development expenses consist primarily of employee-related expenses incurred for research activities, product development, hardware and software engineering, consultant services and other costs associated with the Company's technology platform and products, research materials and facilities, depreciation and maintenance expense.

Advertising Expense

The Company expenses costs of advertising as incurred. Advertising costs were $1.7 million and $0.4 million during the years ended December 31, 2021 and 2020, respectively.

Patent Costs

All patent-related costs incurred in connection with filing and prosecuting patent applications are expensed as incurred due to the uncertainty about the recovery of the expenditure. Amounts incurred are classified as general and administrative expenses.

Stock-Based Compensation

The Company measures stock-based option awards granted to employees, consultants and directors based on their fair value on the date of grant using the Black-Scholes option-pricing model. The fair value of restricted stock units is determined based on the number of shares granted and the closing price of our common stock quoted on the Nasdaq Global Market on the date of grant. Compensation expense for those awards is recognized, net of estimated forfeitures, over the requisite service period, which is generally the vesting period of the respective award. The straight-line method of expense recognition is applied to all awards with service-only conditions, while the graded vesting method is applied to all grants with both service and performance conditions.

The Company classifies stock-based compensation expense in its consolidated statements of operations and comprehensive loss in the same manner in which the award recipient's payroll costs are classified or in which the award recipient's service payments are classified.

Comprehensive Loss

Comprehensive loss includes net loss as well as other changes in stockholders' equity (deficit) that result from transactions and economic events other than those with stockholders. For the years ended December 31, 2021 and 2020, there was no difference between net loss and comprehensive loss.

Net Income (Loss) per Share

Prior to the closing of the IPO, the Company followed the two-class method when computing net income (loss) per share, as the Company had issued shares that meet the definition of participating securities. The two-class method determines net income (loss) per share for each class of common and participating securities according to dividends declared or accumulated and participation rights in undistributed earnings. The two-class method requires income available to common stockholders for the period to be allocated between common and participating securities based upon their respective rights to receive dividends as if all income for the period had been distributed.

Basic net income (loss) per share attributable to common stockholders is computed by dividing the net income (loss) attributable to common stockholders by the weighted average number of common shares outstanding for the period. Diluted net income (loss) attributable to common stockholders is computed by adjusting net income (loss) attributable to common stockholders to reallocate undistributed earnings based on the potential impact of dilutive securities. Diluted net income (loss) per share attributable to common stockholders is computed by dividing the diluted net income (loss) attributable to common stockholders by the weighted average number of common shares outstanding for the period, including potential dilutive common shares assuming the dilutive effect of common stock equivalents.

The Company's convertible preferred stock contractually entitled the holders of such shares to participate in dividends but does not contractually require the holders of such shares to participate in losses of the Company. Accordingly, in periods in which the Company reports a net loss, such losses are not allocated to such participating securities. In periods in which the Company reports a net loss attributable to common stockholders, diluted net loss per share attributable to common stockholders is the same as basic net loss per share attributable to common stockholders, since dilutive common shares are not assumed to have been issued if their effect is anti-dilutive.

Subsequent to the closing of its IPO, the Company only has one class of shares outstanding and basic net income (loss) per common share is computed by dividing the net income (loss) by the weighted average number of shares of common stock outstanding for the period. Diluted net income (loss) per common share is computed by dividing net income (loss) by the weighted average number of shares of common stock outstanding for the period, including potential

dilutive common shares assuming the dilutive effect of outstanding stock awards. For periods in which the Company reports a net loss, diluted net loss per common share is the same as basic net loss per common share, since dilutive common shares are not assumed to have been issued if their effect is anti-dilutive. The Company reported a net loss attributable to common stockholders for each of the years ended December 31, 2021 and 2020.

Income Taxes

The Company accounts for income taxes using the asset and liability method, which requires the recognition of deferred tax assets and liabilities for the expected future tax consequences of events that have been recognized in the consolidated financial statements or in the Company's tax returns. Deferred tax assets and liabilities are determined on the basis of the differences between the financial statements and tax basis of assets and liabilities using enacted tax rates in effect for the year in which the differences are expected to reverse. Changes in deferred tax assets and liabilities are recorded in the provision for income taxes. The Company assesses the likelihood that its deferred tax assets will be recovered from future taxable income and, to the extent it believes, based upon the weight of available evidence, that it is more likely than not that all or a portion of the deferred tax assets will not be realized, a valuation allowance is established through a charge to income tax expense. Potential for recovery of deferred tax assets is evaluated by estimating the future taxable profits expected and considering prudent and feasible tax planning strategies.

The Company accounts for uncertainty in income taxes recognized in the consolidated financial statements by applying a two-step process to determine the amount of tax benefit to be recognized. First, the tax position must be evaluated to determine the likelihood that it will be sustained upon external examination by the taxing authorities. If the tax position is deemed more-likely-than-not to be sustained, the tax position is then assessed to determine the amount of benefit to recognize in the consolidated financial statements. The amount of the benefit that may be recognized is the largest amount that has a greater than 50% likelihood of being realized upon ultimate settlement. The provision for income taxes includes the effects of any resulting tax reserves, or unrecognized tax benefits, which are considered appropriate as well as the related net interest and penalties.

Recently Adopted Accounting Pronouncements

In August 2018, the FASB issued ASU No. 2018-13, *Fair Value Measurement (Topic 820): Disclosure Framework—Changes to the Disclosure Requirements for Fair Value Measurement* which eliminates, modifies, and adds disclosure requirements on fair value measurements. The standard is effective for annual periods beginning after December 15, 2019, including interim periods within those fiscal years. The Company adopted this guidance as of January 1, 2020 and the adoption did not have a material impact on its consolidated financial statements.

Recently Issued Accounting Pronouncements

The Company qualifies as "emerging growth company" as defined in the Jumpstart Our Business Startups Act of 2012 and has elected not to "opt out" of the extended transition related to complying with new or revised accounting standards, which means that when a standard is issued or revised and it has different application dates for public and nonpublic companies, the Company will adopt the new or revised standard at the time nonpublic companies adopt the new or revised standard and will do so until such time that the Company either (i) irrevocably elects to "opt out" of such extended transition period or (ii) no longer qualifies as an emerging growth company.

In June 2016, the FASB issued ASU No. 2016-13, *Financial Instruments—Credit Losses (Topic 326)*. The new standard adjusts the accounting for assets held at amortized costs basis, including marketable securities accounted for as available for sale, and trade receivables. The standard eliminates the probable initial recognition threshold and requires an entity to reflect its current estimate of all expected credit losses. The allowance for credit losses is a valuation account that is deducted from the amortized cost basis of the financial assets to present the net amount expected to be collected. For public entities except smaller reporting companies, the guidance is effective for annual reporting periods beginning after December 15, 2019 and for interim periods within those fiscal years. For non-public entities and smaller reporting companies, the guidance was effective for annual reporting periods beginning after December 15, 2021. In November 2019, the FASB issued ASU No. 2019-10, which deferred the effective date for non-public entities to annual reporting periods beginning after December 15, 2022, including interim periods within those fiscal years. Early

application is allowed. The Company is currently assessing the date of the adoption and the impact of the adoption of this guidance on its consolidated financial statements.

