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, 2022

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 001-40538

ALPHA TEKNOVA, INC.

(Exact name of registrant as specified in its charter)

Delaware	**94-3368109**
(State or other jurisdiction of incorporation or organization)	**(I.R.S. Employer Identification No.)**
2451 Bert Dr.	
Hollister, CA	**95023**
(Address of principal executive offices)	**(Zip Code)**

Registrant's telephone number, including area code: (831) 637-1100

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 $0.00001 per share	TKNO	The Nasdaq Stock Market LLC

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 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, 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. ☐

If securities are registered pursuant to Section 12(b) of the Act, indicate by check mark whether the financial statements of the registrant included in the filing reflect the correction of an error to previously issued financial statements. ☐

Indicate by check mark whether any of those error corrections are restatements that required a recovery analysis of incentive-based compensation received by any of the registrant's executive officers during the relevant recovery period pursuant to §240.10D-1(b). ☐

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 the voting and non-voting common equity held by non-affiliates of the Registrant, based on the closing price of the shares of common stock on June 30, 2022 was $58,751,616.

The number of shares of Registrant's Common Stock outstanding as of March 28, 2023 was 28,190,192.

DOCUMENTS INCORPORATED BY REFERENCE

Portions of the Registrant's Proxy Statement relating to the 2023 Annual Meeting of Stockholders are incorporated by reference into Part III of this Annual Report on Form 10-K where indicated. Such Proxy Statement, or an amendment to this Annual Report on Form 10-K, will be filed with the Securities and Exchange Commission within 120 days after the end of the registrant's fiscal year ended December 31, 2022.

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CAUTIONARY NOTE REGARDING FORWARD-LOOKING STATEMENTS

This Annual Report on Form 10-K contains forward-looking statements that involve substantial risks and uncertainties. All statements other than statements of historical facts contained in this Annual Report on Form 10-K, including statements relating to our financial condition, results of operations, plans, objectives, future performance and business, are forward-looking statements. In some cases, you can identify forward-looking statements because they contain words such as “may,” “will,” “should,” “expects,” “plans,” “anticipates,” “could,” “intends,” “target,” “projects,” “contemplates,” “believes,” “estimates,” “predicts,” “would,” “potential,” “likely,” or “continue” or the negative of these terms or other similar expressions. Forward-looking statements contained in this Annual Report on Form 10-K include, but are not limited to, statements about:

- our ability to meet our publicly announced guidance or other expectations about our business;
- our future financial performance, including our revenue, costs of revenue, and operating expenses;
- our ability to grow profitability;
- our ability to expand our operations and increase capacity;
- our anticipated uses of cash in the short and long terms and the sufficiency of our sources of liquidity;
- our ability to defend against claims and mitigate adverse results from any legal proceedings against us and the merits of any claims or suits against us;
- our ability to maintain cash and cash equivalents and limit our accounts receivable and credit risk exposure;
- our future investments in additional facilities to facilitate our expected growth;
- our future uses of capital to purse potential acquisitions that further or accelerate our strategy;
- our future use of equity or debt financings to execute our business strategy;
- our ability to take advantage of certain exemptions from various reporting requirements generally applicable to public companies;
- our expectations regarding the period during which we qualify as an emerging growth company under the Jumpstart Our Business Startups Act of 2012 (the JOBS Act);
- the impact of recent accounting pronouncements on our financial position, results of operations, or cash flows;
- any failure to maintain effective internal controls over financial reporting or fully remediate any weaknesses in our internal controls that may arise or be identified in the future;
- the impact of changes to our internal control over financial reporting, other than changes intended to remediate material weaknesses;
- the impact of any pandemic, epidemic, or outbreak of infectious disease (including COVID-19), natural disasters, geopolitical unrest, war (including in Ukraine), terrorism, public health issues or other catastrophic events may have on our business and our ability to actively manage our response to these types of events;
- our future adoption of critical accounting policies and estimates;
- our ability to increase the scale and capacity of our manufacturing processes and systems;
- the impact of increased competition from additional companies entering the market and the availability of more advanced technologies in the market;
- the impact of global economic conditions on us and our customers;
- our ability to hire and retain key personnel;
- our ability to obtain capital on favorable terms, or at all;

- our ability to generate future revenue growth from introducing new products to support the growing cell and gene therapy market and the increasing use of messenger ribonucleic acid (mRNA) vaccines and therapies;
- our ability to generate future revenue growth in market segments such as cell and gene therapy, liquid biopsy, and synthetic biology;
- the impact of increased costs on our operations, including materials, labor, inflation, and rising interest rates;
- our ability to use cash on hand to meet current and future financial obligations, including funding our operations, debt service requirements, and capital expenditures;
- our ability to access our invested cash or cash equivalents;
- the enforceability of our exclusive forum provisions in our amended and restated certificate of incorporation;
- our customers' sensitivity to product nonconformances, defects, and errors;
- the availability of exemption of our products from compliance with the U.S. Food, Drug and Cosmetic Act (FDCA);
- our ability to secure and maintain a stable supply of raw materials in the future;
- our ability to maintain a corporate culture that contributes to our success;
- the marketability of our products across a wide range of markets and the probability of success or revenue opportunity in our target markets;
- regulatory developments in the United States and other countries;
- the impact of revenue recognition rules and other factors on our financial results;
- our ability to obtain, maintain, and enforce intellectual property protection for our current and future products, including our ability to protect our trade secrets, trademarks, and trade names; and
- the ongoing expenses associated with being a public company.

We have based the forward-looking statements contained in this Annual Report on Form 10-K primarily on our current expectations and projections about future events and trends that we believe may affect our business, financial condition, results of operations, prospects, business strategy, and financial needs. The outcome of the events described in these forward-looking statements is subject to risks, uncertainties, assumptions, and other factors described in the section titled "Risk Factors" and elsewhere in this Annual Report on Form 10-K. Other sections of this Annual Report on Form 10-K describe additional factors that could adversely impact our business and financial performance. Furthermore, new risks and uncertainties emerge from time to time, and it is not possible for us to predict all risks and uncertainties that could have an impact on the forward-looking statements contained in this Annual Report on Form 10-K. This Annual Report on Form 10-K therefore does not contain an exhaustive list of all potential risks. We cannot assure you that the results, events, and circumstances reflected in the forward-looking statements will be achieved or occur, and actual results, events, or circumstances could differ materially from those described in the forward-looking statements.

In addition, statements that "we believe" and similar statements reflect our beliefs and opinions on the relevant subject, based upon information available to us as of the date of this Annual Report on Form 10-K. While we believe that information forms a reasonable basis for such statements, it may be limited or incomplete, and our statements should not be read to indicate that we have conducted an exhaustive inquiry into, or review of, all potentially available relevant information. These statements are inherently uncertain, and investors are cautioned not to rely upon them unduly.

The forward-looking statements in this Annual Report on Form 10-K are made as of the date hereof. We undertake no obligation to update any forward-looking statements after the date of this Annual Report on Form 10-K or to conform such statements to actual results or revised expectations, except as required by law.

You should read this Annual Report on Form 10-K and the documents to which we refer herein and have filed as exhibits completely and with the understanding that our actual future results, levels of activity, performance, and achievements may be materially different from what we expect. We qualify all of our forward-looking statements by these cautionary statements.

RISK FACTOR SUMMARY

Below is a summary of the principal factors that make an investment in our common stock speculative or risky. This summary does not address all of the risks that we face. Additional discussion of the risks summarized in this risk factor summary, and other risks that we face, can be found below beginning at "Risks Related to Our Business and Strategy" within this Item 1A., "Risk Factors" and should be carefully considered, together with other information in this Annual Report on Form 10-K and our other filings with the Securities and Exchange Commission before making investment decisions regarding our common stock.

- We have incurred operating losses in the past and may incur losses in the future.
- Our operating results may fluctuate significantly in the future, making them difficult to predict, and they could fall below expectations or any guidance we may provide.
- Our efforts to increase the capacity and efficiency of our manufacturing processes and systems could be disruptive to our operations and adversely affect our results of operations and financial condition, and we may not realize some, all, or any of the anticipated benefits of these initiatives in the time frame anticipated.
- Natural disasters (including earthquakes, fire, and drought), geopolitical unrest, war (including the war in Ukraine), terrorism, public health issues (including the ongoing COVID-19 pandemic) or other catastrophic events, some possibly related to the increasing effects of climate change, could disrupt the supply, production, delivery, or demand of our products, which could negatively affect our operations and performance.
- We depend on a limited number of customers for a high percentage of our revenue. If we cannot maintain our current relationships with customers, if we fail to sustain recurring sources of revenue with our existing customers, or if we fail to enter into new customer relationships, our future operating results could be adversely affected.
- We compete with life science, pharmaceutical, and biotechnology companies, some of whom are our customers, who are substantially larger than we are and potentially capable of developing new approaches that could make our products and technology obsolete or develop their own internal capabilities that compete with our products, making it difficult for us to implement our strategies for revenue growth.
- Future strategic investments or transactions may require us to seek additional financing, which we may not be able to secure on favorable terms, if at all.
- Future acquisitions may expose us to risks that could adversely affect our business, and we may not achieve the anticipated benefits of acquisitions of businesses or technologies.
- We began to invest in marketing and selling our products only recently. If our marketing and sales functions are not as effective as we anticipate, our business could fail to grow at satisfactory rates, if at all.
- Our estimates of market opportunity and forecasts of market growth may prove to be inaccurate, and even if the market in which we compete achieves the forecasted growth, our business could fail to grow at similar rates, if at all.
- We and our customers' respective business operations are and will continue to be subject to extensive laws and regulations, and assessing the applicability and relevant requirements of, and maintaining compliance with, these laws and regulations can be expensive and time consuming.
- We rely on assumptions, 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.

- We rely primarily on trade secret laws, as well as confidentiality and non-disclosure agreements, and other contractual protections, to protect our intellectual property. If we are unable to protect the confidentiality of our intellectual property, the value of our technology and products could be materially adversely affected.
- The terms of that certain amended and restated credit and security agreement (Term Loan), dated as of May 10, 2022, by and among the Company and MidCap Financial Trust, as agent and lender, and the additional lenders from time to time party thereto, and that certain amended and restated credit and security agreement (Revolving Loan), dated as of May 10, 2022, by and among the Company and MidCap Financial Trust, as agent and lender, and the additional lenders from time to time party thereto (collectively, the Credit Agreement), as amended on November 8, 2022 (Amendment No. 1 or, as amended, the Amended Credit Agreement), may restrict our current and future operations, particularly our ability to respond to changes or to take certain actions. If we fail to comply with the covenants and other obligations under the Amended Credit Agreement, the lender may be able to accelerate amounts owed under the facilities and may foreclose upon the assets securing our obligations.
- Telegraph Hill Partners Management Company LLC, through its affiliates THP LP and THP LLC, controls us, and its interests may conflict with ours or yours in the future.
- Our shares of common stock are listed on the Nasdaq Global Market, and we are a “controlled company” within the meaning of the rules and listing standards of The Nasdaq Stock Market LLC (Nasdaq). As a result, we qualify for, and intend to rely on, exemptions from certain corporate governance requirements. You will therefore not have the same protections as those afforded to stockholders of companies that are subject to such governance requirements.
- Material weaknesses in our internal control over financial reporting may cause us to fail to timely and accurately report our financial results or result in a material misstatement of our financial statements.
- The requirements of being a public company may strain our resources and distract our management, which could make it difficult to manage our business, particularly after we are no longer an “emerging growth company”.
- Provisions of our corporate governance documents could make an acquisition of us more difficult and may prevent attempts by our stockholders to replace or remove our current directors or management, even if beneficial to our stockholders.

PART I

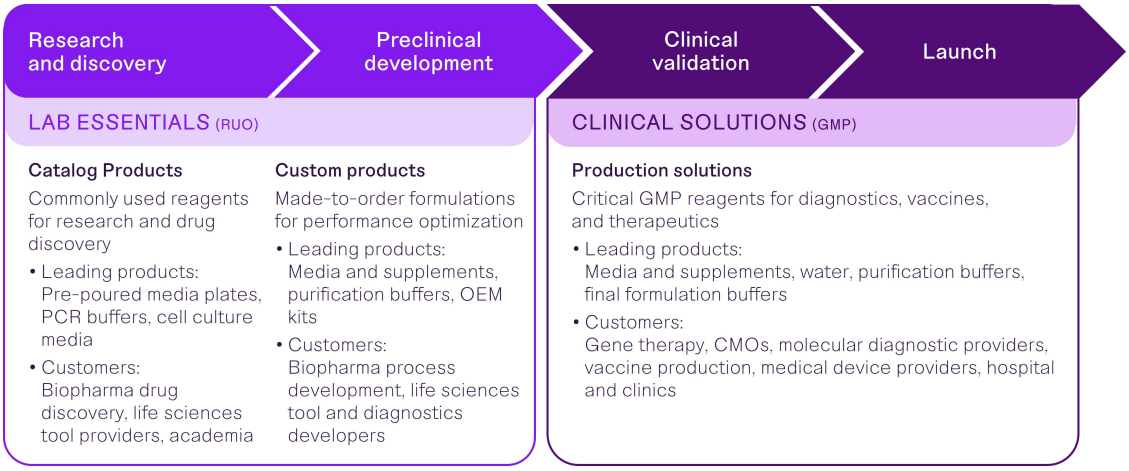
Item 1. Business.

Overview

Alpha Teknova, Inc. (referred to herein as the Company, Teknova, we, us or our) is a leading producer of critical reagents for the research, discovery, development, and commercialization of novel therapies, vaccines, and molecular diagnostics. Our more than 3,000 active customers span the continuum of the life sciences market and include leading pharmaceutical and biotechnology companies, contract development and manufacturing organizations, in vitro diagnostics franchises, and academic and government research institutions. Our Company is built around our knowledge, methods, and know-how in our manufacturing processes, which are highly adaptable and configurable. These proprietary processes enable us to manufacture and deliver high-quality, custom, made-to-order products with short turnaround times and at scale, across all stages of our customers' product development, including commercialization.

We have substantial expertise in manufacturing customer-specified formulations and have demonstrated the ability to manufacture and deliver our products to customers quickly. Due to our expertise in raw materials sourcing, chemical formulation, and quality control, developed over more than two decades, we are typically able to move a new custom product into production in a matter of weeks from order receipt. This can allow our customers to receive their products in weeks as compared to months from alternative suppliers operating in traditional production environments. Our processes are designed to handle a diverse array of customer-requested inputs, which may vary by volume, chemical formulation, quality specifications, container types, and transportation requirements, enabling broad use of our products across the life sciences market. Our proprietary capabilities and products underpin the value we provide to customers across their product development and commercialization activities and allow us to scale with our clients as they grow, supporting their need for materials in greater volumes and that meet increasingly stringent regulatory requirements.

We offer three primary product types: pre-poured media plates for cell growth and cloning; liquid cell culture media and supplements for cellular expansion; and molecular biology reagents for sample manipulation, resuspension, and purification. We typically begin working with customers in the discovery phase of development, in which they use our off-the-shelf (catalog) formulations for initial experimentation. As customers' product development progresses and they begin to need products with improved performance, in greater volumes, and that meet GMP requirements (see below), they routinely go on to order higher value, custom, and GMP-grade products. We believe the bespoke nature of our portfolio makes us a critical, trusted supplier to our customers.



Due to the extensive validation required for these custom products, our customers frequently integrate them as components into the lifecycle of their own products and, we believe, are therefore unlikely to substitute Teknova's components with alternatives. As a result, our customer relationships typically span many years and help drive

recurring business. Moreover, we are committed to delivering high levels of customer satisfaction through continued investment in our customer service, infrastructure, quality systems, and manufacturing processes. During 2022, we achieved an annual customer retention rate of approximately 96% for customers purchasing more than $10,000 annually, which represented just over 10% of our customer base and approximately 90% of our average annual revenue during that period. We believe the Teknova brand is well established in the life sciences industry as a result of our track record of delivering high quality, custom products and providing superior customer service.

We participate in multiple market segments because customers use our products across the life sciences, including in high growth areas like cell and gene therapy research, development, and production. The investment capital raised by companies developing and commercializing cell and gene therapies increased from $9.8 billion in 2019 to $19.9 billion in 2020 and then to $23.1 billion in 2021, according to the latest data from Alliance for Regenerative Medicine.

We believe our prospects for growth will also benefit from developments in other fields, including mRNA vaccines, synthetic biology, and molecular diagnostics and genomics. We believe the key industry factors that will drive our continued growth include:

- the central role that bacterial cell culture plays in producing plasmids, an essential ingredient in cell and gene therapy bioproduction;
- the need for custom reagents for viral purification in the development of gene therapies to increase viral production efficiency, yield, and purity;
- the growing demand for a single, adaptable, end-to-end provider that can offer both research use only (RUO) as well as GMP-grade, custom, made-to-order products with short turnaround times;
- the importance of GMP-grade products in a development and manufacturing process that is subject to complex and stringent regulatory requirements; and
- the demand for suppliers capable of quickly scaling production volumes up and down in response to customer needs.

We are also engaged in research and development to identify and address customers' unmet needs. During 2022 we launched a new WFI Quality Water product line for the bioprocessing market. We also announced an early access program for two new products in development to streamline downstream gene therapy bioprocessing. We believe our efforts to create and offer new products will help drive continued growth in key segments of the life sciences market.

The nature of many of our products and their uses require that they be manufactured by highly skilled personnel in contamination-controlled environments, following exacting procedures to ensure quality. We manufacture our products at our facilities in Hollister, California, which were purpose-built to address our customers’ needs for custom-made, RUO, or GMP-grade input components.

Our Portfolio

Our products are used across all stages of biopharmaceutical and diagnostic development workflows from discovery to commercialization. They include essential formulations for common research applications and highly customized formulations for customer-specific applications in genomics and bioproduction. Our customers also use our GMP-grade products as components in diagnostic kits and in the production of therapeutics.

Product Categories

We have two primary product categories: Lab Essentials and Clinical Solutions. Previously, we had a third product category, Sample Transport, which we ceased producing in 2021. Our products cross all stages of clinical development, from early research through commercialization.

Lab Essentials

We are a leader in providing highly complex chemical formulations for use in biological research and drug discovery. Our core Lab Essentials products consist of commonly used, catalog solutions and customer-specified formulations. During discovery, our products are used regularly in small, bench-scale experiments. As customers optimize their processes and begin to scale up in volume, they tend to order more custom products. Our Lab Essentials products include essential formulations for common research applications and highly customized formulations for customer-specific applications in fields such as genomics, synthetic biology, and bioproduction. We sometimes refer to our Lab Essentials products as "research use only" or "RUO." For the year ended December 31, 2022, our Lab Essentials business contributed approximately 77% of our total revenue.

Clinical Solutions

As noted above, in 2017 we achieved ISO 13485:2016 certification, enabling us to meet the Quality System Regulation (QSR) of products for use in diagnostic and therapeutic applications. Our Clinical Solutions products are custom products used in the production of protein therapies, gene therapies, mRNA vaccines, and diagnostic kits. We sometimes refer to our Clinical Solutions products as "GMP" or "GMP-grade". Since offering GMP-grade products, we have achieved substantial growth in the number of customers seeking these products annually. For the year ended December 31, 2022, our Clinical Solutions business contributed approximately 20% of our total revenue.

Sample Transport

In 2020, we developed and commercialized a suite of sample collection and transport reagents to aid in sample processing for COVID-19 testing. Subsequently, demand for COVID-19 testing declined significantly while the market supply of sample transport medium grew. As a result, in 2021, we decided to cease production of transport medium and no longer market those reagents. For the year ended December 31, 2022, sales of Sample Transport products accounted for an insignificant amount of our total revenue.

Product Types

We have three primary product types: pre-poured media plates for cell growth and cloning; liquid cell culture media and supplements for cellular expansion; and molecular biology reagents for sample manipulation, resuspension, and purification. Within each of the three product types we offer products from each of our two product categories, except pre-poured media plates which are only offered in our Lab Essentials product category.

Pre-poured Media Plates

We have an extensive selection of standard and specialty pre-poured media plates for a wide variety of applications including bacteria, fungi, and nematode growth. Pre-poured media plates, also referred to as agar plates, are the industry standard for growing microorganisms. The agar contains nutrients for the microorganism to grow and often contains compounds, such as antibiotics, to identify and select for microorganisms of interest. Microbes are spread on agar media to produce colonies, which are identical sets or clones of the original microorganism. The use of media plates is essential in the drug development process as it enables scientists to perform discovery experiments, express proteins, select cells for further expansion, and monitor the sterility of a bioproduction environment. Our ability to manufacture specialty pre-poured media plates across a wide range of formulations and plate formats makes them suitable for the most complex biological experiments and high throughput robotic applications.

Cell Culture Media and Supplements

Cell culture media and supplements are used to expand, or grow, a particular cell of interest under controlled conditions. Cell culture media is composed of essential nutrients, such as amino acids and carbohydrates, growth factors, and hormones. To maintain the cells in culture, supplements (such as growth factors and sugars) are added to the culture over time. Expansion of cell lines is fundamental to the production of enzymes, antibodies, vaccines, and protein therapeutics. Different cells, based on species of origin or cell type, require different nutrients for efficient growth. The ability to customize cell culture media and supplements for a specific cell line is necessary to optimize bioproduction purity and yield. Given our customers' desire to optimize cell culture processes early in development, combined with our ability to offer low production volumes for custom formulations, and then to scale production volumes over time, we believe we are a critical supplier for cell culture development and optimization. In addition, we are a leader in the production of bacterial cell culture media and supplements, which are critical inputs into mRNA vaccine and cell and gene therapy production processes.

Molecular Biology Reagents

Molecular biology reagents are a cornerstone of biological research, molecular diagnostics, drug development, and bioproduction. Molecular biology reagents are used routinely for a wide variety of applications, including, but not limited to: washing samples; resuspending samples; purifying nucleic acids or proteins; analyzing samples, cell lysis, and sample management. Our diverse offering simplifies widely used biological protocols for our customers. As customers begin to scale production volumes and require increased manufacturing precision, customers frequently seek to specify formulations and product packaging requirements—which we specialize in providing—to achieve their goals of increasing product performance and realizing manufacturing efficiencies.

Competitive Strengths

Expertise in Complex, Custom Chemical Formulation Manufacturing

We work closely with our customers to provide highly customized formulations across a variety of workflows. Our customers routinely specify the raw material source, chemical composition, packaging, labeling, and quality control specifications required for their desired product. Through two decades of capital investment and process optimization, we have created a production system designed to develop and manufacture customer-specified formulations, which we believe enables us to produce and quality control custom products faster than our competitors. We leverage our proprietary chemical formulation and production expertise, supported by a product database consisting of the formulations of thousands of previously made products. This database, along with our experienced staff, allows us to quickly determine the optimal production process and meet the associated complexity requirements for custom orders. We believe our ability to rapidly customize has contributed significantly to the adoption of our products.

Quality and Regulatory Expertise Drives Deep Customer Relationships

The life sciences industry is subject to rigorous regulatory scrutiny in areas such as quality, reliability, and performance. Our customers rely on us to meet these high standards while also facilitating the development of novel, innovative products. During the early stages of product development, we manufacture formulations specified by our customers to aid in the optimization of therapeutic or diagnostic production processes. Our customers frequently validate these custom-made research and GMP-grade components into their production processes, allowing them to remain with us as a supplier as they scale up from research to commercial production. As a result of the extensive validation and regulatory requirements applicable to these therapeutic and diagnostic products, we believe these components are often used for the life of a product, as evidenced by our customer retention rates. We are focused on developing and fostering long-term relationships with our customers, which has resulted in increased purchasing volumes from our customers over time.

Industry-Leading Delivery Time for Custom Products

Our operations, built upon our proprietary manufacturing processes developed over the past 20 years, enable adaptable, versatile, and rapid production of complex chemical formulations. Our production process is designed to handle diverse inputs in volume and product type, allowing us to deliver custom, made-to-order products for our clients across the life sciences industry. We seek to collaborate with our customers to gain visibility into their product development and purchasing requirements and are positioned to react quickly to meet their needs. Due to our expertise in raw materials sourcing, product creation, chemical formulation, and quality control, we are typically able to move a new custom product into production in a matter of weeks from order receipt. In addition, we can provide custom solutions at low minimum volumes and increase in scale by up to 100-fold within the same production environment. This means our customers can receive their products in weeks rather than months compared to other suppliers operating in traditional production environments. We ship approximately 75% of our custom RUO products less than three weeks from order placement.

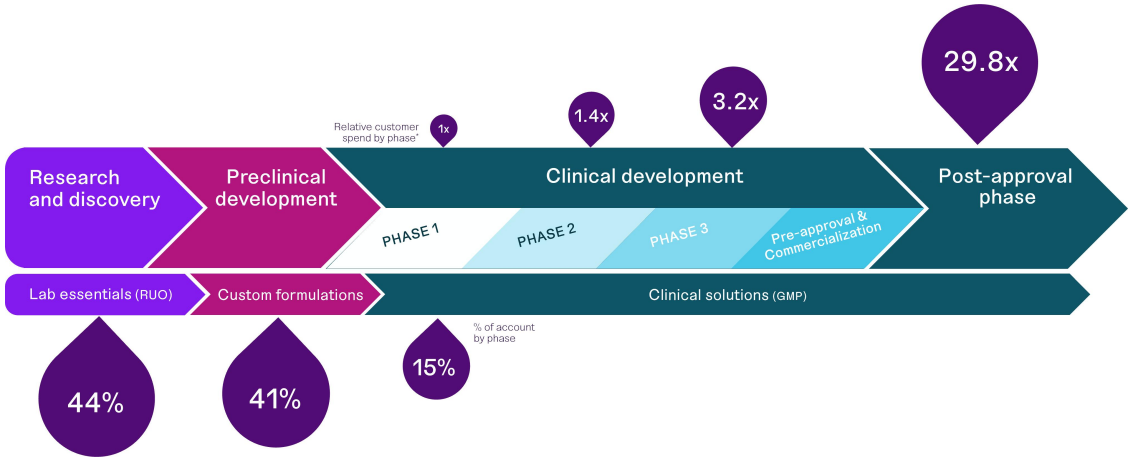
*Delivery times for custom RUO products

For the year ended December 31, 2022, three of our suppliers each made up 10% or more of our total inventory purchases, which suppliers comprised 63% of our total inventory purchases in the aggregate. One supplier, a distributor, accounted for 37% of total inventory purchases and two of our other suppliers accounted for 14% and 12% of total inventory purchases, respectively. For the year ended December 31, 2021, three of our suppliers each made up 10% or more of our total inventory purchases, which suppliers comprised 61% of our total inventory purchases in the aggregate. One supplier, a distributor, accounted for 40% of our total inventory purchases and two of our other suppliers accounted for 11% and 10% of total inventory purchases, respectively.

Well-Positioned in Evolving Cell and Gene Therapy Market

We work closely with our cell and gene therapy customers to provide customized, made-to-order formulations across a variety of workflows. Our products are critical components frequently used in the research and development of cell-and-gene-therapy-derived pharmaceuticals and vaccines. In particular, we are a leading provider of research and GMP-grade bacterial cell culture media and specialized chromatography solutions—reagents required for cell and gene therapies—which we believe positions us especially well to capture share in these growing markets.

A report commissioned by us predicts that, compared to spending during phase 1 clinical trials, average spend by customers developing cell and gene therapies increases by 1.4 times during phase 2 trials, 3.2 times during phase 3 trials and 29.8 times during commercial production, following U.S. Food and Drug Administration (FDA) approval. Our data shows that in calendar year 2022, of our approximately 100 customers purchasing more than $5,000 annually and active in cell and gene therapy development, 44% of them purchased solely catalog products from us, 41% purchased at least one custom product, and 15% purchased at least one GMP-grade product. We therefore believe our customers will spend more with us over time as cell and gene therapies move through the FDA approval process and they purchase more GMP-grade products. Combined with our existing strengths and planned investments in areas valued by developers of cell and gene therapies, which we discuss elsewhere in this Annual Report on Form 10-K, we therefore aim to significantly increase our overall revenue from sales to customers active in cell and gene therapy in the years ahead.



Source: Fletcher Spaght Growth Report, a report commissioned by us

Experienced Leadership and Talented Workforce

Our senior management team has deep experience across the life sciences, diagnostics, and biopharmaceutical market segments. Our senior management team has served in numerous leadership roles at both large, multinational organizations and small growth companies. Our employees provide tailored support, guidance, and service for our customers. We believe the quality of our personnel is critical to our ability to maintain collaborative, long-standing relationships with our customers.

Our Markets

We participate in multiple market segments, because customers use our products across the life sciences industry, including in high-growth areas like cell and gene therapy research, development, and production. We believe our prospects for growth will also benefit from developments in other fields, including the validation of mRNA vaccines and their possible use in therapies, continued significant investment in synthetic biology, and growing interest in molecular diagnostics and genomics. Within these market segments, we have benefited from and expect to continue to benefit from favorable industry preferences for customized products, high quality, and short turnaround times. The key factors driving the growth in our market opportunity include the expansion of cell and gene therapy, an increase in the use of mRNA vaccines and therapies, and the growing acceptance of molecular diagnostics and genomics.

The following are some of the other factors benefiting our core markets:

- **Favorable Research and Development Funding.** Investment in R&D activities in the life sciences sector has grown substantially in the recent past. We expect pharmaceutical companies to continue to outsource R&D activities as they focus on process efficiency. As a supplier of critical reagents that enable the discovery, research, development, and production of biopharmaceutical products such as drug therapies, novel vaccines, and molecular diagnostics, we expect to benefit from investment in R&D over time.
- **Development of New Therapeutic and Diagnostic Modalities.** Innovation and R&D activity in our addressable markets is driving the development of a plethora of new therapeutic modalities. We expect that some R&D activity previously geared toward COVID-19 has shifted to other vaccines and therapeutic areas.
- **Favorable Demographic Trends.** We believe the global demand for healthcare is significantly increasing due to factors such as aging populations, better access to healthcare systems and care, and an increased occurrence of chronic illness.
- **Global Expansion Opportunities.** We expect favorable R&D funding over time, the development of new therapeutic modalities, and favorable demographic trends to occurring globally. We believe this presents attractive future opportunities to expand into markets outside the United States.

In addition to our core markets, we believe there are additional factors driving our key growth markets, including:

Growth in Cell and Gene Therapy

As a supplier to approximately 100 leading cell and gene therapy organizations, we are well positioned to benefit from the growth in this market through our high quality, custom, and made-to-order products. The investment capital raised by companies developing and commercializing cell and gene therapies increased from $9.8 billion in 2019 to $19.9 billion in 2020 and then to $23.1 billion in 2021, according to the latest data from Alliance for Regenerative Medicine. Factors driving this growth include an increasing incidence of previously untreatable cancer and other chronic diseases, a corresponding rise in the number of clinical trials, and FDA approvals of cell and gene therapy products.

We support the development of these therapies by providing customer-specified chemical formulations for bioprocessing, scale-up, and commercialization. Our products are used early in the product development cycle. We believe our product portfolio and our expertise in custom formulations allow us to work closely with our customers at the early stages of product development to optimize manufacturing processes for their particular therapies, and then to scale as their production needs evolve. Therefore, we are able to play an integral role in therapeutic development and, ultimately, commercialization. We believe that because our products are often customized for a specific therapy and then validated, it is unlikely these customers would switch suppliers once their therapies enter clinical trials. In addition, we have announced the development of novel products to address certain critical pain points in gene therapy bioproduction. We believe the introduction of novel products such as these will provide additional revenue opportunities and help position us as key partners to customers in the growing cell and gene therapy market.

Increasing Use of mRNA Vaccines and Therapies

As a leader in bacterial cell culture media and supplements, lysis buffers, and nucleic acid and protein purification reagents, we are a supplier to the mRNA vaccine and therapeutics market and are well positioned to benefit from the increasing use of mRNA vaccines and therapies. We believe the demand for mRNA will continue to increase and therefore drive the need for more customized, research and GMP-grade bacterial cell culture media and associated formulations. The short development timeline and proven effectiveness of the COVID-19 mRNA vaccines have demonstrated the promise of mRNA therapies. The production process for mRNA requires the use of bacteria for plasmid production and a substantial number of chemical formulations for producing, purifying, and re-suspending nucleic acid sequences.

Increase in Molecular Diagnostics and Genomics

According to third-party research, the global molecular diagnostics market is estimated to grow from $14.1 billion in 2020 to $18.0 billion by 2024, while the global genomics market is expected to grow from $23.5 billion in 2021 to $62.9 billion by 2028. We expect this growth to continue to drive demand for our research- and clinical- grade reagents as high growth diagnostics and genomic market leaders use our formulations as critical components in their manufacturing processes and saleable kits. For example, synthetic biology, enzyme, and antibody manufacturers often use our bacterial cell culture media and related cell lysis and purification buffers to produce their cell lines or proteins of interest. A number of our customers in the life science tools and molecular diagnostic market segments, such as spatial transcriptomics, single cell sequencing, and liquid biopsy, use our molecular biology reagents as critical subcomponents in the kits they sell to their end users.

Our Strategy

Our goal is to provide our customers the products necessary to accelerate their therapeutic and diagnostic development efforts, from basic research to commercialization of therapies that improve human health. The key elements of our business strategy to achieve this goal include:

Increase Integration of Our Products into Our Customers' Workflows

Building lasting relationships and embedding our products within our customers' key workflows are at the core of our strategy. During the early stages of product development, we manufacture formulations specified by our customers to aid in the optimization of therapeutic or diagnostic production processes. Our customers validate these custom-made research and GMP-grade components into their production processes, and because of the extensive validation required for customers' therapeutic and diagnostic products, we believe these components are often used for the life of a product, as evidenced by our customer retention rates. As customers move from catalog to custom and, ultimately, to clinical production, their total expenditure increases. Based on our purchase data from 2022, excluding purchase data relating to sample transport medium, customers who purchased our custom products spent approximately 18 times more on average per account with us than those who solely purchased catalog products. Over the same period, our customers who purchased our GMP-grade products, purchased 156 times more per account with us than those who solely purchased catalog products and approximately 9 times more than those who purchased catalog and custom research-grade products. In 2022, customers who purchased solely catalog products, custom products, and GMP-grade products constituted approximately 90%, 9% and 1%, respectively, of the Company's total customers during the period. We aim to increase the proportion of our customers purchasing custom products and GMP-grade products by building lasting relationships and embedding our products within our customers' key workflows as our customers' product development matures.

Provide Superior Customer Service Through Operational Excellence

We are committed to providing superior customer service and fulfilling the expectations of our customers by making the investments required to perpetuate our operational excellence. We have extended our rapid custom production capability by further investing in automation, facilities, and infrastructure to substantially increase the manufacturing capacity at our facilities, improve operating efficiency, and reduce delivery time for our custom research and GMP-grade products. We believe these investments position us for future growth by allowing us to

continue to exceed our customers' expectations in quality and delivery time and enabling us to maintain lasting relationships with our customers as they advance their products through key phases of product development.

Expand R&D and Commercial Scale to Establish Leadership in High-Growth Market Segments

Over the past two decades, we focused almost entirely on developing and enhancing the operational and service aspects of our business, with limited investment in our commercial organization and R&D. Beginning in 2021, we implemented a long-term plan of substantial investment in our marketing, sales, new product development, engineering, and technical support capabilities as well as the expansion and automation of manufacturing operations. We believe these investments will enable us to increase awareness of our brand, develop new products and services, attract new customers, and improve operational effectiveness.

Our initial focus is on the high-growth cell and gene therapy as well as mRNA market segments, building upon our current cell and gene therapy customer base. These segments require short turnaround times for custom-made formulations that scale to production for clinical use. In addition, we have built viral and nucleic acid bioproduction expertise within the Company, and we are developing new potential services and support models for our target customers. We are focused on bringing technologies to market that enable improved processes and efficiencies in gene therapy and nucleic acid bioproduction. Through these efforts, we aim to onboard new cell and gene therapy and well as mRNA therapeutic customers and to support existing customers when they migrate from research- to GMP-grade products.

Selectively Expand in Geographies with Attractive Growth Potential

In 2022, we generated more than 96% of our total revenue within the U.S. We believe a substantial opportunity exists to expand our geographic reach into markets outside of the U.S. that offer strong opportunities for growth, including Europe. Based on our knowledge of the industry, we believe the local supply base in Europe is not able to produce customer-specified formulations with the diversity and at the scale necessary to satisfy the corresponding demand, with the short turnaround times customers expect. Therefore, in the medium to long-term, we intend to expand our addressable market and customer base by pursuing opportunities to grow by developing new relationships with entities that can distribute our products in Europe or help us establish manufacturing capabilities or by acquiring existing operating businesses in Europe. We may also explore partnership or acquisition opportunities in our existing and adjacent market segments within the U.S. to add capabilities and to accelerate our entry into new markets and locations domestically.

Competition

We operate in a highly competitive environment with a diverse base of competitors, many of whom focus on specific regions, customers, and/or segments. Many of the companies selling or developing competitive products, which in some cases are also large customers, have greater financial, personnel, R&D, manufacturing, and marketing resources than we do. We also compete with other smaller, niche competitors and specialized companies that focus on certain areas of the life sciences market. A portion of our target customers have established, in-house production capabilities to manufacture products that are substantially similar to our products. In-house production may prove to be a less costly or more desirable alternative to purchasing our products due to prior investments in production infrastructure and workforce.

Our Lab Essentials and Clinical Solutions products compete on the basis of delivery time, performance, and quality with products offered by numerous large, established life science companies such as Thermo Fisher, Millipore (Merck KGaA), Cytiva (Danaher), Hardy Diagnostics, and Lonza. We are differentiated by our ability to offer customer-specified RUO and GMP formulations with short turnaround times in volumes and product characteristics matching customer needs, our Teknova brand reputation established over more than 20 years, and our scientific and technical expertise.

Government Regulation

We market the products we manufacture as ancillary reagents and materials that our customers can use for research purposes or in the further manufacture of their products, which may include therapies, vaccines, and molecular diagnostics. As ancillary reagents and materials, our products are not subject to regulation under the U.S. Federal Food, Drug and Cosmetic Act, and therefore none of our current products are registered with the FDA. We do not make any claims related to the safety, effectiveness, or diagnostic utility of any of our products because they are not intended for clinical, therapeutic, or diagnostic use.

At the same time, the quality of our ancillary reagents and materials is critical to our biopharmaceutical and other life sciences customers who are subject to extensive regulation by the FDA, and by corresponding regulatory authorities in other countries, regarding the conduct of clinical trials and the marketing approval for and commercialization of products for diagnostic and therapeutic uses. The regulatory oversight of our customers necessitates that they impose rigorous quality requirements on us, as their supplier, through supplier qualification processes, quality agreements, and routine customer audits. We therefore choose to maintain a quality system compliant with our customers' requirements and expectations, including records of our manufacturing, testing, and quality control activities, and we must be able to provide our customers with corresponding records on a periodic basis, upon their request. These customers may seek to requalify us on a regular basis to ensure our quality system, processes, and facilities continue to meet their needs and requirements outlined in relevant customer agreements.

Because quality is so important to our customers, and because many of them may further process and validate the products they purchase from us, we voluntarily built our quality system to comply with specific sections of the ISO 13485:2016 standards established by the International Organization for Standardization (ISO). We are certified to manufacture our products in accordance with those standards. We sell products that we manufacture and process with additional, even more exacting quality and validation controls as "Clinical Solutions" or "GMP-grade," specifically to meet the needs of customers who use our materials in the further manufacture of their diagnostic, vaccine, or therapeutic products.

Compliance with "Research Use Only" Labeling Guidance

In November 2013, the FDA issued Final Guidance for Industry and Food and Drug Administration Staff on "Distribution of In Vitro Diagnostic Products Labeled for Research Use Only or Investigational Use Only" (RUO/IUO Guidance). The RUO/IUO Guidance, while generally not legally binding, explains that the FDA will review the totality of the circumstances when evaluating whether equipment and testing components are properly labeled as RUO. Merely including a labeling statement that a product is intended for research use only will not necessarily exempt the product from FDA regulation or oversight, if the circumstances surrounding the distribution of the product indicate that the manufacturer intends its product to be used for clinical, therapeutic, or diagnostic use. These circumstances may include written or verbal marketing claims or links to articles regarding a product's performance in clinical applications, a manufacturer's provision of technical support for clinical validation or clinical applications, or solicitation of business from clinical laboratories, all of which could be considered evidence of intended uses that conflict with RUO labeling. We do not market any of our products for use in clinical, therapeutic, or diagnostic settings. We believe that all of the products we label and sell as intended for "Research Use Only" are properly labeled and marketed as such in accordance with the RUO/IUO Guidance. If the FDA were to determine, based on the totality of circumstances, that any of our products are intended for diagnostic or therapeutic purposes, then those products would be considered medical products and would require approval from the FDA prior to their commercialization.