In December 2019, the FASB issued ASU 2019-12, *Income Taxes (ASC 740): Simplifying the Accounting for Income Taxes* ("ASU 2019-12"), which is intended to simplify various areas related to accounting for income taxes. ASU 2019-12 removes certain exceptions to the general principles in ASC 740 and also clarifies and amends existing guidance to improve consistent application. For public entities the guidance is effective for annual reporting periods beginning after December 15, 2020 and for interim periods within those fiscal years. For non-public entities, the guidance is effective for annual reporting periods beginning after December 15, 2021 and for interim periods within years beginning after December 15, 2022, with early adoption permitted. The Company is currently evaluating the impact of this standard on its consolidated financial statements.

3. Fair Value Measurements

The following tables present the Company's fair value hierarchy for its assets and liabilities that are measured at fair value on a recurring basis (in thousands):

	Fair Value Measurements at December 31, 2021 Using:			
	Level 1	Level 2	Level 3	Total
Assets:				
Cash equivalents:				
Money market funds	$ 634	$ —	$ —	$ 634

	Fair Value Measurements at December 31, 2020 Using:			
	Level 1	Level 2	Level 3	Total
Assets:				
Cash equivalents:				
Money market funds	$ 339	$ —	$ —	$ 339

Money market funds were valued by the Company based on quoted market prices, which represent a Level 1 measurement within the fair value hierarchy. There were no transfers into or out of Level 3 during the years ended December 31, 2021 and 2020.

4. Inventory

Inventory consisted of the following (in thousands):

	December 31,	
	2021	2020
Raw materials	$ 6,242	$ 2,099
Work-in-progress	551	213
Finished goods	1,125	2,256
	$ 7,918	$ 4,568

5. Property and Equipment, Net

Property and equipment, net consisted of the following (in thousands):

	December 31,	
	2021	2020
Laboratory and demonstration equipment	$ 4,789	$ 4,394
Computer equipment and software	139	417
Furniture and fixtures	112	193
Leasehold improvements	21	21
	5,061	5,025
Less: Accumulated depreciation and amortization	(3,458)	(4,175)
	$ 1,603	$ 850

Depreciation expense amounted to $0.9 million and $0.8 million in each of the years ended December 31, 2021 and 2020, respectively.

6. Accrued Expenses

Accrued expenses consisted of the following (in thousands):

	December 31,	
	2021	2020
Accrued employee compensation and benefits	$ 3,271	$ 2,069
Accrued warranty	1,593	1,265
Accrued professional fees	710	975
Accrued other	1,387	729
	$ 6,961	$ 5,038

Changes in the Company's product warranty obligation are as follows (in thousands):

	Year Ended December 31,	
	2021	2020
Accrual balance at beginning of period	$ 1,265	$ 968
Provision for new warranties	1,776	1,273
Settlements and adjustments made during the period	(1,448)	(976)
Accrual balance at end of period	$ 1,593	$ 1,265

7. Long-Term Debt

Long-term debt consisted of the following (in thousands):

	December 31,	
	2021	2020
Principal amount of long-term debt	$ 15,000	$ 15,000
Less: Current portion of long-term debt	—	(500)
Long-term debt, net of current portion	15,000	14,500
Debt discount, net of accretion	—	(168)
Long-term debt, net of discount and current portion	$ 15,000	$ 14,332

Loan and Security Agreements

As of December 31, 2020, the Company had outstanding borrowings under a Loan and Security Agreement, as amended (the "2019 Loan") with a financial institution (the "Lender"). On March 11, 2021, the Company entered into an

Amended and Restated Loan and Security Agreement, (the "2021 Revolver"), with the Lender to replace the 2019 Loan. This agreement created a revolving line of credit totaling $25.0 million and eliminated the existing term loan. Borrowings under the revolving line of credit bear interest at an annual rate equal to the greater of (i) one-half percent (0.5%) above the prime rate or (ii) 4.0% and mature on March 11, 2024. Borrowings are collateralized by substantially all of the Company's property, excluding intellectual property, which is subject to a negative pledge. The 2021 Revolver subjects the Company to various customary covenants, including requirements as to financial reporting and financial covenants (including an unrestricted minimum cash level of $10.0 million), and restrictions on the Company's ability to dispose of its business or property, to change its line of business, to liquidate or dissolve, to enter into any change in control transaction, to merge or consolidate with any other entity or to acquire all or substantially all the capital stock or property of another entity, to incur additional indebtedness, to incur liens on the Company's property, to pay any dividends or make other distributions on capital stock other than dividends payable solely in capital stock, to redeem capital stock, to enter into in-bound licensing agreements, to engage in transactions with affiliates, and to encumber the Company's intellectual property. Events of default under the 2021 Revolver include failure to make payments when due, insolvency events, failure to comply with covenants or material adverse events with respect to the Company. Upon the occurrence of an event of default and until such event of default is no longer continuing, the annual interest rate will be 5.0% above the otherwise applicable rate. As of December 31, 2021, the Company was in compliance with all financial covenants under the 2021 Revolver. The total long-term debt under the 2021 Revolver of $15 million is due in 2024.

The terms of the 2021 Revolver required that the existing term loan outstanding under the 2019 Loan be repaid with an advance under the line of credit. Accordingly, on March 11, 2021, the Company used $14.5 million of proceeds from the revolving line of credit to repay all amounts then due on the existing term loan. The Company accounted for the transaction as a debt extinguishment and recorded a loss on extinguishment of $0.2 million, which was included in interest expense in the condensed consolidated statements of operations and comprehensive loss.

In accordance with the applicable accounting standards, a short-term debt obligation should be excluded from current liabilities if the entity has both the intent and ability to refinance the obligation on a long-term basis. The intent and ability can be demonstrated by the issuance of a long-term obligation to refinance the short-term obligation on a long-term basis after the date of an entity's balance sheet but before that balance sheet is issued. Due to the initial drawdown of the 2021 Revolver to repay the amount outstanding under the 2019 Loan, the Company classified $14.5 million of debt outstanding as of December 31, 2020 as long-term debt, net of current portion. Principal amounts totaling $0.5 million paid in the first quarter of 2021 prior to entering the 2021 Revolver were classified as current portion of long-term debt as of December 31, 2020.

Paycheck Protection Program Loan

On April 18, 2020, the Company issued a Promissory Note to Signature Bank, pursuant to which it received loan proceeds of $2.2 million (the "Loan") provided under the Paycheck Protection Program established under the Coronavirus Aid, Relief, and Economic Security Act and guaranteed by the U.S. Small Business Administration (the "Paycheck Protection Program"). However, based on updated guidance related to this program, the Company repaid the Loan on May 4, 2020. The Loan was unsecured, was scheduled to mature on April 18, 2022, had a fixed interest rate of 1.0% per annum and was subject to the standard terms and conditions applicable to loans administered under the Paycheck Protection Program.

8. Warrants

In connection with its lease agreement and debt agreements, the Company had outstanding warrants to purchase Preferred Stock as of December 31, 2019. The Company classified all of its Preferred Stock warrants as a liability on its consolidated balance sheets because these warrants were freestanding financial instruments that could have required the Company to transfer assets upon exercise. Upon the closing of the IPO in December 2020, the Company's outstanding warrants to purchase Preferred Stock automatically became warrants to purchase an aggregate of 154,634 shares of common stock. The liability associated with each of these warrants was initially recorded at fair value upon the issuance

date of each warrant and, subsequent to the closing of the IPO on December 22, 2020, the Company no longer remeasures the fair value of the warrant liability at each reporting date.