Environmental Laws and Regulations

We are subject to federal, state, and local laws and regulations relating to the protection of human health and the environment. In the conduct of our business, we handle, store and dispose of certain chemicals and biohazardous waste. The laws and regulations applicable to our operations include provisions that regulate the discharge of materials into the environment. Some of these environmental laws and regulations impose "strict liability," rendering a party liable without regard to negligence or fault on the part of such party. Such environmental laws and regulations may expose us to liability for environmental contamination, including remediation costs, natural resource damages and other damages as a result of the conduct of, or conditions caused by, us or others or for acts

that were in compliance with all applicable laws at the time such acts were performed. In addition, where contamination may be present, it is not uncommon for neighboring landowners and other third parties to file claims for personal injury, property damage, and recovery of response costs. Although it is our policy to use generally accepted operating and disposal practices in accordance with applicable environmental laws and regulations, hazardous substances or wastes may have been disposed or released on, under, or from properties owned, leased, or operated by us or on, under, or from other locations where such substances or wastes have been taken for disposal. These properties may be subject to investigation, remediation, and monitoring requirements under federal, state, and local environmental laws and regulations.

We believe that our operations comply in all material respects with applicable environmental laws and regulations. However, failure to comply with these environmental laws and regulations may result in the imposition of administrative, civil and criminal penalties or other liabilities. Because the requirements imposed by such laws and regulations may frequently change and new environmental laws and regulations may be adopted, we are unable to predict the cost of compliance with such requirements in the future, or the effect of such laws on our capital expenditures, results of operations or competitive position.

Intellectual Property

Our success depends, in part, on our ability to obtain and maintain intellectual property protection for our products and trade secrets, to operate our business without infringing, misappropriating or otherwise violating the intellectual property rights of others, and to defend and enforce our intellectual property rights.

We rely on trade secrets, including know-how, confidential information, unpatented technologies, and other proprietary information, to strengthen or enhance our competitive position, and prevent competitors from reverse engineering or copying our technologies. We maintain, as trade secrets, information relating to our current products and our products currently in development, as well as information related to our business strategy, client lists, and business methods. However, trade secrets and confidential know-how are difficult to protect. To avoid inadvertent and improper disclosure of trade secrets, and to avoid the risks of former employees using these trade secrets to gain future employment, it is our policy to require employees, consultants, and independent contractors to assign to us all rights to intellectual property they develop in connection with their employment with or services for us. We also protect our existing and developing intellectual property expressly through confidentiality provisions in agreements with third parties. There can be no assurance, however, that these agreements will provide meaningful protection for our trade secrets or other intellectual property or proprietary information, or afford adequate remedies in the event of the unauthorized use or disclosure of such trade secrets or other intellectual property or proprietary information. We also seek to preserve the integrity and confidentiality of our trade secrets and other confidential information by maintaining physical security of our premises and physical and electronic security of our information technology systems. While we have confidence in the measures we take to protect and preserve our trade secrets, such measures can be breached, and we may not have adequate remedies for any such breaches. In addition, our trade secrets may otherwise become known or be independently discovered by competitors.

We intend to pursue additional intellectual property protection to the extent we believe it would advance our business objectives, which may include objectives within and outside of the U.S. Despite our efforts to protect our intellectual property rights, these rights may not be respected in the future or may be circumvented or challenged (and potentially invalidated) in a legal proceeding in any jurisdiction where we have intellectual property rights. In addition, the laws of various foreign countries may not afford the same protections or assurances to the same extent as the laws in the U.S. See the section titled “Risk Factors—Risks Related to Our Intellectual Property” for additional information regarding these and other risks related to intellectual property.

Human Capital

As of December 31, 2022, we had 290 employees, of which 285 were full-time and five were part-time. This includes 159 employees in our operations organization, 72 in administrative functions, 32 in sales and marketing and 27 in engineering and research and development. None of our employees are represented by a labor union or are subject to a collective bargaining agreement.

Our human capital resources objectives include, as applicable, identifying, recruiting, retaining, incentivizing, and integrating our existing and future 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.

Facilities

Our headquarters are located in Hollister, California, where we lease approximately 235,600 square feet of commercial, office, manufacturing, and warehouse space at eight separate locations in the same vicinity, which we refer to collectively as our Hollister campus. Our Hollister campus includes dedicated space for us to carry out product formulation, dispensing, manufacturing, and packaging of our products. The Hollister campus includes space used for quality control, packaging, and storage of “retains” for quality control purposes and 12,500 square feet of clean room space. Space used to store our finished goods inventory, ship our products, and house our engineering and quality departments is also located at our Hollister campus, along with a receiving warehouse and raw materials storage. Our management offices, R&D/product development team, lab, customer service, and marketing groups are also located at the Hollister campus.

We also lease approximately 23,400 square feet of warehouse space in Mansfield, Massachusetts under a lease that expires by its terms in August 2024. We lease the warehouse space in Mansfield from Meeches LLC, a company controlled by Ted Davis and Irene Davis, our founders and current directors and greater than five percent stockholders of ours.

We believe that the facilities we currently lease are adequate to meet our needs for the immediate future, and that, should it be needed, additional space can be acquired or leased to accommodate future growth.

Corporate Information

The Company was founded in 1996 and initially incorporated in California on May 30, 2000, under the name “eTeknova, Inc.” On January 11, 2019, the Company filed a certificate of merger and merged with and into Alpha Teknova, Inc., a Delaware corporation, which continued as the surviving entity bearing the corporate name of “Alpha Teknova, Inc.”

In June 2021, we completed the initial public offering of our common stock (IPO). Our common stock trades on the Nasdaq Global Market under the symbol "TKNO". Following the IPO, Telegraph Hill Partners Management Company LLC (Telegraph Hill Partners), through its affiliates Telegraph Hill Partners IV, L.P. (THP LP) and THP IV Affiliates Fund, LLC (THP LLC, and collectively with THP LP, THP), continues to be our controlling stockholder.

Our principal executive offices are located at 2451 Bert Dr., Hollister, California 95023. Our telephone number is (831) 637-1100. Our website address is www.teknova.com. Information contained on, or that can be accessed through, our website is not part of and is not incorporated by reference in, or a part of, this or any other report we file with, or furnish to, the United States Securities and Exchange Commission (SEC).

The name “Teknova”, "teknova:", and the “Teknova Science Matters” logos, and other registered or common law trademarks or service marks of Alpha Teknova, Inc. appearing in this Annual Report on Form 10-K are the property of Alpha Teknova, Inc. Other trademarks and tradenames referred to in this Annual Report on Form 10-K are the property of their respective owners. Solely for convenience, trade names, trademarks, and service marks referred to in this Annual Report on Form 10-K may appear without the ® or TM symbols. Such references are not intended to indicate, in any way, that we will not assert, to the fullest extent under applicable law, our rights or the rights of the applicable licensor to such trade names, trademarks, and service marks.

Item 1A. Risk Factors.

Risks Related to Our Business and Strategy

We have incurred operating losses in the past and may incur losses in the future.

We have incurred operating losses in the past, may incur operating losses in the future and may never achieve or maintain profitability. For the years ending December 31, 2022 and 2021, we incurred net losses of $47.5 million and $9.8 million, respectively. Although we had net income of approximately $3.6 million for the year ended December 31, 2020, we also incurred net losses both prior and subsequent to such time. We expect that our operating expenses will continue to increase as we grow our business and we have incurred additional costs in connection with legal, accounting, and other administrative expenses related to operating as a public company. Since our inception, we have financed our operations primarily through revenue from our products, the sale of our equity securities, including through our IPO, and credit agreements. While our revenue has grown in recent years, if our revenue declines or fails to grow at a rate sufficient to offset increases in our operating expenses, we will not be able to achieve and maintain profitability in future periods. We may never be able to generate sufficient revenue to achieve or maintain profitability, and our recent growth and historical profitability should not be considered indicative of our future performance.

Our operating results may fluctuate significantly in the future, making them difficult to predict, and they could fall below expectations or any guidance we may provide.

Our quarterly and annual operating results may fluctuate significantly, making them difficult to predict. These fluctuations may not fully reflect the underlying performance of our business. They may occur due to a variety of factors, including, but not limited to:

- changes in governmental and academic funding of, or capital market investment in, life sciences research and development or changes that impact the budgets, budget cycles of our customers;
- demand from our largest customers, which accounts for a significant percentage of our sales and orders, may not meet our expectations regarding volume and price in any given time period;
- the level of demand for our products, which may vary significantly, and our ability to increase penetration in our existing markets and expand into new markets;
- customers accelerating, canceling, reducing, or delaying orders, including as a result of developments related to their pre-clinical studies and clinical trials, or plans for commercialization;
- impacts on us, our suppliers, and our customers as a result of the ongoing COVID-19 pandemic or responses to it;
- the relative quality, performance, and reliability of our products;
- our ability to maintain ISO 13485:2016 certification;
- changes in governmental regulations or the regulatory posture toward our business and the businesses of our customers;
- the volume and mix of the products and services we sell or changes in the production or sales costs related to our offerings;
- the success of new products we introduce or product enhancements we or others in our industry make;
- the timing and amount of expenditures that we may incur to acquire, develop, or commercialize additional products, services and technologies or for other purposes, including the expansion of our facilities;
- future accounting pronouncements or changes in our accounting policies;
- difficulties encountered by our commercial carriers in delivering our products, whether as a result of external factors such as weather or internal issues such as labor disputes;

- general market conditions and other factors, including factors unrelated to our operating performance or the operating performance of our competitors or customers; and
- the other factors described in this “Risk Factors” section.

The impact of any one of the factors set out above, or the cumulative effects of a combination of such factors, could result in significant fluctuations and unpredictability in our quarterly and annual operating results. As a result, comparisons of our operating results on a period-to-period basis may not be meaningful. Furthermore, our historical results are not necessarily indicative of results expected for any future period, and quarterly results are not necessarily indicative of the results to be expected for the full year or any other period, and accordingly should not be relied upon as indicative of future performance.

As a result of variability and unpredictability, we may also fail to meet the expectations of industry or financial analysts or investors for any period. If our revenue or operating results fall short of the expectations of analysts or investors or any guidance we may provide, or if the guidance we provide falls short of the expectations of analysts or investors, the price of our common stock could decline substantially. Such a stock price decline could occur even when we have met or exceeded any publicly stated guidance we may have provided and could in turn negatively impact our business, financial condition, results of operations, cash flows, and prospects.

Our efforts to increase the capacity and efficiency of our manufacturing processes and systems could be disruptive to our operations and adversely affect our results of operations and financial condition, and we may not realize some or all of the anticipated benefits of these initiatives in the time frame anticipated or at all.

We continue to extend our production capabilities by investing in automation and infrastructure to substantially increase the manufacturing capacity at our facilities, improve operating efficiency through the use of automation, and reduce delivery time for our custom Lab Essentials and Clinical Solutions products. The expansion and automation of our existing manufacturing capabilities, as well as the creation of new or expanded manufacturing operations, could be disruptive to our operations, divert the attention of management and require significant investments. Our ability to increase our manufacturing capacity is dependent upon a number of uncertainties inherent in all new manufacturing operations, including ongoing compliance with regulatory requirements, the procurement and maintenance of construction, environmental, and operational licenses and approvals for additional expansion, delays in construction, potential supply chain constraints, hiring, the training and retention of qualified employees, and the pace of bringing production equipment and processes online with the capability to manufacture high-quality products at scale. If we experience any problems or delays in meeting our projected timelines for expansion of operating capacity or efficiency, if our projected costs or capital efficiency expectations are not met, or if the actual production capacity yielded by our recent expansion efforts does not meet our projections, our business, financial condition, results of operations, cash flows, and prospects may be harmed.

Our efforts to increase the capacity and efficiency of our manufacturing processes and systems may result in temporary constraints on our ability to produce the quantity of products necessary to fill orders and thereby complete sales in a timely manner. In addition, system upgrades at our manufacturing facilities that impact ordering, production scheduling, manufacturing, and other related processes are complex, and could impact or delay production. A prolonged delay in our ability to fill orders on a timely basis could affect customer demand for our products and increase the size of our product inventories, causing future reductions in our manufacturing schedules and adversely affecting our performance. Furthermore, delays in production could harm our reputation of being a supplier that is able to deliver customer-specified formulations on a short turnaround time, which may harm our brand, business, financial condition, results of operations, cash flows, and prospects.

We may be unable to successfully expand our operations or manage our growth effectively.

The expansion of our manufacturing operations, new product development, the development of our marketing and sales organizations, and our organic growth have all accelerated and will continue to increase the complexity of our business. Opportunities we may pursue in the future, including relationships with distributors or acquisition candidates located outside the U.S, would contribute to that increased complexity. Expansion of our operations may place significant demands on our management, finances, and other resources. Our ability to manage our ongoing and anticipated future growth, should it continue, depends upon a significant expansion of our enterprise, financial, and

other internal management systems and the implementation and subsequent improvement of a variety of systems, procedures, and controls. There can be no assurance that significant problems in these areas will not occur. Any failure to develop these areas and implement and improve supporting systems, procedures, and controls in an efficient manner and at a pace consistent with the growth of our business could have a material adverse effect on our business, financial condition, results of operations, cash flows, and prospects.

If our products do not possess the required or expected quality characteristics or perform as expected, or if the reliability of the technology on which our products are based is questioned, we could experience lost revenue, delayed or reduced market acceptance of our products, increased costs, and damage to our reputation.

Our success depends in large measure on the market's confidence that we can provide reliable, high-quality reagents that our customers can use for the development and commercialization of therapies, novel vaccines, and molecular diagnostics. We believe that customers in our target markets are particularly sensitive to product nonconformances, defects, and errors given the potential for impact on their own products and processes, which in many cases are regulated. Our reputation and the public image of our products and capabilities may be impaired if our products fail to perform as expected.

Although our products undergo quality control testing prior to release for shipment, nonconformances, defects, or errors could nonetheless occur or be present in products that we release for shipment to customers. Our operating results depend on our ability to execute and, when necessary, improve our quality management strategy and systems, our ability to effectively train and maintain our employee base with respect to quality management, and our ability to consistently meet international quality standards, including those set out in ISO 13485:2016 and meet the product specifications and quality requirements specified in agreements with customers. A failure of our quality control systems could result in problems with facility operations, the manufacture or delivery of our products, or our ability to maintain our ISO certification. These and related problems could arise for a variety of reasons, including equipment malfunctions, the failure to follow specific manufacturing and quality control and assurance protocols and procedures or other human error, defects in our engineering, design, manufacturing, and delivery processes, problems with third-party components or raw materials, environmental factors, and damage to, or loss of, our quality systems. The consequences could affect production of a particular batch or series of batches of products, requiring the disposal of those products or a stop to production altogether. Furthermore, some of the products we manufacture are subsequently incorporated into products that are sold by other life sciences companies; we have no control over any aspect of those products.

Because our consumables are highly complex, the occurrence of defects may increase as we continue to introduce new products and as we scale up manufacturing to meet increased demand. Although we have established internal procedures to reduce the risks that may arise from product quality issues, there can be no assurance that we will be able to eliminate or mitigate occurrences of these issues and associated liabilities. In addition, identifying the root cause of quality issues, particularly those affecting reagents and third-party components, may be difficult, which increases the time needed to address quality issues as they arise and increases the risk that similar problems could recur. Finding solutions to quality issues can be expensive and we may incur significant costs or lost revenue in connection with, for example, shipment holds, product recalls or replacements, or the disposal of unsaleable products.

In addition, if we or our suppliers fail to meet applicable quality standards and if our products experience, or are perceived to experience, a material nonconformance, defect, or error, our products could be recalled or we may be unable to timely deliver products to our customers, which in turn could damage our relationships with new and existing customers and our reputation for quality and service. Although we continually take steps to improve our quality procedures, we cannot guarantee that we will not experience quality assurance issues with our products in the future. Any such failure could, among other things, lead to increased costs, delayed or lost revenue, delayed or reduced market acceptance, damage to our relationships with new and existing customers and our reputation, diversion of development resources, legal claims, reimbursement to customers, other customer claims, damage to and possible termination of existing customer relationships, increased insurance costs, time and expense spent investigating the cause and, depending on the cause, similar losses with respect to other batches or products, any of which could harm our business, financial condition, results of operations, cash flows, and prospects. Such nonconformances, defects, or errors could also narrow the scope of the use of our products, which could hinder our success in the market.

Even after any underlying quality or related concerns or problems are resolved, any lingering concerns in our target markets regarding our products or services, or any manufacturing defects or performance errors in our products, could continue to result in lost revenue, delayed or reduced market acceptance, damage to our reputation, and claims against us.

In addition, we may be unable to maintain the quality, reliability, robustness, and expected turnaround times of our products and services to continue to satisfy customer demand as we grow. Fast delivery time is of crucial importance to the cell and gene therapy market segment and our customers rely on us to provide timely delivery of their custom-made formulations. To effectively manage our growth, we must continue to improve our operational, manufacturing, quality control and assurance and monitoring systems and processes, and other aspects of our business, and continue to effectively expand, train, and manage our personnel. The time and resources required to improve our existing systems and procedures, to implement new systems and procedures, and to adequately staff such existing and new systems and procedures are uncertain; failure to complete those objectives in a timely and efficient manner could adversely affect our operations and negatively impact our business and financial results. We may need to purchase additional equipment (some of which can take several months or more to procure, set up, and validate), establish new production processes, and hire additional personnel to meet increased demand. There can be no assurance that we meet any of these anticipated challenges successfully. Failure to manage this growth could result in delays in turnaround times, higher product costs, declining product quality, deteriorating customer service, and slower responses to competitive challenges. A failure in any one of these areas could make it difficult for us to meet market expectations for our products and could damage our reputation and our business, financial condition, results of operations, cash flows, and prospects could be adversely affected.

Our business, financial condition, and results of operations may be materially adversely affected by global epidemics, including, but not limited to, the ongoing COVID-19 pandemic and resulting unfavorable economic conditions.

We face risks related to epidemics, infectious disease outbreaks, or other public health crises that are outside of our control and could significantly disrupt our operations and severely adversely impact our business. The extent to which these global epidemics, such as the ongoing COVID-19 pandemic, impact us will depend on numerous evolving factors and future developments that are difficult to predict, including, among others:

- the severity of outbreaks of infection and emerging variants of the pathogen;
- governmental, business, and other actions in response (which could include limitations on our operations or mandates to provide products or services);
- the impact of the pandemic on our supply chain;
- the impact of the pandemic on economic activity;
- the extent and duration of the effect on customer demand and buying patterns;
- the health of and the effect on our workforce and our ability to meet staffing needs through the operations and other critical functions, particularly if employees are quarantined as a result of exposure;
- any impairment in value of tangible or intangible assets which could be recorded as a result of weaker economic conditions; and
- the potential effects on internal controls including those over financial reporting as a result of changes in working environments such as shelter-in-place and similar orders applicable to employees and business partners.

While we believe we have successfully navigated the operational challenges posed by the COVID-19 pandemic thus far, such as shelter-in-place and quarantine requirements, we continue to closely monitor the COVID-19 pandemic for potential future impact on our business, employees, suppliers, business partners, and distribution channels. In addition to operational impacts, the COVID-19 pandemic has caused, and may continue to cause, disruptions and volatility in the credit or financial markets. A severe or prolonged economic downturn could result in a variety of risks to our business, including that we or our customers could be unable to raise additional capital when needed on favorable terms, if at all; our customers' budgets could be strained, resulting in a decline in demand for our products; or we could be unable to collect payment from customers on time, if at all. The impact of the

COVID-19 pandemic may also exacerbate other risks discussed in this Item 1A, any of which could have a materially adverse effect on the Company. Any of the foregoing could harm our business, and we cannot anticipate all of the ways in which the current economic climate and financial market conditions could adversely impact our business, financial condition, results of operations, prospects, and ability to raise capital if needed.

We are dependent on our customers' spending on and demand for our products. A reduction in spending or demand, including as a result of changes in economic conditions, could have a material adverse effect on our business, financial condition, results of operations, cash flows, and prospects.

Our chemical formulations are sold primarily to biopharmaceutical companies, life science research companies, contract research organizations (CROs), contract development and manufacturing organizations (CDMOs), in vitro diagnostics franchises, and academic and government research institutions developing novel vaccines and therapies and performing basic research. Our customers' spending on research, development, production, and marketing, as well as the outcomes of such research, development, and marketing activities, has a substantial impact on our revenues and profitability, particularly the amount our customers choose to spend on our products. Available resources, the need to develop new products, and consolidation in the industries in which our customers operate may have an impact on that spending. Many of our customers finance their research and development spending with capital raised from private investors and the public capital markets.

The success of our business depends primarily on the number and size of purchases from these customers. Research and development spending by our customers and the availability of government and academic research funding of, or capital markets investment in, life sciences research and development can fluctuate due to changes in available resources, mergers of pharmaceutical and biotechnology companies, spending priorities, general economic conditions and institutional and governmental budgetary policies. Changes in governmental and academic funding of, or capital markets investment in, life sciences research and development, or overall reductions in healthcare spending, could negatively impact us or our customers and, consequently, our sales to them. A substantial majority of our sales are made on a purchase order basis, which permits our customers to cancel, change, or delay their product purchase commitments with little or no notice to us and often without penalty to them. Changes in the number of orders received and filled can cause fluctuations in our quarterly revenue and earnings.

For example, over a period of several years, we benefited from growing demand for our products attributable to the ongoing expansion of the global biologics and diagnostics market segments, robust research and development budgets, and a trend toward greater outsourcing by our customers. These conditions deteriorated in the middle of 2022, when private and public funding available to small and emerging biotechnology companies, in particular, contracted sharply and the direct and indirect effects of the COVID-19 pandemic led to a reduction of or deferral in spending by some of our customers. If these economic pressures on the life sciences industry persist, they could have a significant adverse effect on the demand for our products.

In addition to these industry trends, our customers' willingness and ability to utilize our products are also subject to, among other things, their own financial performance, changes in their available resources, their decisions to acquire in-house manufacturing capacity, their spending priorities, their budgetary policies and practices and their need to develop new biological products, which, in turn, are dependent upon a number of factors, including their competitors' discoveries, developments and commercial manufacturing initiatives and the anticipated market, clinical and reimbursement scenarios for specific products and therapeutic areas. In addition, consolidation in the industries in which our customers operate may have an impact on our customers' spending as they integrate acquired operations, including research and development departments and associated budgets. If our customers reduce their spending on our products as a result of any of these or other factors, our business, financial condition, results of operations, cash flows, and prospects would be materially and adversely affected.

Our customers' research and development, and the clinical and market success of their products, may significantly influence our business, financial condition, and results of operations.

Our customers are engaged in research, development, production, and marketing of pharmaceutical and biotechnology products. We depend on, and have no control over, consumer demand for the products our customers manufacture. Consumer demand for our customers' products could be adversely affected by, among other things, delays in regulatory approvals, the inability of our customers to demonstrate the efficacy and safety of their products, the loss of patent and other intellectual property rights protection, the emergence of competing or

alternative products, including generic drugs, the degree to which private and government payment subsidies for a particular product offset the cost to consumers, changes in the marketing strategies for such products, and the outbreak of a pandemic such as the COVID-19 pandemic. Additionally, if the products our customers manufacture do not gain market acceptance, our revenues and profitability may be adversely affected.

Ongoing changes to the healthcare industry, including ongoing healthcare reform, adverse changes in government or private funding of healthcare products and services, legislation or regulations governing the privacy of patient information or patient access to care, or the delivery, pricing, or reimbursement of pharmaceuticals and healthcare services or mandated benefits, may cause healthcare industry participants to purchase fewer products and services from us or influence the price that others are willing to pay for our products and services. Changes in the healthcare industry's pricing, selling, inventory, distribution, or supply policies or practices could also significantly reduce our revenue and profitability.

If our customers are not successful in attaining or retaining product sales due to market conditions, reimbursement issues, or other factors like those set out above, or if our customers' orders otherwise decline, our financial condition and results of operations may be adversely affected.

We depend on a limited number of customers for a high percentage of our revenue. If we cannot maintain our current relationships with customers, if we fail to sustain recurring sources of revenue with our existing customers, or if we fail to enter into new relationships, our future operating results will be adversely affected.

For the years ended December 31, 2022 and 2021, our largest customer was a distributor that accounted for 15% and 18% of our total revenue, respectively. No other customers accounted for more than 10% of our total revenue for the years ended December 31, 2022 and 2021. Our customers that are distributors, as opposed to direct customers, represent highly diversified customer bases. A substantial majority of our customers buy from us on a purchase order basis. The revenue attributable to our top customers has fluctuated in the past and may fluctuate in the future, especially in our Clinical Solutions product category, within which orders are on average of higher value than orders within our Lab Essentials category. This could have a material adverse effect on our business, financial condition, results of operations, cash flows, and prospects. In addition, the termination of these relationships could result in a temporary or permanent loss of revenue.

Our future success depends on our ability to maintain these relationships, to increase our penetration among these existing customers and to establish new relationships. We engage in conversations with other companies and institutions regarding potential commercial opportunities on an ongoing basis, which can be time consuming. There is no assurance that any of these conversations will result in a commercial agreement, or if an agreement is reached, that the resulting relationship will be successful. Speculation in the industry about our existing or potential commercial relationships can be a catalyst for adverse speculation about us, our products and our capabilities, which can adversely affect our reputation and our business. In addition, if our customers order our products but fail to pay on time or at all, our liquidity, financial condition, results of operations, cash flows, and prospects could be materially and adversely affected.

We compete with life science, pharmaceutical, and biotechnology companies, some of whom are our customers, who are substantially larger than we are and potentially capable of developing new approaches that could make our products and technology obsolete or develop their own internal capabilities that compete with our products, making it difficult for us to implement our strategies for revenue growth.

The market for biologics components products and services in the biopharmaceutical development, life science research, and diagnostics space is intensely competitive, rapidly evolving, significantly affected by new product introductions and other market activities by industry participants and subject to rapid technological change. We also expect increased competition as additional companies enter our market and as more advanced technologies become available. We compete with other providers of outsourced biologics components products and services. We also compete with the in-house discovery, development, and commercial manufacturing functions of pharmaceutical and biotechnology companies. Many of our competitors, which in some cases are also our customers, are large, well-capitalized companies with significantly greater resources and market share than we have. They may undertake their own development of products that are substantially similar to or compete with our products and they may succeed in developing products that are more effective or less costly than any that we may develop. Customers may

believe that larger companies are better able to compete as sole source suppliers, and therefore prefer to purchase from such businesses. Additionally, our competitors may be able to spend more aggressively on product and service development, marketing, sales and other initiatives than we can. Many of these competitors also have:

- broader name recognition;
- longer operating histories and the benefits derived from greater economies of scale;
- larger and more established distribution networks;
- additional product and service lines and the ability to bundle products and services to offer higher discounts or other incentives to gain a competitive advantage;
- more experience in conducting research and development, manufacturing, and marketing;
- more experience in entering into collaborations or other strategic partnership arrangements; and
- more financial, manufacturing, and human resources to support product development, sales and marketing, and legal or regulatory investigations or disputes.

These factors, among others, may enable our competitors to market their products and services at lower prices or on terms more advantageous to customers than we can offer. Competition may result in price reductions, reduced gross margins, and loss of market share, any of which could have a material adverse effect on our business, financial condition, results of operations, cash flows, and prospects. Moreover, consolidation trends in the pharmaceutical, biotechnology, and diagnostics industries have served to create fewer customer accounts and to concentrate purchasing decisions for some customers, resulting in increased pricing pressure on us. Additionally, our current and future competitors, including certain of our customers, may at any time develop additional products and services that compete with our products, and new approaches by these competitors may make our products, capabilities and methodologies obsolete or noncompetitive. We may not be able to compete effectively against these organizations. Failure to anticipate and respond to competitors' actions may impact our future revenue and profitability.

In addition, to develop and market our new products, services, capabilities and methodologies successfully, we must accurately assess and meet customers' needs, make significant capital expenditures, optimize our development and manufacturing processes to predict and control costs, hire, train, and retain the necessary personnel, increase customer awareness and acceptance of such services, provide high quality services in a timely manner, price our products and services competitively, and effectively integrate customer feedback into our business planning. If we fail to create demand for our new products, services or capabilities, our future business could be harmed.

Certain of our products are used by customers in the development and production of novel vaccines, therapies, and molecular diagnostics, some of which represent relatively new and still-developing modes of treatment and testing. Unforeseen adverse events, negative clinical outcomes, or increased regulatory scrutiny of these treatments and their financial cost may damage public perception of the safety, utility, or efficacy of these vaccines and therapies or other modes of treatment and may harm our customers' ability to conduct their business. Such events may negatively impact our revenue and have an adverse effect on our performance.

Cell and gene therapy and mRNA vaccines remain relatively new and are under active development, with only a few cell and gene therapies and mRNA vaccines authorized or approved to date by regulatory authorities. Public perception may be influenced by claims that cell and gene therapy or mRNA vaccines are unsafe or ineffective, and cell and gene therapy may not gain the acceptance of the public or the medical community. In addition, ethical, social, legal, and financial concerns about cell and gene therapy and mRNA vaccines could result in additional regulations or limitations or even prohibitions on certain gene therapies or vaccine-related products, or reduced access to funding for our customers in these market segments. More restrictive regulations or negative public perception could reduce certain of our customers' use of our products, which could negatively affect our revenue and performance. In addition, certain vaccine development and diagnostic testing programs utilize our bacterial cell culture media and our molecular biology reagents, which we manufacture subject to GMP requirements. There can be no assurance that any cell and gene therapy, vaccine programs, or diagnostic tests will proceed to clinical trials or result in a commercial product, or that any resulting gene therapies, vaccines, or diagnostic tests will incorporate or utilize our products.

Our products are highly complex and are subject to quality control and assurance requirements.

We believe all of our products are exempt from compliance with the U.S. Food, Drug, and Cosmetic Act (FDCA) and the current GMP regulations of the FDA, because all of our products are intended for research use only or for further processing by our customers. We do not make any claims related to the safety, effectiveness, or diagnostic utility of any of our products because they are not intended for clinical, therapeutic, or diagnostic use.

Nevertheless, the quality of our products is critical to our customers. We apply quality control procedures, including inspection of our products and/or the materials used in their manufacture, the verification of stability and/or performance, and, for certain products, additional validation procedures, whether a product we offer is designed and manufactured by us or purchased from outside suppliers. All of our quality control processes are administered under a system designed to adhere to aspects of ISO 13485:2016. Some of our customers also validate the products they purchase from us for their applications, and they may qualify us against their quality system requirements, which can include supplier questionnaires, quality agreements, and on-site audits. In the event we or our suppliers manufacture products that fail to comply with applicable quality standards or expectations, we may incur delays in fulfilling orders, recalls, and/or harm to our reputation.

If our customers do not qualify our quality systems, or if we are unable to maintain our ISO certification, our operating results could suffer.

We believe our quality system is adequate and that our activities comply with the qualification and technical standards established in our quality system. However, our customers often require that our quality system meets their qualification standards and that we be certified as in compliance with international quality standards, including with those set out in ISO 13485:2016. We are ISO 13485:2016 certified, and we must periodically pass audits in order to maintain certification. Our ISO certification will expire on July 25, 2023, if we do not pass an audit before that date. We may also encounter quality issues in the future as a result of the expansion or reconfiguration of existing manufacturing facilities, automation or other changes in our manufacturing processes, or the introduction of new products. We may be unable to obtain, or could experience delays in obtaining, customer qualification of our quality system. Any failure by us to obtain and maintain qualification of our quality systems by our customers, or to remain ISO certified, could have a material adverse effect on our business, financial condition, results of operations, cash flows, reputation, and prospects.

If we cannot provide quality technical and applications support, we could lose customers and our business and prospects would suffer.

The introduction of our products into our customers' existing laboratory workflows and ongoing customer support for our products can be challenging. Accordingly, we need highly trained technical support personnel. Hiring technical support personnel is very competitive in our industry due to the limited number of people available with the necessary scientific and technical backgrounds and ability to understand our products and their uses at a technical level. To effectively support potential new customers and the expanding needs of current customers, we will need to substantially expand our technical support staff over time. If we are unable to attract, train, or retain the number of highly qualified technical services personnel that our business needs, our business and prospects will suffer.

We depend on a stable and adequate supply of quality raw materials from our suppliers, and price increases or interruptions of such supply could have an adverse impact on our business, financial condition, results of operations, cash flows, and prospects.

Our operations depend upon our ability to obtain raw materials at reasonable prices. If we are unable to obtain the materials we need at reasonable prices, whether due to inflation in the broader economy, supply chain disruptions, or other factors, we may not be able to produce certain of our products at marketable prices or at all, which could have a material adverse effect on our results of operations. Certain of our raw materials are sourced from a limited number of suppliers. For each of the years ended December 31, 2022 and 2021, purchases from suppliers making up 10% or more of our total inventory purchases represented 63% and 61% of total inventory purchases, respectively. However, we note that one of these suppliers is a distributor that sells products on behalf of a diversified supply chain. Delays or difficulties in securing these raw materials or other laboratory materials could

result in an interruption in our production operations if we cannot obtain an acceptable substitute. Any such interruption could significantly affect our business, financial condition, results of operations, cash flows, and prospects.

Although we believe that we have stable relationships with our existing suppliers, we cannot assure you that we will be able to secure a stable supply of raw materials going forward. Our suppliers may not be able to keep up with our pace of growth or may reduce or cease their supply of raw materials to us at any time. While we may identify other suppliers, raw materials we purchase from those replacement suppliers may require us to alter our production operations or perform extensive validations, which may be time consuming and expensive. In addition, we cannot assure you that our suppliers have obtained and will be able to obtain or maintain all licenses, permits, and approvals necessary for their operations or comply with all applicable laws and regulations, and the failure to do so by them may lead to interruption in their business operations, which in turn may result in shortages of raw materials supplied to us. Some of our suppliers are based overseas and therefore may need to maintain export or import licenses. If the supply of raw materials is interrupted, our business, financial condition, results of operations, cash flows, and prospects may be adversely affected.

If we are unable to manufacture or ship our products to meet demand, our operating results will be harmed.

Our revenue and other operating results depend in large part on our ability to manufacture and ship our products in sufficient quantities and on specific timelines. Any interruptions we experience in the manufacturing or shipping of our products could delay our ability to recognize revenue in a particular quarter. Manufacturing problems can and do arise, and as demand for our products increases, any such problems could have an increasingly significant impact on our operating results. While we have not experienced significant problems with, or delays in our production capabilities that resulted in delays in our ability to ship finished products, there can be no assurance that we will not encounter such problems in the future. The COVID-19 pandemic continues to impact the global supply chain, causing disruptions to service providers, logistics, and the flow and availability of supplies and products. While not significant, we have experienced some disruptions to parts of our supply chain as a result of the pandemic, and we could experience other such disruptions in the future. We also adjust our supply chain requirements based on changing customer needs and demands, and such adjustments could cause delays. We may not be able to ship products quickly and recognize anticipated revenue for a given period if we experience significant delays in the manufacturing process. In addition, we must maintain sufficient production capacity in order to meet anticipated customer demand, and we may be unable to offset the associated fixed costs if orders slow, which would adversely affect our operating margins. Furthermore, our customers rely on us for fast delivery of their custom-made formulations, and if our production timeline slows down, we may not be able to meet their expectations and our relationships could suffer. If we are unable to manufacture and ship our products consistently, in sufficient quantities and on a timely basis, our business, financial condition, results of operations, cash flows, and prospects will be materially and adversely affected.

Future strategic investments or transactions may require us to seek additional financing, which we may not be able to secure on favorable terms, if at all.

We plan to continue a strategy of growth and development for our business. To this end, we actively evaluate various strategic investments and transactions on an ongoing basis, including licensing or acquiring products, technologies, or businesses complementary to our existing portfolio of products and services. We may need to seek additional financing to fund these strategic investments or transactions. Should we need to do so, we may not be able to secure such financing, or obtain such financing on favorable terms. In addition, future acquisitions may require the issuance or sale of additional equity, or equity-linked securities, which may result in additional dilution to our stockholders. The Amended Credit Agreement imposes significant restrictions on our ability to make acquisitions or certain other investments and our ability to make such acquisitions or other investments may be further limited by the terms of any future debt or preferred securities we may issue or any future credit facilities we may enter into.

Natural disasters (including earthquakes, fire, and drought), geopolitical unrest, war (including the war in Ukraine), terrorism, public health issues (including the ongoing COVID-19 pandemic) or other catastrophic

events, some possibly related to the increasing effects of climate change, could disrupt the supply, production, delivery, or demand of our products, which could negatively affect our operations and performance.

We are subject to the risk of damage, destruction, and business disruption caused by the increasing effects of climate change; earthquakes, hurricanes, floods, droughts, and other natural disasters; fire; power shortages; geopolitical unrest, war, terrorist attacks and other hostile acts; public health issues, epidemics or pandemics, such as the ongoing COVID-19 pandemic; and other events beyond our control and the control of the third parties on which we depend. Any of these catastrophic events, whether in the U.S. or abroad, may have a significant negative impact on the global economy, our employees, facilities, critical equipment, partners, suppliers, distributors or customers and could decrease demand for our products, create delays and inefficiencies in our supply chain and make it difficult or impossible for us to manufacture products or perform services for our customers. We may not carry sufficient business insurance to compensate for damage or other losses relating to our facilities and equipment. In addition, any legislative or regulatory responses to these events, including to address the effects of or to mitigate climate change, could increase compliance costs and impose additional operating restrictions, each of which could have a negative impact on the Company's operations.

We rely upon our internal manufacturing, packaging, and distribution operations to produce many of the products we sell and on our warehouse facilities to store products pending sale. Our primary manufacturing and storage operations are located in California, near major earthquake faults, which makes us susceptible to earthquake and fire risks. A catastrophic event that results in damage to specific equipment that would be difficult to replace, in the destruction or disruption of our research and production facilities or in the disruption of our critical business or information technology systems would severely affect our ability to conduct normal business operations. Any disruptions in our operations could adversely affect our business, financial condition, and results of operations and harm our reputation. We may not carry sufficient business insurance to compensate for losses that may occur. Any such losses or damages could have a material adverse effect on our business, financial condition, and results of operations. In addition, the facilities of our suppliers and customers may be harmed or rendered inoperable by such catastrophic events, which may cause disruptions, difficulties or otherwise materially and adversely affect our business.

We rely upon the use of water to produce many of the products we sell, including the sale of water products themselves. Lack of sufficient water to manufacture our products could severely impact our operations and performance. Extended periods of drought in California may put pressure on the use and availability of water for manufacturing purposes, and in some cases, governmental authorities could divert, or already have diverted, water to other uses. As California has grown in population, there are increasing and multiple pressures on the use and distribution of water, which many view as a finite resource. We believe we have access to adequate supplies of water for our manufacturing operations and currently do not anticipate that future drought conditions will have a material impact on our operating results. However, if future drought conditions are worse than prior drought conditions or if regulatory responses to such conditions limit our access to water, our business could be negatively affected.

Because we rely heavily on third-party package-delivery services, a significant disruption in these services, damages or losses sustained during shipping or significant increases in prices could adversely affect our business, financial condition, results of operations, cash flows, and prospects.

We ship a significant portion of our products to our customers through independent package delivery companies, such as FedEx, UPS, and FedEx Freight. If one or more of these third-party package-delivery providers were to experience a significant service disruption, preventing our products from being delivered in a timely fashion or causing us to incur additional shipping costs we could not pass on to our customers, our costs could increase and our relationships with certain of our customers could be adversely affected. In addition, if one or more of these third-party package-delivery providers were to increase prices, and we were not able to find comparable alternatives or make adjustments in our delivery network, our business could be adversely affected. Furthermore, if one or more of these third-party package-delivery providers were to experience performance problems or other difficulties, it could negatively impact our operating results and our customers’ experience. In the past, some of our products have sustained serious damage in transit such that they were no longer usable. Although we have taken steps to improve our packaging and shipping containers, there is no guarantee our products will not become damaged or lost in transit in the future. If our products are damaged or lost in transit, it may result in a substantial delay in the fulfillment of

our customers' orders and, depending on the type and extent of the damage, it may result in a substantial financial loss. If our products are not delivered in a timely, cost-effective fashion, or are damaged or lost during the delivery process, our customers could become dissatisfied and cease using our products, which would adversely affect our business, financial condition, results of operations, cash flows, and prospects.

If we are unable to continue to hire and retain skilled personnel, we will have trouble developing and marketing our products.

We are highly dependent, and our success depends largely, upon the continued service of our management and scientific staff and our ability to attract, retain, and motivate highly skilled technical, scientific, engineering, management, and marketing personnel, who deliver high-quality and timely services to our customers and keep pace with cutting-edge technologies and developments in biology and manufacturing. We also face significant competition in the hiring and retention of such personnel from other companies, other providers of outsourced biologics services, research and academic institutions, government and other organizations who have superior funding and resources. Each of our executive officers may terminate their employment with us at any time. The loss of key personnel or our inability to hire and retain skilled personnel could materially adversely affect the development of our products and our business, financial condition, results of operations, cash flows, and prospects. We do not maintain “key person” insurance for any of our executives or employees.

In addition, we rely on consultants to assist us in developing and implementing engineering and operational advancements. Our consultants and advisors may be contracted by companies other than ours and therefore may have commitments that may limit their availability to us.