In December 2020, holders of 61,931 warrants completed a cashless exercise of the warrants, resulting in the Company's issuance of 55,994 shares of common stock.

As of December 31, 2021 and 2020, the Company had outstanding warrants for the purchase of 92,703 shares of common stock at an exercise price of $9.17 per share, of which warrants for the purchase of 49,078 shares and 43,625 shares expire in 2027 and 2028, respectively.

9. Equity

Preferred Stock

On December 22, 2020, the Company filed a restated certificate of incorporation in the State of Delaware, which, among other things, restated the number of shares of all classes of stock that the Company has authority to issue to 105,000,000 shares, consisting of (i) 100,000,000 shares of common stock, $0.001 par value per share, and (ii) 5,000,000 shares of preferred stock, $0.001 par value per share. The preferred stock will have such rights, preferences, privileges and restrictions, including voting rights, dividend rights, conversion rights, redemption privileges and liquidation preferences, as shall be determined by the Company's board of directors upon issuance. The shares of preferred stock are currently undesignated.

Common Stock

Each share of common stock entitles the holder to one vote on all matters submitted to a vote of the Company's stockholders. Common stockholders are not entitled to receive dividends, unless declared by the board of directors.

Reverse Stock Split

On December 11, 2020, the Company effected a one-for-1.6271 reverse stock split of its issued and outstanding shares of common stock and a proportional adjustment to the existing conversion ratios for each series of the Company's Preferred Stock. Accordingly, all share and per share amounts for all periods presented in the accompanying consolidated financial statements and notes thereto have been adjusted retroactively, where applicable, to reflect this reverse stock split and adjustment of the Preferred Stock conversion ratios.

Public Offerings

On December 22, 2020, the Company completed its IPO, pursuant to which it issued and sold 7,475,000 shares of common stock, inclusive of 975,000 shares sold by the Company pursuant to the full exercise of the underwriters' option to purchase additional shares. The aggregate net proceeds received by the Company from the IPO were $136.6 million, after deducting underwriting discounts and commissions and other offering costs. Upon the closing of the IPO, all of the shares of the Company's outstanding convertible preferred stock then outstanding automatically converted into 14,691,929 shares of common stock. Upon the closing of the IPO in December 2020, all 23,905,267 shares of the Company's outstanding Preferred Stock automatically converted into 14,691,929 shares of common stock and, therefore, there was no outstanding Preferred Stock at December 31, 2020.

On November 15, 2021, the Company completed an underwritten public offering, pursuant to which it issued and sold 3,150,000 shares of common stock at a public offering price of $32.00 per share. The Company received net proceeds of $94.4 million after deducting underwriting discounts and commissions and other offering costs.

10. Stock-Based Compensation

2012 Stock Option and Grant Plan

The Company's 2012 Stock Option and Grant Plan (the "2012 Plan") provided for the Company to sell or issue incentive stock options or nonqualified stock options, stock appreciation rights, restricted stock, restricted stock units and other stock-based awards to employees, directors and non-employee consultants of the Company. The 2012 Plan was administered by the board of directors or, at the discretion of the board of directors, by a committee of the board of directors. The exercise prices, vesting and other restrictions were determined at the discretion of the board of directors, or its committee if so delegated. Following the effectiveness of the Company's 2020 Stock Option and Incentive Plan (the "2020 Plan") in December 2020, no future awards will be made under the 2012 Plan. Additionally, shares underlying awards under the 2012 Plan that expire or are terminated, surrendered, or canceled without the delivery of shares will be available for future awards under the 2020 Plan.

2020 Stock Option and Incentive Plan

On November 23, 2020, the Company's board of directors adopted, and on December 11, 2020, the Company's stockholders approved the 2020 Stock Option and Incentive Plan (the "2020 Stock Plan"), which became effective on December 17, 2020. The 2020 Stock Plan provides for the grant of incentive stock options, nonqualified stock options, stock appreciation rights, restricted stock, restricted stock units, unrestricted stock, unrestricted stock units, dividend equivalent rights and cash-based awards to employees, directors and consultants of the Company. The total number of shares of common stock that may be issued under the 2020 Plan is 1,843,771 shares plus the number of shares underlying awards under the 2012 Plan that expire or are terminated, surrendered, or cancelled without the delivery of shares, are forfeited to or repurchased or otherwise become available again for grant under the 2012 Plan. As of December 31, 2021, 1,680,321 shares remained available for future issuance under the 2020 Plan. The 2020 Plan provides that the number of shares reserved and available for issuance under the 2020 Plan will automatically increase on each January 1 by 4% of the outstanding number of shares of our common stock on the immediately preceding December 31 or such lesser number of shares as determined by the administrator of the 2020 Stock Plan. On January 1, 2022, the number of shares reserved and available for issuance under the 2020 Plan automatically increased by 1,243,080 shares.

2020 Employee Stock Purchase Plan

On November 23, 2020, the Company's board of directors adopted, and on December 11, 2020, the Company's stockholders approved the 2020 Employee Stock Purchase Plan (the "2020 ESPP"), which became effective on December 17, 2020. A total of 288,857 shares of common stock of the Company are reserved for issuance under the 2020 ESPP. As of December 31, 2021, 288,857 shares remained available for issuance under the 2020 ESPP. On November 1, 2021, the first 6-month offering period under the 2020 ESPP commenced, which period shall run through April 30, 2022, at which time the first issuances under the 2020 ESPP are expected to take place. The 2020 ESPP provides that the number of shares reserved and available for issuance will automatically increase on January 1, 2022 and each January 1 thereafter through January 1, 2030, by the least of (i) 307,295 shares of our common stock, (ii) 1% of the outstanding number of shares of common stock on the immediately preceding December 31, or (iii) such lesser number of shares of common stock as determined by the administrator of the 2020 ESPP. On January 1, 2022, the number of shares reserved and available for issuance under the 2020 ESPP automatically increased by 307,295 shares.

Stock Option Valuation

The fair value of stock option grants is estimated using the Black-Scholes option-pricing model. The Company historically has been a private company and has limited company-specific historical and implied volatility information. Therefore, it estimates its expected stock volatility based on the historical volatility of a publicly traded set of peer companies and expects to continue to do so until such time as it has adequate historical data regarding the volatility of its own traded stock price. For options with service-based vesting conditions, the expected term of the Company's stock options has been determined utilizing the "simplified" method for awards that qualify as "plain-vanilla" options. The risk-free interest rate is determined by reference to the U.S. Treasury yield curve in effect at the time of grant of the

award for time periods approximately equal to the expected term of the award. Expected dividend yield is based on the fact that the Company has never paid cash dividends and does not expect to pay any cash dividends in the foreseeable future.