Our corporate culture has contributed to our success, and if we cannot maintain this culture as we grow, we could lose the innovation, creativity, and teamwork fostered by our culture and our business may be harmed.

We believe that our culture has been and will continue to be a critical contributor to our success. If we do not continue to develop our corporate culture or maintain and preserve our guiding principles as we grow and evolve, we may be unable to foster the innovation, curiosity, creativity, focus on execution, teamwork, and the facilitation of critical knowledge transfer and knowledge sharing we believe we need to support our growth. The ongoing growth in the number of our employees and the complexity of our organization may result in a change to our corporate culture, which could harm our business.

We began to invest in marketing and selling our products only recently. If our marketing and sales functions are not as effective as we anticipate, our business and operating results will be adversely affected.

We currently have limited commercialization expertise and have only recently begun to invest in our marketing and sales capabilities. Developing and operating these functions will require significant expenditures, management resources, and time. The eventual impact of our marketing and sales personnel and activities may be less than we expect. We also compete with other companies to recruit, hire, train, and retain qualified marketing and sales personnel. We may not be able to attract and retain the necessary personnel or be able to build efficient and effective marketing and sales organizations, which could negatively impact market acceptance and therefore sales of our products, limiting our revenue growth and potential profitability.

We may enter into additional distribution arrangements and marketing alliances for certain products and services or certain geographic areas, and any failure to successfully identify and implement these arrangements on favorable terms, if at all, may impair our ability to effectively distribute and market our products.

We may pursue additional arrangements regarding the sales, marketing, and distribution of one or more of our products and our future revenue may depend, in part, on our ability to enter into and maintain successful arrangements with other companies having sales, marketing, and distribution capabilities. Any failure to enter into such arrangements and marketing alliances on favorable terms, if at all, could delay or impair our ability to distribute or market our products and could increase our costs of distribution and marketing. Any use of distribution arrangements and marketing alliances to commercialize our products will subject us to a number of risks, including the following:

- we may be required to relinquish important rights to our products;
- we may be exposed to additional regulation and risk associated with the sale of our products in new geographic areas;
- we may not be able to control the amount and timing of resources that our distributors or collaborators may devote to the distribution or marketing of our products;
- our distributors or collaborators may experience financial difficulties; and
- business combinations or significant changes in a collaborator's business strategy may adversely affect a collaborator's willingness or ability to complete its obligations under any arrangement.

Our success depends on the market acceptance of our bacterial cell culture media, specialized chromatography solutions, and molecular biology reagents, which we manufacture subject to GMP quality standards. Our bacterial cell culture media, specialized chromatography solutions, and molecular biology reagents may not achieve or maintain significant commercial market acceptance.

Our commercial success is dependent upon our ability to continue to successfully market and sell our bacterial cell culture media, specialized chromatography solutions, and molecular biology reagents, which are manufactured subject to GMP quality standards. Our ability to achieve and maintain market acceptance of our products will depend on a number of factors, including:

- our ability to increase awareness of the capabilities of our products and solutions;
- our ability to continue to produce and deliver custom-made formulations to our customers with short turnaround times;
- our ability to maintain compliance with GMP quality standards for certain of our products;
- our ability to assess and determine, consistent with the interpretation of the FDA and similar regulatory bodies, the regulatory categories and status of our product offerings which may develop and change over time and to obtain any regulatory clearances or approvals, if and/or when required by the FDA or similar regulatory authorities;
- our customers' willingness to adopt new products;
- whether our products reliably provide advantages over legacy and other alternative offerings and are perceived by customers to be cost effective;
- our ability to execute on our strategy to scale-up our manufacturing capabilities to meet increasing demand;
- the rate of adoption of our products by biopharmaceutical companies, academic institutions, and others;
- the relative reliability and robustness of our products as a whole;
- our ability to develop new tools and solutions for customers;
- whether competitors develop and commercialize products and services that provide comparable features and benefits at scale;
- whether competitors effectively link their instruments and/or capital equipment to their reagents;
- the impact of our investments in product innovation and commercial growth; and
- negative publicity regarding our or our competitors' products resulting from defects or errors.

We cannot assure you that we will be successful in addressing these or other risk factors that might affect the market acceptance of our products. If we are unsuccessful in achieving and maintaining market acceptance of our products, our business, financial condition, results of operations, cash flows, and prospects could be adversely affected.

Our long-term results depend upon our ability to improve existing products and introduce and market new products and services successfully.

Our business is dependent on the continued improvement of our existing products and our development of new products and services utilizing our current or other potential future capabilities. As we introduce new products and services or refine, improve, or upgrade versions of existing products, we cannot predict the level of market acceptance or the amount of market share these new products or services will achieve, if any. We cannot assure you that we will not experience material delays in the introduction of new products and services in the future. Consistent with our strategy of offering new products and product refinements, we expect to continue to use a substantial amount of capital for product development and refinement. We may need additional capital for product development and refinement than is available on terms favorable to us, if at all, which could adversely affect our business, financial condition, results of operations, cash flows, and prospects.

We generally sell our products in industries that are characterized by rapid technological changes, frequent new product introductions, and changing industry standards. If we do not develop new products and product enhancements based on technological innovation on a timely basis, our products may become obsolete over time and our revenues, cash flow, profitability, and competitive position will suffer. Our success will depend on several factors, including our ability to:

- correctly identify customer needs and preferences and predict future needs and preferences;
- allocate our research and development funding to products with higher growth prospects;
- anticipate and respond to our competitors' development of new products and technological innovations;
- innovate and develop new technologies and applications, and acquire or obtain rights to third-party technologies that may have valuable applications in the markets we serve;
- successfully commercialize new technologies in a timely manner, price them competitively, and manufacture and deliver sufficient volumes of new products of appropriate quality on time; and
- convince our customers to adopt new technologies.

In addition, if we fail to accurately predict future customer needs and preferences or fail to produce viable technologies, we may invest heavily in research and development of products that do not lead to significant revenue. Even if we successfully innovate and develop new products and product enhancements, we may incur substantial costs in doing so, and our profitability may suffer.

The market may not be receptive to our new products and services upon their introduction.

We expect a portion of our future revenue growth to come from introducing new products to support the growing cell and gene therapy market and the increasing use of mRNA vaccines and therapies. The commercial success of all of our products will depend upon their acceptance by the life science and biopharmaceutical industries. Some of the products and services that we are developing are based upon new technologies or approaches. As a result, there can be no assurance that these new products and services, even if successfully developed and introduced, will be accepted by customers. If customers do not adopt our new products, services and technologies, our results of operations may suffer and, as a result, the market price of our common stock may decline.

Due to the significant resources required to access new markets, we must make strategic and operational decisions to prioritize certain markets, and product offerings, 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 products have 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 in which we believe the path to commercializing our products and realizing revenue is shorter. However, due to the significant resources required for the development of applications 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 applications may not lead to the

development of any viable products and may divert resources away from better opportunities. Similarly, our potential decisions to delay or terminate efforts to address, or to collaborate with third parties in respect of, certain markets may subsequently also prove to have been 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 the cell and gene therapy market, it could slow or stop our business growth and negatively impact our business, financial condition, results of operations, and prospects.

Our estimates of market opportunity and forecasts of market growth may prove to be inaccurate, and even if the market in which we compete achieves the forecasted growth, our business could fail to grow at similar rates, if at all.

Addressable market estimates and growth forecasts are subject to significant uncertainty and are based on assumptions and estimates that may be inaccurate. These estimates and forecasts are based on a number of complex assumptions and third-party estimates and other business data, including assumptions and estimates relating to our ability to generate revenue from existing products and the development of new products and services. Our estimates and forecasts relating to the size and expected growth of our markets may prove to be inaccurate. Even if the markets in which we compete meet the size estimates and growth forecasted by us, our business could fail to grow at the rate we anticipate, if at all.

Product liability lawsuits against us could cause us to incur substantial liabilities, limit sales of our existing products, and limit commercialization of any products that we may develop.

Our business exposes us to the risk of product liability claims that are inherent in the development, production, distribution, and sale of biotechnology products. We face an inherent risk of product liability exposure related to the use of our products and product liability lawsuits may allege that our products failed to perform as designed. We may also be subject to liability for errors in, a misunderstanding of or inappropriate reliance upon, the information we provide in the ordinary course of our business activities. If any of our products harm people due to our negligence, willful misconduct, unlawful activities, or material breach, or if we cannot successfully defend ourselves against claims that our products caused injuries, we could incur substantial liabilities. While we seek to limit our product liability exposure, including in our contracts and terms and conditions of sale with our customers, we may not be successful in reducing or eliminating potential liability. Regardless of merit or eventual outcome, liability claims may result in the following, any of which could impact our business, financial condition, results of operations, cash flows, and prospects:

- decreased demand for our products and any products or services that we may develop in the future;
- injury to our reputation;
- costs to defend the related litigation;
- distraction of management's attention from our primary business;
- loss of revenue; and
- the inability to commercialize products that we may develop.

We maintain product liability insurance, but this insurance is subject to deductibles, limits, and exclusions and may not fully protect us from the financial impact of defending against product liability claims or the potential loss of revenue that may result. 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.

We are subject to stringent and evolving data privacy and information security laws, regulations, and standards, as well as policies and contractual obligations related to data privacy and security, and changes in these could adversely affect our business.

We are subject to data privacy and information security laws and regulations that apply to the collection, transmission, storage, and use of proprietary information and personal information. Failure to comply with any of these laws and regulations could result in enforcement actions against us, including fines, claims for damages by

affected individuals, damage to our reputation, and loss of goodwill, any of which could have a material adverse effect on our business, financial condition, results of operations, cash flows, and prospects. Additionally, if we are unable to properly protect the privacy and security of information, we could be found to have breached our contracts.

In the U.S., numerous federal and state laws, including state data breach notification laws and federal and state health information privacy and consumer protection laws, govern the collection, use, disclosure, and security of personal information. These laws continue to change and evolve and are increasing in breadth and impact. Many states in which we operate have laws that protect the privacy and security of personal information. For example, the California Consumer Privacy Act of 2018 (CCPA), which protects the privacy rights of California residents and imposes obligations on companies that process their personal information, came into effect on January 1, 2020. Among other things, the CCPA requires covered companies to provide disclosures to California residents and afford them data protection and privacy rights, including the ability to opt-out of certain sales of personal information. The CCPA provides for civil penalties for violations, as well as a private right of action for certain data breaches that result in the loss of personal information. In addition, the California Privacy Rights Act (CPRA) took effect January 1, 2023. The CPRA amends the CCPA, giving California residents additional control over their personal information and imposing further obligations on businesses processing the personal information of California residents. The CPRA includes the creation of a privacy-specific enforcement agency, the first of its kind in any U.S. state, which will be responsible for enforcing the new law. These laws subject us to increased regulatory and overall risk. State laws are changing rapidly and there is discussion in Congress of a new federal data protection and privacy law to which we would become subject, if it is enacted. Without an overarching federal law driving privacy compliance in the U.S., however, a patchwork of privacy legislation formed by individual state laws could also create risks, similar to the patchwork created by differing state data breach notification obligations. Requirements to comply with varying state laws not only increase costs for compliance, but also create the potential for enforcement by individual state attorneys general.

Various foreign countries also have, or are developing, laws that govern the collection, use, disclosure, security, and cross-border transmission of personal information. The legislative and regulatory landscape for data privacy and information security continues to evolve, and there has been an increasing focus on data privacy and information security issues that have the potential to affect our business. To the extent applicable, we are, or could be subject to these laws, rules, and regulations, and we cannot guarantee that we are, or will be, in compliance with all applicable laws, rules, and regulations as they are enforced now or as they evolve.

We use third-party credit card processors to process payments from our customers. Through our agreements with our third-party credit card processors, we are subject to payment card association operating rules, including the Payment Card Industry Data Security Standard (PCI-DSS), which governs a variety of areas, including how consumers and customers may use their cards, the security features of cards, security standards for processing, data security and allocation of liability for certain acts or omissions, including liability in the event of a data breach. Any change in these rules or standards and related requirements could make it difficult or impossible for us to comply. Additionally, any data breach or failure to hold certain information in accordance with PCI-DSS may have an adverse effect on our business and results of operations.

It is possible that the laws governing data privacy and information security may be interpreted and applied in a manner that is inconsistent with our practices and our efforts to comply with the evolving data protection rules may be unsuccessful. We must devote significant resources to understanding and complying with this changing landscape. Failure to comply with U.S. federal and state and non-U.S. laws regarding data privacy and information security could expose us to penalties under such laws, orders requiring that we change our practices, claims for damages or other liabilities, regulatory investigations and enforcement action, litigation, and significant costs for remediation, any of which could adversely affect our business. Even if we are not determined to have violated these laws, government investigations into these issues typically require the expenditure of significant resources and generate negative publicity, which could have a material adverse effect on our business, financial condition, results of operations, cash flows, and prospects.

Our internal computer systems, or those of our suppliers, customers, or contractors, have been and may in the future be subject to cyberattacks or security breaches, which could result in a material disruption of our

product development programs or otherwise adversely affect our business, financial condition, results of operations, cash flows, and prospects.

Despite the implementation of security measures, our internal computer systems and those of our suppliers, customers, and contractors, are vulnerable to damage from computer viruses and unauthorized access. We and our suppliers, including security and infrastructure suppliers, manage and maintain our data using a combination of on-site systems and cloud-based data centers. We face a number of risks related to protecting information, including inappropriate use or disclosure, unauthorized access or acquisition, or inappropriate modification of information. Cyberattacks are increasing in their frequency, sophistication, and intensity and have become increasingly difficult to detect. Cyberattacks could include the deployment of harmful malware, ransomware, denial-of-service attacks, social engineering, and other means to affect service reliability and threaten the confidentiality, integrity, and availability of information. Cyberattacks also could include phishing attempts or e-mail fraud to cause unauthorized payments or information to be transmitted to an unintended recipient, or to permit unauthorized access to systems. A material cyberattack or security incident could cause interruptions in our operations and could result in a material disruption of our business operations, damage to our reputation, financial condition, results of operations, cash flows, and prospects.

In the ordinary course of our business, we collect and store data that we are required to protect, including, among other things, personal information about our employees, credit card data, intellectual property, and proprietary business information. Any cyberattack or security incident that leads to the unauthorized access, acquisition, use or disclosure of personal or proprietary information could harm our reputation, cause us not to comply with U.S. federal and/or state, or non-U.S., data breach notification laws, or our contractual obligations, and otherwise subject us to liability under laws and regulations that protect the privacy and security of personal information. In addition, we could be subject to risks caused by misappropriation, misuse, leakage, falsification, or intentional or accidental release or loss of information maintained in our information systems and networks and those of our suppliers, including personal information of our employees and Company, customer, and supplier confidential data. In addition, outside parties have previously attempted and may in the future attempt to penetrate our systems or those of our suppliers or fraudulently induce our personnel or the personnel of our suppliers to disclose information in order to gain access to our data and/or systems or make unauthorized payments to third parties. The number and complexity of these threats continue to increase over time. If a material breach of our information technology systems or those of our suppliers occurs, the market perception of the effectiveness of our security measures could be harmed and our reputation and credibility could be damaged.

Our insurance coverage may not be adequate to cover losses associated with security incidents, and in any case, such insurance may not cover all of the types of costs, expenses, and losses we could incur to address a security incident. As a result, we may be required to expend significant additional resources to protect against the threat of these issues or to alleviate problems caused by the same. In addition, we could be subject to regulatory actions and/or claims made by individuals and groups in private litigation related to data collection and use practices and other data privacy laws and regulations, including claims for misuse or inappropriate disclosure of data, as well as unfair or deceptive practices. Although we develop and maintain systems and controls designed to prevent these events from occurring, and we have a process to identify and mitigate threats, the development and maintenance of these systems, controls, and processes is costly and requires ongoing monitoring and updating as technologies change and efforts to overcome security measures become increasingly sophisticated. Moreover, despite our efforts, the possibility of these events occurring cannot be eliminated entirely and there can be no assurance that any measures we take will prevent cyberattacks or security incidents that could adversely affect our business, financial condition, results of operations, cash flows, and prospects.

We are dependent upon information technology systems, which are subject to disruption, damage, and failure.

To conduct our business, we rely on information technology systems, networks, and services, many of which are managed, hosted, and provided by third parties. System failure, malfunction, or loss of data that is housed in the Company's or its third-party service providers' critical information systems could disrupt our ability to perform critical functions, which in turn could materially and adversely affect our business and operating results, financial position, and cash flows. Our information systems could be damaged or cease to function properly due to a number of other reasons, including power outages or other catastrophic events. As a result, we may experience interruptions

in our ability to manage our daily operations, which could adversely affect our business, financial condition, and results of operations.

Changes in political, economic, or governmental regulations may reduce demand for our products or increase our expenses.

We compete in many markets in which we and our customers must comply with federal, state, local and international regulations, such as environmental, health and safety, and food and drug regulations. We develop, configure, and market our products to meet customer needs created by those regulations. The U.S. and international healthcare industry is subject to changing political, economic, and regulatory influences that could significantly affect the drug development process, research and development costs, and the pricing and reimbursement for pharmaceutical and other therapeutic products. Any significant change in regulations could have an adverse effect on both our customers' business and our business, which could result in reduced demand for our products and services or increases in our expenses. For example, we provide products used for basic research and input components used by biopharmaceutical customers for further processing.

Changes in the FDA's regulation of the drug discovery and development process may have a negative impact on the ability of our customers to conduct and fund clinical trials, which could have a material adverse effect on the demand for the products we supply to these customers. Additionally, the U.S. government and governments worldwide have increased efforts to expand healthcare coverage while at the same time curtailing and better controlling the increasing costs of healthcare. If cost-containment efforts limit our customers' profitability, they may decrease research and development spending, which could decrease the demand for our products and materially adversely affect our growth prospects. Any of these factors could harm our customers' businesses, which, in turn, could materially adversely affect our business, financial condition, results of operations, cash flows, and prospects.

We may become subject to greater financial, operating, legal, and compliance risk associated with global operations.

We engage in limited business globally, with approximately 3% of our revenue for each of the years ended December 31, 2022 and 2021, coming from outside the U.S. However, a part of our strategy is to expand geographically, both through distribution and through direct sales. We may also seek to expand geographically by acquiring complementary businesses outside of the U.S. This would subject us to a number of risks, including international economic, political, and labor conditions; currency fluctuations; tax laws (including U.S. taxes on income earned by foreign subsidiaries); increased financial accounting and reporting burdens and complexities; compliance with legislative and regulatory requirements that govern the collection, use, disclosure, security and cross-border transmission of personal information; unexpected changes in, or impositions of, legislative or regulatory requirements; failure of laws to protect intellectual property rights adequately; inadequate local infrastructure and difficulties in managing and staffing international operations; delays resulting from difficulty in obtaining export licenses for certain technology; tariffs, quotas, and other trade barriers and restrictions; transportation delays; operating in locations with a higher incidence of corruption and fraudulent business practices; and other factors beyond our control, including terrorism, war, natural disasters, climate change, and diseases.

Laws and regulations applicable to international transactions are often unclear and may at times conflict. Compliance with these laws and regulations may involve significant costs or require changes in our business practices that result in reduced revenue and profitability. Non-compliance could also result in fines, damages, criminal sanctions, and damage to our reputation. We expect to incur additional compliance costs associated with our global operations and could become subject to penalties in foreign countries if we do not comply with local laws and regulations, which may be substantially different from those in the U.S.

We may expand our operations in countries with developing economies, where it may be common to engage in business practices that are prohibited by anti-corruption and anti-bribery laws and regulations that either do, or likely will, apply to us, such as the U.S. Foreign Corrupt Practices Act, the U.S. Travel Act, and the UK Bribery Act 2010, which prohibit improper payments or offers of payment by us for the purpose of obtaining or retaining business. Although we intend to implement policies and procedures designed to ensure compliance with these laws, there can be no assurance that all of our employees, contractors, distributors, and agents, including those based in foreign countries where practices that violate such laws may be customary, will comply with our internal policies.

Any such non-compliance, even if prohibited by our internal policies, could have an adverse effect on our business and result in significant fines or penalties.

Future acquisitions may expose us to risks that could adversely affect our business, and we may not achieve the anticipated benefits of acquisitions of businesses or technologies.

We may, in the future, make selected opportunistic acquisitions of complementary businesses, products, services, or technologies. Any acquisition involves numerous risks, uncertainties, and operational, financial, and managerial challenges, including the following, any of which could adversely affect our business, financial condition, results of operations, cash flows, and prospects:

- difficulties in integrating new operations, systems, technologies, products, services, and personnel of acquired businesses effectively;
- problems maintaining uniform procedures, controls, and policies with respect to our financial accounting systems;
- lack of synergies or the inability to realize expected synergies and cost-savings, including enhanced revenue, technology, human resources, cost savings, operating efficiencies, and other synergies;
- difficulties in managing geographically dispersed operations, including risks associated with entering foreign markets in which we have no or limited prior experience;
- underperformance of any acquired technology, product, or business relative to our expectations and the price we paid;
- negative near-term impacts on financial results after an acquisition, including acquisition-related earnings charges;
- the potential loss of key employees, customers, and strategic partners of acquired companies;
- declining employee morale and retention issues affecting employees of businesses that we acquire, which may result from changes in compensation, or changes in management, reporting relationships, future prospects, or the direction of the acquired business;
- claims by terminated employees and stockholders of acquired companies or other third parties related to the transaction;
- the assumption or incurrence of additional debt obligations or expenses, or use of substantial portions of our cash;
- the issuance of equity or equity-linked securities to finance, or as consideration for, any acquisitions may dilute the ownership of our stockholders;
- the issuance of equity or equity-linked securities to finance, or as consideration for, any acquisitions may not be an option if the price of our common stock is low or volatile, which could preclude us from completing any such acquisitions;
- acquisitions financed with borrowings could increase our leverage and interest expense, which could make us more vulnerable to business downturns;
- any collaboration, strategic alliance, and licensing arrangement may require us to relinquish valuable rights to our technologies or products, or grant licenses on terms that are not favorable to us;
- disruption of our ongoing operations and diversion of management’s attention and company resources from existing operations of the business;
- inconsistencies in standards, controls, procedures, and policies;
- the impairment of intangible assets as a result of technological advancements, or worse-than-expected performance of acquired companies;
- assumption of, or exposure to, historical liabilities of the acquired business, including unknown contingent or similar liabilities that are difficult to identify or accurately quantify, litigation-related

liabilities and regulatory compliance or accounting issues, and potential litigation or regulatory action arising from a proposed or completed acquisition;

- the need to later divest acquired assets at a loss if an acquisition does not meet our expectations; and
- risks associated with acquiring intellectual property, including potential disputes regarding an acquired companies' intellectual property.

In addition, the successful integration of acquired businesses requires significant effort and expense across all operational areas, including sales and marketing, research and development, manufacturing, finance, legal, and information technologies. We may not be able to identify or complete promising acquisitions for many reasons, including competition among buyers, the high valuations of businesses in our industry, the need for regulatory and other approvals, and the availability of capital. Even if we are able to complete acquisitions in the future, there can be no assurance that such acquisitions will be successful or profitable. Our failure to successfully address the foregoing risks may prevent us from achieving the anticipated benefits from any future acquisitions in a reasonable time frame, or at all.

We and our customers' respective business operations are and will continue to be subject to extensive laws and regulations, and assessing the applicability and relevant requirements of, and maintaining compliance with, these laws and regulations can be expensive and time consuming.

We are subject to various local, state, federal, foreign, and transnational laws and regulations, and, in the future, any changes to such laws and regulations could adversely affect us. We offer certain products that may be deemed medical devices and become subject to related regulation. Additionally, we provide products used by third parties for the development and commercialization of drug therapies, novel vaccines, and molecular diagnostics by biopharmaceutical companies, life science research companies, CROs, CDMOs, in vitro diagnostics franchises, laboratories, and academic and government research institutions that are also subject to extensive regulation.

The quality of our products is critical to our customers, including researchers looking to develop novel vaccines and drug therapies and for biopharmaceutical customers who use our products as components in their preclinical studies and clinical trials. Biopharmaceutical customers are subject to extensive regulations by the FDA and similar regulatory authorities in other countries for conducting clinical trials and commercializing products for therapeutic or diagnostic use. This regulatory scrutiny results in our customers imposing rigorous quality requirements on us as their supplier through supplier qualification processes and customer contracts, including quality agreements. Regulatory authorities and our customers may conduct scheduled or unscheduled periodic inspections of our facilities to monitor our regulatory compliance or compliance with our quality agreements with our customers. There are significant risks at each stage of the regulatory scheme for our customers.

Regulatory agencies may in the future take action against us or our customers for failure to comply with applicable regulations governing clinical trials and the development and testing of diagnostic and therapeutic products, as well as requirements to fall within certain regulatory categories to qualify for exemption from marketing authorization, or where applicable to obtain clearance, authorization, or approval prior to marketing of regulated products. Failure by us or by our customers to comply with the requirements of these regulatory authorities, including without limitation, remediating any inspectional observations to the satisfaction of these regulatory authorities, could result in warning letters, product recalls or seizures, monetary sanctions, injunctions to halt manufacture and distribution, restrictions on our operations, civil or criminal sanctions, or withdrawal of existing or denial of pending approvals, including those relating to products or facilities. In addition, such a failure could expose us to contractual or product liability claims, contractual claims from our customers, including claims for reimbursement, as well as ongoing remediation and increased compliance costs, any or all of which could be significant.

We are also subject to a variety of federal, state, local, and international non-U.S. laws and regulations that govern, among other things, the importation and exportation of products, the handling, transportation, and manufacture of substances that could be classified as hazardous, and our business practices in the U.S. and abroad such as anti-corruption and anti-competition laws. Any noncompliance by us with applicable laws and regulations or the failure to maintain, renew, or obtain necessary permits and licenses could result in criminal, civil, and administrative penalties and could have an adverse effect on our results of operations.

Establishing policies, procedures, and monitoring and oversight with consideration of both legal requirements and industry best practices in these areas are costly and time consuming. Defending against any actions for non-compliance of such laws can also be costly, time consuming, and may require significant financial and personnel resources. Therefore, even if we are successful in defending against any such actions that may be brought against us, our business may be impaired.

Our products could become subject to regulation by the 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, cash flows, and prospects.

We voluntarily follow the quality standards set out in specific sections of ISO 13485:2016 for the manufacture of our products. Nevertheless, we believe all of our products, including those we market as "GMP-grade" or as being within our "Clinical Solutions" category of products, are exempt from FDA regulations applicable to medical devices and drugs because all of our products are ancillary materials and reagents that are intended for research use or for further processing by our customers. We believe our products are properly labeled and marketed as such. The FDA could nonetheless disagree and conclude that our products are in fact subject to the FDCA and decide to take enforcement action against us, including requiring us to stop the sale of our products until we comply, which would adversely affect our business, financial condition, results of operations, cash flows, and prospects. There can be no assurance that the FDA would find our operations to be in compliance in a timely manner, or at all, and our results of operations could suffer.

In addition, we make certain of our products available to customers as RUO products. Those products must bear a label with the statement: "For Research Use Only," and companies must comply with the FDA's November 2013 Final Guidance for Industry and Food and Drug Administration Staff on "Distribution of In Vitro Diagnostic Products Labeled for Research Use Only or Investigational Use Only" (RUO/IUO Guidance) when labeling and marketing RUO products. The FDA could disagree with our assessment that our RUO products are properly labeled and marketed as RUO or could conclude that our products labeled and marketed as RUO are actually intended for diagnostic or clinical use. The FDA could take enforcement action against us under the FDCA, including requiring us to stop the sale of our RUO products until we are in compliance with applicable regulations, which would adversely affect our business, financial condition, results of operations, cash flows, and prospects. There can be no assurance that we could come into compliance with those regulations in a timely manner, or at all.

We rely on assumptions, 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, to evaluate our business, measure our performance, identify trends affecting our business, formulate financial projections and make strategic decisions. These metrics include a breakdown of product revenue into Lab Essentials, Clinical Solutions and Sample Transport revenue, revenue by customer market (pharmaceutical/biotechnology, and academia, government, distributors and healthcare providers), number of customers, average revenue per customer, number of active customers, average revenue per active customer, average sale price by product, orders per day, quotes per day, delivery times, order type, new customer metrics, and status of pipeline opportunities that represent potential customers. 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. Our methodologies for tracking these metrics may also 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.

We have recorded, and may be required to record in the future, a significant charge to earnings if our goodwill and other intangible assets, or other investments become impaired.

We are required under U.S. generally accepted accounting principles (GAAP) to test goodwill and indefinite lived intangibles for impairment at least annually and to review our goodwill, intangible assets, and other assets acquired through merger and acquisition activity for impairment when events or changes in circumstance indicate

the carrying value may not be recoverable. Factors that could lead to impairment of goodwill, intangible assets and other assets acquired via acquisitions include significant adverse changes in the business climate and actual or projected operating results (affecting our company as a whole or affecting any particular segment) and declines in the financial condition of our business.

During the three months ended September 30, 2022, the market price of our common stock and market capitalization declined significantly. Given the significance of this decline, we performed interim goodwill impairment testing. As a result of that testing, we determined goodwill was fully impaired and recorded an impairment charge of $16.6 million during the three months ended September 30, 2022, adversely impacting our financial results.

After recording the impairment charge, as of December 31, 2022, intangible assets represented approximately 12% of our total assets. In addition, in the future we may acquire other businesses, products, or technologies as well as pursue strategic alliances, join ventures, technology licenses, or investments in complementary businesses, resulting in goodwill and other intangible assets. Such goodwill and intangible assets must be tested and reviewed as described above. If in the future we again determine that there has been impairment, we may be required to record charges to earnings, and our financial results for the relevant period would be reduced by the amount of the impairment, net of tax effects, if any.

Similarly, long-lived assets must be evaluated for impairment when events or changes in circumstances indicate a possible inability to recover carrying amounts. In December 2022, we decided to cease further use and development of certain manufacturing machinery and equipment. After reviewing the recoverability of the carrying value of these assets and determining that their carrying value exceeded their fair value, we recorded an impairment charge of $4.2 million relating to these long-lived assets. If in the future we again determine that there has been impairment to long-lived assets, we may be required to record charges to earnings, and our financial results for the relevant period would be reduced by the amount of the impairment, net of tax effects, if any.

Changes in accounting principles and guidance could result in unfavorable accounting charges or effects.

We prepare our financial statements in accordance with GAAP. These principles are subject to interpretation by the SEC and various bodies formed to create and interpret appropriate accounting principles and guidance. The adoption of new or revised accounting principles may require us to make changes to our systems, processes, and internal controls, which could have a significant effect on our reported financial results and internal controls, cause unexpected financial reporting fluctuations, retroactively affect previously reported results, or require us to make costly changes to our operational processes and accounting systems upon our following the adoption of these standards.

For example, in 2016, the Financial Accounting Standards Board issued ASU No. 2016-02, *Leases*, and its related interpretations, which as updated requires lessees to generally recognize operating and financing lease liabilities and corresponding right-of-use assets on the balance sheet. We adopted this new standard effective January 1, 2022, using the modified retrospective approach, applied at the beginning of the period of adoption, and elected the package of transitional practical expedients. The adoption of this standard resulted in recording operating right-of-use lease assets of $20.3 million, which included reclassifying approximately $0.2 million of deferred rent as a component of the operating lease asset as of January 1, 2022. The adoption also resulted in recording operating lease liabilities of $20.5 million as of January 1, 2022. The standard did not have an impact on the condensed statements of operations, and cash flows.

Our revenue recognition and other factors may impact our financial results in any given period and make them difficult to predict.

Under Accounting Standards Codification (ASC) 606, *Revenue from Contracts with Customers*, (ASC 606), we recognize revenue when our performance obligations have been satisfied in an amount that reflects the consideration that we expect to receive in exchange for those performance obligations. Our revenue primarily includes revenue from the sale of manufactured products, including products from our catalog or available for purchase on our website, and custom manufactured products (such as custom bacterial cell culture media and specialized chromatography solutions). Contracts for such sales contain a single performance obligation, namely the delivery of consumable products. Our application of ASC 606 with respect to the nature of future contractual

arrangements could impact the forecasting of our revenue for future periods, as both the mix of products we will sell in a given period, as well as the size of contracts, is difficult to predict.

Furthermore, the presentation of our financial results requires us to make estimates and assumptions that may affect revenue recognition. In some instances, we could reasonably use different estimates and assumptions, and changes in estimates may occur from period to period. See the section titled "Management's Discussion and Analysis of Financial Condition and Results of Operations—Critical Accounting Policies and Estimates—Revenue Recognition."

Given the foregoing factors, comparing our revenue and operating results on a period-to-period basis may not be meaningful, and our past results may not be indicative of our future performance.

Our ability to use net operating loss carryforwards to reduce future tax payments may be limited.

As of December 31, 2022, we had $28.9 million of U.S. federal and $30.3 million of state net operating loss carryforwards (NOLs) available to reduce taxable income in future years. Our ability to utilize those NOLs may be limited based on our operating performance and tax laws in effect at the time of the proposed use. Under the Tax Cuts and Jobs Act (the Tax Act), as modified by the Coronavirus Aid, Relief, and Economic Security Act (the CARES Act), federal NOLs incurred in taxable years beginning after December 31, 2017, may be carried forward indefinitely, but the deductibility of such federal NOLs in taxable 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 Act or the CARES Act.

Separately, under Sections 382 and 383 of the Internal Revenue Code of 1986, as amended, and corresponding provisions of state law, if a corporation undergoes an "ownership change," which is generally defined as a greater than 50% change, by value, in its equity ownership over a three-year period, the corporation's ability to use its pre-change NOLs 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 as a result of subsequent shifts in our stock ownership, some of which may be outside of our control. As a result, our ability to use our pre-change NOLs to offset U.S. federal taxable income may be subject to limitations, which could potentially result in increased future tax liability to us. In addition, at the state level, there may be periods during which the use of NOLs is suspended or otherwise limited, which could accelerate or permanently increase state taxes owed.

Our business is subject to risks relating to environmental, health, and safety laws and regulations.

We are subject to environmental, health, and safety laws and regulations, incur costs to comply with such laws and regulations, and could be exposed to liabilities or other obligations imposed under such laws or regulations. The costs of compliance with environmental, health, and safety laws and regulations are significant. Any violations, even if inadvertent or accidental, of current or future environmental, health, and safety laws or regulations, and the cost of compliance with any resulting order or fine, could adversely affect our business, financial condition, and results of operations.

Our management has limited experience in operating a public company.

Our executive officers have limited experience in the management of a publicly traded company. Our management team may not successfully or effectively manage our ongoing transition to a mature public company that will be subject to significant regulatory oversight and reporting obligations under federal securities laws. Their limited experience in dealing with the increasingly complex laws pertaining to public companies could be a significant disadvantage because they may devote more time to these activities rather than to the management and growth of our business.

We may not have adequate personnel with the appropriate knowledge, experience, and training in the accounting policies, practices, or internal controls over financial reporting required of public companies in the U.S. The development and implementation of the standards and controls necessary for us to meet the accounting standards required of a public company in the U.S. may require costs greater than expected. We have recently hired,

and will continue to hire, employees whose skills and training are required to develop and carry out the accounting, financial reporting, legal, compliance, and internal control policies and practices required of public companies in the U.S. These additional employees will increase our operating cost in future periods.

Risks Related to Our Intellectual Property

Our inability to protect our intellectual property could have a material adverse effect on our business. In addition, third parties may claim that we infringe or have disclosed their intellectual property or proprietary information, and we could suffer significant litigation or licensing expense as a result.

Our success depends on our ability to obtain and maintain intellectual property protection in the U.S. and other countries with respect to our current and future proprietary products. We rely primarily upon a combination of trade secret protection and confidentiality agreements to protect our technology, manufacturing processes, and products. Our commercial success depends in part on obtaining and maintaining trade secret protection of our current and future products, if any, and the methods used to manufacture them, as well as successfully defending such trade secrets against third-party challenges. Our ability to stop third parties from making, using, selling, offering to sell, or importing our products is dependent upon the extent to which we have valid and enforceable intellectual property rights that cover these activities.

Although we do not currently own any issued patents covering our proprietary products or manufacturing processes, we may in the future file patent applications or acquire or license intellectual property rights, including patents and patent applications. The patent prosecution process is expensive and time consuming, and we may not be able to file and prosecute all necessary or desirable patent applications at a reasonable cost or in a timely manner or in all jurisdictions where protection may be commercially advantageous. It is also possible that we may fail to identify patentable aspects of our research and development output before it is too late to obtain patent protection. In addition, we or our collaborators may only pursue, obtain, or maintain patent protection in a limited number of countries. Even if patents do successfully issue, such patents may not adequately protect our intellectual property, provide exclusivity for our current or future product and service offerings, prevent others from designing around our claims, or otherwise provide us with a competitive advantage.

Additionally, the laws of some countries do not protect intellectual property rights to the same extent as the laws of the U.S., and many companies have encountered significant problems in protecting and defending such rights in foreign jurisdictions. The legal systems of certain countries, particularly certain developing countries, do not favor the enforcement of intellectual property rights, particularly those relating to biotechnology, which could make it difficult for us to stop the infringement, misappropriation, or other violation of our intellectual property rights, including the unauthorized use or reproduction of our manufacturing or other trade secrets. Any of these outcomes could impair our ability to prevent competition from third parties, which may have a material adverse effect on our business, financial condition, results of operations, cash flows, and prospects.

We rely primarily on trade secret laws, as well as confidentiality and non-disclosure agreements, and other contractual protections, to protect our technologies. If we are unable to protect the confidentiality of our technology, the value of our technology and products could be materially adversely affected.

In addition to trade secret protection we also rely on confidentiality agreements with our employees, consultants, contractors, collaborators, CDMOs, CROs, and others to protect our technology and other proprietary information. These agreements require that all confidential information developed by the individual or entity or made known to the individual or entity by us during the course of the individual's or entity's relationship with us be kept confidential and not disclosed to third parties. Our agreements with employees as well as our personnel policies also generally provide that any inventions conceived by the individual in the course of rendering services to us shall be our exclusive property or that we may obtain full rights to such inventions at our election. However, trade secrets are difficult to protect.

Although we use reasonable efforts to protect our trade secrets, our employees, consultants, contractors, collaborators, CDMOs, CROs, and others may unintentionally or willfully disclose our proprietary information to competitors, notwithstanding the existence of a valid confidentiality or similar non-disclosure agreement. We also face the risk that present or former employees could continue to hold rights to intellectual property used by us,

demand the registration of intellectual property rights in their name, and seek payment of damages for our use of such intellectual property.

Enforcing a claim that a third party illegally obtained or is using any of our trade secrets is expensive and time consuming, and the outcome is unpredictable. We may not have adequate remedies in the event of unauthorized use or disclosure of our trade secrets or other proprietary information in the case of a breach of any such agreements, and our trade secrets and other proprietary information could be disclosed to third parties, including our competitors. Many of our partners also collaborate with our competitors and other third parties. The disclosure of our trade secrets to our competitors, or more broadly, would impair our competitive position and may materially harm our business, financial condition, results of operations, cash flows, and prospects. Costly and time-consuming litigation could be necessary to determine the scope of and enforce our rights, and failure to maintain trade-secret protection could adversely affect our competitive business position. The enforceability of confidentiality agreements may vary from jurisdiction to jurisdiction. Courts outside the U.S. are sometimes less willing to protect trade secrets. Moreover, our competitors may independently develop substantially equivalent or superior knowledge, methods, and know-how, and the existence of our own trade secrets affords no protection against such independent discovery.

If we are sued for infringing, misappropriating, or otherwise violating intellectual property rights of third parties, such litigation could be costly and time consuming and could prevent or delay us from developing or commercializing our current or future products.

Our products may infringe on, or be accused of infringing on, one or more claims of an issued patent or may fall within the scope of one or more claims in a published patent application that may subsequently be issued and to which we do not hold a license or other rights.

Because patent applications in the U.S. and many foreign jurisdictions typically are not published until 18 months after filing, or in some cases not at all, and publications in the scientific literature often lag behind actual discoveries, we cannot be certain whether others have filed patent applications for technology that we were the first to invent. Others, including our competitors, may have filed, and may in the future file, patent applications covering technology similar to ours. Any such patent application may have priority over any future patent applications or patents that we may file or obtain, which could further require us to obtain rights to issued patents by others covering such technologies. If another party has filed a U.S. patent application on inventions similar to ours, we may have to participate in an interference proceeding declared by the United States Patent and Trademark Office (the USPTO) to determine priority of invention in the U.S. The costs of these proceedings could be substantial, and it is possible that such efforts would be unsuccessful if, unbeknownst to us, the other party had independently arrived at the same or similar invention prior to our own invention, resulting in a loss of our U.S. patent position with respect to such inventions.

Additionally, pending patent applications that have been published can, subject to certain limitations, be later amended in a manner that could cover our current or future products or the use of our current or future products. After issuance, the scope of patent claims remains subject to construction based on interpretation of the law, the written disclosure in a patent and the patent's prosecution history. Our interpretation of the relevance or the scope of a patent or a pending application may be incorrect. In addition, third parties may obtain patents in the future and claim that use of our technologies infringes upon these patents. These third parties could bring claims against us or our collaborators that would cause us to incur substantial expenses and, if successful against us, could cause us to pay substantial damages.

The life sciences industry has produced a proliferation of patents, and it is not always clear to industry participants, including us, which patents cover various types of products or methods of use. The coverage of patents is subject to interpretation by the courts, and the interpretation is not always uniform. If we are sued for patent infringement, we would need to demonstrate that our products or methods of use either do not infringe the patent claims of the relevant patent and/or that the patent claims are invalid or unenforceable, and we may not be able to do this. Proving invalidity, in particular, is difficult since it requires a showing of clear and convincing evidence to overcome the presumption of validity enjoyed by issued patents. Third parties have, and may in the future have, U.S. and non-U.S. issued patents and pending patent applications that may cover our current or future products. Such a third party may claim that we or our manufacturing or commercialization partners are using inventions covered by the third party's patent rights and may go to court or a tribunal to stop us from engaging in our normal operations

and activities, including making or selling our current or future products. In the event that any of these patent rights were asserted against us, we believe that we may have defenses against any such action, including that such patents would not be infringed by our current or future products and/or that such patents are not valid. However, if any such patent rights were to be asserted against us and our defenses to such assertion were unsuccessful, unless we obtain a license to the patents concerned, we could be liable for damages, which could be significant and include treble damages and attorneys' fees if we are found to have willfully infringed. We could also be precluded from commercializing any future products that were ultimately held to infringe such patents, all of which could have a material adverse effect on our business, financial condition, results of operations, cash flows, and prospects.

If we are found to infringe the patent rights of a third party, or in order to avoid potential claims, we or our collaborators may choose or be required to seek a license from a third party and be required to pay license fees or royalties or both. These licenses may not be available on reasonable terms, or at all. In particular, any of our competitors that control intellectual property that we are found to infringe may be unwilling to provide us a license under any terms. Even if we or our collaborators were able to obtain a license, the rights may be nonexclusive, which could result in our competitors gaining access to the same intellectual property. Ultimately, we could be prevented from commercializing a product, or be forced to cease some aspect of our business operations, if, as a result of actual or threatened patent infringement claims, we or our collaborators are unable to enter into licenses on acceptable terms. In addition, we could be found liable for monetary damages, including treble damages and attorneys' fees, if we are found to have willfully infringed a patent. Further, if a patent infringement suit is brought against us or our third-party service providers and if we are unable to successfully obtain rights to required third-party intellectual property, we may be required to expend significant time and resources to redesign our current or future products, or to develop or license replacement technology, all of which may not be feasible on a technical or commercial basis, and may delay or require us to abandon our development, manufacturing or sales activities relating to our current or future products. A finding of infringement could prevent us from commercializing our future products or force us to cease some of our business operations, which could harm our business. Claims that we have misappropriated the confidential information or trade secrets of third parties could have a similar negative impact on our business. Any of the foregoing could have a material adverse effect on our business, financial condition, results of operations, cash flows, and prospects.

Intellectual property litigation and other proceedings could cause us to spend substantial resources and distract our personnel from their normal responsibilities.

Even if resolved in our favor, intellectual property litigation or other legal proceedings relating to our, our licensors' or other third parties' intellectual property claims may cause us to incur significant expenses and could distract our personnel from their normal responsibilities. Patent litigation and other proceedings may also absorb significant management time. If not resolved in our favor, litigation may require us to pay any portion of our opponents' legal fees. Such litigation or proceedings could substantially increase our operating losses and reduce the resources available for development activities or any future sales, marketing, or distribution activities. We may not have sufficient financial or other resources to conduct such litigation or proceedings adequately. Our competitors or other third parties may be able to sustain the cost of such litigation and proceedings more effectively than we can because of their substantially greater resources. Uncertainties resulting from our participation in patent litigation or other proceedings could have a material adverse effect on our ability to compete in the marketplace. Furthermore, because of the substantial amount of discovery required in certain jurisdictions in connection with intellectual property litigation, there is a risk that some of our confidential information could be compromised by disclosure during this type of litigation. There could also be public announcements of the results of hearings, motions or other interim proceedings or developments. If securities analysts or investors perceive these results to be negative, the perceived value of our current or future products or intellectual property could be diminished. Accordingly, the market price of our common stock may decline. Uncertainties resulting from the initiation and continuation of patent litigation or other proceedings could have a material adverse effect on our business, financial condition, results of operations, and prospects.

We may be subject to claims by third parties asserting that we or our employees, consultants, or independent contractors have misappropriated their intellectual property, or claiming ownership of what we regard as our own intellectual property and proprietary technology.

We try to ensure that our employees do not use the proprietary information or know-how of others in their work for us. We may, however, be subject to claims that we or these employees have inadvertently or otherwise used or disclosed intellectual property, trade secrets, or other proprietary information of any such employee's former employer or that patents and applications we have filed to protect inventions of these individuals, even those related to one or more of our current or future products, are rightfully owned by their former or concurrent employer. Litigation may be necessary to defend against these claims.

In addition, while we typically require our employees, consultants, and independent contractors who may be involved in the development of intellectual property to execute agreements assigning such intellectual property to us, we may be unsuccessful in executing such an agreement with each party who in fact develops intellectual property that we regard as our own, or such agreements may be breached or alleged to be ineffective, and the assignment may not be self-executing, which may result in claims by or against us related to the ownership of such intellectual property or may result in such intellectual property becoming assigned to third parties. If we fail in enforcing or defending any such claims, in addition to paying monetary damages, we may lose valuable intellectual property rights. Even if we are successful in prosecuting or defending against such claims, litigation could result in substantial costs and be a distraction to our senior management and scientific personnel. Any of the foregoing could have a material adverse effect on our business, financial condition, results of operations, cash flows, and prospects.

We rely on confidentiality agreements that may be difficult to enforce and the breach of which could have a material adverse effect on our business and competitive position.

Our policy is to enter agreements relating to the non-disclosure and non-use of confidential information with third parties, including our contractors, consultants, advisors, and research collaborators, as well as agreements that purport to require the disclosure and assignment to us of the rights to the ideas, developments, discoveries, and inventions of our employees and consultants while we employ or engage them. However, these agreements can be difficult and costly to enforce. Moreover, to the extent that our contractors, consultants, advisors, and research collaborators apply or independently develop intellectual property in connection with any of our projects, disputes may arise as to the ownership of the intellectual property. If a dispute arises, a court may determine that the intellectual property belongs to a third party. In addition, we rely primarily on trade secrets and proprietary know-how that we seek to protect, in large part, by confidentiality agreements with our employees, contractors, consultants, advisors, or others. Despite the protective measures we employ, we still face the risk that:

- these agreements may be breached;
- these agreements may not provide adequate remedies for the applicable type of breach; or
- our trade secrets or proprietary know-how will otherwise become known.

Any breach of our confidentiality agreements or our failure to enforce such agreements effectively would have a material adverse effect on our business and competitive position.

If our trademarks and trade names are not adequately protected, we may not be able to build name recognition in our markets of interest and our business, financial condition, results of operations, cash flows, and prospects may be adversely affected.

Our trademarks or trade names may be challenged, infringed, circumvented, or declared generic or determined to be infringing on other marks. We may not be able to protect our rights to these trademarks and trade names or may be forced to stop using these names or marks, which we need for name recognition by potential partners or customers in our markets of interest. During trademark registration proceedings, we may receive rejections. Although we would be given an opportunity to respond to those rejections, we may be unable to overcome such rejections. In addition, in the USPTO and in comparable agencies in many foreign jurisdictions, third parties are given an opportunity to oppose pending trademark applications and to seek to cancel registered trademarks. Opposition or cancellation proceedings may be filed against our trademarks, and our trademarks may not survive such proceedings. If we are unable to establish name recognition based on our trademarks and trade names, we may

not be able to compete effectively and our business, financial condition, results of operations, cash flows, and prospects may be adversely affected.

Intellectual property rights do not necessarily address all potential threats.

The degree of future protection afforded by our proprietary and intellectual property rights is uncertain because such rights offer only limited protection and may not adequately protect our rights or permit us to gain or keep our competitive advantage. For example:

- we do not currently own or license any issued patents, and others may be able to develop products that are similar to, or better than, our current or future products in a way that is not covered by the claims of the patents we may own or license in the future;
- the trade secret protection that we rely on to protect our proprietary information and know-how does not protect us against any third parties independently developing competing technology;
- we, or our licensing partners or current or future collaborators, might not have been the first to make the inventions covered by issued patents or pending patent applications that we may own or license in the future;
- we, or our licensing partners or current or future collaborators, might not be the first to file patent applications for certain of our or their inventions;
- we may choose not to apply for a patent for certain trade secrets or know-how, and a third party may subsequently obtain a patent covering such intellectual property;
- the patents of third parties or pending or future applications of third parties, if issued, may have an adverse effect on our business; or
- any patents that we obtain may not provide us with any competitive advantages or may ultimately be found not to be owned by us, or not to be valid or enforceable.

Should any of these events occur, they could significantly harm our business, financial conditions, results of operations, cash flows, and prospects.

We may need or may choose to obtain licenses from third parties to advance our research or allow commercialization of our current or future products, and we cannot provide any assurances that we would be able to do so.

We may need or may choose to obtain licenses from third parties to advance our research or allow commercialization of our current or future products, and we cannot provide any assurances that third-party patents do not exist that might be enforced against our current or future products in the absence of such a license. We may fail to obtain any of these licenses on commercially reasonable terms, if at all. Even if we are able to obtain a license, it may be non-exclusive, thereby giving our competitors access to the same technologies licensed to us. If we could not obtain a license, we may be required to expend significant time and resources to develop or license replacement technology. If we are unable to do so, we may be unable to develop or commercialize the affected products, which could materially harm our business. The third parties owning such intellectual property rights could also seek either an injunction prohibiting our sales, or, with respect to our sales, an obligation on our part to pay royalties and/or other forms of compensation.

Licensing of intellectual property involves complex legal, business, and scientific issues. Disputes may arise between us and our licensors regarding intellectual property subject to a license agreement, including:

- the scope of rights granted under the license agreement and other interpretation-related issues;
- whether and the extent to which our technology and processes infringe on intellectual property of the licensor that is not subject to the licensing agreement;
- our right to sublicense patent and other rights to third parties under collaborative development relationships;

- our diligence obligations with respect to the use of the licensed technology in relation to our development and commercialization of our products, and what activities satisfy those diligence obligations; and
- the ownership of inventions and know-how resulting from the joint creation or use of intellectual property by our licensors and us and our partners.

If disputes over intellectual property that we have licensed prevent or impair our ability to maintain the licensing arrangements on acceptable terms, we may be unable to successfully develop and commercialize the affected product successfully, or the dispute may have an adverse effect on our results of operations.

We may, in the future, grant licenses under our intellectual property. Like in-licenses, out-licenses are complex, and disputes may arise between us and our licensees, such as the types of disputes described above. Moreover, our licensees may breach their obligations, or we may be exposed to liability due to our failure or alleged failure to satisfy our obligations. Any such occurrence could have an adverse effect on our business.

Risks Related to Our Indebtedness

Our existing indebtedness could adversely affect our business and growth prospects.

The Amended Credit Agreement provides for loan commitments in an aggregate amount of up to $57.135 million. Our indebtedness, including the indebtedness we have incurred, and may in the future incur, under the Amended Credit Agreement or otherwise, could require us to divert funds identified for other purposes to debt service and impair our liquidity position. If we cannot generate sufficient cash flow from operations to service our debt, we may need to refinance our debt, dispose of assets, or issue equity to obtain necessary funds. We do not know whether we will be able to take any of these actions on a timely basis, on terms satisfactory to us, or at all.

Our indebtedness, the cash flow needed to service our debt, and the covenants contained in the Amended Credit Agreement may have important consequences, including:

- limiting funds otherwise available to finance our operating losses or capital expenditures by requiring us to dedicate a portion of our cash flows from operations to the repayment of debt and related interest;
- limiting our ability to prepay existing indebtedness, pay dividends or distributions, dispose of assets, engage in mergers and consolidations, make acquisitions or other investments, and make changes in the nature of the business, among other things;
- making us more vulnerable to rising interest rates, as certain of our borrowings, including borrowings under the Amended Credit Agreement, bear variable rates of interest; and
- making us more vulnerable in the event of a downturn in our business.

Fluctuations in interest rates can increase borrowing costs. Increases in interest rates, such as those increases observed during 2022 and expected to continue into 2023, may directly impact the amount of interest we are required to pay and reduce earnings accordingly. In addition, tax laws, including the disallowance or deferral of tax deductions for interest paid on outstanding indebtedness, could have an adverse effect on our liquidity and our business, financial condition, results of operations, cash flows, and prospects. In addition, our Amended Credit Agreement contains customary affirmative and negative covenants and certain restrictions on operations that could impose operating and financial limitations and restrictions on us, including restrictions on our ability to enter into particular transactions and to engage in other actions that we may believe are advisable or necessary for our business.

We expect to use cash on hand to meet current and future financial obligations, including funding our operations, debt service requirements, and capital expenditures. The ability to meet these obligations depends on our financial and operating performance, which is subject to prevailing economic, industry, and competitive conditions and to certain financial, business, economic, and other factors beyond our control and as set forth herein.

Despite current indebtedness levels, we may incur substantially more indebtedness, which could further exacerbate the risks associated with our substantial indebtedness.

We may incur significant additional indebtedness in the future, including in connection with investments in joint ventures or acquisitions. If new debt is added to our current indebtedness levels, the related risks that we face could intensify.

The terms of the Amended Credit Agreement may restrict our current and future operations, particularly our ability to respond to changes or to take certain actions. If we fail to comply with the covenants and other obligations under the Amended Credit Agreement, the lender may be able to accelerate amounts owed under the facilities and may foreclose upon the assets securing our obligations.

The Amended Credit Agreement contains a number of restrictive covenants that impose significant operating and financial restrictions on us and may, unless waived by the lender, limit our ability to engage in acts that may be in our long-term best interests, including restrictions on our ability to:

- incur additional indebtedness;
- incur liens;
- merge, dissolve, liquidate, amalgamate, consolidate, or sell all or substantially all of our assets;
- declare or pay certain dividends, payments, or distributions, or repurchase or redeem certain capital stock; and
- make certain investments.

These restrictions could limit, potentially significantly, our operational flexibility and affect our ability to finance our future operations or capital needs or to execute our business strategy. Our indebtedness under the Amended Credit Agreement is secured by substantially all of our assets. If we fail to comply with the covenants and our other obligations under the Amended Credit Agreement, the lender would be able to accelerate the required repayment of amounts due and, if they are not repaid, could foreclose upon the assets securing our obligations with respect to such indebtedness.

Risks Related to Our Common Stock

Telegraph Hill Partners Management Company LLC, through its affiliates THP LP and THP LLC, controls us, and its interests may conflict with ours or yours in the future.

THP controls approximately 62.1% of the voting power of our outstanding common stock, which means that THP can control the vote of all matters submitted to a vote of our stockholders. This control enables THP to control the election of the members of our board of directors and all other corporate decisions. In particular, for so long as THP continues to own a majority of our common stock, THP will be able to cause or prevent a change of control of us or a change in the composition of our board of directors and could preclude any unsolicited acquisition of us. Pursuant to our investors' rights agreement and our amended and restated certificate of incorporation, THP has certain rights, and the ability to take certain actions, that are not otherwise available to all stockholders. For example, our investors' rights agreement provides THP the right, subject to certain conditions, to demand that we file a registration statement or request that their shares of our common stock be covered by a registration statement that we are otherwise filing. In addition, until such time as THP first ceases to own greater than 50% of the outstanding voting power of our common stock, our amended and restated certificate of incorporation effectively provides THP with the ability to fill vacancies on the board, remove directors (with or without cause), call a special meeting of our stockholders, amend our certificate of incorporation (subject to approval of our board of directors) and amend our bylaws. Even when THP ceases to control a majority of the total voting power, for so long as THP continues to own a significant percentage of our common stock, THP will still be able to significantly influence the composition of our board of directors and the approval of actions requiring stockholder approval. Accordingly, for such period of time, THP will have significant influence with respect to our management, business plans, and policies. The concentration of ownership and availability of the foregoing rights could deprive you of an opportunity

to receive a premium for your shares of common stock as part of a sale of us and ultimately might affect the market price of our common stock.

THP and its affiliates engage in a broad spectrum of activities, including investments in our industry generally. In the ordinary course of their business activities, THP and its affiliates may engage in activities where their interests conflict with our interests or those of our other stockholders, such as investing in or advising businesses that directly or indirectly compete with certain portions of our business or are suppliers or customers of ours. Our amended and restated certificate of incorporation provides that none of THP and its affiliates and any person or entity who, while a stockholder, director, officer, or agent of the Company or any of its affiliates, is a director, officer, principal, partner, member, manager, employee, agent, and/or other representative of THP and its affiliates (each, an "Identified Person") has any duty to refrain from (i) engaging in a corporate opportunity in the same or similar business activities or lines of business in which we or our affiliates are engaged or that are deemed to be competing with us or any of our affiliates or (ii) otherwise investing in or providing services to any person that competes with us or our affiliates or engaging, directly or indirectly, in the same business activities or similar business activities or lines of business in which we operate. In addition, to the fullest extent permitted by law, no Identified Person has any obligation to offer to us or our subsidiaries or affiliates the right to participate in any corporate opportunity in the same or similar business activities or lines of business in which we or our affiliates are engaged or that are deemed to be competing with us or any of our affiliates. This means that THP may pursue acquisition opportunities that may be complementary to our business, and, as a result, those acquisition opportunities may not be available to us. In addition, THP may have an interest in pursuing acquisitions, divestitures, and other transactions that, in its judgment, could enhance its investment, even though such transactions might involve risks to you or may not prove beneficial.

Our shares of common stock are listed on the Nasdaq Global Market, and we are a "controlled company" within the meaning of the rules and listing standards of The Nasdaq Stock Market LLC (Nasdaq). As a result, we qualify for, and intend to rely on, exemptions from certain corporate governance requirements. You will therefore not have the same protections as those afforded to stockholders of companies that are subject to such governance requirements.

THP controls a majority of the voting power of our outstanding common stock. As a result, we are a "controlled company" within the meaning of the corporate governance standards of Nasdaq. Under these corporate governance standards, a company of which more than 50% of the voting power for the election of directors is held by an individual, group or another company is a "controlled company" and may elect not to comply with certain corporate governance requirements. For example, controlled companies, within one year of the date of the listing of their common stock:

- are not required to have a board that is composed of a majority of "independent directors," as defined under the rules and listing standards of Nasdaq;
- are not required to have a compensation committee that is composed entirely of independent directors or have a written charter addressing the committee's purpose and responsibilities; and
- are not required to have director nominations be made by or recommended to the full board of directors, by its independent directors, or by a nominations committee that is composed entirely of independent directors, or to adopt a written charter or a board resolution addressing the nominations process.

We utilize, and intend to continue to utilize, certain of these exemptions. For example, a majority of our directors have not been, and in the future for so long as we rely on such exemptions, will not be, affirmatively determined to be independent, nor will our compensation committee or nominating and corporate governance committee of the board be comprised entirely of directors who have been determined to be independent. Accordingly, you will not have the same protections afforded to stockholders of companies that are subject to all of the corporate governance requirements of Nasdaq.

If we fail to comply with Nasdaq listing rules or California laws governing the diversity of our board of directors, we could be exposed to financial penalties and suffer reputational harm.

In August 2021, the SEC announced that it had approved Nasdaq's proposed rule change to advance board diversity and enhance transparency of board diversity statistics through new listing requirements. Under these new listing rules, Nasdaq listed companies will be required, subject to certain exceptions, to disclose annually diversity statistics regarding their directors' voluntary self-identified characteristics and include on their boards of directors at least two "Diverse" directors or publicly disclose why their boards do not include such "Diverse" directors. Under the phase-in period for these new listing rules, for companies like ours that are listed on the Nasdaq Global Market, this disclosure requirement regarding the existence of at least one "Diverse" director applies starting on the later of August 7, 2023, or the date that the company files its proxy statement for its annual shareholder meeting during 2023, and regarding the existence of at least two "Diverse" directors applies starting on the later of August 6, 2025, or the date that the company files its proxy statement for its annual shareholder meeting during 2025. Under the proposed rule, a "Diverse" director is someone who self-identifies either as (i) female or (ii) Black or African American, Hispanic or Latinx, Asian, Native American or Alaska Native, Native Hawaiian or Pacific Islander, or two or more races or ethnicities, or (iii) lesbian, gay, bisexual, transgender or a member of the queer community. Smaller reporting companies, such as Teknova, can satisfy the Nasdaq rules by having two females on its board.

In addition, in September 2018, California's Senate Bill 826 (SB 826) was signed into law. SB 826 generally requires public companies with principal executive offices in California to have a minimum number of females on its board of directors. As of December 31, 2021, each public company was required to have at least two females on its board of directors if the company had at least five directors, and at least three females on its board of directors if the company had at least six directors as of December 31, 2021. On May 13, 2022, the Superior Court of California for the County of Los Angeles entered an order striking down SB 826, holding that the statute violates the Equal Protection Clause of the California Constitution. The California Secretary of State has appealed the order and such appeal is currently pending. On September 16, 2022, the appellate court ruled to temporarily stay enforcement of the trial court's order, which prevented the California Secretary of State from collecting diversity data on corporate disclosure forms pursuant to SB 826, pending a further order of the appellate court. On December 1, 2022, the appellate court vacated the temporary stay order and on February 3, 2023, a record on appeal was filed and such appeal is currently pending. To the extent that this ruling of the appellate court permits the Secretary of State of California to collect and report diversity data, we may be required to comply with additional disclosure requirements. However, ultimate enforceability of SB 826 remains uncertain.

Additionally, on September 30, 2020, Assembly Bill 979 (AB 979) was signed into law. AB 979 generally requires public companies with principal executive offices in California to include specified numbers of directors from "underrepresented communities." A director from an "underrepresented community" means a director who self-identifies as Black, African American, Hispanic, Latino, Asian, Pacific Islander, Native American, Native Hawaiian, Alaska Native, gay, lesbian, bisexual, or transgender. As of December 31, 2021, each public company with principal executive offices in California was required to have at least one director from an underrepresented community. By December 31, 2022, a public company with more than four but fewer than nine directors was required to have a minimum of two directors from underrepresented communities, and a public company with nine or more directors will need to have a minimum of three directors from underrepresented communities. These laws do not provide a transition period for newly listed companies. On April 1, 2022, the Superior Court of California for the County of Los Angeles entered an order striking down AB 979, holding that the statute violates the Equal Protection Clause of the California Constitution. On June 2, 2022, a notice of appeal was filed. On September 16, 2022, the appellate court ruled to temporarily stay enforcement of the trial court's order, which prevented the California Secretary of State from collecting diversity data on corporate disclosure forms pursuant to AB 979, pending a further order of the appellate court. On December 1, 2022, the appellate court vacated the temporary stay order and on February 3, 2023, a record on appeal was filed and such appeal is currently pending. To the extent that this ruling of the appellate court permits the Secretary of State of California to collect and report diversity data, we may be required to comply with additional disclosure requirements. Litigation regarding AB 979 will continue.

Our board of directors currently includes two female directors, and no directors who self-identify as coming from "underrepresented communities." If the current composition of our board of directors changes, or if our current or future female or other "Diverse" directors no longer serve on our board of directors prior to the applicable dates

under the phase-in period for the Nasdaq board diversity rules, we could be out of compliance with these rules. If the current composition of our board of directors does not change and SB 826 or AB 979 become applicable to us, we would be out of compliance with these regulations. We cannot ensure that we can recruit, attract, and/or retain qualified members of the board and meet gender and diversity requirements under Nasdaq listing rules or any California law that may become applicable to us, which may expose us to financial penalties and adversely affect our reputation.

Because we are a public company, we are obligated to develop and maintain proper and effective internal control over financial reporting in order to comply with Section 404 of the Sarbanes-Oxley Act of 2002 (the Sarbanes-Oxley Act). These internal controls may not be determined to be effective, which may adversely affect investor confidence in us and, as a result, the value of our common stock.

We are required, pursuant to Section 404 of the Sarbanes-Oxley Act, to furnish a report by management on, among other things, the effectiveness of our internal control over financial reporting. This assessment includes disclosure of any material weaknesses identified by our management in our internal control over financial reporting. We are also required to disclose changes made to our internal controls and procedures on a quarterly basis. However, we expect that our independent registered public accounting firm will not be required to report on the effectiveness of our internal control over financial reporting pursuant to Section 404 of the Sarbanes-Oxley Act until the date we are no longer an "emerging growth company" as defined in the JOBS Act, if we take advantage of the exemptions contained in the JOBS Act. At such time, our independent registered public accounting firm may issue a report that is adverse if it is not satisfied with the level at which our controls are documented, designed, or operating.

Additionally, the existence of any material weakness or significant deficiency would require management to devote significant time and incur significant expense to remediate any such material weaknesses or significant deficiencies and management may not be able to remediate any such material weaknesses or significant deficiencies in a timely manner. The existence of any material weakness in our internal control over financial reporting could also result in errors in our financial statements that could require us to restate our financial statements, cause us to fail to meet our reporting obligations, and cause stockholders to lose confidence in our reported financial information, all of which could materially and adversely affect our business and the price of our common stock.

Material weaknesses in our internal control over financial reporting may cause us to fail to timely and accurately report our financial results or result in a material misstatement of our financial statements.

In connection with the audits of our financial statements for the fiscal year ended December 31, 2022 as well as for fiscal years ended December 31, 2020 and 2019, we identified material weaknesses in our internal control over financial reporting. A material weakness is a deficiency, or combination of deficiencies, in internal control over financial reporting such that there is a reasonable possibility that a material misstatement of our financial statements will not be prevented or detected on a timely basis. The material weakness identified during the year ended December 31, 2022 resulted from not having the appropriate complement of tax resources commensurate with the nature and complexity associated with the Company's income tax accounting process. Our audited financial statements present income taxes in accordance with GAAP, however, such adjustments amounted to a material weakness. The material weakness remained un-remediated as of December 31, 2022. See Part II, Item 9A "Controls and Procedures" in this Annual Report on Form 10-K.

We have begun taking measures, and plan to continue to take measures, to remediate this material weakness, however, we cannot assure you that these or other measures will fully remediate the material weakness in a timely manner or prevent future material weaknesses from occurring. As part of our remediation plan to address the material weakness identified above, we are working to engage accounting personnel and/or consultants with specific income tax accounting experience necessary to assist with our accounting for income taxes as well as implementing and adopting additional control procedures. We believe that the measures we are implementing will remediate the material weakness and strengthen our internal control over financial reporting.

While we are implementing our plan to remediate the material weakness, we can give no assurance that this implementation will remediate the material weakness in internal control over financial reporting or that additional material weaknesses in our internal control over financial reporting will not be identified in the future. If we identify

future material weaknesses in our internal control over financial reporting, the accuracy and timing of our financial reporting may be adversely affected. If additional material weaknesses exist or are discovered in the future, and we are unable to remediate any such material weaknesses, our reputation, financial condition, and operating results could suffer. Moreover, we could become subject to investigations by regulatory authorities, which could require additional financial and management resources.

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

We are an "emerging growth company," defined in the JOBS Act and, for as long as we continue to be an emerging growth company, we may choose to take advantage of certain exemptions and relief from various public reporting requirements, including the requirement that our internal control over financial reporting be audited by our independent registered public accounting firm pursuant to Section 404 of the Sarbanes-Oxley Act; the exemption from any rules that could be adopted by the Public Company Accounting Oversight Board requiring mandatory audit firm rotations or a supplement to the auditor's report on financial statements; reduced disclosure obligations regarding executive compensation in our periodic reports and proxy statements; and not required to hold nonbinding advisory votes on executive compensation or stockholder approval of any golden parachute payments not previously approved.

Section 107 of the JOBS Act provides that an "emerging growth company" can take advantage of the extended transition period provided in Section 7(a)(2)(B) of the Securities Act of 1933, as amended (the Securities 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 take advantage of the extended transition period to comply with new or revised accounting standards and to adopt certain of the reduced disclosure requirements available to emerging growth companies. As a result of the accounting standards election, we are not subject to the same implementation timing for new or revised accounting standards as other public companies that are not emerging growth companies, which may make comparison of our financials to those of other public companies more difficult. Additionally, because we have taken advantage of certain reduced reporting requirements, the information contained herein may be different from the information you receive from other public companies in which you hold stock.

We will remain an "emerging growth company" until the earliest to occur of (i) the last day of the fiscal year in which we have more than $1.235 billion in annual revenue; (ii) the date we qualify as a "large accelerated filer," with at least $700.0 million of equity securities held by non-affiliates; (iii) the date on which we have issued, in any three-year period, more than $1.0 billion in non-convertible debt securities; and (iv) the last day of the fiscal year ending after the fifth anniversary of the completion of our IPO.

We are also a "smaller reporting company" as defined in Item 10(f)(1) of Regulation S-K. Smaller reporting companies may take advantage of certain reduced disclosure obligations, including, among other things, providing only two years of audited financial statements. We will remain a smaller reporting company for so long as either (i) the market value of our common shares held by non-affiliates is less than $250.0 million as of the end of our second fiscal quarter or (ii) we have annual revenues of less than $100.0 million and the market value of our common shares held by non-affiliates is less than $700.0 million as of the end of our second fiscal quarter. To the extent we take advantage of such reduced disclosure obligations, it may also make comparison of our financial statements with other public companies difficult or impossible.

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 the price of our stock decline or become more volatile.

The requirements of being a public company may strain our resources and distract our management, which could make it difficult to manage our business, particularly after we are no longer an "emerging growth company".

We are subject to the reporting requirements of the Securities Exchange Act of 1934, as amended (the Exchange Act) and the Sarbanes-Oxley Act, the listing requirements of Nasdaq and other applicable securities rules and regulations. The Exchange Act requires that we file annual, quarterly, and current reports with respect to our business, financial condition, results of operations, cash flows, and prospects. The Sarbanes-Oxley Act requires, among other things, that we establish and maintain effective internal controls and procedures for financial reporting. Furthermore, the need to continue to establish and maintain the corporate infrastructure demanded of a public company may divert our management's attention from implementing our growth strategy, which could prevent us from improving our business, financial condition, results of operations, cash flows, and prospects. We have made, and will continue to make, changes to our internal controls and procedures for financial reporting and accounting systems to meet our reporting obligations as a public company. However, the measures we take may not be sufficient to address all risks or wholly satisfy our obligations as a public company. In addition, these rules and regulations have increased our legal and financial compliance costs and have made, and are expected to continue to make, some activities more time-consuming and costly and to increase demand on our systems and resources, particularly after we are no longer an "emerging growth company." For example, these rules and regulations have made, and are expected to continue to make, it more difficult and more expensive for us to obtain director and officer liability insurance, and we may be required to incur substantial costs to maintain the same or similar coverage. These additional obligations could have a material adverse effect on our business, financial condition, results of operations, cash flows, and prospects.

In addition, changing laws, regulations, and standards relating to corporate governance and public disclosure are creating uncertainty for public companies, increasing legal and financial compliance costs and making some activities more time consuming. These laws, regulations, and standards are subject to varying interpretations, in many cases due to their lack of specificity, and, as a result, their application in practice may evolve over time as new guidance is provided by regulatory and governing bodies. This could result in continuing uncertainty regarding compliance matters and higher costs necessitated by ongoing revisions to disclosure and governance practices. We intend to invest resources to comply with evolving laws, regulations, and standards, and this investment may result in increased general and administrative expenses and a diversion of our management's time and attention from revenue-generating activities. If our efforts to comply with new laws, regulations, and standards differ from the activities intended by regulatory or governing bodies due to ambiguities related to their application and practice, regulatory authorities may initiate legal proceedings against us, which could have a material adverse effect on our business, financial condition, results of operations, cash flows, and prospects.

Provisions of our corporate governance documents could make an acquisition of us more difficult and may prevent attempts by our stockholders to replace or remove our current management, even if beneficial to our stockholders.

Our amended and restated certificate of incorporation and amended and restated bylaws and the General Corporation Law of the State of Delaware, as amended (the DGCL), contain provisions that could make it more difficult for a third party to acquire us, even if doing so might be beneficial to our stockholders. Among other things, these provisions:

- allow us to authorize the issuance of undesignated preferred stock, the terms of which may be established and the shares of which may be issued without stockholder approval, and which may include supermajority voting, special approval, dividend, or other rights or preferences superior to the rights of other stockholders;
- provide for a classified board of directors with staggered three-year terms;
- provide that, at any time after THP first ceases to beneficially own more than 50% in voting power of the outstanding shares of our common stock entitled to vote generally in the election of directors (the THP Trigger Event), directors may only be removed for cause, and only by the affirmative vote of holders of at least 66 2/3% in voting power of all the then-outstanding shares of our stock entitled to vote thereon, voting together as a single class;

- prohibit stockholder action by written consent from and after the THP Trigger Event;
- provide that, at any time after the THP Trigger Event, special meetings may only be called by or at the direction of the Chairman of our board of directors, our board of directors, or our Chief Executive Officer;
- provide that, at any time after the THP Trigger Event, any alteration, amendment, or repeal, in whole or in part, of any provision of our bylaws by our stockholders will require the affirmative vote of the holders of at least 66 2/3% in voting power of all the then-outstanding shares of our stock entitled to vote thereon, voting together as a single class; and
- establish advance notice requirements for nominations for elections to our board of directors and for proposing matters that can be acted upon by stockholders at stockholder meetings.

Section 203 of the DGCL generally prohibits a Delaware corporation from engaging in any of a broad range of business combinations with any interested stockholder for a period of three years following the date on which the stockholder became an interested stockholder. We have expressly elected not to be governed by Section 203 of the DGCL, until such time as THP beneficially owns, in the aggregate, less than a majority of the total voting power of all outstanding shares of our common stock entitled to vote generally in the election of directors. At that time, such election shall be automatically withdrawn and we will thereafter be governed by Section 203 of the DGCL, except that THP will not be deemed to be an interested stockholder under Section 203 of the DGCL regardless of its percentage ownership of our common stock. These provisions could discourage, delay, or prevent a transaction involving a change in control of our company. These provisions could also discourage proxy contests and make it more difficult for you and other stockholders to elect directors of your choosing and cause us to take other corporate actions you desire, including actions that you may deem advantageous, or could negatively affect the trading price of our common stock. In addition, because our board of directors is responsible for appointing the members of our management team, these provisions could in turn affect any attempt by our stockholders to replace current members of our management team.

These and other provisions in our amended and restated certificate of incorporation, amended and restated bylaws, and Delaware law could make it more difficult for stockholders or potential acquirers to obtain control of our board of directors or initiate actions that are opposed by our then-current board of directors, including actions to delay or impede a merger, tender offer, or proxy contest involving our company. The existence of these provisions could negatively affect the price of our common stock and limit opportunities for you to realize value in a corporate transaction.

Our amended and restated certificate of incorporation designates the Court of Chancery of the State of Delaware as the exclusive forum for certain litigation that may be initiated by our stockholders and the federal district courts of the United States as the exclusive forum for litigation arising under the Securities Act, which could limit our stockholders' ability to obtain a favorable judicial forum for disputes with us.

Pursuant to our amended and restated certificate of incorporation, unless we consent in writing to the selection of an alternative forum, the Court of Chancery of the State of Delaware (or, if and only if the Court of Chancery of the State of Delaware lacks subject matter jurisdiction, any state court located within the State of Delaware or, if and only if all such state courts lack subject matter jurisdiction, the federal district court for the District of Delaware) will be the sole and exclusive forum 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 current or former directors, officers, employees or stockholders to us or our stockholders, (3) any action asserting a claim against us, or any of our current or former directors, officers, employees, or stockholders arising pursuant to any provision of the DGCL, our amended and restated certificate of incorporation or our amended and restated bylaws, (4) any claim or cause of action seeking to interpret, apply, enforce, or determine the validity of our amended and restated certificate of incorporation or our amended and restated bylaws, (5) any action or proceeding asserting a claim against us or any of our current or former directors, officers, employees, or stockholders as to which the DGCL confers jurisdiction to the Court of Chancery of the State of Delaware, and (6) any action asserting a claim governed by the internal affairs doctrine of the law of the State of Delaware; provided that, for the avoidance of doubt, the foregoing forum selection provision will not apply to claims arising under the Exchange Act or any other claim for which the federal courts have exclusive jurisdiction. Our amended and restated certificate of incorporation also provides that, unless we consent in

writing to the selection of an alternative forum, the federal district courts of the United States shall be the exclusive forum for the resolution of any complaint asserting a cause of action arising under the Securities Act. Our amended and restated certificate of incorporation further provides 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 provisions of our amended and restated certificate of incorporation described above.

The forum selection provisions in our amended and restated certificate of incorporation may have the effect of discouraging lawsuits against our directors and officers. The enforceability of similar choice of forum provisions in other companies' certificates of incorporation has been challenged in legal proceedings and there is uncertainty as to whether a court would enforce such provisions. In addition, investors cannot waive compliance with the federal securities laws and the rules and regulations thereunder. If the enforceability of our forum selection provisions were to be challenged, we may incur additional costs associated with resolving such a challenge. While we currently have no basis to expect any such challenge would be successful, if a court were to find our forum selection provisions to be inapplicable or unenforceable with respect to one or more of these specified types of actions or proceedings, we may incur additional costs associated with having to litigate in other jurisdictions, which could have an adverse effect on our business, financial condition, results of operations, cash flows, and prospects and result in a diversion of the time and resources of our employees, management, and board of directors.

An active, liquid trading market for our common stock may not be sustained, which may limit your ability to sell your shares.

Our shares of common stock began trading on the Nasdaq Global Market on June 25, 2021. Prior to our IPO, there was no public market for our common stock. Although our common stock is listed on the Nasdaq Global Market, an active trading market for our common stock may not be sustained. A public trading market having the desirable characteristics of depth, liquidity, and orderliness depends upon the existence of willing buyers and sellers at any given time, which is dependent upon the individual decisions of buyers and sellers over which neither we nor any market maker has control. The failure of an active and liquid trading market to persist would likely have a material adverse effect on the value of our common stock. An inactive market may also impair our ability to raise capital to continue to fund operations by issuing additional shares of our common stock or other equity or equity-linked securities and may impair our ability to acquire other companies or technologies by using any such securities as consideration.

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

Sales of a substantial number of shares of our common stock in the public market could occur at any time. These sales, or the perception in the market that the holders of a large number of shares of common stock intend to sell shares, could reduce the market price of our common stock. All shares sold in our IPO were freely tradable upon such sale without restriction or further registration under the Securities Act, except for any shares held by our affiliates, as that term is defined under Rule 144 of the Securities Act (Rule 144), including our directors, executive officers, and other affiliates (including THP), which may be sold only in compliance with certain limitations.

As of December 31, 2022, we have 28,179,423 shares of common stock outstanding, substantially all of which are held by directors, executive officers, and other affiliates and will be subject to volume, manner of sale, and other limitations under Rule 144. Registration of any of these outstanding shares of common stock would result in such shares becoming freely tradable without compliance with Rule 144 upon effectiveness of the registration statement.

The market price of our stock could decline if the holders of currently restricted shares of common stock sell them or are perceived by the market as intending to sell them. These factors could also make it more difficult for us to raise additional funds through future offerings of our shares of common stock or other securities. In addition, shares of our common stock that are issued pursuant to our equity incentive plans and our Employee Stock Purchase Plan (ESPP) will become eligible for sale in the public market, subject to provisions relating to various vesting agreements, lock-up agreements, and Rule 144, as applicable.

As of December 31, 2022, there were 312,174, 1,715,000 and 1,847,429 shares of common stock reserved for issuance pursuant to outstanding stock option awards under the 2016 Stock Plan, as amended (2016 Plan), the 2020 Equity Incentive Plan, as amended (2020 Plan) and the 2021 Equity Incentive Plan (2021 Plan), respectively. In addition, the 2021 Plan and the ESPP provide for annual automatic increases in the number of shares reserved thereunder. As of January 1, 2023, a total of 3,596,340 and 804,236 shares of common stock were available and have been reserved for future issuance under the 2021 Plan and our ESPP, respectively. In the future, we may also issue our securities in connection with investments or acquisitions. The amount of shares of our common stock issued in connection with an investment or acquisition could constitute a material portion of our then-outstanding shares of our common stock. Any issuance of additional securities in connection with investments or acquisitions may result in additional dilution to you.

Because we have no current plans to pay regular cash dividends on our common stock and are prohibited from paying cash dividends under the Amended Credit Agreement, you may not receive any return on investment unless you sell your common stock for a price higher than you paid for it.