The following table presents, on a weighted average basis, the assumptions used in the Black-Scholes option-pricing model to determine the grant-date fair value of stock options granted:

	Year Ended December 31,	
	2021	2020
Risk-free interest rate	1.1 %	0.4 %
Expected volatility	65 %	60 %
Expected dividend yield	—	—
Expected term (in years)	6	6

The following table summarizes the Company's option activity for the fiscal year ended December 31, 2021:

	Number of Shares	Weighted Average Exercise Price	Weighted Contractual Term	Aggregate Intrinsic Value
			(in years)	(in thousands)
Outstanding at beginning of period	3,405,698	$ 2.27	7.1	$ 186,234
Granted	65,256	36.89		
Exercised	(671,661)	1.33		
Forfeited	(52,252)	2.19		
Outstanding at end of period	2,747,041	$ 3.32	6.7	$ 62,714
Vested and expected to vest at end of period	2,682,327	$ 3.27	6.6	$ 61,353
Exercisable at end of period	1,766,726	$ 2.01	5.7	$ 42,324

The aggregate intrinsic value of stock options is calculated as the difference between the exercise price of the stock options and the fair value of the Company's common stock for those stock options that had exercise prices lower than the fair value of the Company's common stock. The aggregate intrinsic value of stock options exercised during the years ended December 31, 2021 and 2020 was $24.0 million and $1.6 million, respectively. As of December 31, 2021, total unrecognized compensation cost related to unvested stock options was $3.2 million, which is expected to be recognized over a weighted average period of 2.5 years.

The weighted average grant-date fair value of stock options granted during the years ended December 31, 2021 and 2020 was $20.34 per share and $2.89 per share, respectively.

The following table summarizes the Company's restricted stock units activity for the fiscal year ended December 31, 2021:

	Number of Shares	Weighted Average Grant Date Fair Value
Unvested at beginning of period	—	$ —
Granted	197,669	36.43
Vested and released	(174)	57.47
Forfeited	(9,731)	46.78
Unvested at end of period	187,764	$ 35.87

The remaining unrecognized compensation expense for outstanding restricted stock units as of December 31, 2021 was $5.2 million and the weighted-average period over which this cost will expected to be recognized is 3.3 years. The total fair value of restricted stock units vested in fiscal year 2021 was less than $0.1 million as of December 31, 2021.

Stock-Based Compensation

The Company recorded stock-based compensation expense in the following expense categories of its consolidated statements of operations and comprehensive loss (in thousands):

	Year Ended December 31,	
	2021	2020
Cost of revenue	$ 97	$ 37
Research and development expenses	448	129
Selling, general and administrative expenses	1,959	359
	$ 2,504	$ 525

11. Leases

The Company has leases for office space and certain equipment. All of the leases recorded on the consolidated balance sheets as ROU assets are operating leases. The Company's leases have remaining lease terms ranging from less than one year to approximately four years. Some of the leases include options to extend the lease for up to two years and these options were not included for the purpose of determining the right-of-use assets and associated lease liabilities as the Company determined that the renewal of these leases is not reasonably certain. The leases do not include any restrictions or covenants that had to be accounted for under the lease guidance.

On January 2, 2018, the Company entered a new operating lease in Boston, Massachusetts (the "Lease"), for 37,500 rentable square feet of office space and is considered the Company's corporate headquarters. A security deposit of $0.5 million was paid to the property owner and the Company issued a warrant to purchase 70,983 shares of Series D preferred stock at a purchase price of $5.6351 per share. The initial fair value of the warrants of $0.3 million was recorded as additional rent payments, increasing the value of the ROU asset and preferred stock warrant liability.

The initial term of the lease is through July 2025 and has additional renewal options. The annualized base rent will increase by 2.5% annually on the anniversary of the commencement date. The Company is obligated to pay its portion of real estate taxes and costs related to the premise, including costs of operations, maintenance, repair, replacement and management of the new leased premises.

The Company had a facility lease in California for approximately 1,500 square feet that expired in February 2021. The Company also has a facility lease in North Carolina for approximately 2,000 square feet that had an expiration date of November 2020. In October 2020, the Company entered into an extension agreement for the North Carolina lease to extend it for an additional two years until November 2022.

The components of lease expense under ASC 842 were as follows (in thousands):

	Year Ended December 31,	
	2021	2020
Operating lease cost	$ 1,780	$ 1,806
Short-term lease cost	20	13
Variable lease cost	541	243
	$ 2,341	$ 2,062

Supplemental disclosure of cash flow information related to leases was as follows (in thousands):

	Year Ended December 31,	
	2021	2020
Cash paid for amounts included in the measurement of operating lease liabilities	$ 1,855	$ 1,795
Operating lease liabilities arising from obtaining right-of-use assets	$ 16	$ 92

The weighted-average remaining lease term and discount rate were as follows:

	December 31,	
	2021	2020
Weighted-average remaining lease term - operating leases (in years)	3.72	4.71
Weighted-average discount rate - operating leases	9.5 %	9.4 %

The interest rate implicit in lease contracts is typically not readily determinable and as such, the Company uses its incremental borrowing rate based on information available at the lease commencement date, which represents an internally developed rate that would be incurred to borrow, on a collateralized basis, over a similar term, an amount equal to the lease payments in a similar economic environment.

Future annual minimum lease payments under operating leases as of December 31, 2021 are as follows (in thousands):

Year Ending December 31,	
2022	$ 1,841
2023	1,833
2024	1,878
2025	1,435
Total future minimum lease payments	6,987
Less: imputed interest	(1,135)
Total operating lease liabilities	$ 5,852

12. Commitments and Contingencies

Leases

The Company’s commitments under its leases are described in Note 11.

Royalty Arrangements

The Company has entered into royalty arrangements with two parties whereby the Company owes low- to mid-single digit royalty percentages related to revenue that is derived pursuant to in-licensed technologies. Royalty obligations are expensed when incurred or over the minimum royalty periods and have not been material. Some of the arrangements include minimum royalties over a defined term.

The future minimum royalty payments are $0.1 million per year, through the end of the patents’ lives. The Company has the right to terminate the agreements with written notice.

401(k) Savings Plan

The Company has a defined-contribution savings plan under Section 401(k) of the Internal Revenue Code. This plan covers substantially all employees who meet minimum age and service requirements and allows participants to defer a portion of their annual compensation on a pre-tax basis. Company contributions to the plan may be made at the

discretion of the board of directors. The Company started matching contributions under the plan in 2021 and made or accrued contributions of $0.1 million for the year ended December 31, 2021.

Indemnification Agreements

In the ordinary course of business, the Company may provide indemnification of varying scope and terms to vendors, lessors, business partners and other parties with respect to certain matters including, but not limited to, losses arising out of breach of such agreements or from intellectual property infringement claims made by third parties. In addition, the Company has entered into indemnification agreements with its executive officers and members of its board of directors that will require the Company, among other things, to indemnify them against certain liabilities that may arise by reason of their status or services as directors or officers. The maximum potential amount of future payments the Company could be required to make under these indemnification agreements is, in many cases, unlimited. To date, the Company has not incurred any material costs as a result of such indemnifications. The Company is not currently aware of any indemnification claims and had not accrued any liabilities related to such obligations in its consolidated financial statements as of December 31, 2021 and 2020.

Legal Proceedings

The Company is not currently party to any material legal proceedings. At each reporting date, the Company evaluates whether or not a potential loss amount or a potential range of loss is probable and reasonably estimable under the provisions of the authoritative guidance that addresses accounting for contingencies. The Company expenses as incurred the costs related to such legal proceedings.