We do not anticipate paying any regular cash dividends on our common stock. Any decision to declare and pay dividends in the future will be made at the discretion of our board of directors and will depend on, among other things, our results of operations, financial condition, cash requirements, contractual restrictions, and other factors that our board of directors may deem relevant. In addition, the terms of the Amended Credit Agreement prohibit us from paying dividends, other than dividends payable in our stock, without the prior written consent of the lender. Our future ability to pay cash dividends on our common stock may also be limited by the terms of any future debt or preferred securities we may issue or any future credit facilities we may enter into. Therefore, any return on investment in our common stock is solely dependent upon the appreciation of the price of our common stock on the open market, which may not occur.

We may issue shares of preferred stock in the future, which could make it difficult for another company to acquire us or could otherwise adversely affect holders of our common stock, which could depress the price of our common stock.

Our amended and restated certificate of incorporation authorizes us to issue one or more series of preferred stock. Our board of directors has the authority to determine the preferences, limitations, and relative rights of the shares of preferred stock and to fix the number of shares constituting any series and the designation of such series, without any further vote or action by our stockholders. Our preferred stock could be issued with voting, liquidation, dividend, and other rights superior to the rights of our common stock. The potential issuance of preferred stock may delay or prevent a change in control of us, discouraging bids for our common stock at a premium to the market price, and materially adversely affect the market price and the voting and other rights of the holders of our common stock.

Our future capital needs are uncertain and we may need to raise additional funds in the future.

We believe that our existing cash and cash equivalents as of December 31, 2022, together with our credit facility under the Amended Credit Agreement, will enable us to fund our operating expenses and capital expenditure requirements for at least the next 12 months. However, we may need to raise substantial additional capital to:

- expand the commercialization of our products;
- fund our operations;
- further our research and development; and
- pursue strategic transactions, such as acquisitions.

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

- market acceptance of our products;
- the cost and timing of establishing additional sales, marketing, and distribution capabilities;
- revenue and cash flow derived from existing or future collaborations;

- the cost of our research and development activities;
- the cost and timing of regulatory clearances or approvals;
- the effect of competing technological and market developments; and
- the extent to which we engage in strategic transactions, such as the acquisition of, investment in, or disposal of businesses, assets, products, and technologies, including inbound or outbound 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 restricting our operations or our ability to incur additional debt. Any debt or equity financing 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. Moreover, we cannot assure you that we will be able to comply with the financial covenants in our Amended Credit Agreement. If we are unable to comply with the financial covenants in our Amended Credit Agreement, we may be unable to maintain the Amended Credit Agreement as an external source of funds. 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. Any of these factors could have a material adverse effect on our business, financial condition, results of operations, cash flows, and prospects.

Claims for indemnification by our directors and officers may reduce our funds available to satisfy successful third-party claims against us and may reduce the amount of money available to us.

Our amended and restated certificate of incorporation and amended and restated bylaws provide for indemnification of our directors and officers, in each case to the fullest extent permitted by Delaware law. In addition, as permitted by Section 145 of the DGCL, our amended and restated bylaws, and the indemnification agreements that we have entered into with our directors and officers, provide that:

- we will indemnify our directors and officers for serving us in those capacities or for serving other business enterprises at our request, to the fullest extent permitted by Delaware law. Delaware law provides that a corporation may indemnify such person if such person acted in good faith and in a manner such person reasonably believed to be in or not opposed to the best interests of the Company and, with respect to any criminal proceeding, had no reasonable cause to believe such person's conduct was unlawful;
- we may, in our discretion, indemnify employees and agents in those circumstances where indemnification is permitted by applicable law;
- we may, in our discretion, advance expenses incurred by our directors and officers in connection with defending or participating in a proceeding, except that such directors or officers shall undertake to repay such advances if it is ultimately determined that such person is not entitled to indemnification;
- we will not be obligated pursuant to our amended and restated bylaws to indemnify a person with respect to proceedings initiated by that person against us or our other indemnitees, except with respect to proceedings authorized by our board of directors or brought to enforce a right to indemnification; and
- the rights conferred in our amended and restated bylaws are not exclusive, and we are authorized to enter into indemnification agreements with our directors, officers, employees, and agents and to obtain insurance to indemnify such persons.

While we maintain a directors' and officers' insurance policy, such insurance may not be adequate to cover all liabilities that we may incur, which may reduce our available funds to satisfy third-party claims and may adversely impact our cash position.

General Risk Factors

We are subject to export and import control laws and regulations that could impair our ability to compete in international markets or subject us to liability if we violate such laws and regulations.

We are subject to U.S. export controls and sanctions regulations that restrict the shipment or provision of certain products to certain countries, governments, and persons. While we take precautions to prevent our products from being exported in violation of these laws, we cannot guarantee that the precautions we take will prevent violations of export control and sanctions laws. If we are found to be in violation of U.S. sanctions or export control laws, it could result in substantial fines and penalties for us and for the individuals working for us. We may also be adversely affected through other penalties, reputational harm, loss of access to certain markets, or otherwise. Complying with export control and sanctions regulations may be time-consuming and may result in the delay or loss of sales opportunities or impose other costs. Any change in export or import regulations, economic sanctions or related legislation, or a change in the countries, governments, persons or technologies targeted by such regulations could decrease our ability to export or sell certain products and services to existing or potential customers.

Fluctuations in our effective tax rate may adversely affect our results of operations and cash flows.

We are subject to a variety of tax liabilities, including federal, state, and other taxes such as income, sales/use, payroll, withholding, and ad valorem taxes. Changes in tax laws or their interpretations could decrease our net income, the value of any tax loss carryforwards, the value of any tax credits recorded on our balance sheet, and our cash flows, and accordingly could have a material adverse effect on our business, financial condition, results of operations, cash flows, and prospects. In addition, some of our tax liabilities are subject to periodic audits by the relevant taxing authority, which could increase our tax liabilities.

Unanticipated changes in effective tax rates or adverse outcomes resulting from examination of our income or other tax returns could adversely affect our operating results and financial condition.

We are currently subject to income taxes in the U.S. only, but our future tax liabilities may be subject to the allocation of expenses in other jurisdictions. Our future effective tax rates could be subject to volatility or adversely affected by a number of factors, including:

- changes in the valuation of our deferred tax assets and liabilities;
- expected timing and amount of the release of any tax valuation allowances;
- expansion into foreign jurisdictions that require us to pay local income taxes;
- expiration of, or detrimental changes in, research and development tax credit laws; or
- changes in tax laws, regulations, or interpretations thereof.

In addition, we may be subject to audits of our income, sales, and other transaction taxes. Outcomes from these audits could have an adverse effect on our operating results and financial condition.

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

The preparation of financial statements in conformity with GAAP requires management to make estimates and assumptions that affect the amounts reported in our financial statements and accompanying notes. We base our estimates on historical experience and on various other assumptions that we believe to be reasonable under the circumstances, the results of which form the basis for making judgments about the carrying values of assets, liabilities, equity, revenue, and expenses that are not readily apparent from other sources. It is possible that interpretation, industry practice, and guidance may evolve over time. If our assumptions change or if actual circumstances differ from our assumptions, our operating results may be adversely affected and could fall below the expectations of securities analysts and investors, resulting in a decline in the market price of our common stock.

Our disclosure controls and procedures may not prevent or detect all errors or acts of fraud.

We are subject to the periodic reporting requirements of the Exchange Act. We have designed our disclosure controls and procedures to provide reasonable assurance that information we must disclose in reports we file or submit under the Exchange Act is accumulated and communicated to management, and recorded, processed, summarized, and reported within the time periods specified in the rules and forms of the SEC. We believe that any disclosure controls and procedures, no matter how well conceived and operated, can provide only reasonable, not absolute, assurance that the objectives of the control system are met. These inherent limitations include the realities that judgments in decision-making can be faulty, and that breakdowns can occur because of simple error or mistake. Additionally, controls can be circumvented by the individual acts of some persons, by collusion of two or more people, or by an unauthorized override of the controls. Accordingly, because of the inherent limitations in our control system, misstatements due to error or fraud may occur and not be detected.

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 U.S. 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 misconduct by employees or others, and any 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 could distract management in defending ourselves against any of these claims or investigations.

Our operating results and stock price may be volatile. Market volatility may affect the value of an investment in our common stock and could subject us to litigation.

Our quarterly operating results are likely to fluctuate in the future. In addition, securities markets worldwide have experienced, and are likely to continue to experience, significant price and volume fluctuations, including as a result of the ongoing COVID-19 pandemic and the Russian invasion of Ukraine and their economic consequences, economic uncertainty and increased interest rates, inflation, the government closure of Silicon Valley Bank and Signature Bank, and liquidity concerns at other financial institutions that may be unrelated to our operating performance. This market volatility, as well as general economic, market, or political conditions, could subject the market price of our common stock to wide price fluctuations regardless of our operating performance. Our operating results and the trading price of our common stock may fluctuate in response to various factors, including:

- market conditions in our industry or the broader stock market;
- actual or anticipated fluctuations in our quarterly financial and operating results;
- introduction of new products or services by us or our competitors;
- issuance of new or changed securities analysts' reports or recommendations;
- sales, or anticipated sales, of large blocks of our stock;
- additions or departures of key personnel;
- regulatory or political developments;
- litigation and governmental investigations;
- changing economic conditions;
- investors' perception of us;

- events beyond our control such as weather, war (including the Russian invasion of Ukraine), health crises (including the ongoing COVID-19 pandemic), the government closure of Silicon Valley Bank and Signature Bank, and liquidity concerns at other financial institutions; and
- any default on our indebtedness.

These and other factors, many of which are beyond our control, may cause our operating results and the market price and demand for our common stock to fluctuate substantially. Fluctuations in our quarterly operating results could limit or prevent investors from readily selling their shares of common stock and may otherwise negatively affect the market price and liquidity of our shares of common stock. In addition, in the past, when the market price of a stock has been volatile, holders of that stock have sometimes instituted securities class action litigation against the company that issued the stock. If any of our stockholders brought a lawsuit against us, we could incur substantial costs defending the lawsuit. Such a lawsuit could also divert the time and attention of our management from our business, which could significantly harm our profitability and reputation.

Our cash and cash equivalents could be adversely affected if the financial institutions in which we hold our cash and cash equivalents fail.

On March 10, 2023, the Federal Deposit Insurance Corporation (FDIC) announced that Silicon Valley Bank had been closed by the California Department of Financial Protection and Innovation and on March 12, 2023, Signature Bank was closed by the New York State Department of Financial Services and the FDIC was named receiver. Although we do not maintain any bank accounts with Silicon Valley Bank or Signature Bank, we regularly maintain cash balances at third-party financial institutions in excess of the FDIC insurance limit. Any failure of a depository institution to return any of our deposits, or any other adverse conditions in the financial or credit markets affecting depository institutions, could impact access to our invested cash or cash equivalents and could adversely impact our operating liquidity and financial performance.

If securities or industry analysts do not publish research or reports about our business, if our results of operations do not meet their expectations, if they publish unfavorable research or reports, adversely change their recommendations regarding our common stock or cease coverage of us, our stock price and trading volume could decline.

The trading market for our common stock is influenced by the research and reports that industry or securities analysts publish about us or our business. We do not have any control over any securities or industry analyst coverage.

Analysts may develop and publish their own projections of our business, and may form a consensus about our future performance. Our actual business results may vary significantly from that consensus or other guidance or expectations due to a number of factors, many of which are outside of our control and could adversely affect our business and future operating results. In addition, if our publicly announced guidance or other expectations of future operating results fail to meet expectations of securities analysts, investors, or other interested parties, the price of our common stock could decline.

Moreover, if any of the analysts who cover us provide inaccurate or unfavorable research, issue an adverse opinion regarding our stock price, cease coverage of us, or fail to publish reports on us regularly, we could lose visibility in the financial markets, and our stock price or trading volume could decline.

We may become the subject of various claims, litigation or investigations which could have a material adverse effect on our business, financial condition, results of operations, or stock price.

From time to time we may become subject to various claims, litigation, or investigations, such as commercial disputes, employment-related claims, or “whistleblower” complaints, and we may become involved in governmental or regulatory investigations or similar matters. Any claims asserted against us or our management, regardless of merit or eventual outcome, could harm our reputation, distract our management, and have an adverse impact on our relationship with our current and prospective employees, customers, and other third parties and could lead to additional related claims. Furthermore, there is no guarantee that we will be successful in defending ourselves

against claims, litigation, or investigations, or that any insurance policies that we may maintain would cover any or all of our liabilities arising from claims, litigation, or investigations. Any judgments or settlements in any future claims, litigation, or investigation could have a material adverse effect on our business, financial condition, results of operations, and price of our common stock.

Item 1B. Unresolved Staff Comments.

None.

Item 2. Properties.

See Item 1. "Business – Facilities" for specific information about our commercial, office, manufacturing, and warehouse space.

Item 3. Legal Proceedings.

We are not a party to any material legal proceedings at this time. From time to time, we may become involved in various legal proceedings that arise in the ordinary course of business. For example, we may in the future become involved in legal proceedings relating to customers, employees, suppliers, competitors, government agencies, or others. We will evaluate any claims and lawsuits with respect to their potential merits, our potential defenses and counter claims, and the expected effect on us of defending the claims and a potential adverse result. However, the results of any litigation, investigation, or other legal proceedings are inherently unpredictable and potentially expensive. Any claims against us, whether meritorious or not, could be time consuming, result in costly litigation, damage our reputation, require significant amounts of management time, and divert significant resources. If any legal proceedings were to be determined adversely to us, or we were to enter into a settlement arrangement, we could be exposed to monetary damages or limits on our ability to operate our business, which could have an adverse effect on our business, financial condition, and operating results.

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.

Market Information for Common Stock

Our common stock is listed on the Nasdaq Global Market under the symbol "TKNO".

Holders

On March 28, 2023, we had 5 holders of record of our common stock.

Dividends

We have not paid any dividends since our inception. We currently intend to retain all available funds and any future earnings to support operations and to finance the growth and development of our business. We do not currently intend to declare or pay any cash dividends on our common stock in the foreseeable future. Any future determination to pay dividends on our capital stock will be at the discretion of our board of directors, subject to applicable laws, and will depend on our financial condition, results of operations, capital requirements, and other factors that our board of directors considers relevant. In particular, unless waived, the terms of the Amended Credit Agreement prohibit us from paying dividends, other than dividends payable in our stock, without the prior written consent of the lender. Our future ability to pay cash dividends on our common stock may also be limited by the terms of any future debt or preferred securities we may issue or any future credit facilities we may enter into.

Securities Authorized for Issuance Under Equity Compensation Plans

See Item 12. of Part III for information regarding securities authorized for issuance under our equity compensation plans.

Stock Performance Graph

We are a smaller reporting company, as defined by Rule 12b-2 of the Exchange Act and are not required to provide a performance graph.

Issuer Repurchases of Equity Securities

Not applicable.

Item 6. [Reserved].

Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations.

The following discussion and analysis of Alpha Teknova, Inc.'s financial condition and results of operations should be read in conjunction with the financial statements and the notes thereto contained elsewhere in this Annual Report on Form 10-K. This discussion contains forward-looking statements reflecting our current expectations, estimates, and assumptions concerning events and financial trends that may affect its future operating results or financial position. Actual results and the timing of events may differ materially from those contained in these forward-looking statements due to a number of factors, including those discussed in the sections titled "Risk Factors" and "Cautionary Note Regarding Forward-Looking Statements" appearing elsewhere in this Annual Report on Form 10-K. Unless the context otherwise requires, references in this "Management's Discussion and Analysis of Financial Condition and Results of Operations" to "the Company," "Teknova," we," "us," and "our" are intended to mean the business and operations of Alpha Teknova, Inc.

A discussion regarding our financial condition and results of operations for the fiscal year ended December 31, 2022 compared to the fiscal year ended December 31, 2021 is presented below. A discussion regarding our financial condition and results of operations for the fiscal year ended December 31, 2021 compared to the fiscal year ended December 31, 2020 can be found in "Management's Discussion and Analysis of Financial Condition and Results of Operations" in Part II, Item 7 of our Annual Report on Form 10-K for the fiscal year ended December 31, 2021 filed with the SEC on March 18, 2022.

Overview

Since our founding in 1996, we have been producing critical reagents for the research, discovery, development, and commercialization of novel therapies, vaccines, and molecular diagnostics. Our more than 3,000 active customers span the entire continuum of the life sciences market, including leading pharmaceutical and biotechnology companies, contract development and manufacturing organizations, in vitro diagnostics franchises, and academic and government research institutions. Our Company is built around our knowledge, methods, and know-how in our manufacturing processes, which are highly adaptable and configurable. These proprietary processes enable us to manufacture and deliver high-quality, custom, made-to-order products with short turnaround times and at scale, across all stages of our customers' product development, including commercialization.

We have two primary product categories: Lab Essentials and Clinical Solutions. Previously, we had a third product category, Sample Transport, which we ceased producing in 2021. Our products cross all stages of development, from early research through commercialization. We offer three primary product types: pre-poured media plates for cell growth and cloning; liquid cell culture media and supplements for cellular expansion; and molecular biology reagents for sample manipulation, resuspension, and purification. We offer our liquid cell culture media and supplements and molecular biology reagents in both of our two product categories; pre-poured media plates are available in our Lab Essentials category only.

In 2017, we achieved ISO 13485:2016 certification, enabling us to manufacture products for use in diagnostic and therapeutic applications. Our certification allows us to offer solutions across the entire customer product development workflow, supporting our customers' need for materials in greater volume and that meet increasingly stringent regulatory requirements as they scale from research to commercialization.

We manufacture our products at our Hollister, California headquarters and stock inventory of raw materials, components, and finished goods at that campus. We rely on a limited number of suppliers for certain raw materials, and we have no long-term supply arrangements with our suppliers, as we order on a purchase order basis. We ship our products directly from our warehouse in Hollister, California to our customers and distributors, generally pursuant to purchase orders. We typically recognize revenue when products are shipped.

We generated revenue of $41.4 million in 2022, which represents an increase of $4.5 million as compared to 2021. In 2022 and 2021, only 3.2% and 2.9%, respectively, of our revenue was generated from customers located outside of the U.S. Our sales outside of the U.S. are denominated in U.S. dollars. Approximately 76% of our

revenue for the year ended December 31, 2022, was generated from sales through direct channels and a small salesforce, with the remainder generated through sales by distributors.

We had an operating loss of $49.7 million in 2022 compared to $12.0 million in 2021. We expect our expenses will continue to increase in future periods, but at a slower rate, in connection with our ongoing activities as we:

- attract, hire, and retain qualified personnel;
- invest in processes and infrastructure to enable manufacturing automation and expand capacity, including the ongoing buildout of our new, state-of-the-art manufacturing, warehouse and distribution facilities;
- introduce new products and services and create and protect intellectual property;
- build our brand and market, and sell new and existing products and services; and
- potentially acquire businesses or technologies to accelerate the growth of our business.

Key Developments

- On May 10, 2022, we entered into the Amended and Restated Credit and Security Agreements which provide for loan commitments in an aggregate amount of up to $57.135 million from $27.0 million under the previous credit agreements. Subsequently, on November 8, 2022, we entered into Amendment No. 1 to the Credit Agreements, and on March 28, 2023, we entered into Amendment No. 2 to the Credit Agreements, which reduced the requirements for trailing twelve months net revenue for all future periods, among other things. See "Management's Discussion and Analysis of Financial Condition and Results of Operations—Liquidity and Capital Resources—Credit Facility" for more information regarding the credit facility.
- On October 13, 2022, we announced an early access program for novel products to address critical pain points in cell and gene therapy bioproduction.
- On November 9, 2022, we announced a new WFI Quality Water product line for the bioprocessing market.
- On December 7, 2022, our new, state-of-the-art manufacturing facility became operational for research-grade products.
- On February 1, 2023, we carried out a reduction in workforce of approximately 40 positions, aimed at reducing operating expenses. Total annual cost savings are estimated at $4 million.
- On March 30, 2023, we entered into a Sales Agreement with Cowen and Company, LLC, under which the Company may offer and sell, from time to time, shares of common stock having aggregate gross proceeds of up to $50.0 million.

Impact of Broader Economic Trends on Our Business

We are closely monitoring increased economic uncertainty in the U.S. and abroad. General inflation in the U.S. has risen to levels not experienced in recent decades. General inflation, including rising prices for our raw materials and other inputs, as well as rising salaries and other expenses, negatively impact our business by increasing our cost of sales and operating expenses. In addition, the U.S. Federal Reserve has raised, and may again raise, interest rates in response to concerns about inflation. Inflation, together with increased interest rates, may cause our customers to reduce, delay, or cancel orders for our goods and services thereby causing a decrease in or change in timing of sales of our products and services. The impact of future inflation and interest rate increases on the results of our operations cannot be accurately predicted. For further information regarding the impact of these economic factors on the Company, please see Item 1A., "Risk Factors" in this report, which is incorporated herein by reference.

We continue to closely monitor the impact of the ongoing COVID-19 pandemic on all aspects of our business, including how it will continue to impact customers, employees, suppliers, business partners, and distribution channels. We believe that we have successfully navigated the uncertain environment associated with the COVID-19 pandemic and that we will continue to do so, but the situation surrounding the COVID-19 pandemic remains fluid, and we are actively managing our response in collaboration with customers, team members, and business partners. For further information regarding the impact of the COVID-19 pandemic on the Company, please see Item 1A., "Risk Factors" in this report, which is incorporated herein by reference.

Results of Operations

The following tables set forth our results of operations for the years ended December 31, 2022 and 2021 (dollars in thousands):

	For the Year Ended December 31,			
	2022	2021	$ Change	% Change
Revenue	$ 41,420	$ 36,893	$ 4,527	12.3 %
Cost of sales	23,944	19,272	4,672	24.2 %
Gross profit	17,476	17,621	(145)	(0.8)%
Operating expenses:				
Research and development	7,737	4,312	3,425	79.4 %
Sales and marketing	9,151	3,777	5,374	142.3 %
General and administrative	28,298	20,392	7,906	38.8 %
Amortization of intangible assets	1,148	1,148	—	—
Goodwill impairment	16,613	—	16,613	100.0 %
Long-lived assets impairment	4,188	—	4,188	100.0 %
Total operating expenses	67,135	29,629	37,506	126.6 %
Loss from operations	(49,659)	(12,008)	(37,651)	313.5 %
Other income (expenses), net				
Interest income (expense), net	213	(589)	802	(136.2)%
Other income (expense), net	55	(40)	95	(237.5)%
Total other income (expenses), net	268	(629)	897	(142.6)%
Loss before income taxes	(49,391)	(12,637)	(36,754)	290.8 %
Benefit from income taxes	(1,923)	(2,834)	911	(32.1)%
Net loss	$ (47,468)	$ (9,803)	$ (37,665)	384.2 %

Revenue

Our revenue disaggregated by product category, for the years ended December 31, 2022 and 2021 was as follows (dollars in thousands):

	For the Year Ended December 31,			
	2022	2021	$ Change	% Change
Lab Essentials	$ 31,772	$ 27,184	$ 4,588	16.9 %
Clinical Solutions	8,445	6,793	1,652	24.3 %
Sample Transport	6	1,530	(1,524)	(99.6)%
Other	1,197	1,386	(189)	(13.6)%
Total revenue	$ 41,420	$ 36,893	$ 4,527	12.3 %

Total revenue was $41.4 million in 2022, an increase of $4.5 million, or 12.3%, compared with $36.9 million in 2021.

Lab Essentials revenue was $31.8 million in 2022, an increase of $4.6 million, or 16.9%, compared with $27.2 million in 2021. The increase in Lab Essentials revenue was primarily attributable to higher average revenue per customer as the average number of customers remained consistent year over year.

Clinical Solutions revenue was $8.4 million in 2022, an increase of $1.7 million, or 24.3%, compared with $6.8 million in 2021. The increase in Clinical Solutions revenue was primarily attributable to higher average revenue per customer as the average number of customers remained consistent year over year.

Sample Transport revenue was not significant in 2022, compared to $1.5 million in 2021. The decline in Sample Transport revenue was due to the decline in market demand for COVID-19 testing and an increase in market supply of sample transport products, each of which began in early 2021. As a result, in 2021, we decided to cease production of sample transport medium and no longer market those products. Please see Item 1A., "*Risk Factors*", for a discussion of the impact of the COVID-19 pandemic on the operations of our business and the uncertainties associated with global epidemics that may have an adverse impact on our operating results, cash flows, and financial condition in the future.

Our revenue disaggregated by geographic region for the years ended December 31, 2022 and 2021, was as follows (dollars in thousands):

	For the Year Ended December 31,			
	2022	2021	$ Change	% Change
United States	$ 40,103	$ 35,808	$ 4,295	12.0 %
International	1,317	1,085	232	21.4 %
Total revenue	$ 41,420	$ 36,893	$ 4,527	12.3 %

Revenue from sales to customers in the United States was $40.1 million in 2022, and $35.8 million in 2021. Revenue from U.S. sales was consistent year over year, representing 96.8% and 97.1% of our total revenue in 2022 and 2021, respectively.

Revenue from sales to customers in markets outside of the U.S. was $1.3 million in 2022, and $1.1 million in 2021. Revenue from international sales was also consistent year over year, representing 3.2% and 2.9% of our total revenue in 2022 and 2021, respectively.

Gross profit

Our gross profit for the years ended December 31, 2022 and 2021 was as follows (dollars in thousands):

	For the Year Ended December 31,			
	2022	2021	$ Change	% Change
Cost of sales	$ 23,944	$ 19,272	$ 4,672	24.2 %
Gross profit	17,476	17,621	(145)	(0.8)%
Gross profit %	42.2 %	47.8 %		

Gross profit percentage was 42.2% in 2022, and 47.8% in 2021. The decrease in gross profit percentage from 2021 was primarily driven by higher labor costs and supplies as a percentage of revenue.

Operating expenses

Our operating expenses for the years ended December 31, 2022 and 2021 were as follows (dollars in thousands):

	For the Year Ended December 31,			
	2022	2021	$ Change	% Change
Research and development	$ 7,737	$ 4,312	$ 3,425	79.4 %
Sales and marketing	9,151	3,777	5,374	142.3 %
General and administrative	28,298	20,392	7,906	38.8 %
Amortization of intangible assets	1,148	1,148	—	—
Goodwill impairment	16,613	—	16,613	100.0 %
Long-lived assets impairment	4,188	—	4,188	100.0 %
Total operating expenses	$ 67,135	$ 29,629	$ 37,506	126.6 %

Research and development expenses were $7.7 million in 2022 and $4.3 million in 2021. The increase was primarily driven by increased headcount, professional fees, and supplies to support our new product and process development efforts.

Sales and marketing expenses were $9.2 million in 2022 and $3.8 million in 2021. The increase was primarily driven by increased headcount to develop our commercial capabilities and improve customer support, as well as higher marketing and stock-based compensation expenses.

General and administrative expenses were $28.3 million in 2022 and $20.4 million in 2021. The increase was primarily driven by increased headcount as well as stock-based compensation, insurance, and occupancy expenses incurred to support our growth strategy.

Amortization of intangible assets was consistent in 2022 and 2021, at $1.1 million.

We incurred a $16.6 million goodwill impairment charge in 2022, with no comparable charges in 2021. Refer to “Notes to Financial Statements—Note 8—Goodwill and Intangible Assets, Net,” in our financial statements for details regarding the impairment.

We incurred a $4.2 million impairment charge related to long-lived assets in 2022, with no comparable charges in 2021. Refer to “Notes to Financial Statements—Note 6—Property, Plant, and Equipment, Net,” in our financial statements for details regarding the impairment.

Other income (expenses), net

Other income (expenses), net for the years ended December 31, 2022 and 2021 was as follows (dollars in thousands):

	For the Year Ended December 31,			
	2022	2021	$ Change	% Change
Interest income (expense), net	$ 213	$ (589)	$ 802	(136.2)%
Other income (expense), net	55	(40)	95	(237.5)%
Total other income (expenses), net	$ 268	$ (629)	$ 897	(142.6)%

Total other income, net was $0.3 million in 2022, as we capitalized $1.6 million of interest during the year. Total other (expense), net was $0.6 million in 2021, primarily due to interest expense related to our Amended Credit Agreement.

Benefit from income taxes

Our benefit from income taxes for the years ended December 31, 2022 and 2021 was as follows (dollars in thousands):

	For the Year Ended December 31,			
	2022	2021	$ Change	% Change
Benefit from income taxes	$ (1,923)	$ (2,834)	$ 911	(32.1)%
Effective tax rate	3.9%	22.4%		

Our benefit from income taxes was $1.9 million in 2022, which was primarily due to a federal deferred tax benefit from losses during such period. Our benefit from income taxes was $2.8 million in 2021. The decrease in our benefit for income taxes was attributable to operating losses not expected to be benefitted and the goodwill impairment charge disallowed for tax purposes.

Liquidity and Capital Resources

The primary source of financing for our operations was our IPO, which we completed in June 2021 and resulted in net proceeds to us of $99.1 million, after deducting underwriting discounts and commissions of $7.7 million and offering expenses of $3.6 million.

As of December 31, 2022, we had $50.3 million in working capital, which included $42.2 million in cash and cash equivalents. In addition to our existing cash and cash equivalents balance, another source of liquidity is our credit facility as described below in the section titled “Management’s Discussion and Analysis of Financial Condition and Results of Operations—Liquidity and Capital Resources—Credit Facility”.

To facilitate our expected growth, we have used our sources of liquidity to make investments to expand our operations and increase capacity, and may continue to do so in the future. In particular, we have nearly completed the build out of our new manufacturing, warehouse and distribution facilities in Hollister, California.

As of December 31, 2022, our material cash requirements from known contractual obligations and commitments relate primarily to operating leases for our office, manufacturing, warehouse and distribution facilities. See “Notes to Financial Statements—Note 7—Leases,” for a discussion of our lease obligations reflected on our balance sheet.

Credit Facility

On May 10, 2022, we entered into the Amended and Restated Credit and Security Agreement (Term Loan) as borrower, with MidCap Financial Trust (MidCap), as agent and lender, and the additional lenders from time to time party thereto (the Term Loan Credit Agreement) and the Amended and Restated Credit and Security Agreement (Revolving Loan) as borrower, with MidCap as agent and lender, and the additional lenders from time to time party thereto (the Revolving Loan Credit Agreement, together with the Term Loan Credit Agreement, the Credit Agreement). The Credit Agreement provided for a $57.135 million credit facility (the Credit Facility) consisting of a $52.135 million senior secured term loan (the Term Loan) and a $5.0 million working capital facility (the Revolver). The Term Loan consisted of the $12.0 million balance made available in 2021 under the previous credit facility and an additional $40.135 million, staged such that $5.135 million was funded upon closing of the Credit Agreement, an additional $5.0 million was funded on October 31, 2022, $10.0 million was to be available in the first half of 2023, $10.0 million was to be available in the second half of 2023 and $10.0 million was to be available in the first half of 2024, with the borrowing in the second half of 2023 and in the first half of 2024 being contingent upon achieving trailing twelve months of Clinical Solutions revenue of $15.0 million and $19.0 million, respectively, and liquidity requirements (as defined in the Credit Agreement) of $10.0 million and $15.0 million, respectively. The maximum loan amount under the Revolver was $5.0 million, and we were permitted to request the lenders to increase such amount up to $15.0 million. Borrowings on the Revolver were limited in accordance with a borrowing base calculation.

The interest on the Term Loan was based on the annual rate of one-month London Inter-Bank Offered Rate (LIBOR) plus 6.45%, subject to a LIBOR floor of 1.00%. If any advance under the Term Loan was prepaid at any time, the prepayment fee was based on the amount being prepaid and an applicable percentage amount, such as 3%, 2%, or 1%, based on the date the prepayment was made after the closing date of the Term Loan. Interest on the outstanding balance of the Revolver was payable monthly in arrears at an annual rate of one-month LIBOR plus 3.75%, subject to a LIBOR floor of 1.00%.

The maturity date of the Credit Facility is May 1, 2027. On the date of termination of the Term Loan or the date on which the obligations under the Term Loan become due and payable in full, we would pay an exit fee in an amount equal to 5.00% of the total aggregate principal amount of term loans made pursuant to the Term Loan as of such date. The Credit Agreement contained a financial covenant based upon a trailing twelve months of net revenue, including a requirement of $42.5 million in the twelve months ending December 31, 2022.

On November 8, 2022, we entered into Amendment No. 1 to the Credit Agreement (Amendment No. 1 or, as amended, the Amended Credit Agreement) which (i) replaced the LIBOR-based interest rate with a rate equal to the forward-looking one-month term Secured Overnight Financing Rate adjusted upward by 0.10% (or Term SOFR, as defined in Amendment No. 1) plus an applicable margin (6.45%, for the Term Loan and 3.75% for the Revolver), with a Term SOFR floor of 1.00%, and with such interest rate calculation change taking effect on December 1, 2022, (ii) increased the applicable prepayment fee percentage amounts by one percentage point, (iii) gave lenders discretion regarding the $10.0 million in borrowing that was previously guaranteed to be available under the Term Loan in the first half of 2023, and (iv) reduced our requirements for trailing twelve months of net revenue for all future periods—for example, for the twelve months ending December 31, 2022, our minimum net revenue requirement was reduced from $42.5 million to $38.0 million, where as of December 31, 2022, the Company was in compliance with this requirement. Concurrent with Amendment No. 1, the exit fee due on the date of termination of the Term Loan or the date on which the obligations under the Term Loan become due and payable in full, increased from 5.00% to 7.00% of the total aggregate principal amount of term loans made pursuant to the Term Loan as of such date.

On March 28, 2023, we entered into Amendment No. 2 to the Credit Agreement (Amendment No. 2) which (i) increased the applicable margin from 6.45% to 7.00% for the Amended Term Loan and from 3.75% to 4.00% for the Amended Revolver, and increased the Term SOFR floor from 1.00% to 4.50% on both the Amended Term Loan and Amended Revolver, (ii) gave lenders discretion regarding the $10.0 million in borrowings in the second half of 2023 and the $10.0 million in borrowings in the first half of 2024 by removing the trailing twelve month Clinical Solutions revenue requirement that was previously required under the Amended Term Loan, (iii) removed the increase in the minimum cash covenant from $10.0 million to $15.0 million on the $10.0 million in borrowings in the first half of 2024, and added the $10.0 million minimum cash covenant requirement throughout the remaining term of the Amended Credit Agreement, and (iv) reduced the requirements for trailing twelve months of net revenue for all future periods—for example, for the twelve months ending December 31, 2023, the minimum net revenue requirement was reduced from $45.0 million to $42.0 million. Concurrent with Amendment No. 2, the exit fee due on the date of termination of the Amended Term Loan, or the date on which the obligations under the Amended Term Loan become due and payable in full, increased from 7.0% percent to 8.5% of the total aggregate principal amount of term loans made pursuant to the Term Loan (including amendments thereto) as of such date. Other than the modifications described in this paragraph and in Item 9B below, the Amended Credit Agreement continues unmodified in all other material respects.

We believe these sources of liquidity, in addition to the net proceeds from our IPO, which closed on June 29, 2021, will be sufficient to fund our liquidity requirements for at least the next 12 months. Our principal liquidity requirements are to fund our operations and capital expenditures. We may, however, require or elect to secure additional financing as we continue to execute our business strategy. If we require or elect to raise additional funds, we may do so through equity or debt financing, which may or may not be available on favorable terms and could require us to agree to covenants that limit our operating flexibility.

To meet the Company’s future working capital needs, the Company may need to raise additional debt or equity financing. While the Company has implemented a plan to control its expenses and to satisfy its obligations under the Amended Credit Agreement throughout the one year period from the date of issuance of these annual

financial statements, the Company cannot guarantee that it will be able to maintain compliance with its loan agreements, raise additional capital, contain expenses, or increase revenue.

The following table sets forth, for the periods indicated, net cash flows used in operating activities, used in investing activities and provided by financing activities (in thousands):

	For the Year Ended December 31,	
	2022	2021
Net cash used in operating activities	$ (27,400)	$ (9,069)
Net cash used in investing activities	(28,149)	(17,521)
Net cash provided by financing activities	10,267	110,793
Net (decrease) increase in cash and cash equivalents	$ (45,282)	$ 84,203

Operating Activities

Net cash used in operating activities consists primarily of net loss adjusted for certain non-cash items (including depreciation and amortization, bad debt expense, deferred taxes, loss on disposal of property, plant, and equipment, inventory reserve, amortization of debt issuance costs, and stock-based compensation expense), and the effect of changes in working capital and other activities.

Net cash used in operating activities was $27.4 million in 2022, which primarily consisted of net loss of $47.5 million plus net adjustments for non-cash charges of $27.4 million, offset by net changes in operating assets and liabilities of $7.3 million. The primary non-cash adjustments to net income included a $16.6 million goodwill impairment charge, $4.2 million impairment charge related to long-lived assets, $3.7 million of stock-based compensation, $3.2 million of depreciation and amortization, $0.7 million of inventory reserve, partially offset by $1.9 million in deferred taxes. Net cash used in changes in operating assets and liabilities consisted primarily of a $7.6 million increase in inventories and $2.1 million increase in other non-current assets, partially offset by a $1.2 million decrease in income taxes receivable, $0.6 million increase in accounts payable and $0.4 million decrease in accounts receivable.

Net cash used in operating activities was $9.1 million in 2021, which primarily consisted of net loss of $9.8 million plus net adjustments for non-cash charges of $2.5 million, offset by net changes in operating assets and liabilities of $1.8 million. The primary non-cash adjustments to net income included $2.9 million of depreciation and amortization, $1.6 million of stock-based compensation, $0.4 million of inventory reserve, partially offset by $2.8 million in deferred taxes. Net cash used in changes in operating assets and liabilities consisted primarily of a $2.3 million increase in inventories, $1.3 million increase in prepaid expenses and other current assets, partially offset by a $1.8 million increase in accrued liabilities and $0.3 million increase in accounts payable.

Investing Activities

Net cash used in investing activities relates primarily to capital expenditures and purchases of marketable securities, partially offset by proceeds from maturities and sales of marketable investments.

Net cash used in investing activities was $28.1 million for the year ended December 31, 2022, which consisted of purchases of property, plant, and equipment.

Net cash used in investing activities was $17.5 million for the year ended December 31, 2021, which primarily consisted of purchases of property, plant, and equipment of $19.9 million. This was partially offset by receipt of proceeds from sales and maturities of short-term marketable securities of $1.1 million and $0.7 million, respectively, and proceeds from a loan to a related party of $0.5 million.

Financing Activities

Net cash provided by financing activities primarily relates to proceeds from our IPO, net of underwriters' commissions and discounts, payment of issuance costs of the IPO, and proceeds from long-term debt.

Net cash provided by financing activities was $10.3 million for the year ended December 31, 2022, which was primarily attributable to proceeds from long-term debt of $10.1 million, partially offset by related debt issuance costs of $0.2 million and payment of exit fee costs related to our debt refinancing of $0.1 million. We also received proceeds of $0.1 million from the exercise of stock options and $0.3 million from issuance of common stock under our employee stock purchase plan.

Net cash provided by financing activities was $110.8 million for the year ended December 31, 2021, which was primarily attributable to proceeds from the IPO, net of underwriters' commissions and discounts, of $102.7 million and proceeds from long-term debt pursuant to our previous credit agreement of $11.9 million, partially offset by payment of costs related to our IPO of $3.6 million and debt issuance costs of $0.2 million.

Critical Accounting Policies and Estimates

Our financial statements have been prepared in accordance with GAAP. The preparation of financial statements in conformity with GAAP requires management to make estimates and assumptions that affect the reported amounts of assets, liabilities and contingencies as of the date of the financial statements and reported amounts of revenues and expenses during the reporting periods. We evaluate our estimates on an ongoing basis. We base our estimates on historical experience and on other assumptions that are believed to be 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. However, future events may cause us to change our assumptions and estimates, which may require adjustment. Actual results could differ from these estimates.

We believe the following critical accounting policies involve significant areas where management applies judgments and estimates in the preparation of our financial statements.

Revenue Recognition

We account for revenue in accordance with ASC 606. This process involves identifying the contract with a customer, identifying the performance obligations in the contract, determining the transaction price, allocating the transaction price to the performance obligations in the contract, and recognizing revenue when or as we satisfy performance obligations.

We recognize revenue from the sale of manufactured products and services when control of promised goods or services is transferred to customers in an amount that reflects the consideration we expect to be entitled to in exchange for those goods or services. Control is transferred when the customer has the ability to direct the use of and obtain benefits from the goods or services. The majority of our sales agreements contain performance obligations satisfied at a point in time when control is transferred to the customer.

Occasionally, we offer rebates, discounts, and returns on our products, however, returns and refunds occur rarely. We record rebates, discounts, and returns at the time they occur. The difference between recording these as they occur and estimating the amount of consideration in exchange for the transfer of promised goods would not have a material impact on the financial statements.

Goodwill

Goodwill is the excess of the fair value of the company above the fair value accounting basis of the net assets and liabilities of the company under pushdown accounting. Goodwill is not amortized, but is tested for impairment annually as of October 1, or more frequently if events or circumstances indicate that the carrying value may no longer be recoverable and that an impairment may have occurred. We operate as one segment and one reporting unit, and therefore goodwill is tested for impairment at the entity level.

We first consider qualitative factors that indicate impairment may have occurred. Such indicators may include macro-economic conditions such as adverse industry or market conditions; entity-specific events such as increasing costs, declining financial performance, or loss of key personnel. If the qualitative assessment indicates a reduction in the carrying value is more likely than not to have occurred, we perform a quantitative assessment, comparing the fair value of the reporting unit to its carrying value, including goodwill. If the carrying value of the reporting unit

exceeds the fair value, an impairment has occurred, and an impairment loss is recognized for the difference up to the carrying value of the reporting unit's goodwill.

The fair value of the reporting unit was determined using a combination of an income approach and market approach. We incurred a $16.6 million goodwill impairment charge in 2022, with no comparable charges in 2021. Refer to "Notes to Financial Statements—Note 8—Goodwill and Intangible Assets, Net," in our financial statements for details regarding the impairment.

Application of the goodwill impairment test requires judgments, including a qualitative assessment to determine whether there are any impairment indicators, and determining the fair value of the reporting unit. A number of significant assumptions and estimates are involved in a quantitative assessment. In the application of the income approach to forecast future cash flows, revenue and operating income growth rates, discount rates, and other factors are used. Additionally, assumptions related to guideline company financial multiples are used in the market approach.

Intangible Assets and Other Long-Lived Assets

We review our definite-lived intangible assets and other long-lived assets for impairment whenever events or changes in circumstances indicate the carrying amount of our long-lived assets may not be recoverable. Recoverability of assets to be held and used is measured by a comparison of the carrying amount of the assets to future undiscounted net cash flows expected to be generated. Significant judgment is required to estimate the amount and timing of future cash flows and the relative risk of achieving those cash flows. The key assumptions that we use in our discounted cash flow model are the amount and timing of estimated future cash flows to be generated by the asset over an extended period of time and a rate of return that considers the relative risk of achieving the cash flows, the time value of money, and other factors that a willing market participant would consider.

Indefinite-lived intangible assets are also subject to an impairment test at least annually, as of October 1, or more frequently if events or circumstances indicate that it is more likely than not that the asset is impaired. If the fair value of the asset is less than the carrying amount, an impairment loss would be recognized in an amount equal to the difference between the carrying amount and the fair value. We determined that it is not more likely than not that the fair value of our indefinite-lived intangible assets is less than the carrying amount.

Assumptions and estimates about future values and remaining useful lives are complex and often subjective. They can be affected by a variety of factors, including external factors such as industry and economic trends, and internal factors such as changes in our business strategy and our internal forecasts.

Income Taxes

The asset and liability method is used in accounting for deferred income taxes. Under this method, deferred income taxes are provided for differences between the carrying amounts of assets and liabilities for financial reporting and tax purposes using the enacted tax rates and laws that will be in effect when the differences are expected to reverse. Accordingly, our tax provision contemplates tax rates currently in effect to determine our current tax provision as well as enacted tax rates expected to apply to taxable income in the fiscal years in which those temporary differences are expected to be recovered or settled to determine our deferred tax provision. Any significant fluctuation in rates or changes in tax laws could lead to either increases or decreases in our effective tax rate.

Our provision for income taxes, deferred tax assets and liabilities, and reserves for unrecognized tax benefits reflect our best assessment of estimated future taxes to be paid. Significant judgments and estimates based on interpretations of existing tax laws or regulations are required in determining our provision for income taxes. Changes in tax laws, statutory tax rates, and estimates of our future taxable income could impact the deferred tax assets and liabilities provided for in the financial statements and would require an adjustment to the provision for income taxes.

Stock-Based Compensation

Stock-based compensation expense is recognized based on the fair value and is expensed on a straight-line basis over the requisite service periods of the award, which generally represents the scheduled vesting period. Forfeitures are recognized as they occur. We account for stock-based compensation expense based on the estimated grant date fair value, using the Black-Scholes option-pricing model which requires us to make a number of assumptions, including expected volatility, the expected risk-free interest rate, the expected term and the expected dividend.

These inputs are subjective and generally require significant analysis and judgment to develop. Changes in the assumptions can materially affect the fair value and ultimately how much stock-based compensation is recognized.

- *Volatility.* Since we have limited historical data on volatility of our stock, expected volatility is based on the volatility of the stock of similar publicly traded entities. In evaluating similarity, we consider factors such as industry, stage of life cycle, size, and financial leverage.
- *Fair value of underlying common stock*. The fair value of our common stock is determined by the closing price as reported on the Nasdaq Global Market on the date of grant.
- *Risk-free interest rate*. The risk-free rate that we use is based on U.S. Treasury zero-coupon issues with remaining terms similar to the expected term on the options.
- *Expected term*. As we do not have sufficient historical exercise activity to estimate expected life, the expected life of options granted is determined using the simplified method. The simplified method is based on the vesting period and the contractual term for each grant or for each vesting tranche for awards with graded vesting. The midpoint of the vesting date and the maximum contractual expiration date are used to determine the expected term under this method.
- *Dividend yield*. We have never declared or paid any cash dividends and does not plan to pay cash dividends in the foreseeable future. Therefore, we use an expected dividend yield of zero. In addition, the terms of the Amended Credit Agreement prohibit us from paying dividends, other than dividends payable in our common stock, without the prior consent of the lender.

Accounting Pronouncements Not Yet Adopted

In June 2016, the Financial Accounting Standards Board issued ASU No. 2016-13, *Financial Instruments—Credit Losses* (Topic 326). The standard introduces a new model for recognizing credit losses on financial instruments based on an estimate of current expected credit losses and will apply to accounts receivable. The new guidance became effective for Teknova's annual and interim periods beginning January 1, 2023. We are currently evaluating the impact of the adoption of the standard on the financial statements and do not anticipate the standard to have a significant impact.

Emerging Growth Company and a Smaller Reporting Company

We qualify as an "emerging growth company" as defined in the JOBS Act. For as long as we qualify as an emerging growth company, we may take advantage of certain exemptions from various reporting requirements and other burdens that are otherwise applicable generally to public companies. These provisions include, but are not limited to:

- reduced obligations with respect to financial data, including presenting only two years of audited financial statements;
- an exemption from compliance with the auditor attestation requirements of Section 404 of the Sarbanes-Oxley Act;
- reduced disclosure about our executive compensation arrangements in our periodic reports, proxy statements, and registration statements; and
- exemptions from the requirements of holding non-binding advisory votes on executive compensation or golden parachute arrangements.

In addition, under the JOBS Act, emerging growth companies can delay adopting new or revised accounting standards until such time as those standards apply to private companies. We have elected to avail ourselves of this exemption from adopting new or revised accounting standards, and, therefore, we will not be subject to the same new or revised accounting standards as other public companies that are not emerging growth companies or that have opted out of using such extended transition period, which may make comparison of our financial statements with those of other public companies more difficult. We may take advantage of these reporting exemptions until we no longer qualify as an emerging growth company, or, with respect to adoption of certain new or revised accounting standards, until we irrevocably elect to opt out of using the extended transition period.

Under the JOBS Act, we will remain an emerging growth company until the earliest of:

- the last day of the fiscal year in which we have total annual gross revenues of $1.235 billion or more;
- the last day of our fiscal year following the fifth anniversary of the date of the closing of our initial public offering (IPO);
- the date on which we have issued more than $1.0 billion in nonconvertible debt during the previous three years; and
- the date on which we are deemed to be a “large accelerated filer” under the Exchange Act (i.e., the first day of the fiscal year after we have (i) more than $700.0 million in outstanding common equity held by our non-affiliates, measured each year on the last business day of our most recently completed second fiscal quarter, and (ii) been public for at least 12 months).

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.

The information required by this item is set forth at the pages indicated in Part IV, Item 15(a)(1) and 15(a)(2), respectively, of this Annual Report on Form 10-K.

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

Not applicable.

Item 9A. Controls and Procedures.

Evaluation of Disclosure Controls and Procedures

Our management, with the participation of our Chief Executive Officer (CEO) and Chief Financial Officer (CFO) (our principal executive officer and principal financial officer, respectively), evaluated the effectiveness of our disclosure controls and procedures as of December 31, 2022. The term “disclosure controls and procedures,” as defined in Rules 13a-15(e) and 15d-15(e) under the Exchange Act means controls and other procedures of an issuer that are designed to ensure that information required to be disclosed by an issuer in the reports that it files or submits under the Exchange Act is recorded, processed, summarized and reported, within the time periods specified in the SEC’s rules and forms. Disclosure controls and procedures include, without limitation, controls and procedures designed to ensure that information required to be disclosed by an issuer in the reports that it files or submits under the Exchange Act is accumulated and communicated to the issuer’s management, including its principal executive and principal financial officers, or persons performing similar functions, as appropriate to allow timely decisions regarding required disclosure.

Management recognizes that any controls and procedures, no matter how well designed and operated, can provide only reasonable assurance of achieving their objectives and management necessarily applies its judgment in evaluating the cost-benefit relationship of possible controls and procedures.

Based upon our evaluation of the Company's disclosure controls and procedures, as of December 31, 2022, the CEO and the CFO concluded that the disclosure controls were not effective, due to the material weakness in internal control over financial reporting described below, to provide reasonable assurance that information required to be disclosed by the Company in the reports that it files or submits under the Exchange Act is accumulated and communicated to management, including the CEO and CFO, as appropriate, to allow timely decisions regarding required disclosure and were not effective to provide reasonable assurance that such information is recorded, processed, summarized, and reported within the time periods specified by the SEC's rules and forms.

Notwithstanding this material weakness, management has concluded that our audited financial statements included in this Annual Report on Form 10-K are fairly stated in all material respects in accordance with GAAP for each of the periods presented herein.

Internal Control Over Financial Reporting

Management's Report on Internal Controls Over Financial Reporting

Our management is responsible for establishing and maintaining adequate internal control over financial reporting (as defined in Rules 13a-15(f) and 15(d)-15(f) under the Exchange Act). Our management conducted an assessment of the effectiveness of the Company's internal control over financial reporting as of December 31, 2022, based on criteria established in Internal Control-Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission. Based on that assessment, our management has concluded that our internal control over financial reporting was not effective as of December 31, 2022.

Under standards established by the Public Company Accounting Oversight Board, a material weakness is a deficiency, or combination of deficiencies, in internal control over financial reporting such that there is a reasonable possibility that a material misstatement of our annual or interim financial statements will not be prevented or detected and corrected on a timely basis. During the audit of our financial statements, for the fiscal year ended December 31, 2022, we and our independent registered public accounting firm identified a material weakness in our accounting for income taxes. Specifically, the Company did not have the appropriate complement of tax resources commensurate with the nature and complexity associated with the Company's income tax accounting process. Our audited financial statements present income taxes in accordance with GAAP, however, such adjustments amounted to a material weakness. The material weakness remained un-remediated as of December 31, 2022.

Attestation of Independent Registered Public Accounting Firm

Our independent registered public accounting firm is not required to attest to the effectiveness of our internal control over financial reporting for as long as we are an "emerging growth company" pursuant to the provisions of the JOBS Act.

Changes in Internal Control Over Financial Reporting

Except for the material weakness described above, there were no changes in our internal control over financial reporting (as defined in Rules 13a-15(f) and 15d-15(f) under the Exchange Act) that occurred during the quarter ended December 31, 2022, that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

Remediation of the Prior Year Material Weakness

During the audit of our financial statements, for the fiscal years ended December 31, 2019 and 2020, we and our independent registered public accounting firm identified a material weakness in our financial close and reporting process. Specifically, that process was not adequately designed, documented, and executed to support the accurate and timely reporting of the Company's financial results with respect to complex, non-routine transactions, such as business combinations. Consequently, we inappropriately accounted for our entry into a stock purchase agreement with Telegraph Hill Partners Management Company LLC (Telegraph Hill Partners), through its affiliates Telegraph Hill Partners IV, L.P. (THP LP) and THP IV Affiliates Fund, LLC (THP LLC, and collectively with THP LP, THP) on January 14, 2019, pursuant to which THP acquired majority control of Teknova (the THP Transaction), including

as to certain tax benefits and the allocation of transaction costs across periods. Our audited financial statements presented the THP Transaction in accordance with GAAP, however, such adjustments amounted to a material weakness. The material weakness remained un-remediated as of December 31, 2021. As a result of this material weakness, we hired accounting employees and engaged consultants with specific technical accounting experience necessary to assist with complex, non-routine transactions. We also designed and implemented additional controls and procedures both as they relate to our financial close and reporting process as well as complex, non-routine transactions. These changes and the remediation of this material weaknesses identified, were completed during the quarter ended March 31, 2022.

Remediation of the Current Year Material Weakness

As described above, a material weakness was identified during the audit of our financial statements for the fiscal year ended December 31, 2022 related to our accounting for income taxes. We have begun taking measures, and plan to continue to take measures, to remediate this material weakness. These measures include engaging accounting personnel and/or consultants with specific income tax accounting experience necessary to assist with our accounting for income taxes as well as implementing and adopting additional controls and procedures. These remediation measures may be time consuming, costly, and might place significant demands on our financial and operational resources. We believe that the remediation plan's design and implementation will effectively remediate the material weakness, however, until the remediation activities are fully implemented and the operational effectiveness of related internal controls is validated through testing, the material weakness described above will continue to exist.

Item 9B. Other Information.

Amendment to Lease Agreement

In January 2023, we entered into a First Amendment to Lease Agreement (which we refer to as the Lease Amendment) with Ken & Jill Gimelli, LLC (to whom we refer as Gimelli LLC), which modifies our Commercial Lease Agreement with Gimelli LLC dated October 7, 2020, pursuant to which we lease premises located at 2451 Bert Drive and 2320 Technology Parkway in Hollister, California. Effective December 1, 2022, the Lease Amendment modified the Commercial Lease Agreement by, among other things, extending the base term of the lease of 2320 Technology Parkway from five (5) years to twelve (12) years, providing us with an option to extend the lease of 2320 Technology Parkway for an additional five (5) years, and establishing the amount of rent that shall be payable to Gimelli LLC during each of years six (6) to twelve (12) and during the extension period. 2320 Technology Parkway is the location of our new, state-of-the-art manufacturing facility.

Other than the modifications described in this Item 9B, the Commercial Lease Agreement with Gimelli LLC continues unmodified in all other material respects. This summary of the Lease Amendment does not purport to be complete and is subject to, and qualified in its entirety by, the full text of the Lease Amendment, which is filed as Exhibit 10.22 to this Annual Report on Form 10-K.

Amendment to the Credit Agreement

On March 28, 2023, we entered into amendments (which we refer to collectively as Amendment No. 2) to (i) our May 10, 2022, Amended and Restated Credit and Security Agreement (Term Loan), as amended on November 8, 2022 (which we refer to as the Amended Term Loan Credit Agreement) and (ii) our May 10, 2022, Amended and Restated Credit and Security Agreement (Revolving Loan) as amended on November 8, 2022 (which we refer to as the Amended Revolving Loan Credit Agreement and, together with the Amended Term Loan Credit Agreement, the Amended Credit Agreement), in each case with us as borrower and with MidCap Financial Trust (to whom we refer as MidCap) as agent and lender, and the additional lenders from time to time party thereto. Amendment No. 2 modifies the credit facility established under the Credit Agreement (which we refer to as the Credit Facility or, as amended by Amendment No. 1, the Amended Credit Facility), consisting of a $52.135 million senior secured term loan (which we refer to as the Term Loan or, as amended by Amendment No. 1, the Amended Term Loan) and a $5.0 million working capital facility (which we refer to as the Revolver or, as amended by Amendment No. 1, the Amended Revolver).

Amendment No. 2 gave lenders discretion regarding the $10.0 million in borrowings in the second half of 2023 and the $10.0 million in borrowings in the first half of 2024 by removing the trailing twelve month Clinical Solutions revenue requirement that was previously required under the Amended Term Loan, removed the increase in the minimum cash covenant from $10.0 million to $15.0 million on the $10.0 million in borrowings in the first half of 2024, and added the $10.0 million minimum cash covenant requirement throughout the remaining term of the Amended Credit Agreement.

The Credit Agreement includes minimum net revenue requirements which are measured on a trailing twelve-month basis. Amendment No. 2 reduced these requirements for all future periods—for example, for the twelve months ending December 31, 2023, our minimum net revenue requirement was reduced from $45.0 million to $42.0 million.

Amendment No. 2 increased the applicable margin from 6.45% to 7.00% for the Amended Term Loan and from 3.75% to 4.00% for the Amended Revolver, and increased the Term SOFR floor from 1.00% to 4.50% on both the Amended Term Loan and Amended Revolver. In addition, at the end of the Amended Term Loan, the Company will pay an exit fee of 8.50%, an increase from the previous 7.00%, of the total aggregate principal amount of loans made under the Term Loan Credit Agreement (including amendments thereto).

Other than the modifications described in this Item 9B, the Amended Credit Agreement continues unmodified in all other material respects. This summary of Amendment No. 2 does not purport to be complete and is subject to, and qualified in its entirety by, the full text of Amendment No. 2 to the Term Loan and Amendment No. 2 to the Revolver, which are filed as Exhibit 10.26 and Exhibit 10.29, respectively, to this Annual Report on Form 10-K.

ATM Sales Agreement

On March 30, 2023, we entered into a Sales Agreement (the Sales Agreement) with Cowen and Company, LLC (Cowen) with respect to an at-the-market offering program under which the Company may offer and sell, from time to time at its sole discretion, shares of its common stock, par value $0.00001 per share (the Common Stock), having an aggregate offering price of up to $50,000,000 (the Shares) through Cowen as its sales agent.

Pursuant to the terms of the Sales Agreement, the Company will set the parameters for the sale of Shares, including the number of Shares to be issued, the time period during which sales are requested to be made, limitations on the number of Shares that may be sold in any one trading day and any minimum price below which sales may not be made. Subject to the terms of the Sales Agreement, Cowen may sell the Shares by any method that is deemed to be an “at the market offering” as defined in Rule 415 promulgated under the Securities Act of 1933, as amended, including sales made through The Nasdaq Stock Market LLC (Nasdaq) or any other trading market for the Common Stock. The Company will pay Cowen a commission equal to up to three percent (3.0%) of the gross sales proceeds of any Shares sold through Cowen under the Sales Agreement, and has provided Cowen with customary indemnification and contribution rights. The Company will also reimburse Cowen for certain expenses incurred in connection with the Sales Agreement. The Sales Agreement will terminate upon the earlier of (i) the sale of all Shares subject to the Sales Agreement or (ii) the termination of the Sales Agreement in accordance with the terms and conditions set forth therein. Cowen has agreed to act as sales agent on a commercially reasonable efforts basis consistent with its normal trading and sales practices and applicable state and federal laws, rules and regulations and the rules of Nasdaq.

Any Shares to be offered and sold under the Sales Agreement will be issued and sold pursuant to the Company’s Registration Statement on Form S-3 (File No. 333-265987), which was filed with the Securities and Exchange Commission (SEC) on July 1, 2022 and which became effective on July 12, 2022 (the Registration Statement). The Company filed a prospectus supplement with the SEC on March 30, 2023 in connection with the offer and sale of the Shares pursuant to the Sales Agreement.

The aggregate market value of Shares eligible for sale in the offering and under the Sales Agreement will be subject to the limitations of General Instruction I.B.6 of Form S-3, to the extent required under such instruction. The prospectus supplement filed with the SEC on March 30, 2023 is only offering Shares having an aggregate offering price of $14,500,000. The Company will be required to file another prospectus supplement in the event it determines to offer more than $14,500,000 of Shares in accordance with the terms of the Sales Agreement, to the extent then permitted under General Instruction I.B.6 of Form S-3.

The foregoing description of the Sales Agreement does not purport to be complete and is qualified in its entirety by reference to the full text of the Sales Agreement, a copy of which is attached as Exhibit 1.1 to this Annual Report on Form 10-K and is incorporated herein by reference.

The representations, warranties and covenants contained in the Sales Agreement were made only for purposes of such agreement and as of specific dates, were solely for the benefit of the parties to the Sales Agreement, and may be subject to limitations agreed upon by the contracting parties. Accordingly, the Sales Agreement is incorporated herein by reference only to provide investors with information regarding the terms of the Sales Agreement, and not to provide investors with any other factual information regarding the Company or its business, and should be read in conjunction with the disclosures in the Company's periodic reports and other filings with the SEC.

Paul Hastings LLP, counsel to the Company, has issued an opinion to the Company, dated March 30, 2023, relating to the validity of the Shares to be issued and sold pursuant to the Sales Agreement, a copy of which is filed as Exhibit 5.1 to this Annual Report on Form 10-K.

This Annual Report on Form 10-K shall not constitute an offer to sell or the solicitation of an offer to buy any Shares, nor shall there be any offer, solicitation or sale of the Shares in any state or country in which such offer, solicitation or sale would be unlawful prior to registration or qualification under the securities laws of any such state or country.

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 will be contained in our definitive proxy statement on Schedule 14A to be filed with the SEC in connection with our 2023 Annual Meeting of the Stockholders (the Proxy Statement), which we expect to file not later than 120 days after the end of our fiscal year ended December 31, 2022, and is incorporated in this Annual Report on Form 10-K by reference.

Item 11. Executive Compensation.

The information required by this Item will be contained in our Proxy Statement, which we expect to file not later than 120 days after the end of our fiscal year ended December 31, 2022, and is incorporated in this report by reference.

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

The information required by this Item will be contained in our Proxy Statement, which we expect to file not later than 120 days after the end of our fiscal year ended December 31, 2022, and is incorporated in this report by reference.

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

The information required by this Item will be contained in our Proxy Statement, which we expect to file not later than 120 days after the end of our fiscal year ended December 31, 2022, and is incorporated in this report by reference.

Item 14. Principal Accounting Fees and Services.

The information required by this Item will be contained in our Proxy Statement, which we expect to file not later than 120 days after the end of our fiscal year ended December 31, 2022, and is incorporated in this report by reference.

PART IV

Item 15. Exhibits, Financial Statement Schedules.

(a) The following documents are filed as a part of this report:

(1) Financial Statements

Our Financial Statements are listed in the "Index to Financial Statements" of Alpha Teknova, Inc. beginning on page F-1 immediately following the signature pages of this Annual Report on Form 10-K.

(2) Financial Statement Schedules

All financial statement schedules called for under Regulation S-X are omitted because either they are not applicable or are not required under the related instructions, or because the required information is included either in the Financial Statements or Notes thereto included elsewhere in this Annual Report on Form 10-K.

(3) Exhibits

The following exhibits are incorporated by reference or filed with this Annual Report on Form 10-K, in each case as indicated therein (numbered in accordance with Item 601 of Regulation S-K).

Exhibit Index

Exhibit Number		Description
1.1	*	Common Stock Sales Agreement, dated March 30, 2023, by and between Cowen and Company, LLC and Alpha Teknova, Inc.
3.1		Amended and Restated Certificate of Incorporation of Alpha Teknova, Inc. (incorporated by reference to Exhibit 3.1 to the Registrant's Current Report on Form 8-K filed with the SEC on June 29, 2021).
3.2		Amended and Restated Bylaws of Alpha Teknova, Inc. (incorporated by reference to Exhibit 3.2 to the Registrant's Current Report on Form 8-K filed with the SEC on June 29, 2021).
4.1		Form of Common Stock Certificate (incorporated by reference to Exhibit 4.1 to the Registrant's Registration Statement on Form S-1, as amended (File No. 333-256795 filed with the SEC on June 21, 2021).
4.2		Investors' Rights Agreement, dated as of January 14, 2019, by and among Alpha Teknova, Inc., and certain of its stockholders (incorporated by reference to Exhibit 4.2 to the Registrant's Registration Statement on Form S-1 (File No. 333-256795 filed with the SEC on June 4, 2021).
4.3	*	Description of the Registrant's capital stock.
5.1	*	Opinion of Paul Hastings LLP
10.1	+	Alpha Teknova, Inc. 2016 Stock Plan, as amended (incorporated by reference to Exhibit 10.1 to the Registrant's Registration Statement on Form S-1 (File No. 333-256795 filed with the SEC on June 4, 2021).
10.2	+	Alpha Teknova, Inc. 2016 Stock Plan Form of Stock Option Agreement (incorporated by reference to Exhibit 10.2 to the Registrant's Registration Statement on Form S-1 (File No. 333-256795 filed with the SEC on June 4, 2021).
10.3	+	Alpha Teknova, Inc. 2020 Equity Incentive Plan, as amended (incorporated by reference to Exhibit 10.3 to the Registrant's Registration Statement on Form S-1 (File No. 333-256795 filed with the SEC on June 4, 2021).
10.4	+	Alpha Teknova, Inc. 2020 Equity Incentive Plan Form of Stock Option Agreement (incorporated by reference to Exhibit 10.4 to the Registrant's Registration Statement on Form S-1 (File No. 333-256795 filed with the SEC on June 4, 2021).
10.5	+	Alpha Teknova, Inc. 2021 Equity Incentive Plan (incorporated by reference to Exhibit 10.5 to the Registrant's Registration Statement on Form S-8 (File No. 333-257523 filed with the SEC on June 29, 2021).
10.6	+	Alpha Teknova, Inc. 2021 Equity Incentive Plan Form of Stock Option Agreement (incorporated by reference to Exhibit 10.6 to the Registrant's Registration Statement on Form S-1, as amended (File No. 333-256795 filed with the SEC on June 21, 2021).
10.7	+	Alpha Teknova, Inc. 2021 Equity Incentive Plan Form of Restricted Stock Unit Award Agreement (incorporated by reference to Exhibit 10.7 to the Registrant's Registration Statement on Form S-1, as amended (File No. 333-256795 filed with the SEC on June 21, 2021).
10.8	+	Alpha Teknova, Inc. 2021 Employee Stock Purchase Plan (incorporated by reference to Exhibit 10.8 to the Registrant's Registration Statement on Form S-8 (File No. 333-257523 filed with the SEC on June 29, 2021).
10.9	+#	Offer Letter, dated as of November 16, 2019, between Alpha Teknova, Inc. and Stephen Gunstream (incorporated by reference to Exhibit 10.9 to the Registrant's Registration Statement on Form S-1 (File No. 333-256795 filed with the SEC on June 4, 2021).
10.10	+	Offer Letter, dated as of August 18, 2020, between Alpha Teknova, Inc. and Damon Terrill (incorporated by reference to Exhibit 10.12 to the Registrant's Registration Statement on Form S-1 (File No. 333-256795 filed with the SEC on June 4, 2021).
10.11	+	Offer Letter, dated as of January 22, 2021, between Alpha Teknova, Inc. and Matthew Lowell (incorporated by reference to Exhibit 10.13 to the Registrant's Registration Statement on Form S-1 (File No. 333-256795 filed with the SEC on June 4, 2021).
10.12	+	Offer Letter, dated as of November 4, 2020, between Alpha Teknova, Inc. and Lisa Hood (incorporated by reference to Exhibit 10.14 to the Registrant's Registration Statement on Form S-1 (File No. 333-256795 filed with the SEC on June 4, 2021).

10.13	+	Offer Letter, dated as of September 20, 2021, between Alpha Teknova, Inc. and Ken Gelhaus (incorporated by reference to Exhibit 10.1 to the Registrant's Current Report on Form 8-K, filed with the SEC on November 15, 2021).
10.14	+	Form of Indemnification Agreement between Alpha Teknova, Inc. and each of its directors and officers (incorporated by reference to Exhibit 10.16 to the Registrant's Registration Statement on Form S-1, as amended (File No. 333-256795 filed with the SEC on June 21, 2021).
10.15	+	Alpha Teknova, Inc. Annual Incentive Bonus Plan (incorporated by reference to Exhibit 10.17 to the Registrant's Registration Statement on Form S-1, as amended (File No. 333-256795 filed with the SEC on June 21, 2021).
10.16		Lease Agreement, dated December 1, 2015, between Michael and Paige McCullough and Alpha Teknova, Inc (incorporated by reference to Exhibit 10.18 to the Registrant's Registration Statement on Form S-1 (File No. 333-256795 filed with the SEC on June 4, 2021).
10.17		Lease Agreement, dated November 1, 2015, between McMar LLC and Alpha Teknova, Inc., as amended (incorporated by reference to Exhibit 10.19 to the Registrant's Registration Statement on Form S-1 (File No. 333-256795 filed with the SEC on June 4, 2021).
10.18		Lease, dated September 1, 2019, between Meeches LLC and Alpha Teknova, Inc (incorporated by reference to Exhibit 10.20 to the Registrant's Registration Statement on Form S-1 (File No. 333-256795 filed with the SEC on June 4, 2021).
10.19		Lease Agreement, dated December 29, 2020, between Simmco LLC and Alpha Teknova, Inc (incorporated by reference to Exhibit 10.21 to the Registrant's Registration Statement on Form S-1 (File No. 333-256795 filed with the SEC on June 4, 2021).
10.20		Warehouse Lease Agreement, dated January 1, 2021, between Mooney Family LP and Alpha Teknova, Inc (incorporated by reference to Exhibit 10.22 to the Registrant's Registration Statement on Form S-1 (File No. 333-256795 filed with the SEC on June 4, 2021).
10.21		Commercial Lease Agreement, dated October 7, 2020, between Ken and Jill Gimelli, LLC and Alpha Teknova, Inc (incorporated by reference to Exhibit 10.23 to the Registrant's Registration Statement on Form S-1 (File No. 333-256795 filed with the SEC on June 4, 2021).
10.22	*	First Amendment to the Commercial Lease Agreement between Ken and Jill Gimelli, LLC and Alpha Teknova, Inc, dated December 1, 2022.
10.23	+	Alpha Teknova, Inc. Executive Severance and Change in Control Plan (incorporated by reference to Exhibit 10.26 to the Registrant's Registration Statement on Form S-1, as amended (File No. 333-256795 filed with the SEC on June 21, 2021).
10.24	§	Amended and Restated Credit and Security Agreement (Term Loan), dated as of May 10, 2022, by and among Alpha Teknova, Inc. and MidCap Financial Trust, as agent and as a lender, and the additional lenders from time to time party thereto (incorporated by reference to Exhibit 10.1 to the Registrant's Current Report on Form 8-K filed with the SEC on May 11, 2022).
10.25	§	Amendment No. 1, dated as of November 8, 2022, to the Amended and Restated Credit and Security Agreement (Term Loan), dated as of May 10, 2022, by and among Alpha Teknova, Inc. and MidCap Financial Trust, as agent and as a lender, and the additional lenders from time to time party thereto (incorporated by reference to Exhibit 10.2 to the Registrant's Form 10-Q for the period ended September 30, 2022).
10.26	*	Amendment No. 2, dated as of March 28, 2023, to the Amended and Restated Credit and Security Agreement (Term Loan), dated as of May 10, 2022, and as amended on November 8, 2022 by and among Alpha Teknova, Inc. and MidCap Financial Trust, as agent and as a lender, and the additional lenders from time to time party thereto.
10.27	§	Amended and Restated Credit and Security Agreement (Revolving Loan), dated as of May 10, 2022, by and among Alpha Teknova, Inc. and MidCap Financial Trust, as agent and as a lender, and the additional lenders from time to time party thereto (incorporated by reference to Exhibit 10.2 to the Registrant's Current Report on Form 8-K filed with the SEC on May 11, 2022).
10.28	§	Amendment No. 1, dated as of November 8, 2022, to the Amended and Restated Credit and Security Agreement (Revolving Loan), dated as of May 10, 2022, by and among Alpha Teknova, Inc. and MidCap Financial Trust, as agent and as a lender, and the additional lenders from time to time party thereto (incorporated by reference to Exhibit 10.4 to the Registrant's Form 10-Q for the period ended September 30, 2022).
10.29	*	Amendment No. 2, dated as of March 28, 2023, to the Amended and Restated Credit and Security Agreement (Revolving Loan), dated as of May 10, 2022, and as amended November 8, 2022 by and

		among Alpha Teknova, Inc. and MidCap Financial Trust, as agent and as a lender, and the additional lenders from time to time party thereto.
10.30	*	Summary of Teknova's Non-Employee Director Compensation Policy.
23.1	*	Consent of Ernst & Young, LLP, Independent Registered Public Accounting Firm.
23.2	*	Consent of Paul Hastings LLP (contained in Exhibit 5.1)
24.1	*	Power of Attorney (see page 85 of this Annual Report on Form 10-K).
31.1	*	Certification of Principal Executive Officer Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002 (filed herewith).
31.2	*	Certification of Principal Financial Officer Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002 (filed herewith).
32.1	*	Certification Pursuant to 18 U.S.C. Section 1350, as Adopted Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002 (filed herewith).
101.INS		Inline XBRL Instance Document
101.SCH		Inline XBRL Taxonomy Extension Schema
101.CAL		Inline XBRL Taxonomy Extension Calculation Linkbase
101.DEF		Inline XBRL Taxonomy Extension Definition Linkbase
101.LAB		Inline XBRL Taxonomy Extension Label Linkbase
101.PRE		Inline XBRL Taxonomy Extension Presentation Linkbase
104		Cover Page Interactive Data File, formatted in Inline XBRL

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*	Filed herewith.
+	Management contract or compensatory plan or arrangement.
#	Certain confidential information contained in this Exhibit has been omitted because it is both (i) not material and (ii) of the type that the Registrant treats as private or confidential.
§	Non-material schedules and exhibits have been omitted pursuant to Item 601(a)(5) of Regulation S-K. The Registrant hereby undertakes to furnish supplemental copies of any of the omitted Schedules and exhibits upon request by the SEC.

(c) Financial Statement Schedules

No financial statement schedules are provided because the information called for is not applicable.

Item 16. Form 10-K Summary

None.

POWER OF ATTORNEY

KNOW ALL PERSONS BY THESE PRESENTS, that each person whose signature appears below constitutes and appoints Stephen Gunstream and Matt Lowell, and each of them, his or her true and lawful attorneys-in-fact, each with full power of substitution, for him or her in any and all capacities, to sign any amendments to this Annual Report on Form 10-K and to file the same, with exhibits thereto and other documents in connection therewith, with the Securities and Exchange Commission, hereby ratifying and confirming all that each of said attorneys-in-fact or their substitute or substitutes may do or cause to be done by virtue hereof.

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

Alpha Teknova, Inc.

Date: March 30, 2023

By: /s/ Stephen Gunstream

Stephen Gunstream
President and Chief Executive Officer

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

Name	Title	Date
/s/ Stephen Gunstream **Stephen Gunstream**	President, Chief Executive Officer, and Director (Principal Executive Officer)	March 30, 2023
/s/ Matt Lowell **Matt Lowell**	Chief Financial Officer (Principal Financial and Accounting Officer)	March 30, 2023
/s/ Paul Grossman **Paul Grossman**	Chairman of the Board	March 30, 2023
/s/ Irene Davis **Irene Davis**	Director	March 30, 2023
/s/ Ted Davis **Ted Davis**	Director	March 30, 2023
/s/ Alexander Herzick **Alexander Herzick**	Director	March 30, 2023
/s/ J. Matthew Mackowski **J. Matthew Mackowski**	Director	March 30, 2023
/s/ Robert E. McNamara **Robert E. McNamara**	Director	March 30, 2023
/s/ Brett Robertson **Brett Robertson**	Director	March 30, 2023
/s/ Alexander Vos **Alexander Vos**	Director	March 30, 2023

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REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Stockholders and the Board of Directors of Alpha Teknova, Inc.

Opinion on the Financial Statements

We have audited the accompanying balance sheets of Alpha Teknova, Inc. as of December 31, 2022 and December 31, 2021, the related statements of operations and comprehensive loss, convertible and redeemable preferred stock and stockholders' equity and cash flows for the two years in the period ended December 31, 2022, and the related notes (collectively referred to as the “financial statements”). In our opinion, the financial statements present fairly, in all material respects, the financial position of the Company at December 31, 2022 and December 31, 2021, and the results of its operations and its cash flows for each of the two years in the period ended December 31, 2022, in conformity with U.S. generally accepted accounting principles.

Basis for Opinion

These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on the Company’s financial statements based on our audits. We are a public accounting firm registered with the Public Company Accounting Oversight Board (United States) (PCAOB) and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement, whether due to error or fraud. The Company is not required to have, nor were we engaged to perform, an audit of its internal control over financial reporting. As part of our audits we are required to obtain an understanding of internal control over financial reporting but not for the purpose of expressing an opinion on the effectiveness of the Company's internal control over financial reporting. Accordingly, we express no such opinion.

Our audits included performing procedures to assess the risks of material misstatement of the financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the financial statements. We believe that our audits provide a reasonable basis for our opinion.

/s/ Ernst & Young LLP

We have served as the Company’s auditor since 2020.
San Jose, CA
March 30, 2023

ALPHA TEKNOVA, INC.
Statements of Operations and Comprehensive Loss
(in thousands, except share and per share data)

	For the Year Ended December 31,	
	2022	2021
Revenue	$ 41,420	$ 36,893
Cost of sales	23,944	19,272
Gross profit	17,476	17,621
Operating expenses:		
Research and development	7,737	4,312
Sales and marketing	9,151	3,777
General and administrative	28,298	20,392
Amortization of intangible assets	1,148	1,148
Goodwill impairment	16,613	—
Long-lived assets impairment	4,188	—
Total operating expenses	67,135	29,629
Loss from operations	(49,659)	(12,008)
Other income (expenses), net		
Interest income (expense), net	213	(589)
Other income (expense), net	55	(40)
Total other income (expenses), net	268	(629)
Loss before income taxes	(49,391)	(12,637)
Benefit from income taxes	(1,923)	(2,834)
Net loss	(47,468)	(9,803)
Change in unrealized loss on available-for-sale securities, net of tax		(7)
Comprehensive loss	$ (47,468)	$ (9,810)
Net loss per share—basic and diluted	$ (1.69)	$ (0.61)
Weighted average shares used in computing net loss per share—basic and diluted	28,083,563	16,087,653

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

ALPHA TEKNOVA, INC.
Balance Sheets
(in thousands, except share and per share data)

	As of December 31,	
	2022	**2021**
ASSETS		
Current assets:		
Cash and cash equivalents	$ 42,236	$ 87,518
Accounts receivable, net of allowance for doubtful accounts of $22 thousand and $23 thousand	4,261	4,666
Inventories, net	12,247	5,394
Income taxes receivable	22	1,188
Prepaid expenses and other current assets	2,374	2,438
Total current assets	61,140	101,204
Property, plant, and equipment, net	51,577	29,810
Operating right-of-use lease assets	19,736	—
Goodwill	—	16,613
Intangible assets, net	17,556	18,704
Other non-current assets	2,252	180
Total assets	$ 152,261	$ 166,511
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current liabilities:		
Accounts payable	$ 2,449	$ 2,248
Accrued liabilities	6,203	5,495
Current portion of operating lease liabilities	2,223	—
Total current liabilities	10,875	7,743
Deferred tax liabilities	1,223	3,153
Other accrued liabilities	191	273
Long-term debt, net	21,976	11,870
Deferred rent	—	269
Long-term operating lease liabilities	18,111	—
Total liabilities	52,376	23,308
Stockholders' equity:		
Preferred stock, $0.00001 par value, 10,000,000 shares authorized at December 31, 2022 and December 31, 2021, respectively, zero shares issued and outstanding at December 31, 2022 and December 31, 2021	—	—
Common stock, $0.00001 par value, 490,000,000 shares authorized at December 31, 2022 and December 31, 2021, respectively, 28,179,423 and 28,012,017 shares issued and outstanding at December 31, 2022 and December 31, 2021, respectively	—	—
Additional paid-in capital	154,891	150,741
Accumulated deficit	(55,006)	(7,538)
Total stockholders' equity	99,885	143,203
Total liabilities and stockholders' equity	$ 152,261	$ 166,511

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

ALPHA TEKNOVA, INC.
Statements of Convertible and Redeemable Preferred Stock and Stockholders' Equity
(in thousands, except share data)

Successor	Convertible and Redeemable Preferred Stock		Common Stock		Additional Paid-in Capital	Accumulated other comprehensive income (loss)	Retained Earnings (Accumulated Deficit)	Stockholders' Equity
	Shares	Amount	Shares	Amount				
Balance at January 1, 2021	9,342,092	$ 35,638	3,599,232	$ —	$ 14,495	$ 7	$ 2,265	$ 16,767
Stock-based compensation	—	—	—	—	1,551	—	—	1,551
Unrealized loss on available-for-sale securities	—	—	—	—	—	(7)	—	(7)
Accretion of convertible and redeemable preferred stock to redemption value	—	300	—	—	(300)	—	—	(300)
Conversion of convertible and redeemable preferred stock	(9,342,092)	(35,938)	17,512,685	—	35,938	—	—	35,938
Issuance of common stock upon initial public offering, net of issuance costs and underwriting discounts	—	—	6,900,000	—	99,057	—	—	99,057
Issuance of stock under employee stock plans, net	—	—	100	—	—	—	—	—
Net loss	—	—	—	—	—	—	(9,803)	(9,803)
Balance at December 31, 2021	—	—	28,012,017	—	150,741	—	(7,538)	143,203
Stock-based compensation	—	—	—	—	3,711	—	—	3,711
Issuance of common stock upon exercise of stock options	—	—	118,900	—	145	—	—	145
Issuance of common stock under employee stock purchase plan	—	—	48,506	—	294	—	—	294
Net loss	—	—	—	—	—	—	(47,468)	(47,468)
Balance at December 31, 2022	—	$ —	28,179,423	$ —	$ 154,891	$ —	$ (55,006)	$ 99,885

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

ALPHA TEKNOVA, INC.
Statements of Cash Flows
(in thousands)

	For the Year Ended December 31,	
	2022	**2021**
Operating activities:		
Net loss	$ (47,468)	$ (9,803)
Adjustments to reconcile net loss to net cash used in operating activities:		
Bad debt expense	25	235
Inventory reserve	697	441
Depreciation and amortization	3,165	2,883
Stock-based compensation	3,711	1,551
Deferred taxes	(1,930)	(2,837)
Amortization of debt financing costs	278	134
Non-cash lease expense	329	65
Loss on disposal of property, plant, and equipment	326	41
Goodwill impairment	16,613	-
Long-lived assets impairment	4,188	-
Other	-	(10)
Changes in operating assets and liabilities:		
Accounts receivable	380	(278)
Inventories	(7,550)	(2,253)
Income taxes receivable	1,166	229
Prepaid expenses and other current assets	64	(1,301)
Other non-current assets	(2,072)	(156)
Accounts payable	572	270
Accrued liabilities	188	1,810
Other	(82)	(90)
Cash used in operating activities	(27,400)	(9,069)
Investing activities:		
Purchase of property, plant, and equipment	(28,149)	(19,877)
Proceeds from loan to related party	-	529
Proceeds on sales of short-term marketable securities	-	1,132
Proceeds from maturities of short-term marketable securities	-	695
Cash used in investing activities	(28,149)	(17,521)
Financing activities:		
Proceeds from long-term debt	10,135	11,889
Payment of debt issuance costs	(172)	(153)
Payment of exit fee costs	(135)	—
Payment of issuance costs for initial public offering	—	(3,615)
Proceeds from initial public offering, net of underwriters' commissions and discounts	—	102,672
Proceeds from exercise of stock options	145	—
Proceeds from issuance of common stock under employee stock purchase plan	294	—
Cash provided by financing activities	10,267	110,793
Change in cash and cash equivalents	(45,282)	84,203
Cash and cash equivalents at beginning of period	87,518	3,315
Cash and cash equivalents at end of period	$ 42,236	$ 87,518
Supplemental cash flow disclosures:		
Income taxes paid	$ -	$ 8
Interest paid, net of amounts capitalized	$ 101	$ 414
Capitalized property, plant, and equipment included in accounts payable and accrued liabilities	$ 2,237	$ 2,088
Conversion of convertible and redeemable preferred stock into common stock	$ -	$ 35,638
Accretion of convertible and redeemable preferred stock to redemption value	$ -	$ 300
Recognition of operating right-of-use lease asset	$ 22,094	$ -
Recognition of operating lease liabilities	$ 22,363	$ -

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

Note 1. Nature of the Business

Alpha Teknova, Inc. (referred to herein as the Company or Teknova), produces critical reagents for the research, discovery, development, and commercialization of novel therapies, vaccines, and molecular diagnostics. Product offerings include pre-poured media plates for cell growth and cloning; liquid cell culture media and supplements for cellular expansion; and molecular biology reagents for sample manipulation, resuspension, and purification. Teknova supports customers spanning the life sciences market, including pharmaceutical and biotechnology companies, contract development and manufacturing organizations, in vitro diagnostic franchises, and academic and government research institutions, with catalog and custom, made-to-order products.