13. Net Loss

Basic and diluted net loss per share attributable to common stockholders was calculated as follows (in thousands, except share and per share amounts):

	Year Ended December 31,	
	2021	2020
Numerator:		
Net loss and comprehensive loss	$ (22,169)	$ (12,819)
Accretion of redeemable convertible preferred stock to redemption value	—	(90)
Net loss attributable to common stockholders	$ (22,169)	$ (12,909)
Denominator:		
Weighted average common shares outstanding basic and diluted	27,957,904	5,485,032
Net loss per share attributable to common stockholders, basic and diluted	$ (0.79)	$ (2.35)

The Company's potential dilutive securities have been excluded from the computation of diluted net loss per share as the effect would be to reduce the net loss per share. Therefore, the weighted average number of common shares outstanding used to calculate both basic and diluted net loss per share attributable to common stockholders is the same. 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 had an anti-dilutive effect:

	December 31,	
	2021	2020
Warrants to purchase common stock	92,703	92,703
Options to purchase common stock	2,747,041	3,405,698
Restricted stock units	187,764	—
	3,027,508	3,498,401

14. Income Taxes

During the years ended December 31, 2021 and 2020, the Company did not record income tax benefits for the net operating losses incurred or for the research and development tax credits generated in each year, due to its uncertainty of realizing a benefit from those items. The Company does not have any foreign operations and therefore, has not provided for any foreign taxes.

A reconciliation of the U.S. federal statutory income tax rate to the Company's effective income tax rate is as follows:

	Year Ended December 31,	
	2021	2020
Federal statutory income tax rate	(21.0)%	(21.0)%
State income taxes, net of federal benefit	(6.8)	(2.2)
Federal and state research and development tax credits	(4.5)	(2.8)
Nondeductible items	(11.7)	10.9
Other	—	(0.4)
Change in valuation allowance	44.0	15.5
Effective income tax rate	0.0 %	0.0 %

Net deferred tax assets consisted of the following (in thousands):

	December 31,	
	2021	2020
Deferred tax assets:		
Net operating loss carryforwards	$ 20,054	$ 14,688
Research and development tax credit carryforwards	7,054	6,064
Lease liability	1,483	1,871
Deferred Revenue	2,160	134
Accrued expenses and other	3,194	1,730
Total deferred tax assets	33,945	24,487
Deferred tax liabilities:		
Right-of-use asset	(1,314)	(1,602)
Total deferred tax liabilities	(1,314)	(1,602)
Valuation allowance	(32,631)	(22,885)
Net deferred tax assets	$ —	$ —

As of December 31, 2021, the Company had U.S. federal and state net operating loss carryforwards of $80.4 million and $52.3 million, respectively, which may be available to offset future taxable income and begin to expire in 2032 and 2025, respectively, of which $46.0 million of federal net operating losses do not expire. As of December 31, 2021, the Company also had U.S. federal and state research and development tax credit carryforwards of $4.8 million and $2.7 million, respectively, which may be available to offset future tax liabilities and begin to expire in 2032 and 2029, respectively.

Utilization of the U.S. federal and state net operating loss carryforwards and research and development tax credit carryforwards may be subject to a substantial annual limitation under Sections 382 and 383 of the Internal Revenue Code of 1986, and corresponding provisions of state law, due to ownership changes that have occurred previously or that could occur in the future. These ownership changes may limit the amount of carryforwards that can be utilized annually to offset future taxable income or tax liabilities. In general, an ownership change, as defined by Section 382, results from transactions increasing the ownership of certain stockholders or public groups in the stock of a corporation by more than 50% over a three-year period. The Company has not conducted a study to assess whether a change of control has occurred or whether there have been multiple changes of control since inception due to the significant complexity and cost associated with such a study. If the Company has experienced a change of control, as defined by Section 382, at any time since inception, utilization of the net operating loss carryforwards or research and development tax credit

carryforwards would be subject to an annual limitation under Section 382, which is determined by first multiplying the value of the Company's stock at the time of the ownership change by the applicable long-term tax-exempt rate, and then could be subject to additional adjustments, as required. Any limitation may result in expiration of a portion of the net operating loss carryforwards or research and development tax credit carryforwards before utilization. Further, until a study is completed by the Company and any limitation is known, no amounts are being presented as an uncertain tax position.

The Company has not conducted a study to document qualified activities for research and development tax credits generated. Such a study may result in an adjustment to the Company's research and development tax credit carryforwards; however, until a study is completed, and any adjustment is known, no amounts are being presented as an uncertain tax position.

The Company has evaluated the positive and negative evidence bearing upon its ability to realize the deferred tax assets. Management has considered the Company's history of cumulative net operating losses incurred since inception and has concluded that it is more likely than not that the Company will not realize the benefits of the deferred tax assets. Accordingly, a full valuation allowance has been established against the net deferred tax assets as of December 31, 2021 and 2020. Management reevaluates the positive and negative evidence at each reporting period.

Changes in the valuation allowance for deferred tax assets related primarily to the increase in net operating loss carryforwards and research and development tax credit carryforwards and were as follows (in thousands):

	Year Ended December 31,	
	2021	2020
Valuation allowance as of beginning of year	$ 22,885	$ 20,903
Increases recorded to income tax provision	9,746	1,982
Valuation allowance as of end of year	$ 32,631	$ 22,885

As of December 31, 2021 and 2020, the Company had not recorded any amounts for unrecognized tax benefits. The Company's policy is to record interest and penalties related to income taxes as part of its income tax provision. As of December 31, 2021 and 2020, the Company had no accrued interest or penalties related to uncertain tax positions and no amounts had been recognized in the Company's consolidated statements of operations and comprehensive loss. The Company files 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. The Company is open to future tax examination under statute from 2018 to the present; however, carryforward attributes that were generated prior to 2018 may still be adjusted upon examination by federal, state or local tax authorities if they either have been or will be used in a future period. The Company is currently under examination by the Internal Revenue Service for the year ending December 31, 2018. No material adjustments have been proposed to date. The Company has not received notice of examination by any other jurisdictions for any other tax year open under statute.

15. Related Party Transactions

Commercial Services Agreement

In 2015, the Company entered into a commercial services agreement with one of its preferred stock investors under which the investor became eligible for payment of $1.5 million upon the achievement of certain sales and marketing milestones by December 31, 2016. Payment of the milestones was only upon the occurrence of a deemed liquidation event prior to an IPO. The Company accounted for the commercial services agreement liability as a financial instrument that may have required a transfer of assets because of the liquidation features. The liability was remeasured to fair value at each reporting period based on the probability of the occurrence of a deemed liquidation event. Upon the closing of the Company's IPO in December 2020, the obligation was resolved, and the Company was no longer required to pay such milestone payments. Accordingly, the Company recorded other income of $0.8 million during the year ended December 31, 2020 to reduce the fair value of the liability to zero.

16. Subsequent Event

Grant of Restricted Stock Units and Stock Options under the 2020 Plan

On March 1, 2022, the Company granted 555,173 restricted stock units to employees under the 2020 Stock Plan. The restricted stock units vest over a four-year period. The restricted stock units were valued based on market value of the Company's closing stock price at the date of grant and had an aggregate fair value of $9.2 million, which is being amortized as stock compensation expense over the vesting term.

On March 1, 2022, the Company granted 337,194 stock options to employees under the 2020 Stock Plan. The stock options vest over a four-year period. The stock options have an exercise price of $16.66, which was the Company's closing stock price at the date of grant. The total fair value of these stock options at the grant date was $3.4 million using the Black-Scholes option pricing model, and the value is being amortized as stock compensation expense over the vesting term.

Item 9. Changes in and Disagreements with Accountants on Accounting and Financial Disclosure.