Teknova manufactures its products at its Hollister, California headquarters and stocks inventory of raw materials, components, and finished goods at that location. The Company ships products directly from its warehouse in Hollister, California.

Stock Split

In June 2021, the Company's board of directors and stockholders, respectively, approved a 1.8746 for-one forward stock split of the Company's issued and outstanding shares of common stock, including the shares of common stock underlying outstanding stock options. This stock split was effectuated on June 17, 2021. The par value of the Company's common stock was not adjusted as a result of the stock split. All issued and outstanding share and per share amounts of the Company's common stock and stock options included in the accompanying financial statements have been retroactively adjusted to reflect this stock split for all periods presented.

Initial Public Offering

On June 29, 2021, the Company completed its initial public offering (IPO) in which the Company issued and sold 6,900,000 shares of its common stock, including shares issued upon the exercise in full of the underwriters' option to purchase 900,000 additional shares of its common stock, at a public offering price of $16.00 per share. The Company received $99.1 million in net proceeds, after deducting underwriting discounts and commissions of $7.7 million and offering expenses of $3.6 million.

On June 28, 2021, all outstanding shares of convertible and redeemable preferred stock were converted into 17,512,685 shares of the Company's common stock. Prior to the conversion of preferred stock to the Company's common stock, total accretion of $0.3 million related to costs associated with the issuance of the convertible and redeemable preferred stock was recognized as an increase to the carrying value from $35.6 million to $35.9 million. Subsequent to the closing of the IPO, there were no shares of convertible and redeemable preferred stock outstanding.

Prior to the IPO, deferred offering costs, which consist primarily of direct incremental legal, accounting, and consulting fees relating to the Company's IPO, were capitalized within prepaid expenses and other current assets in the balance sheets. Upon the closing of the IPO, these costs were reclassified into additional paid-in capital, as an offset against IPO proceeds. As of December 31, 2021, $3.6 million of these IPO-related costs were included as a reduction to additional paid-in capital on the balance sheet.

Note 2. Summary of Significant Accounting Policies

Basis of Presentation and Use of Estimates

The accompanying financial statements and related notes are prepared in accordance with U.S. generally accepted accounting principles (GAAP). The preparation of financial statements in conformity with GAAP requires management to make estimates and assumptions that affect certain amounts of assets and liabilities, and disclosures of assets and liabilities, at the date of each financial statement, and the reported amount of revenues and expenses during the reporting period. Significant items that are subject to such estimates and assumptions include, but are not

limited to, the valuation of share-based payment awards, impairment of long-lived assets, impairment of goodwill and intangible assets, and income taxes. Although management bases its estimates on historical experience and various other assumptions that are believed to be reasonable under the circumstances, actual results could differ significantly from the estimates under different assumptions or conditions.

Going Concern

These financial statements and accompanying notes have been prepared in accordance with the provisions of Accounting Standards Codification (ASC) 205-40, *Presentation of Financial Statements—Going Concern*, on the basis that the Company will continue as a going concern, which contemplates the realization of assets and the settlement of liabilities and commitments in the normal course of business.

The Company has incurred operating losses in the past and expects to incur operating losses in the near to medium-term. We have incurred net losses of $47.5 million and $9.8 million in the years ended December 31, 2022 and 2021, respectively, and have an accumulated deficit of $55.0 million as of December 31, 2022.

As of December 31, 2022, we had $50.3 million in working capital, which included $42.2 million in cash and cash equivalents. In addition to our existing cash and cash equivalents balance, another source of liquidity is our credit facility as described below Note 10. Long-term Debt, Net. We believe that our existing cash and cash equivalents as of December 31, 2022, together with our credit facility under the Amended Credit Agreement, will enable us to fund our operating expenses and capital expenditure requirements for at least the next 12 months.

Our principal liquidity requirements are to fund our operations and capital expenditures. We may, however, require or elect to secure additional financing as we continue to execute our business strategy. If we require or elect to raise additional funds, we may do so through equity or debt financing, which may or may not be available on favorable terms and could require us to agree to covenants that limit our operating flexibility.

Segment Reporting

Operating segments are defined as components of an entity for which separate financial information is available and that is regularly reviewed by the Chief Operating Decision Maker (CODM) in deciding how to allocate resources to an individual segment and in assessing performance. Teknova’s CODM is its Chief Executive Officer, currently Stephen Gunstream. Teknova has determined that it operates in one reporting unit, one operating segment, and one reportable segment, as the CODM reviews financial information presented on a consolidated basis for purposes of making operating decisions, allocating resources, and evaluating financial performance.

Concentrations of Credit Risk

Teknova’s financial instruments that are exposed to concentration of credit risk consist primarily of cash and cash equivalents and accounts receivable. The Company places its cash with high-quality banking institutions. At times, the Company’s cash balances may exceed the Federal Deposit Insurance Corporation (FDIC) insurance limit. Teknova's cash equivalents consist primarily of money market funds invested in U.S. Treasuries. Teknova extends credit to customers based on its evaluation of the customer's financial condition and routinely communicates with its customers regarding payments. The Company has a history of limited write-offs, and therefore believes that its accounts receivable credit risk exposure is low. For information regarding the Company’s significant customers and suppliers, see Note 4.

Cash and Cash Equivalents

Teknova’s cash and cash equivalents include cash on hand, cash held in banks, and highly-liquid investments with maturities of three months or less at the date of acquisition. Teknova maintains its cash in bank deposit accounts in financial institutions that are insured by the FDIC up to a balance of $250.0 thousand. Cash equivalents are stated at amortized cost, plus accrued interest, which approximates fair value.

Fair Value of Financial Instruments

The carrying amounts of certain of Teknova's financial instruments, including cash equivalents, accounts receivable, inventories, accounts payable and accrued liabilities, approximate fair value due to their relatively short maturities.

Accounts Receivable

Accounts receivable are stated at invoice value, less estimated allowances for doubtful accounts. Teknova uses the allowance method to account for uncollectible accounts receivable, calculated by management using the historical average of uncollectible accounts. The Company continually monitors its customer payments and maintains an allowance for estimated losses resulting from its customers' inability to make required payments. Accounts receivable are considered past due once customer payment terms have been exceeded. Receivables are written off when deemed uncollectible. Recoveries of trade receivables previously written off are recorded when received.

Inventories

Inventory, consisting of raw materials, work in process and finished goods, is stated at the lower of cost or net realizable value, on a first-in, first-out basis. Teknova writes down its inventory for estimated obsolescence or inventory in excess of reasonably expected near-term sales or unmarketable inventory, in an amount equal to the difference between the cost of inventory and the estimated net realizable value, based upon assumptions about future demand and market conditions. If actual market conditions are less favorable than those projected by Teknova, additional inventory write-downs may be required. Inventory impairment charges establish a new cost basis for inventory, and charges are not reversed subsequently to income, even if circumstances later suggest that increased carrying amounts are recoverable.

Capitalized Software Implementation Costs

Teknova capitalizes certain implementation costs incurred under a cloud computing hosting arrangement. Costs incurred during the application development stage related to the implementation of the hosting arrangement are capitalized and included within other assets on the accompanying balance sheets. Amortization of capitalized implementation costs is recognized on a straight-line basis over the expected term of the associated hosting arrangement when it is ready for its intended use. Costs related to preliminary project activities and post-implementation activities are expensed as incurred. As of December 31, 2022 and 2021, Teknova had capitalized software implementation costs of $2.2 million and $0.1 million, respectively. Amortization expense related to capitalized implementation costs for the year ended December 31, 2022 was $0.1 million. No amortization expense related to capitalized implementation costs was recorded for the year ended December 31, 2021 as the underlying implementation activities were not complete.

Property, Plant, and Equipment

Teknova records property, plant, and equipment at fair value when it is acquired in a business combination or at cost for all other purchases of property, plant, and equipment. Property, plant, and equipment is depreciated over the estimated useful lives of the assets, using the straight-line method. Any leasehold improvements are amortized on a straight-line basis over the shorter of the estimated useful life of the asset or the estimated remaining life of the lease. Costs for repairs and maintenance that do not significantly increase the value or estimated lives of property, plant, and equipment are expensed as incurred. Upon retirement or sale, the cost and related accumulated

depreciation are removed from the balance sheets, and the resulting gain or loss is reflected in the statements of operations and comprehensive loss.

The estimated useful lives of the major classes of property and equipment are as follows:

	Estimated Useful Lives
Machinery and equipment	5 – 15 years
Office furniture and equipment	3 – 7 years
Vehicles	5 years
Leasehold improvements	3 – 15 years

Impairment of Long-Lived Assets

Teknova evaluates its long-lived assets for impairment when events or changes in circumstances indicate a possible inability to recover carrying amounts. Recoverability is assessed by comparing the carrying value of the assets to estimated undiscounted future cash flows expected to be generated by the assets. Impairment losses are recorded on long-lived assets used in operations when indicators of impairment are present and the undiscounted cash flows estimated to be generated during the life of those assets are less than the assets' carrying amounts. If an asset is impaired, the loss is measured as the amount by which the asset's carrying value exceeds its fair value. For the fiscal year ended December 31, 2022, the Company recorded impairments of its long-lived assets, see Note 6. Property, Plant, and Equipment, Net. There were no indicators of impairment during the year ended December 31, 2021.

Goodwill

Goodwill is the excess of the Company's fair value over the Company's fair value accounting basis of the Company's net assets and liabilities. Goodwill is not amortized, but is tested for impairment annually as of October 1, or more frequently if events or circumstances indicate that the carrying value may no longer be recoverable and that an impairment may have occurred.

Teknova first considers qualitative factors that indicate whether impairment may have occurred. Such indicators may include, macro-economic conditions, such as adverse industry or market conditions and entity-specific events, such as increasing costs, declining financial performance, or loss of key personnel. If the Company's assessment of such qualitative factors indicates that a reduction in the carrying value is more likely than not to have occurred, Teknova performs a quantitative assessment, comparing the fair value of the Company (in this capacity, the Reporting Unit) to the carrying value, including goodwill, of the Reporting Unit. If the carrying value of the Reporting Unit exceeds its fair value, an impairment has occurred, and an impairment charge is recognized for the difference up to the carrying value of the Reporting Unit's goodwill. The fair value of the Reporting Unit is a Level 3 measure and is determined using a market and income approach.

For the fiscal year ended December 31, 2022, the Company fully impaired its goodwill, see Note 8. Goodwill and Intangible Assets, Net. There was no impairment of goodwill during the year ended December 31, 2021.

Intangible Assets

Teknova's intangible assets consist of the Teknova trade name and the Company's customer relationships.

Indefinite-lived intangible assets are not amortized but are tested for impairment at least annually as of October 1, or more frequently if events or circumstances indicate that it is more likely than not that an asset is impaired. If the fair value of the asset is less than its carrying amount, an impairment charge would be recognized in an amount equal to the difference between the carrying amount and the fair value.

Finite-lived intangible assets are amortized over the estimated economic useful lives of the assets, which is the period during which expected cash flows support the fair value of such intangible assets. Teknova reviews finite-lived intangible assets for impairment whenever events or changes in circumstances indicate that the carrying

amount of the assets or an asset group may not be recoverable. When such an event occurs, management determines whether there has been impairment by comparing the anticipated undiscounted future net cash flows to the related assets' or asset group's carrying value.

There was no impairment of intangible assets during the years ended December 31, 2022 and 2021.

Leases

The Company determines if an arrangement is an operating lease at a lease's inception. Leases with an initial term of 12 months or fewer are not recorded on the balance sheet. All other operating leases are recorded on the balance sheet with a corresponding operating lease asset, net, representing the right to use the underlying asset for the lease term and the operating lease liabilities representing the obligation to make lease payments arising from the lease. The Company's lease agreements do not contain any material residual value guarantees or restrictive covenants.

Operating lease assets and operating lease liabilities are recognized at the commencement date based on the present value of lease payments over the lease term and include options to extend or terminate the lease when such options are reasonably certain to be exercised. The present value of lease payments is determined primarily using the incremental borrowing rate, adjusted for the lease term, based on the information available at the lease commencement or modification date as required. Lease agreements with lease and non-lease components are generally accounted for as a single lease component. The Company's operating lease expense is recognized on a straight-line basis over the lease term.

Debt Issuance Costs

Debt issuance costs represent legal, consulting, and other financial costs associated with debt financing and are presented on the balance sheets as a direct reduction from the carrying amount of the related debt instrument. Debt issuance costs on the term debt are amortized to interest expense over the term of the applicable debt agreement using the effective interest rate method.

Revenue Recognition

We account for revenue in accordance with ASC 606, *Revenue From Contracts With Customers*. Teknova recognizes revenue for sales of goods through the following steps:

- Identification of the contract, or contracts, with a customer, typically a purchase order
- Identification of the performance obligations in the contract
- Determination of the transaction price
- Allocation of the transaction price to the performance obligations in the contract
- Recognition of revenue when, or as, the company satisfies a performance obligation

Teknova recognizes revenue from the sale of manufactured products and services when control of promised goods or services is transferred to customers in an amount that reflects the consideration the Company expects to be entitled to in exchange for those goods or services. Control is transferred when the customer has the ability to direct the use of and obtain benefits from the goods or services. The majority of the Company's sales agreements contain performance obligations satisfied at a point in time when control is transferred to the customer.

Teknova's sales are made directly to customers or through distributors, generally under agreements with payment terms typically shorter than 90 days and, in no case exceeding one year. Therefore, Teknova's contracts do not contain a significant financing component. Sales, value add, and other taxes collected concurrent with revenue are excluded from sales. The Company records amounts billed to customers for shipping and handling in a sales transaction as revenue. Shipping and handling costs are included in general and administrative expenses as revenue is recognized. Shipping and handling costs for the years ended December 31, 2022 and 2021 were $1.4 million and $1.1 million, respectively.

Occasionally, Teknova offers rebates, discounts, and returns on its products, however returns and refunds occur rarely. The Company records rebates, discounts, and returns at the time they occur. The difference between recording these as they occur and estimating the amount of consideration in exchange for the transfer of promised goods would not have a material impact on the financial statements.

Costs incurred to obtain contracts with customers are expensed immediately, because the amortization period for such costs is one year or less.

Cost of Sales

Cost of sales includes salaries, wages and benefits, raw materials consumption (including direct and indirect material), depreciation, utilities, rent, manufacturing supplies, and other production overhead.

Research and Development Expenses

The Company's research and development expenses primarily consist of employee-related expenses, including salaries, benefits, and stock-based compensation expense for personnel in process engineering and product development functions, expenses related to occupancy costs, laboratory supplies, consulting fees, and depreciation associated with various assets used in the research and development of the Company's products and processes.

Sales and Marketing Expenses

The Company's sales and marketing expenses primarily consist of employee-related expenses, including salaries, benefits, and stock-based compensation expense for sales and marketing employees, expenses related to occupancy costs, brand strategy, website, content and collateral. The Company expenses advertising costs as incurred. Advertising expense for the years ended December 31, 2022 and 2021 were not significant and $0.4 million, respectively, and are included in sales and marketing expenses.

General and Administrative Expenses

The Company's general and administrative expenses primarily consist of costs associated with executive and administrative staff, and other expenses such as shipping charges, professional service fees, occupancy costs, IT systems, insurance, depreciation, and stock-based compensation expense for executive and administrative staff.

Stock-Based Compensation

Teknova measures and recognizes compensation expense for all stock-based awards, including stock options, restricted stock units, and stock purchase rights granted under the Employee Stock Purchase Plan (ESPP) to employees, based on the estimated fair value of the awards on the date of grant. The fair value of each stock option granted and employee stock purchase rights are estimated using the Black-Scholes option-pricing model, which requires the Company to make a number of assumptions, including expected volatility, the expected risk-free interest rate, the expected term, and the expected dividend. The fair value of each restricted stock unit is based on the fair value of the Company's common stock on the date of grant. Stock-based compensation expense is recognized over the requisite service period of the award, which generally represents the scheduled vesting period. Forfeitures are recognized as they occur.

Employee Benefit Plans

Teknova has a salary deferral 401(k) plan (the 401(k) Plan) covering substantially all employees. Contributions by the Company to the 401(k) Plan for the years ended December 31, 2022 and 2021 were $0.6 million and $0.6 million, respectively. Contributions payable as of December 31, 2022 and 2021, of $0.1 million and $0.3 million, respectively, are included within accrued liabilities in the accompanying financial statements.

Income Taxes

Teknova uses the asset and liability method in accounting for its deferred income taxes. Under this method, deferred income taxes are provided for differences between the carrying amounts of assets and liabilities for financial reporting and tax purposes, using the enacted tax rates and laws that will be in effect when the differences are expected to reverse. Deferred tax assets and liabilities are adjusted for the effects of the changes in tax laws and rates on the date of enactment. Deferred tax assets are reduced by a valuation allowance when it is more likely than not that some or all of the deferred tax assets will not be realized.

Teknova accounts for unrecognized tax benefits based upon its assessment of whether tax benefits are more likely than not to be sustained upon examination by tax authorities. The Company reports a liability for unrecognized tax benefits taken, or expected to be taken, in a tax return and recognizes associated interest and penalties, if any, in income tax expense. Unrecognized tax benefits as of December 31, 2022 and 2021, were not significant.

Net Loss Per Share of Common Stock

Basic net income (loss) per share is computed using the two-class method. Diluted net income (loss) per share is computed using the more dilutive of (i) the treasury stock method or if-converted method, or (ii) the two-class method. The two-class method is an earnings allocation formula that determines net income per share for each class of common stock and participating security according to dividends declared and participation rights in undistributed earnings. The treasury stock method uses the number of new shares that may be created by unexercised in-the-money options, where the exercise price is less than the current share price. The if-converted method calculates the value of convertible securities as if they were converted into new shares. Per share amounts are computed by dividing net income (loss) by the weighted average shares outstanding during each period. The diluted net income (loss) per share is computed by giving effect to all potential dilutive common stock equivalents outstanding for the period.

Recently Adopted Accounting Pronouncements

Effective January 1, 2022, the Company adopted ASU No. 2016-02, *Leases* (Topic 842) using the modified retrospective approach, applied at the beginning of the period of adoption, and elected the package of transitional practical expedients. The adoption of this standard resulted in recording operating right-of-use lease assets of $20.3 million, which included reclassifying approximately $0.2 million of deferred rent as a component of the operating lease asset as of January 1, 2022. The adoption also resulted in recording operating lease liabilities of $20.5 million as of January 1, 2022. The standard did not have an impact on the statements of operations and cash flows. Refer to Note 7. Leases herein for additional information pertaining to the adoption of the new standard.

Effective January 1, 2022, the Company adopted ASU No. 2019-12, *Income Taxes* (Topic 740): Simplifying the Accounting for Income Taxes, which removed certain exceptions to the general principles in ASC 740 and clarified and amended certain guidance to promote consistent application. The adoption of this standard did not have a significant impact on the Company's financial statements.

Accounting Pronouncements Not Yet Adopted

In June 2016, the Financial Accounting Standards Board (FASB) issued ASU No. 2016-13, *Financial Instruments—Credit Losses* (Topic 326). The standard introduces a new model for recognizing credit losses on financial instruments based on an estimate of current expected credit losses and will apply to accounts receivable. The new guidance will be effective for Teknova’s annual and interim periods beginning after December 15, 2022. Teknova is currently evaluating the impact of the adoption of the standard on the financial statements and does not anticipate the standard to have a significant impact.

Note 3. Revenue Recognition

Teknova has two primary product categories: Lab Essentials and Clinical Solutions. Previously, the Company had a third product category, Sample Transport, which it ceased producing in 2021.

Lab Essentials

Teknova is a leader in providing highly complex chemical formulations for use in biological research and drug discovery. The Company's core research products consist of commonly used, catalog solutions and customer-specified formulations. During discovery, the Company's products are used regularly in small, bench-scale experiments. As customers optimize their processes and begin to scale up in volume, they tend to order more custom products. The Lab Essentials portion of Teknova's business includes: pre-poured media plates for cell growth and cloning; liquid cell culture media and supplements for cellular expansion; and molecular biology reagents for sample manipulation, resuspension, and purification. Teknova's Lab Essentials products include essential formulations for common research applications and highly customized formulations for customer-specific applications in genomics and bioproduction.

Clinical Solutions

In 2017, Teknova achieved ISO 13485:2016 certification, enabling the Company to meet the quality system regulation of products for use as components in diagnostic and therapeutic products manufactured by the Company's customers. Teknova believes that its Clinical Solutions products are used in the production of protein therapies, gene therapies, mRNA vaccines, and diagnostic kits. The Clinical Solutions portion of our business includes: liquid cell culture media and supplements for cellular expansion and molecular biology reagents for sample manipulation, resuspension, and purification.

Sample Transport

In 2020, Teknova developed and commercialized a suite of sample collection and transport reagents to aid in sample processing for COVID-19 testing. Subsequently, demand for COVID-19 testing declined significantly while the market supply of sample transport medium grew. As a result, in 2021, the Company decided to cease production of transport medium and no longer markets those reagents.

Teknova’s revenue, disaggregated by product category, for the years ended December 31, 2022 and 2021 was follows (in thousands):

	For the Year Ended December 31,	
	2022	2021
Lab Essentials	$ 31,772	$ 27,184
Clinical Solutions	8,445	6,793
Sample Transport	6	1,530
Other	1,197	1,386
Total revenue	$ 41,420	$ 36,893

Teknova’s revenue, disaggregated by geographic region, for the years ended December 31, 2022 and 2021 was follows (in thousands):

	For the Year Ended December 31,	
	2022	2021
United States	$ 40,103	$ 35,808
International	1,317	1,085
Total revenue	$ 41,420	$ 36,893

Note 4. Concentrations of Risk

Customers

Customers who accounted for 10% or more of the Company's revenues and outstanding balance of accounts receivable were:

	For the Year Ended December 31,		As of December 31,	
	2022	2021	2022	2021
Distributor customer A	15%	18%	17%	10%
Distributor customer B	*	*	15%	16%
Direct customer A	*	*	*	12%

The Company's customers that are distributors, as opposed to direct customers, represent highly diversified customer bases.

Suppliers

Suppliers who accounted for 10% or more of the Company's inventory purchases and outstanding balance of accounts payable were:

	For the Year Ended December 31,		As of December 31,	
	2022	2021	2022	2021
Distributor supplier A	37%	40%	11%	20%
Direct supplier A	14%	11%	*	*
Direct supplier B	12%	10%	*	*

Note 5. Inventories, Net

Inventories consist of the following (in thousands):

	As of December 31,	
	2022	2021
Finished goods, net	$ 8,368	$ 3,172
Work in process	186	105
Raw materials, net	3,693	2,117
Total inventories, net	$ 12,247	$ 5,394

Note 6. Property, Plant, and Equipment, Net

Property, plant, and equipment consist of the following (in thousands):

	As of December 31,	
	2022	2021
Machinery and equipment	$ 19,433	$ 9,942
Office furniture and equipment	628	649
Vehicles	229	70
Leasehold improvements	12,093	2,805
	32,383	13,466
Less—Accumulated depreciation	(4,520)	(2,473)
	27,863	10,993
Construction in progress	23,714	18,817
Total property, plant, and equipment, net	$ 51,577	$ 29,810

Depreciation expense related to property, plant, and equipment recorded for the years ended December 31, 2022 and 2021 was $2.0 million and $1.7 million, respectively.

Teknova capitalizes a portion of the interest on funds borrowed to finance its capital expenditures. Capitalized interest is recorded as part of an asset's cost and depreciated over the asset's useful life. Capitalized interest costs were $1.6 million and $0.3 million for the years ended December 31, 2022 and 2021, respectively.

In December 2022, the Company decided to cease further use and development of certain manufacturing machinery and equipment. The Company reviewed the recoverability of the carrying value of these assets and determined that their carrying value exceeded their fair value. Fair value of these assets was measured employing cost and market approaches, using Level 3 inputs under ASC 820, *Fair Value Measurement*. Unobservable inputs include salvage value estimates, replacement or reproduction cost estimates as well as consideration of physical deterioration, functional and economic obsolescence, where measurable. As a result of this fair value analysis, an impairment charge of $4.2 million was recorded related to these long-lived assets. Carrying value after the impairment charges approximates fair value.

Note 7. Leases

The Company leases office space, warehouse and manufacturing space, and equipment. The Company's lease agreements have remaining lease terms of one year to 15 years, and some of these leases have renewal and termination options. Such termination options are exercisable at the Company's option. Terms and conditions to extend or terminate such leases are recognized as part of the right-of-use assets and lease liabilities where reasonably certain to be exercised. All of the Company's leases are operating leases.

Operating lease expense was $3.2 million for the year ended December 31, 2022. Rent expense for the year ended December 31, 2021, was $1.7 million. Cash paid for amounts included in the measurement of the lease liabilities was $2.8 million for the year ended December 31, 2022. The weighted-average discount rate was 4.9% and the weighted-average remaining lease term was 9.2 years as of December 31, 2022.

Maturities of operating lease liabilities at December 31, 2022, is as follows (in thousands):

	Amount
2023	$ 3,142
2024	3,046
2025	2,607
2026	2,558
2027	2,529
Thereafter	11,915
Total lease payments	25,797
Less: imputed interest	(5,463)
Present value of lease liabilities	$ 20,334

Note 8. Goodwill and Intangible Assets, Net

The following is a summary of the changes in the carrying amount of goodwill (in thousands):

	Balance at December 31, 2022			Balance at December 31, 2021		
	Gross	Accumulated Impairment	Net	Gross	Accumulated Impairment	Net
Goodwill	$ 16,613	$ 16,613	$ —	$ 16,613	$ —	$ 16,613

During the three months ended September 30, 2022, the market price of Teknova's common stock and market capitalization declined significantly. Given the significance of this decline, the Company performed interim goodwill impairment testing.

The fair value of the Company was determined using a combination of an income approach and market approach. The income approach was based on the present value of future cash flows, which were derived from financial forecasts, and requires significant assumptions and judgement including, among others, a discount rate and a terminal value. Fair values were based on expected future cash flows using Level 3 inputs under ASC 820, *Fair Value Measurement*. The cash flows are those expected to be generated by the Company, discounted at the weighted average cost of capital. The present value of future cash flows was determined by discounting estimated future cash flows at an 18.0% weighted average cost of capital, which considers the risk of achieving the projected cash flows, long-term growth rate, the risk applicable to the Company, industry, and to the market as a whole.

The guideline public company method, a market approach method, was also used to estimate the fair value of the Company. The guideline public company method utilizes the trading multiples of similarly traded public companies. The unobservable inputs used to measure the fair value primarily included projected revenue growth rates and the determination of appropriate market comparison companies. Selected multiples were considered and applied to the trailing-twelve-month and next-twelve-month enterprise value-to-revenue multiples.

The resulting estimated fair value was reconciled to the Company's market capitalization. The reconciliation included an estimated implied control premium above the Company's market capitalization on September 30, 2022, of approximately 25%. Based on the results of the impairment test, the Company determined goodwill was fully impaired and recorded an impairment charge of $16.6 million during the three months ended September 30, 2022. There was no impairment of goodwill during the year ended December 31, 2021.

The following is a summary of intangible assets with definite and indefinite lives (in thousands):

	Balance at December 31, 2022			Balance at December 31, 2021		
	Gross	Accumulated Amortization	Net	Gross	Accumulated Amortization	Net
Definite Lived:						
Customer relationships	$ 9,180	$ 4,543	$ 4,637	$ 9,180	$ 3,395	$ 5,785
Indefinite Lived:						
Tradename	12,919	—	12,919	12,919	—	12,919
Total intangible assets	$ 22,099	$ 4,543	$ 17,556	$ 22,099	$ 3,395	$ 18,704

For the years ended December 31, 2022 and 2021 amortization expense was approximately $1.1 million and $1.1 million, respectively.

The remaining weighted-average useful life of definite lived intangible assets is four years. The estimated future amortization expense of intangible assets with definite lives is as follows (in thousands):

	Amount
2023	$ 1,148
2024	1,148
2025	1,148
2026	1,148
2027	45
Estimated future amortization expense of definite-lived intangible assets	$ 4,637

There was no impairment of intangible assets during the years ended December 31, 2022 and 2021.

Note 9. Accrued Liabilities

Accrued liabilities were comprised of the following (in thousands):

	As of December 31,	
	2022	2021
Payroll-related	$ 2,796	$ 2,818
Property, plant, and equipment	1,966	1,446
Deferred revenue	198	200
Other	1,243	1,031
Total current accrued liabilities	$ 6,203	$ 5,495

Note 10. Long-Term Debt, Net

On May 10, 2022, the Company entered into the Amended and Restated Credit and Security Agreement (Term Loan) as borrower, with MidCap Financial Trust (MidCap), as agent and lender, and the additional lenders from time to time party thereto (the Term Loan Credit Agreement) and the Amended and Restated Credit and Security Agreement (Revolving Loan) as borrower, with MidCap as agent and lender, and the additional lenders from time to time party thereto (the Revolving Loan Credit Agreement, together with the Term Loan Credit Agreement, the Credit Agreement).

The Credit Agreement provided for a $57.135 million credit facility (the Credit Facility) consisting of a $52.135 million senior secured term loan (the Term Loan) and a $5.0 million working capital facility (the Revolver). The Term Loan consisted of the $12.0 million balance made available in 2021 under the previous credit facility and an additional $40.135 million, staged such that $5.135 million was funded upon closing of the Credit Agreement, an additional $5.0 million was funded on October 31, 2022, $10.0 million was to be available in the first half of 2023, $10.0 million was to be available in the second half of 2023 and $10.0 million was to be available in the first half of 2024, with the borrowing in the second half of 2023 and in the first half of 2024 being contingent upon achieving trailing twelve months of Clinical Solutions revenue of $15.0 million and $19.0 million, respectively, and liquidity requirements (as defined in the Credit Agreement) of $10.0 million and $15.0 million, respectively. The maximum loan amount under the Revolver was $5.0 million, and the Company was permitted to request the lenders to increase such amount up to $15.0 million. Borrowings on the Revolver were limited in accordance with a borrowing base calculation.

The interest on the Term Loan was based on the annual rate of one-month London Inter-Bank Offered Rate (LIBOR) plus 6.45%, subject to a LIBOR floor of 1.00%. If any advance under the Term Loan was prepaid at any time, the prepayment fee was based on the amount being prepaid and an applicable percentage amount, such as 3%, 2%, or 1%, based on the date the prepayment is made after the closing date of the Term Loan. Interest on the outstanding balance of the Revolver was payable monthly in arrears at an annual rate of one-month LIBOR plus 3.75%, subject to a LIBOR floor of 1.00%.

The maturity date of the Credit Facility is May 1, 2027. On the date of termination of the Term Loan or the date on which the obligations under the Term Loan become due and payable in full, the Company would pay an exit fee in an amount equal to 5.00% of the total aggregate principal amount of term loans made pursuant to the Term Loan as of such date. The Credit Agreement contained a financial covenant based upon a trailing twelve months of net revenue, including a requirement of $42.5 million in the twelve months ending December 31, 2022.

On November 8, 2022, the Company entered into Amendment No. 1 to the Credit Agreement (Amendment No. 1 or, as amended, the Amended Credit Agreement) which (i) replaced the LIBOR-based interest rate with a rate equal to the forward-looking one-month term Secured Overnight Financing Rate adjusted upward by 0.10% (or Term SOFR, as defined in Amendment No. 1) plus an applicable margin (6.45% for the Term Loan and 3.75% for the Revolver), with a Term SOFR floor of 1.00%, and with such interest rate calculation change taking effect on December 1, 2022, (ii) increased the applicable prepayment fee percentage amounts by one percentage point, (iii) gave lenders discretion regarding the $10.0 million in borrowing that was previously guaranteed to be available under the Term Loan in the first half of 2023, and (iv) reduced the requirements for trailing twelve months of net revenue for all future periods—for example, for the twelve months ending December 31, 2022, the minimum net

revenue requirement was reduced from $42.5 million to $38.0 million, where as of December 31, 2022, the Company was in compliance with this requirement. Concurrent with Amendment No. 1, the exit fee due on the date of termination of the Term Loan, or the date on which the obligations under the Term Loan become due and payable in full, increased from 5.00% to 7.00% of the total aggregate principal amount of term loans made pursuant to the Term Loan as of such date. Subsequent to December 31, 2022, the Company further amended the Credit Agreement. Refer to Note 17. Subsequent Events, below for a description of the amendment.

Previously, on March 26, 2021, the Company entered into the following agreements (together, the Previous Credit Agreement): (i) that certain credit and security agreement (Previous Term Loan), dated as of March 26, 2021, by and among the Company and MidCap Financial Trust, as agent and lender, and the additional lenders from time to time party thereto, and (ii) that certain credit and security agreement (Previous Revolving Loan), dated as of March 26, 2021, by and among the Company and MidCap Financial Trust, as agent and lender, and the additional lenders from time to time party thereto. The Previous Credit Agreement provided for a $27.0 million credit facility (the Previous Facility) consisting of a $22.0 million senior, secured term loan (the Previous Term Loan), and a $5.0 million working capital facility (the Previous Revolver). The Previous Term Loan was staged such that $12.0 million was available immediately, an additional $5.0 million was available on September 30, 2021, and $5.0 million was to be made available in 2022, but the final borrowing in 2022 was contingent upon achieving trailing twelve months net revenue of $37.0 million if the proposed funding date was to be on or after January 1, 2022, and before July 1, 2022 or $38.5 million if the proposed funding date was to be on or after July 1, 2022, and on or before September 30, 2022, and earnings before interest, taxes, depreciation, and amortization (EBITDA) targets (as defined in the Credit Agreement). The Company opted not to draw down the $5.0 million Previous Term Loan tranche available on September 30, 2021. Borrowings on the Previous Revolver were limited to those derived from a borrowing base calculation; however, as of December 31, 2021, there was no drawdown on the Revolver. The interest on the Previous Term Loan was based on the annual rate of one-month London Inter-Bank Offered Rate (LIBOR) plus 6.45%, subject to a LIBOR floor of 1.50%. If any advance under the Previous Term Loan was prepaid at any time, the prepayment fee was based on the amount being prepaid and an applicable percentage amount, such as 3%, 2%, or 1%, based on the date the prepayment was made after the closing date of the Term Loan. The Previous Credit Agreement contained a financial covenant based upon a trailing twelve months of net revenue, including a requirement of $32.0 million in the twelve months ended December 31, 2021. As of December 31, 2021, the Company was in compliance with this requirement. The outstanding balance on the Previous Facility would have been due in full on March 1, 2026. At the end of the Previous Term Loan, the Company was to pay an exit fee of $0.6 million, which represented 5% of the $12.0 million in borrowings made available immediately on March 26, 2021. Such fee was being accreted to interest expense over the life of the Term Loan. The Company incurred $0.3 million of debt issuance costs, which were recorded in long-term debt in the balance sheet.

Long-term debt, net consists of the following (in thousands):

	As of December 31,	
	2022	2021
Long-term debt	$ 22,135	$ 12,000
Cumulative accretion of exit fee	161	90
Unamortized debt discount and debt issuance costs	(320)	(220)
Long-term debt, net	$ 21,976	$ 11,870

At December 31, 2022, the scheduled maturities of the Company's debt obligations were as follows (in thousands):

	Amount
2023	$ —
2024	—
2025	6,456
2026	11,068
2027	4,611
Total	$ 22,135

As of December 31, 2022, the fair value of Teknova's long-term debt approximates its carrying value. The fair value of Teknova's long-term debt was based on observable market inputs (Level 2).

Note 11. Convertible and Redeemable Preferred Stock

In June 2021, the Company’s board of directors and stockholders, respectively, approved a 1.8746 for-one forward stock split, which was effectuated on June 17, 2021. On June 28, 2021, all outstanding shares of the Company’s Series A preferred stock were converted into 17,512,685 shares of the Company’s common stock on a one-to-one basis and their carrying value of $35.9 million was reclassified into stockholders’ equity. As of December 31, 2022 and 2021, there were no shares of convertible and redeemable preferred stock issued and outstanding.

Note 12. Stock-Based Compensation

Equity Incentive Plans

Teknova maintains stock incentive plans for the benefit of certain of Teknova's officers, directors, consultants and employees. The Company granted time-based and performance-based options to purchase common shares under both its 2016 Stock Plan, as amended (2016 Plan) and 2020 Equity Incentive Plan, as amended (2020 Plan). At the time the 2020 Plan became effective, no additional stock awards were granted or are able to be granted in the future under the 2016 Plan. In June 2021, the Company’s board of directors and the Company’s stockholders approved the 2021 Equity Incentive Plan (2021 Plan), which became effective in connection with the IPO. From and after the date on which the 2021 Plan became effective, no further grants were made or will be made under the 2020 Plan. At December 31, 2022, 2,469,164 shares of the Company's common stock remain available for future grants under the 2021 Plan.

The types of equity-based awards that may be granted under the 2021 Plan include: incentive stock options or nonqualified stock options, stock appreciation rights, restricted stock awards, restricted stock unit awards, performance awards, and other stock-based awards. The equity-based awards for employees will vest over a four-year period, pursuant to two different vesting schedules. For initial equity-based awards granted to employees, the first vest is generally a one-year cliff vest, followed by monthly vesting for the final three years. Thereafter, annual equity-based awards granted to employees typically vest on a monthly basis over the four-year vest term. The initial equity-based awards granted to the Company’s non-employee, independent directors upon appointment to the board of directors will vest over a three-year period and the annual equity-based awards granted to the Company’s non-employee, independent directors granted thereafter will cliff vest after one year from the date of grant.