None.

Item 9A. Controls and Procedures.

Evaluation of Disclosure Controls and Procedures

Evaluation of Disclosure Controls and Procedures. Our principal executive officer and principal financial officer, after evaluating the effectiveness of our disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) as of the end of the period covered by this Annual Report on Form 10-K, have concluded that, based on such evaluation, our disclosure controls and procedures were effective to ensure that information required to be disclosed by us in the reports that we file or submit under the Exchange Act is recorded, processed, summarized and reported, within the time periods specified in the SEC's rules and forms, and is accumulated and communicated to our management, including our principal executive and principal financial officers, or persons performing similar functions, as appropriate to allow timely decisions regarding required disclosure.

Changes in Internal Control over Financial Reporting. There were no changes in our internal control over financial reporting, identified in connection with the evaluation of such internal control that occurred during the quarter ended December 31, 2021 that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

Management's Annual Report on Internal Control over Financial Reporting. Our management is responsible for establishing and maintaining adequate internal control over financial reporting. Internal control over financial reporting is defined in Rules 13a-15(f) and 15d-15(f) under the Exchange Act, as a process designed by, or under the supervision of, our principal executive officer and principal financial officer and effected by our board of directors, management and other personnel to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. Our internal control over financial reporting includes those policies and procedures that:

- pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of our assets;
- provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that our receipts and expenditures are being made only in accordance with authorizations of management and our directors; and
- provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use or disposition of our assets that could have a material effect on the financial statements.

Under the supervision and with the participation of our management, including our principal executive officer and principal financial officer, we conducted an evaluation of the effectiveness of our internal control over financial reporting based on the 2013 framework in Internal Control—Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission. Based on our evaluation under that framework, our management concluded that our internal controls over financial reporting were effective as of December 31, 2021.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

Attestation Report on Internal Control over Financial Reporting. This Annual Report on Form 10-K does not include an attestation report of our independent registered public accounting firm on internal control over financial reporting due to the deferral allowed under the JOBS Act for emerging growth companies.

Item 9B. Other Information.

None.

Item 9C. Disclosure Regarding Foreign Jurisdictions that Prevent Inspections.

Not applicable.

PART III

Item 10. Directors, Executive Officers and Corporate Governance.

The information required by this Item 10 will be included in our Definitive Proxy Statement to be filed with the Securities and Exchange Commission, or SEC, with respect to our 2022 Annual Meeting of Stockholders and is incorporated herein by reference.

Our board of directors has adopted a Code of Business Conduct and Ethics applicable to all officers, directors and employees, including our principal executive officer, principal financial officer, principal accounting officer or controller, or persons performing similar functions. A copy of the Code is available at the Investors section of our website, located at ir.908devices.com, under “Corporate Governance—Documents & Charters.” We intend to make all required disclosures regarding any amendments to, or waivers from, any provisions of the Code at the same location of our website.

Item 11. Executive Compensation.

The information required by this Item 11 will be included in our Definitive Proxy Statement to be filed with the SEC with respect to our 2022 Annual Meeting of Stockholders and is incorporated herein by reference.

Item 12. Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters.

The information required by this Item 12 will be included in our Definitive Proxy Statement to be filed with the SEC with respect to our 2022 Annual Meeting of Stockholders and is incorporated herein by reference.

Item 13. Certain Relationships and Related Transactions, and Director Independence.

The information required by this Item 13 will be included in our Definitive Proxy Statement to be filed with the SEC with respect to our 2022 Annual Meeting of Stockholders and is incorporated herein by reference.

Item 14. Principal Accountant Fees and Services.

The information required by this Item 14 will be included in our Definitive Proxy Statement to be filed with the SEC with respect to our 2022 Annual Meeting of Stockholders and is incorporated herein by reference.

PART IV

Item 15. Exhibit and Financial Statement Schedules

(a) 1. Financial Statements

For a list of the financial statements included herein, see Index to Consolidated Financial Statements in this Annual Report on Form 10-K, incorporated into this Item by reference.

2. Financial Statement Schedules

Financial statement schedules have been omitted because they are either not required or not applicable or the information is included in the consolidated financial statements or the notes thereto.

3. Exhibits

See the Exhibit Index in Item 15(b) below.

(b) Exhibit Index.

Exhibit Number	Description
3.1	Sixth Amended and Restated Certificate of Incorporation of the Registrant, as currently in effect (incorporated by reference to Exhibit 3.3 to the Registrant's Registration Statement on Form S-1 (File No. 333-250954) filed with the SEC on November 25, 2020)
3.2	Amended and Restated By-laws of the Registrant, as currently in effect (incorporated by reference to Exhibit 3.5 to the Registrant's Registration Statement on Form S-1 (File No. 333-250954) filed with the SEC on December 14, 2020)
4.1	Fourth Amended and Restated Stockholders Agreement among the Registrant, certain of its stockholders and its investors, dated April 12, 2019 (incorporated by reference to Exhibit 4.1 to the Registrant's Registration Statement on Form S-1 (File No. 333-250954) filed with the SEC on November 25, 2020)
4.2	Fourth Amended and Restated Registration Rights Agreement among the Registrant, certain of its stockholders and its investors, dated April 12, 2019 (incorporated by reference to Exhibit 4.2 to the Registrant's Registration Statement on Form S-1 (File No. 333-250954) filed with the SEC on November 25, 2020)
4.3	Form of Specimen Common Stock Certificate (incorporated by reference to Exhibit 4.3 to the Registrant's Registration Statement on Form S-1 (File No. 333-250954) filed with the SEC on December 14, 2020)
4.4	Warrant Agreement, dated March 15, 2017, between Hercules Technology III, L.P. and the Registrant (incorporated by reference to Exhibit 4.6 to the Registrant's Registration Statement on Form S-1 (File No. 333-250954) filed with the SEC on December 14, 2020)
4.5	Warrant Agreement, dated September 7, 2018, between PEI Investments, LLC and the Registrant (incorporated by reference to Exhibit 4.7 to the Registrant's Registration Statement on Form S-1 (File No. 333-250954) filed with the SEC on December 14, 2020)
4.6	Description of Securities (incorporated by reference to Exhibit 4.6 to the Registrant's Annual Report on Form 10-K (File No. 001-39815) filed with the SEC on March 31, 2021)

10.1#	2012 Stock Option and Grant Plan, as amended and forms of award agreements thereunder (incorporated by reference to Exhibit 10.1 to the Registrant's Registration Statement on Form S-1 (File No. 333-250954) filed with the SEC on December 14, 2020)
10.2#	2020 Stock Option and Incentive Plan and forms of award agreements thereunder (incorporated by reference to Exhibit 10.2 to the Registrant's Registration Statement on Form S-1 (File No. 333-250954) filed with the SEC on December 14, 2020)
10.3#	2020 Employee Stock Purchase Plan (incorporated by reference to Exhibit 10.13 to the Registrant's Registration Statement on Form S-1 (File No. 333-250954) filed with the SEC on December 14, 2020)
10.4#	Senior Executive Cash Incentive Bonus Plan (incorporated by reference to Exhibit 10.14 to the Registrant's Registration Statement on Form S-1 (File No. 333-250954) filed with the SEC on December 14, 2020)
10.5#*	Amended and Restated Non-Employee Director Compensation Policy
10.6#	Form of Director Indemnification Agreement (incorporated by reference to Exhibit 10.3 to the Registrant's Registration Statement on Form S-1 (File No. 333-250954) filed with the SEC on December 14, 2020)
10.7#	Form of Executive Officer Indemnification Agreement (incorporated by reference to Exhibit 10.4 to the Registrant's Registration Statement on Form S-1 (File No. 333-250954) filed with the SEC on December 14, 2020)
10.8#	Form of Executive Officer Employment Agreement (incorporated by reference to Exhibit 10.5 to the Registrant's Registration Statement on Form S-1(File No. 333-250954) filed with the SEC on November 25, 2020)
10.9+	Amended and Restated Exclusive License Agreement between the Registrant and The University of North Carolina at Chapel Hill, dated May 20, 2015, as amended (incorporated by reference to Exhibit 10.6 to the Registrant's Registration Statement on Form S-1 (File No. 333-250954) filed with the SEC on December 16, 2020)
10.10+	Limited Exclusive Commercial Field of Use Patent License Agreement between the Registrant and UT-Battle LLC, dated June 13, 2012, as amended (PLA-1670) (incorporated by reference to Exhibit 10.7 to the Registrant's Registration Statement on Form S-1 (File No. 333-250954) filed with the SEC on December 16, 2020)
10.11+	Limited Exclusive Commercial Field of Use Patent License Agreement between the Registrant and UT-Battle LLC, dated June 13, 2012, as amended (PLA-1699) (incorporated by reference to Exhibit 10.8 to the Registrant's Registration Statement on Form S-1 (File No. 333-250954) filed with the SEC on December 16, 2020)
10.12+	Loan and Security Agreement between the Registrant and Signature Bank, dated August 29, 2019 (incorporated by reference to Exhibit 10.9 to the Registrant's Registration Statement on Form S-1 (File No. 333-250954) filed with the SEC on December 16, 2020)
10.13+	First Amendment to Loan and Security Agreement between the Registrant and Signature Bank, dated March 15, 2020 (incorporated by reference to Exhibit 10.10 to the Registrant's Registration Statement on Form S-1 (File No. 333-250954) filed with the SEC on November 25, 2020)
10.14+	Second Amendment to Loan and Security Agreement between the Registrant and Signature Bank, dated August 7, 2020 (incorporated by reference to Exhibit 10.11 to the Registrant's Registration Statement on Form S-1 (File No. 333-250954) filed with the SEC on November 25, 2020)
10.15+	Amended and Restated Loan and Security Agreement between the Registrant and Signature Bank, dated March 11, 2021 (incorporated by reference to Exhibit 10.1 to the Registrant's Current Report on Form 8-K (File No. 001-039815) filed with the SEC on March 15, 2021)
10.16	Lease by Harbor Industrial Development LLC to the Registrant, dated January 2, 2018, as amended (incorporated by reference to Exhibit 10.12 to the Registrant's Registration Statement on Form S-1 (File No. 333-250954) filed with the SEC on November 25, 2020)
21.1*	Subsidiaries of the Registrant
23.1*	Consent of PricewaterhouseCoopers LLP, Independent Registered Public Accounting Firm, PCAOB ID 238
31.1*	Certification of Principal Executive Officer Pursuant to Rules 13a-14(a) and 15d-14(a) under the Securities Exchange Act of 1934, as Adopted Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.

31.2*	Certification of Principal Financial Officer Pursuant to Rules 13a-14(a) and 15d-14(a) under the Securities Exchange Act of 1934, as Adopted Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.
32.1**	Certification of Principal Executive Officer Pursuant to 18 U.S.C. Section 1350, as Adopted Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.
32.2**	Certification of Principal Financial Officer Pursuant to 18 U.S.C. Section 1350, as Adopted Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.
101.INS*	Inline XBRL Instant Document
101.SCH*	Inline XBRL Taxonomy Extension Schema Document
101.CAL*	Inline XBRL Taxonomy Extension Calculation Linkbase Document
101.LAB*	Inline XBRL Taxonomy Extension Labels Linkbase Document
101.PRE*	Inline XBRL Taxonomy Extension Presentation Linkbase Document
101.DEF*	Inline XBRL Taxonomy Extension Definition Linkbase Document
104*	Cover Page Data File (the cover page XBRL tags are embedded within the iXBRL document).

# Indicates a management contract or any compensatory plan, contract or arrangement.

+ Confidential treatment has been granted as to certain portions, which portions have been omitted and submitted separately to the SEC.

* Filed herewith.

** The certifications furnished in Exhibit 32.1 and 32.2 hereto are deemed to accompany this Annual Report on Form 10-K and will not be deemed “filed” for purposes of Section 18 of the Securities Exchange Act of 1934, as amended. Such certifications will not be deemed to be incorporated by reference into any filings under the Securities Act of 1933, as amended, or the Securities Exchange Act of 1934, as amended, except to the extent that the Registrant specifically incorporates it by reference.

Item 16. Form 10–K Summary.

None.

SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

908 DEVICES INC.

Date: March 11, 2022

By: /s/ Kevin J. Knopp, Ph.D.
Kevin J. Knopp, Ph.D.
Chief Executive Officer

Pursuant to the requirements of the Securities Exchange Act of 1934, this report has been signed below by the following persons on behalf of the registrant in the capacities and on the dates indicated.

Signature	Title	Date
/s/ Kevin J. Knopp, Ph.D. Kevin J. Knopp, Ph.D.	Chief Executive Officer and Director (Principal Executive Officer)	March 11, 2022
/s/ Joseph H. Griffith IV Joseph H. Griffith IV	Chief Financial Officer (Principal Financial and Accounting Officer)	March 11, 2022
/s/ E. Kevin Hrusovsky E. Kevin Hrusovsky	Chairman of the Board of Directors	March 11, 2022
/s/ Nicolas Barthelemy Nicolas Barthelemy	Director	March 11, 2022
/s/ Keith L. Crandell Keith L. Crandell	Director	March 11, 2022
/s/ Fenel M. Eloi Fenel M. Eloi	Director	March 11, 2022
/s/ Jeffrey P. George Jeffrey P. George	Director	March 11, 2022
/s/ Marsha Eisenberg, Ph.D. Marsha Eisenberg, Ph.D.	Director	March 11, 2022
/s/ Mark Spoto Mark Spoto	Director	March 11, 2022
/s/ Tony J. Hunt Tony J. Hunt	Director	March 11, 2022

908 DEVICES INC.

AMENDED AND RESTATED
NON-EMPLOYEE DIRECTOR COMPENSATION POLICY

The purpose of this Non-Employee Director Compensation Policy (the "Policy") of 908 Devices Inc. (the "Company") is to provide a total compensation package that enables the Company to attract and retain, on a long-term basis, high-caliber directors who are not employees or officers of the Company or its subsidiaries ("non-employee directors"). In furtherance of the purpose stated above, all non-employee directors shall be paid compensation for services provided to the Company as set forth below:

Cash Retainers

Annual Retainer for Board Membership: $40,000 for general availability and participation in meetings and conference calls of our Board of Directors, to be paid quarterly in arrears, pro-rated based on the number of actual days served by the director during such calendar quarter. No additional compensation will be paid for attending individual meetings of the Board of Directors.

Additional Annual Retainer for Non-Executive Chair:	$40,000

Additional Annual Retainers for Committee Membership:

Audit Committee Chair:	$20,000
Audit Committee member:	$10,000
Compensation Committee Chair:	$20,000
Compensation Committee member:	$10,000
Nominating and Corporate Governance Committee Chair:	$15,000
Nominating and Corporate Governance Committee member:	$7,500

Chair and committee member retainers are in addition to retainers for members of the Board of Directors. No additional compensation will be paid for attending individual committee meetings of the Board of Directors.

Equity Retainers

Initial Award: An initial, one-time equity award (the “Initial Award”), representing $200,000 of value on the grant date, will be granted to each new non-employee director upon his or her election to the Board of Directors, with 50% of the value allocated to Restricted Stock Unit awards (“RSUs”), and 50% of the value allocated to Non-Qualified Stock Option awards (“NQSOs”).

The number of RSUs issued shall be calculated by dividing $100,000 by the closing market price on the NASDAQ Global Market (or such other market on which the Company’s common stock is then principally listed) of a share of the Company’s common stock on the effective date of grant, and rounding up to the next whole number of shares.

The number of NQSOs granted shall be calculated by dividing $100,000 by the fair value calculated under ASC Topic 718 (i.e., Black-Scholes Value) of an option to purchase a share of the Company’s common stock on the effective date of grant, and rounding up to the next whole number of shares. The NQSOs subject to the Initial Award shall expire ten years from the date of grant and the exercise price per share of such NQSOs shall be the closing market price on the NASDAQ Global Market (or such other market on which the Company’s common stock is then principally listed) of a share of the Company’s common stock on the effective date of grant.

The RSUs shall vest annually over three (3) years from the director commencement date, with pro rata vesting upon termination of service for any reason, and the NQSOs shall vest monthly over three (3) years from the director commencement date.

Annual Award: On or about the date of each Annual Meeting of Stockholders of the Company (the “Annual Meeting”), each continuing non-employee director, other than a director who joined the Board of Directors and received an Initial Award within 90 days of such Annual Meeting, will receive an annual equity award (the “Annual Award”), representing $135,000 of value on the grant date, with 50% of the value allocated to RSUs, and 50% of the value allocated to NQSOs.

The number of RSUs issued shall be calculated by dividing $67,500 by the closing market price on the NASDAQ Global Market (or such other market on which the Company’s common stock is then principally listed) of a share of the Company’s common stock on the effective date of grant, and rounding up to the next whole number of shares.

The number of NQSOs granted shall be calculated by dividing $67,500 by the fair value calculated under ASC Topic 718 (i.e., Black-Scholes Value) of an option to purchase a share of the Company’s common stock on the effective date of grant, and rounding up to the next whole number of shares. The NQSOs subject to the Annual Award shall expire ten years from the date of grant and the exercise price per share of such NQSOs shall be the closing market price on the NASDAQ Global Market (or such other market on which the Company’s common stock is then principally listed) of a share of the Company’s common stock on the effective date of grant.

The RSUs shall vest in full at the one year anniversary of the Annual Meeting, or the day prior to the next Annual Meeting, whichever is first to occur, with pro rata vesting upon termination of service for any reason, and the NQSOs shall vest monthly over one (1) year from the date of the Annual Meeting.

Sale Event Acceleration: All outstanding Initial Awards and Annual Awards held by a non-employee director shall become fully vested and exercisable upon a Sale Event (as defined in the Company's 2020 Stock Option and Incentive Plan).

Expenses

The Company will reimburse all reasonable out-of-pocket expenses incurred by non-employee directors in attending meetings of the Board of Directors or any committee thereof.

Effective as of January 1, 2022.

Exhibit 21.1

SUBSIDIARIES OF THE REGISTRANT

Company Name	Jurisdiction
908 Devices Securities Corporation	Massachusetts

Exhibit 23.1

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We hereby consent to the incorporation by reference in the Registration Statement on Form S-8 (No. 333-251755) of 908 Devices Inc. of our report dated March 11, 2022 relating to the financial statements, which appears in this Form 10-K.

/s/ PricewaterhouseCoopers LLP
Boston, Massachusetts
March 11, 2022

Exhibit 31.1

CERTIFICATION PURSUANT TO

RULES 13a-14(a) AND 15d-14(a) UNDER THE SECURITIES EXCHANGE ACT OF 1934,

AS ADOPTED PURSUANT TO SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002

I, Kevin J. Knopp, Ph.D., certify that:

1. I have reviewed this Annual Report on Form 10-K of 908 Devices Inc.;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) for the registrant and have:

    a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

    b) (Paragraph omitted pursuant to SEC Release Nos. 33-8238/34-47986 and 33-8392/34-49313);

    c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

    d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):

    a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

    b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: March 11, 2022

By: /s/ Kevin J. Knopp, Ph.D.
Kevin J. Knopp, Ph.D.
Chief Executive Officer
(Principal Executive Officer)

Exhibit 31.2

CERTIFICATION PURSUANT TO

RULES 13a-14(a) AND 15d-14(a) UNDER THE SECURITIES EXCHANGE ACT OF 1934,

AS ADOPTED PURSUANT TO SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002

I, Joseph H. Griffith IV, certify that:

1. I have reviewed this Annual Report on Form 10-K of 908 Devices Inc.;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) for the registrant and have:

    a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

    b) (Paragraph omitted pursuant to SEC Release Nos. 33-8238/34-47986 and 33-8392/34-49313);

    c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

    d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):

    a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

    b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: March 11, 2022

By: /s/ Joseph H. Griffith IV
Joseph H. Griffith IV
Chief Financial Officer
(Principal Financial and Accounting Officer)

Exhibit 32.1

CERTIFICATION PURSUANT TO

18 U.S.C. SECTION 1350, AS ADOPTED PURSUANT TO

SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002

In connection with the Annual Report on Form 10-K of 908 Devices Inc. (the "Company") for the year ended December 31, 2021, as filed with the Securities and Exchange Commission on the date hereof (the "Report"), the undersigned, Kevin J. Knopp, Ph.D., Chief Executive Officer of the Company, hereby certifies, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that to the best of his knowledge:

(1) The Report fully complies with the requirements of section 13(a) or 15(d) of the Securities Exchange Act of 1934; and

(2) The information contained in the Report fairly presents, in all material respects, the financial condition and result of operations of the Company.

Date: March 11, 2022

By: /s/ Kevin J. Knopp, Ph.D.
Kevin J. Knopp, Ph.D.
Chief Executive Officer
(Principal Executive Officer)

Exhibit 32.2

CERTIFICATION PURSUANT TO

18 U.S.C. SECTION 1350, AS ADOPTED PURSUANT TO

SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002

In connection with the Annual Report on Form 10-K of 908 Devices Inc. (the "Company") for the year ended December 31, 2021, as filed with the Securities and Exchange Commission on the date hereof (the "Report"), the undersigned, Joseph H. Griffith IV, Chief Financial Officer of the Company, hereby certifies, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that to the best of his knowledge:

(1) The Report fully complies with the requirements of section 13(a) or 15(d) of the Securities Exchange Act of 1934; and

(2) The information contained in the Report fairly presents, in all material respects, the financial condition and result of operations of the Company.

Date: March 11, 2022

By: /s/ Joseph H. Griffith IV
Joseph H. Griffith IV
Chief Financial Officer
(Principal Financial and Accounting Officer)