Generally, the number of shares of the Company’s common stock that will be reserved for issuance under the 2021 Plan will automatically increase on January 1 of each year for a period of ten years, beginning on January 1, 2022, and continuing through January 1, 2031, in an amount equal to 4% of the total number of shares of the Company’s common stock outstanding on December 31 of the preceding year; provided, however, that the Company’s board of directors may act prior to January 1st of a given year to provide that the increase for such year will be a lesser number of shares of common stock. Effective January 1, 2023, an additional 1,127,176 new shares became available for issuance under the 2021 Plan.

The following table summarizes the stock option activity for the year ended December 31, 2022 (in thousands, except share and per share data):

	Number of Shares	Weighted Average Exercise Price per Share	Weighted Average Remaining Contractual Term (in years)	Aggregate Intrinsic Value
Outstanding at January 1, 2022	2,764,112	$ 4.63	8.69	$ 45,280
Granted	1,507,591	$ 11.14	—	—
Exercised	(118,900)	$ 1.22	—	—
Forfeited	(232,047)	$ 9.79	—	—
Expired	(74,224)	$ 2.04	—	—
Outstanding at December 31, 2022	3,846,532	$ 7.02	8.31	$ 9,083
Exercisable at December 31, 2022	1,354,691	$ 4.80	7.91	$ 4,643
Vested and expected to vest at December 31, 2022	3,561,850	$ 7.55	8.50	$ 7,606

The total intrinsic value of options exercised during the year ended December 31, 2022 was $0.9 million. During the year ended December 31, 2021, the total intrinsic value of options exercised was not significant. The aggregate grant-date fair value of options vested during the year ended December 31, 2022 and 2021, was $6.6 million and $0.4 million, respectively.

The following table summarizes the restricted stock unit activity for the year ended December 31, 2022 (in thousands, except share and per share data):

	Number of Shares	Weighted Average Grant Date Fair Value per Share	Weighted Average Remaining Contractual Term (in years)	Aggregate Intrinsic Value
Outstanding at January 1, 2022	—	$ —	—	$ —
Granted	28,071	$ 7.43	—	—
Vested	—	$ —	—	—
Forfeited	—	$ —	—	—
Outstanding at December 31, 2022	28,071	$ 7.43	0.42	$ 158
Vested and expected to vest at December 31, 2022	28,071	$ 7.43	0.42	$ 158

Employee Stock Purchase Plan

In June 2021, the Company's board of directors and the Company's stockholders, respectively, approved the Company's 2021 Employee Stock Purchase Plan (the ESPP), which became effective in connection with the IPO. At December 31, 2022, 522,442 shares of the Company's common stock remain available for issuance under the ESPP. The number of shares of the Company's common stock that will be reserved for issuance will automatically increase on January 1 of each year for a period of ten years, beginning on January 1, 2022, and continuing through January 1, 2031, by the lesser of (i) 1% of the total number of shares of the Company's common stock outstanding on December 31 of the immediately preceding year; and (ii) 319,911 shares (subject to adjustments for stock splits, dividends, combinations of shares, exchanges of shares, and other "Capitalization Adjustments", as defined in the ESPP), except before the date of any such increase, the Company's board of directors may determine that such increase will be less than the amount set forth in clauses (i) and (ii). Effective January 1, 2023, an additional 281,794 new shares became available for issuance under the ESPP.

Generally, all regular employees, including executive officers, employed by the Company will be eligible to participate in the ESPP and to contribute, normally through payroll deductions, up to 15% of their earnings (as defined in the ESPP) for the purchase of the Company's common stock under the ESPP. Unless otherwise determined by the Company's board of directors, shares of the Company's common stock will be purchased for the

accounts of employees participating in the Company's ESPP at a price per share equal to the lesser of (i) 85% of the fair market value of a share of the Company's common stock on the first day of an offering; or (ii) 85% of the fair market value of a share of the Company's common stock on the date of purchase. Offering periods are generally six months long and begin on May 15 and November 15 of each year.

Valuation of Employee Share-Based Awards

Teknova uses the Black-Scholes option-pricing model to determine the fair value of stock options. The valuation model for stock compensation expense requires the Company to make assumptions and judgments about the variables used in the calculation, including the expected term, expected volatility and fair value of the Company's common stock, and an assumed risk-free interest rate. The assumptions used in the Black-Scholes option-pricing model were as follows:

Volatility. Since the Company has limited historical data on volatility of its stock, expected volatility is based on the volatility of the stock of similar publicly traded entities. In evaluating similarity, the Company considers factors such as industry, stage of life cycle, size, and financial leverage.

Fair value of underlying common stock. The fair value of the Company's common stock is determined by the closing price of its common stock as reported on the Nasdaq Global Market on the date of grant.

Risk-free interest rate. The risk-free rate that the Company uses is based on U.S. Treasury zero-coupon issues with remaining terms similar to the expected term on the options.

Expected term. As the Company does not have sufficient historical exercise activity to estimate expected life, the expected life of options granted is determined using the simplified method. The simplified method is based on the vesting period and the contractual term for each grant or for each vesting tranche for awards with graded vesting. The midpoint of the vesting date and the maximum contractual expiration date are used to determine the expected term under this method.

Dividend yield. The Company has never declared or paid any cash dividends and do not plan to pay cash dividends in the foreseeable future. Therefore, the Company uses an expected dividend yield of zero. In addition, the terms of the Amended Credit Agreement prohibit us from paying dividends, other than dividends payable in the Company's common stock, without the prior consent of the lender.

The weighted average assumptions used in the Black-Scholes option-pricing model are as follows:

	For the Year Ended December 31,			
	Employee Stock Option Plans		Employee Stock Purchase Plan	
	2022	2021	2022	2021
Estimated dividend yield	- %	- %	- %	- %
Weighted-average expected stock price volatility	33.77 %	33.51 %	43.00 %	25.47 %
Weighted-average risk-free interest rate	2.79 %	1.06 %	3.70 %	0.06 %
Expected average term of options (in years)	6.25	6.17	0.50	0.50
Weighted-average fair value of common stock	$ 11.14	$ 19.89	$ 7.20	$ 24.63
Weighted-average fair value per option	$ 4.18	$ 6.45	$ 1.96	$ 5.46

Summary of Stock-Based Compensation Expense

Stock-based compensation expense included in the accompanying financial statements was as follows (in thousands):

	For the Year Ended December 31,	
	2022	2021
Cost of sales	$ 147	$ 7
Research and development	187	157
Sales and marketing	504	66
General and administrative	2,873	1,321
Total stock-based compensation expense	$ 3,711	$ 1,551

Stock-based compensation expense related to stock options was $3.5 million and $1.6 million for the years ended December 31, 2022 and 2021, respectively. Unrecognized compensation expense related to stock options was $10.1 million at December 31, 2022, which is expected to be recognized as expense over the weighted-average period of 3.11 years.

Stock-based compensation expense related to restricted stock units was $0.1 million and zero for the years ended December 31, 2022 and 2021, respectively. Unrecognized compensation expense related to restricted stock units was $0.1 million at December 31, 2022, which is expected to be recognized as expense over the weighted-average period of 0.42 years.

During the year ended December 31, 2021, the Company's board of directors approved an amendment to the outstanding performance-based option to acquire 231,719 shares of the Company's common stock previously granted under 2020 Plan, to eliminate the performance-based vesting and provide that such option will vest in 48 equal monthly installments. The stock option modification was measured as the excess of the fair value of the modified option over the fair value of the original option immediately before the modification. The incremental stock-based compensation expense for such stock option modification is approximately $3.5 million, of which $0.9 million and $0.5 million incremental stock-based compensation expense was recognized during the years ended December 31, 2022 and 2021, respectively, in general and administrative expense in the statements of operations and comprehensive loss. Additionally, in January 2019, the Company granted 284,682 performance-based options that vest upon a change of control. As of December 31, 2022, these options were not considered probable of vesting. The Company had unrecognized compensation expense of approximately $0.5 million at December 31, 2022, relating to these options.

Total stock-based compensation expense related to the ESPP was not significant for the years ended December 31, 2022 and 2021, respectively. Total compensation cost related to the ESPP not yet recognized is also not significant. As of December 31, 2022, an insignificant amount has been withheld on behalf of employees for a future purchase under the ESPP. The Company issued 48,506 and zero shares of common stock under the ESPP during the years ended December 31, 2022 and 2021, respectively.

Note 13. Income Taxes

Teknova's provision for (benefit from) income taxes consist of the following for the year ended December 31, 2022 and 2021 (in thousands):

	For the Year Ended December 31,	
	2022	2021
Current:		
Federal	$ —	$ —
State	7	3
Total current	7	3
Deferred:		
Federal	(2,055)	(2,604)
State	125	(233)
Total deferred	(1,930)	(2,837)
Income tax benefit	$ (1,923)	$ (2,834)

A reconciliation of the statutory tax rate to the Company's effective tax rate is as follows:

	For the Year Ended December 31,	
	2022	2021
Statutory federal income tax rate %	21.0%	21.0%
State income tax rate	5.6	2.1
Stock compensation	(0.5)	(1.5)
Research and development credit	0.2	0.6
Change in valuation allowance	(13.6)	—
Goodwill impairment	(9.0)	—
Other	0.2	0.2
Effective tax rate %	3.9%	22.4%

Income taxes are provided for the tax effects of transactions reported in the financial statements and consist of taxes currently due, plus deferred taxes. Deferred taxes are recognized for differences between the basis of assets and liabilities for financial statement and income tax purposes. The deferred tax assets and liabilities represent the future tax return consequences of those differences, which will be either deductible or taxable when the assets and liabilities are recovered or settled. The Company's component of net deferred tax liability and assets consist of the following as of December 31, 2022 and 2021 (in thousands):

	As of December 31,	
	2022	2021
Deferred tax asset		
Net operating loss carryforwards	$ 8,005	$ 3,672
Accrued compensation	552	401
Stock compensation	1,008	262
Tax credit carryforwards	275	150
Accruals and other	321	241
Operating lease liabilities	5,435	—
Capitalized research and development expenses	1,450	—
Total deferred tax asset	17,046	4,726
Deferred tax liability		
Fixed assets	(1,131)	(2,429)
Intangibles	(4,693)	(4,973)
Operating right-of-use lease assets	(5,275)	—
Total deferred tax liability	(11,099)	(7,402)
Valuation allowance	(7,170)	(477)
Net deferred tax liability	$ (1,223)	$ (3,153)

As of the end of December 31, 2022, Teknova has federal and state net operating loss carryforwards (NOLs) of $28.9 million and $30.3 million, respectively. The federal NOLs will carryforward indefinitely but are subject to an 80% taxable income limitation. The state NOLs begin to expire in 2036. As of December 31, 2022, the Company has federal research and development tax credit carryforwards of $0.2 million, which will begin to expire in 2035 and a state research and development tax credit carryforward of $0.1 million and carry forward indefinitely. NOLs and tax credit carryforwards may become subject to an annual limitation in the event of certain cumulative changes in the ownership interest of significant stockholders, as defined under Sections 382 and 383 of the Internal Revenue Code of 1986, as amended, as well as similar state tax provisions. This could limit the amount of NOLs and tax credits that the Company can utilize annually to offset future taxable income or tax liabilities.

On June 29, 2020, the California legislature enacted California Assembly Bill 85 (AB 85), which suspends the use of California NOLs and limits the use of California research tax credits for tax years beginning in 2020 and before 2023. There was no significant impact on the Company's 2021 financial statements due to the loss generated. Subsequently on February 9, 2022, California Senate Bill (SB 113) was enacted and restores the use of net operating losses and business tax credits that were suspended or limited under AB 85 one year earlier, allowing tax attributes

to be used in fiscal year 2022. There was no significant impact on the Company's 2022 financial statements due to the loss generated.

Effective for tax years beginning after December 31, 2021, taxpayers are required to capitalize any expenses incurred that are considered incidental to research and experimentation (R&E) activities under IRC Section 174. While taxpayers historically had the option of deducting these expenses under IRC Section 174, the Tax Cuts and Jobs Act mandates capitalization and amortization beginning with tax years after December 31, 2021. Expenses incurred in connection with R&E activities must be amortized over a 5-year period if incurred in the U.S. or over a 15-year period if incurred outside of the U.S. R&E activities are broader in scope than the calculation of qualified research activities under IRC Section 41 (for research and development tax credit purposes). For the year ended December 31, 2022, the Company performed an analysis based on all the guidance available and has determined that it will continue to be in a loss position after considering the R&E capitalization. The Company will continue to monitor the effects of this legislation, but we do not expect this change will have a material cash impact to the Company’s taxes because our remaining operating expenses after excluding R&E expenses are significant enough to keep the Company in a current-year loss.

The Company had insignificant unrecognized tax benefits at December 31, 2022 and 2021. In connection with FASB’s Accounting for Uncertainty in Income Taxes, the Company recognizes interest and penalties accrued on any unrecognized tax benefits as a component of income tax expense. The Company does not expect to recognize any unrecognized tax benefits over the next twelve months. Consequently, the Company has not accrued interest or penalties related to uncertain tax positions as of the end of December 31, 2022 or 2021.

Teknova files income tax returns in the U.S. federal jurisdiction and various states. The Company is no longer subject to U.S. federal income tax examinations for tax years prior to 2019. The Company is no longer subject to state income tax examinations for tax years prior to 2018. The Company is currently not under examination by the Internal Revenue Service or any other taxing authorities.

Note 14. Net Loss Per Share

Basic net loss per share is computed by dividing net loss by the weighted-average number of shares of common stock outstanding during the period. Diluted net loss per share is computed by giving effect to all potentially dilutive common stock equivalents to the extent they are dilutive. For purposes of this calculation, stock options, restricted stock units, employee stock purchase rights, and convertible preferred stock are considered to be common stock equivalents but have been excluded from the calculation of diluted net loss per share as their effect is anti-dilutive for all periods presented.

The following table sets forth the computation of basic and diluted net loss per share (in thousands, except share and per share data):

	For the Year Ended December 31,	
	2022	2021
Net loss	$ (47,468)	$ (9,803)
Weighted average shares used in computing net loss per share—basic and diluted	28,083,563	16,087,653
Net loss per share—basic and diluted	$ (1.69)	$ (0.61)

The following is a summary of the common stock equivalents for the securities outstanding during the respective periods that have been excluded from the computation of diluted net loss per common share, as their effect would be anti-dilutive:

	For the Year Ended December 31,	
	2022	2021
Employee share-based awards to purchase common stock	3,208,403	2,206,993
Convertible Series A preferred stock	—	4,607,059
Total	3,208,403	6,814,052

Note 15. Related Parties

The Company has identified the following as related parties through common control: Meeches LLC and Thomas E. Davis, LLC. Meeches LLC is controlled by Ted Davis and Irene Davis, founders and current directors, and greater than five percent stockholders of the Company. Thomas E. Davis, LLC is also controlled by Ted Davis.

The Company leased certain real property and had a related party note receivable totaling $0.5 million, which was received on March 31, 2021, from Thomas E. Davis, LLC.

The Company leases certain real property from Meeches LLC and does not have any outstanding balances owed to Meeches LLC as of December 31, 2022 and 2021, respectively. For the years ended December 31, 2022 and 2021, the Company paid Meeches LLC $0.3 million and $0.3 million, respectively.

Note 16. Other Financial Information

The change in the allowance for doubtful accounts is as follows:

	For the Year Ended December 31,	
	2022	2021
Beginning balance	$ 23	$ 23
Provisions (benefits)	25	235
Recoveries (write-offs), net	(26)	(235)
Ending balance	$ 22	$ 23

The change in the inventory reserve is as follows:

	For the Year Ended December 31,	
	2022	2021
Beginning balance	$ 470	$ 29
Provisions (benefits)	697	555
Write-offs and other	(121)	(114)
Ending balance	$ 1,046	$ 470

The change in the income tax valuation allowance is as follows:

	For the Year Ended December 31,	
	2022	2021
Beginning balance	$ 477	$ —
Additions charged to expense	6,693	477
Reductions charged to other accounts	—	—
Ending balance	$ 7,170	$ 477

Note 17. Subsequent Events

On February 1, 2023, the Company carried out a reduction in workforce of approximately 40 positions, aimed at reducing operating expenses. The Company estimates that it will incur approximately $0.8 million of costs in connection with the reduction in workforce related to severance pay and other termination benefits. The Company expects the majority of the costs to be incurred and payments made during the first quarter of 2023. Total annual cost savings are estimated at $4 million.

On March 28, 2023, the Company entered into Amendment No. 2 to the Credit Agreement (Amendment No. 2) which (i) increased the applicable margin from 6.45% to 7.00% for the Amended Term Loan and from 3.75% to

4.00% for the Amended Revolver, and increased the Term SOFR floor from 1.00% to 4.50% on both the Amended Term Loan and Amended Revolver, (ii) gave lenders discretion regarding the $10.0 million in borrowings in the second half of 2023 and the $10.0 million in borrowings in the first half of 2024 by removing the trailing twelve month Clinical Solutions revenue requirement that was previously required under the Amended Term Loan, (iii) removed the increase in the minimum cash covenant from $10.0 million to $15.0 million on the $10.0 million in borrowings in the first half of 2024, and added the $10.0 million minimum cash covenant requirement throughout the remaining term of the Amended Credit Agreement, and (iv) reduced the requirements for trailing twelve months of net revenue for all future periods—for example, for the twelve months ending December 31, 2023, the minimum net revenue requirement was reduced from $45.0 million to $42.0 million. Concurrent with Amendment No. 2, the exit fee due on the date of termination of the Amended Term Loan, or the date on which the obligations under the Amended Term Loan become due and payable in full, increased from 7.00% percent to 8.50% of the total aggregate principal amount of term loans made pursuant to the Term Loan (including amendments thereto) as of such date. Other than the modifications described in this paragraph and in Item 9B below, the Amended Credit Agreement continues unmodified in all other material respects.

On March 30, 2023, the Company entered into a Sales Agreement (the Sales Agreement) with Cowen and Company, LLC (Cowen), under which the Company may offer and sell, from time to time, shares of common stock having aggregate gross proceeds of up to $50.0 million (the ATM Shares). The Company will pay Cowen a commission of up to 3% of the gross proceeds of any sales of the ATM Shares pursuant to the Sales Agreement.

Exhibit 1.1

ALPHA TEKNOVA, INC.

$50,000,000

COMMON STOCK

SALES AGREEMENT

March 30, 2023

Cowen and Company, LLC
599 Lexington Avenue
New York, NY 10022

Ladies and Gentlemen:

Alpha Teknova, Inc. (the "**Company**"), confirms its agreement (this "**Agreement**") with Cowen and Company, LLC ("**Cowen**"), as follows:

1. Issuance and Sale of Shares. The Company agrees that, from time to time during the term of this Agreement, on the terms and subject to the conditions set forth herein, it may issue and sell through Cowen, acting as agent and/or principal, shares (the "**Placement Shares**") of the Company's common stock, par value $0.00001 per share (the "**Common Stock**"), having an aggregate offering price of up to $50,000,000; provided, however, that in no event shall the Company issue or sell through Cowen such number or dollar amount of Placement Shares that would (a) exceed the number or dollar amount of shares of Common Stock registered on the effective Registration Statement (defined below) pursuant to which the offering is being made, (b) exceed the number of authorized but unissued shares of Common Stock (less shares of Common Stock issuable upon exercise, conversion or exchange of any outstanding securities of the Company or otherwise reserved from the Company's authorized capital stock), (c) exceed the number or dollar amount of shares of Common Stock permitted to be sold under Form S-3 (including General Instruction I.B.6 thereof, if applicable) or (d) exceed the number or dollar amount of shares of Common Stock for which the Company has filed a Prospectus Supplement (defined below) (the lesser of (a), (b), (c) and (d), the "**Maximum Amount**"). Notwithstanding anything to the contrary contained herein, the parties hereto agree that compliance with the limitation set forth in this Section 1 on the number of shares of Common Stock issued and sold under this Agreement shall be the sole responsibility of the Company, and Cowen shall have no obligation in connection with such compliance. The issuance and sale of Common Stock through Cowen will be effectuated pursuant to the Registration Statement (as defined below) filed by the Company and declared effective by the Securities and Exchange Commission (the "**Commission**"), although nothing in this Agreement shall be construed as requiring the Company to use the Registration Statement (as defined below) to issue the Common Stock.

The Company has filed, in accordance with the provisions of the Securities Act of 1933, as amended, and the rules and regulations thereunder (collectively, the "**Securities Act**"), with the Commission a registration statement on Form S-3 (File No. 333-265987), including a base prospectus, relating to certain securities, including the Common Stock, to be issued from time to

time by the Company, and which incorporates by reference documents that the Company has filed or will file in accordance with the provisions of the Securities Exchange Act of 1934, as amended, and the rules and regulations thereunder (collectively, the "**Exchange Act**"). The Company has prepared a prospectus supplement specifically relating to the Placement Shares (the "**Prospectus Supplement**") to the base prospectus included as part of such registration statement. The Company has furnished to Cowen, for use by Cowen, copies of the prospectus included as part of such registration statement, as supplemented by the Prospectus Supplement, relating to the Placement Shares. Except where the context otherwise requires, such registration statement, and any post-effective amendment thereto, as amended when it became effective, including all documents filed as part thereof or incorporated by reference therein, and including any information contained in a Prospectus (as defined below) subsequently filed with the Commission pursuant to Rule 424(b) under the Securities Act or deemed to be a part of such registration statement pursuant to Rule 430B or 462(b) of the Securities Act, or any subsequent registration statement on Form S-3 filed pursuant to Rule 415(a)(6) under the Securities Act by the Company with respect to the Placement Shares, is herein called the "**Registration Statement.**" The base prospectus, including all documents incorporated therein by reference, included in the Registration Statement, as it may be supplemented by the Prospectus Supplement, in the form in which such prospectus and/or Prospectus Supplement have most recently been filed by the Company with the Commission pursuant to Rule 424(b) under the Securities Act, together with any "issuer free writing prospectus," as defined in Rule 433 under the Securities Act ("**Rule 433**"), relating to the Placement Shares that (i) is consented to by Cowen, hereinafter referred to as a "**Permitted Free Writing Prospectus,**" (ii) is required to be filed with the Commission by the Company or (iii) is exempt from filing pursuant to Rule 433(d)(5)(i), in each case in the form filed or required to be filed with the Commission or, if not required to be filed, in the form retained in the Company's records pursuant to Rule 433(g), is herein called the "**Prospectus**." Any reference herein to the Registration Statement, the Prospectus or any amendment or supplement thereto shall be deemed to refer to and include the documents incorporated by reference therein, and any reference herein to the terms "amend," "amendment" or "supplement" with respect to the Registration Statement or the Prospectus shall be deemed to refer to and include the filing after the execution hereof of any document with the Commission deemed to be incorporated by reference therein. For purposes of this Agreement, all references to the Registration Statement, the Prospectus or to any amendment or supplement thereto shall be deemed to include any copy filed with the Commission pursuant to the Electronic Data Gathering Analysis and Retrieval System ("**EDGAR**").

2. Placements. Each time that the Company wishes to issue and sell the Placement Shares hereunder (each, a "**Placement**"), it will notify Cowen by email notice (or other method mutually agreed to in writing by the parties) (a "**Placement Notice**") containing the parameters in accordance with which it desires the Placement Shares to be sold, which shall at a minimum include the number of Placement Shares to be issued, the time period during which sales are requested to be made, any limitation on the number of Placement Shares that may be sold in any one Trading Day (as defined in Section 3) and any minimum price below which sales may not be made, a form of which containing such minimum sales parameters necessary is attached hereto as **Schedule 1**. The Placement Notice shall originate from any of the individuals from the Company set forth on **Schedule 2** (with a copy to each of the other individuals from the Company listed on such schedule), and shall be addressed to each of the individuals from Cowen set forth on **Schedule 2**, as such **Schedule 2** may be amended from time to time. The Placement Notice shall be effective upon receipt by Cowen unless and until (i) in accordance with the notice requirements set forth in

Section 4, Cowen declines to accept the terms contained therein for any reason, in its sole discretion, (ii) the entire amount of the Placement Shares have been sold, (iii) in accordance with the notice requirements set forth in Section 4, the Company suspends or terminates the Placement Notice for any reason, in its sole discretion, (iv) the Company issues a subsequent Placement Notice with parameters superseding those on the earlier dated Placement Notice, or (v) this Agreement has been terminated under the provisions of Section 11. The amount of any discount, commission or other compensation to be paid by the Company to Cowen in connection with the sale of the Placement Shares shall be calculated in accordance with the terms set forth in **Schedule 3.** It is expressly acknowledged and agreed that neither the Company nor Cowen will have any obligation whatsoever with respect to a Placement or any Placement Shares unless and until the Company delivers a Placement Notice to Cowen and Cowen does not decline such Placement Notice pursuant to the terms set forth above, and then only upon the terms specified therein and herein. In the event of a conflict between the terms of this Agreement and the terms of a Placement Notice, the terms of the Placement Notice will control.

3. Sale of Placement Shares by Cowen. Subject to the terms and conditions herein set forth, upon the Company's delivery of a Placement Notice, and unless the sale of the Placement Shares described therein has been declined, suspended, or otherwise terminated in accordance with the terms of this Agreement, Cowen, for the period specified in the Placement Notice, will use its commercially reasonable efforts consistent with its normal trading and sales practices and applicable state and federal laws, rules and regulations and the rules of The Nasdaq Stock Market, LLC ("**Nasdaq**") to sell such Placement Shares up to the amount specified, and otherwise in accordance with the terms of such Placement Notice. Cowen will provide written confirmation to the Company (including by email correspondence to each of the individuals of the Company set forth on **Schedule 2**, if receipt of such correspondence is actually acknowledged by any of the individuals to whom the notice is sent, other than via auto-reply) no later than the opening of the Trading Day (as defined below) immediately following the Trading Day on which it has made sales of Placement Shares hereunder setting forth the number of Placement Shares sold on such day, the volume-weighted average price of the Placement Shares sold, and the Net Proceeds (as defined below) payable to the Company. In the event the Company engages Cowen for a sale of Placement Shares that would constitute a "block" within the meaning of Rule 10b-18(a)(5) under the Exchange Act (a "**Block Sale**"), the Company will provide Cowen, at Cowen's request and upon reasonable advance notice to the Company, on or prior to the Settlement Date (as defined below) with respect to such Block Sale, the opinions of counsel, accountant's letter and officers' certificates set forth in Section 8 hereof, each dated as of such Settlement Date, and such other documents and information as Cowen shall reasonably request. Cowen may sell Placement Shares by any method permitted by law deemed to be an "at the market" offering as defined in Rule 415 of the Securities Act, including without limitation sales made through Nasdaq or on any other existing trading market for the Common Stock. Cowen shall not purchase Placement Shares for its own account as principal unless expressly authorized to do so by the Company in a Placement Notice. The Company acknowledges and agrees that (i) there can be no assurance that Cowen will be successful in selling Placement Shares, and (ii) Cowen will incur no liability or obligation to the Company or any other person or entity if it does not sell Placement Shares for any reason other than a failure by Cowen to use its commercially reasonable efforts consistent with its normal trading and sales practices to sell such Placement Shares as required under this Section 3. For the purposes hereof, "**Trading Day**" means any day on which the Company's Common Stock is purchased and sold on the principal market on which the Common Stock is listed or quoted.

Notwithstanding any other provision of this Agreement, the Company shall not offer, sell or deliver, or request the offer or sale, of any Placement Shares pursuant to this Agreement and, by notice to Cowen given by telephone (confirmed promptly by email), shall cancel any instructions for the offer or sale of any Placement Shares, and Cowen shall not be obligated to offer or sell any Placement Shares, (i) during any period in which the Company is, or could be deemed to be, in possession of material non-public information, or (ii) at any time from and including the date on which the Company shall issue a press release containing, or shall otherwise publicly announce, its earnings, revenues or other results of operations (an "**Earnings Announcement**") through and including the time that the Company files a Quarterly Report on Form 10-Q or an Annual Report on Form 10-K that includes consolidated financial statements as of and for the same period or periods, as the case may be, covered by such Earnings Announcement; *provided, however*, that the Company shall not be prohibited from delivering any Placement Shares in settlement for sales of Placement Shares that occurred when the Company was not in possession of material non-public information.

4. Suspension of Sales.

(a) The Company or Cowen may, upon notice to the other party in writing (including by email correspondence to each of the individuals of the other party set forth on **Schedule 2**, if receipt of such correspondence is actually acknowledged by any of the individuals to whom the notice is sent, other than via auto-reply) or by telephone (confirmed immediately by verifiable facsimile transmission or email correspondence to each of the individuals of the other party set forth on **Schedule 2**), suspend any sale of Placement Shares; *provided, however*, that such suspension shall not affect or impair either party's obligations with respect to any Placement Shares sold hereunder prior to the receipt of such notice. While a suspension is in effect, any obligation under Sections 7(m), 7(n) and 7(o) with respect to delivery of certificates, opinions, or comfort letters to Cowen shall be waived. Each of the parties agrees that no such notice under this Section 4 shall be effective against the other unless it is made to one of the individuals named on **Schedule 2** hereto, as such schedule may be amended from time to time.

(b) If either Cowen or the Company has reason to believe that the exemptive provisions set forth in Rule 101(c)(1) of Regulation M under the Exchange Act are not satisfied with respect to the Common Stock, it shall promptly notify the other party, and Cowen may, at its sole discretion, suspend sales of the Placement Shares under this Agreement.

(c) If the Company has reason to believe that a sale of Placement Shares pursuant to an outstanding Placement Notice may exceed the number of shares available to be sold by the Company pursuant to General Instruction I.B.6. of Form S-3, it shall promptly notify Cowen in writing (including by email correspondence to each of the individuals set forth on **Schedule 2**, if receipt of such correspondence is actually acknowledged by any of the individuals to whom the notice is sent, other than via auto-reply) or by telephone (confirmed immediately by verifiable facsimile transmission or email correspondence to each of the individuals of the Company set forth on **Schedule 2**), suspend any sale of Placement Shares; *provided, however*, that such suspension shall not affect or impair either party's obligations with respect to any Placement Shares sold hereunder prior to the receipt of such notice.

(d) The Registration Statement was declared effective on July 12, 2022. Notwithstanding any other provision of this Agreement, during any period in which the Registration Statement is no longer effective under the Securities Act, the Company shall promptly notify Cowen, the Company shall not request the sale of any Placement Shares, and Cowen shall not be obligated to sell or offer to sell any Placement Shares.

5. Settlement.

(a) Settlement of Placement Shares. Unless otherwise specified in the applicable Placement Notice, settlement for sales of Placement Shares will occur on the second (2nd) Trading Day (or such earlier day as is industry practice for regular-way trading) following the date on which such sales are made (each, a "**Settlement Date**" and the first such settlement date, the "**First Delivery Date**"). The amount of proceeds to be delivered to the Company on a Settlement Date against receipt of the Placement Shares sold (the "**Net Proceeds**") will be equal to the aggregate sales price received by Cowen at which such Placement Shares were sold, after deduction for (i) Cowen's commission, discount or other compensation for such sales payable by the Company pursuant to Section 2 hereof, (ii) any other amounts due and payable by the Company to Cowen hereunder pursuant to Section 7(g) (Expenses) hereof, and (iii) any transaction fees imposed by any governmental or self-regulatory organization in respect of such sales.

(b) Delivery of Placement Shares. On or before each Settlement Date, the Company will, or will cause its transfer agent to, electronically transfer the Placement Shares being sold by crediting Cowen's or its designee's account (provided Cowen shall have given the Company written notice of such designee prior to the Settlement Date) at The Depository Trust Company through its Deposit and Withdrawal at Custodian System or by such other means of delivery as may be mutually agreed upon by the parties hereto which in all cases shall be freely tradeable, transferable, registered shares in good deliverable form. On each Settlement Date, Cowen will deliver the related Net Proceeds in same day funds to an account designated by the Company on, or prior to, the Settlement Date. The Company agrees that, if the Company or its transfer agent (if applicable) defaults in its obligation to deliver duly authorized Placement Shares on a Settlement Date, through no fault of Cowen, in addition to and in no way limiting the rights and obligations set forth in Section 9(a) (Indemnification and Contribution) hereof, it will (i) hold Cowen harmless against any loss, claim, damage, or reasonable and documented expense (including reasonable and documented legal fees and expenses), as incurred, arising out of or in connection with such default by the Company and (ii) pay to Cowen (without duplication) any commission, discount, or other compensation to which it would otherwise have been entitled absent such default.

6. Representations and Warranties of the Company. The Company represents and warrants to, and agrees with, Cowen that as of (i) the date of this Agreement, (ii) each Time of Sale (as defined below), (iii) each Settlement Date, and (iv) each Bring-Down Date (as defined below) (each date included in (i) through (iv), a "**Representation Date**"):

(a) Compliance with Registration Requirements. The Registration Statement and any Rule 462(b) Registration Statement have been declared effective by the Commission under the Securities Act. The Company has complied, to the Commission's satisfaction, with all requests of the Commission for additional or supplemental information. No stop order suspending the effectiveness of the Registration Statement or any Rule 462(b) Registration Statement is in effect

and no proceedings for such purpose have been instituted or are pending or, to the knowledge of the Company, contemplated or threatened by the Commission. The Company meets the requirements for use of Form S-3 under the Securities Act. The proposed offering of the Placement Shares hereunder meets the requirements of General Instruction I.B.6. of Form S-3.

(b) No Misstatement or Omission. The Prospectus when filed complied and, as amended or supplemented, if applicable, will comply in all material respects with the Securities Act. Each of the Registration Statement, any Rule 462(b) Registration Statement, the Prospectus and any post-effective amendments or supplements thereto, at the time it became effective or its date, as applicable, complied and as of each Representation Date, complied and will comply in all material respects with the Securities Act and did not and, as of each Representation Date, did not and will not contain any untrue statement of a material fact or omit to state a material fact required to be stated therein or necessary to make the statements therein not misleading. The Prospectus, as amended or supplemented, as of its date, did not and, as of each Representation Date, will not contain any untrue statement of a material fact or omit to state a material fact necessary in order to make the statements therein, in the light of the circumstances under which they were made, not misleading. The representations and warranties set forth in the two immediately preceding sentences do not apply to statements in or omissions from the Registration Statement, any Rule 462(b) Registration Statement, or any post-effective amendment thereto, or the Prospectus, or any amendments or supplements thereto, made in reliance upon and in conformity with information relating to Agent's Information (as defined below). There are no contracts or other documents required to be described in the Prospectus or to be filed as exhibits to the Registration Statement which have not been described or filed as required. As used herein, "**Time of Sale**" means with respect to each offering of Placement Shares pursuant to this Agreement, the time of Cowen's initial entry into contracts with purchasers for the sale of such Placement Shares.

(c) Offering Materials Furnished to Cowen. The Company has delivered to Cowen one complete copy of the Registration Statement and a copy of each consent and certificate of experts filed as a part thereof, and conformed copies of the Registration Statement (without exhibits) and the Prospectus, as amended or supplemented, in such quantities and at such places as Cowen has reasonably requested. The Registration Statement, the Prospectus and any Permitted Free Writing Prospectus (to the extent any such Permitted Free Writing Prospectus was required to be filed with the Commission) delivered to Cowen for use in connection with the public offering of the Placement Shares contemplated herein have been and will be identical to the versions of such documents transmitted to the Commission for filing via EDGAR, except to the extent permitted by Regulation S-T.

(d) Emerging Growth Company. The Company is an "emerging growth company," as defined in Section 2(a) of the Securities Act. The Company agrees to notify Cowen promptly upon the Company ceasing to be an emerging growth company.

(e) Not an Ineligible Issuer. The Company currently is not an "ineligible issuer," as defined in Rule 405 under the Securities Act. The Company agrees to notify Cowen promptly upon the Company becoming an "ineligible issuer."

(f) Distribution of Offering Material by the Company. The Company has not, directly or indirectly, distributed and will not distribute, prior to the completion of Cowen's

distribution of the Placement Shares, any offering material in connection with the offering and sale of the Placement Shares other than the Prospectus or the Registration Statement.

(g) The Sales Agreement. This Agreement has been duly authorized, executed and delivered by, and is a valid and binding agreement of, the Company, enforceable in accordance with its terms, except as rights to indemnification hereunder may be limited by applicable law and except as the enforcement hereof may be limited by bankruptcy, insolvency, reorganization, moratorium or other similar laws relating to or affecting the rights and remedies of creditors or by general equitable principles.

(h) Authorization of the Common Stock. The Placement Shares, when issued and delivered, will be duly authorized for issuance and sale pursuant to this Agreement and, when issued and delivered by the Company against payment therefor pursuant to this Agreement, will be duly authorized, validly issued, fully paid and nonassessable, free and clear of any pledge, lien, encumbrance, security interest or other claim and will conform in all respects to the descriptions thereof in the Prospectus, and the issuance and sale of the Placement Shares by the Company is not subject to preemptive or other similar rights arising by operation of law, under the organizational documents of the Company or under any agreement to which the Company or any Subsidiary is a party or otherwise.

(i) No Applicable Registration or Other Similar Rights. There are no persons with registration or other similar rights to have any equity or debt securities registered for sale under the Registration Statement or included in the offering contemplated by this Agreement, except for such rights as have been duly waived.

(j) No Material Adverse Change. Except as otherwise disclosed in the Prospectus, subsequent to the respective dates as of which information is given in the Prospectus: (i) there has been no material adverse change, or any development that would reasonably be expected to result in a material adverse change, in the condition, financial or otherwise, or in the earnings, business, operations or prospects, whether or not arising from transactions in the ordinary course of business, of the Company and its subsidiaries, considered as one entity (any such change is called a "**Material Adverse Change**"); (ii) the Company and its subsidiaries, considered as one entity, have not incurred any material liability or obligation, indirect, direct or contingent; and (iii) there has been no dividend or distribution of any kind declared, paid or made by the Company or, except for regular quarterly dividends publicly announced by the Company or dividends paid to the Company or other subsidiaries, by any of its subsidiaries on any class of capital stock or repurchase or redemption by the Company or any of its subsidiaries of any class of capital stock (other than pursuant to the forfeiture or repurchase of securities underlying equity or equity-based awards under existing equity incentive plans described in the Registration Statement or the Prospectus).

(k) Independent Accountants. Ernst & Young LLP, who has expressed its opinion with respect to the financial statements (which term as used in this Agreement includes the related notes thereto) and supporting schedules filed with the Commission or incorporated by reference as a part of the Registration Statement and included in the Prospectus, is an independent registered public accounting firm as required by the Securities Act and the Exchange Act.

(l) Preparation of the Financial Statements. The financial statements filed with the Commission as a part of or incorporated by reference in the Registration Statement and included in the Prospectus present fairly, in all material respects, the consolidated financial position of the Company and its subsidiaries as of and at the dates indicated and the results of their operations and cash flows for the periods specified. The supporting schedules included in or incorporated in the Registration Statement present fairly the information required to be stated therein. Such financial statements and supporting schedules have been prepared in conformity with generally accepted accounting principles as applied in the United States applied on a consistent basis throughout the periods involved, except as may be expressly stated in the related notes thereto and except in the case of unaudited financial statements, which are subject to normal and recurring year-end adjustments and do not contain certain footnotes as permitted by the applicable rules of the Commission. No other financial statements or supporting schedules are required to be included in or incorporated by reference in the Registration Statement.

(m) XBRL. The interactive data in eXtensible Business Reporting Language included or incorporated by reference in each Registration Statement fairly presents the information called for in all material respects and has been prepared in accordance with the Commission's rules and guidelines applicable thereto.

(n) Incorporation and Good Standing of the Company and its Subsidiaries. The Company has been duly incorporated and is validly existing as a corporation in good standing under the laws of the jurisdiction of its incorporation and has the corporate power and authority to own, lease and operate its properties and to conduct its business as described in the Prospectus and to enter into and perform its obligations under this Agreement and to consummate the transactions contemplated herein and therein. Each subsidiary of the Company (each a "**Subsidiary**" has been duly organized and is validly existing as a corporation or limited liability company in good standing under the laws of the jurisdiction of its organization and has the requisite power and authority to own, lease and operate its properties and to conduct its business as described in the Prospectus. Each of the Company and its Subsidiaries is duly qualified as a foreign corporation or foreign partnership to transact business and is in good standing under the laws of the jurisdiction of its incorporation or formation and each other jurisdiction in which such qualification is required, whether by reason of the ownership or leasing of property or the conduct of business, except for such jurisdictions where the failure to so qualify or to be in good standing would not, individually or in the aggregate, result in a Material Adverse Change. Except as described in the Prospectus, all of the issued and outstanding equity interests of the Subsidiaries have been duly authorized and validly issued, are fully paid and nonassessable and are owned by the Company free and clear of any security interest, mortgage, pledge, lien, encumbrance or claim. The Company does not own or control, directly or indirectly, any corporation, association or other entity other than the subsidiaries listed in Exhibit 21.1 to the Company's Annual Report on Form 10-K for the most recently ended fiscal year and other than (i) those subsidiaries not required to be listed on Exhibit 21.1 by Item 601 of Regulation S-K under the Exchange Act and (ii) those subsidiaries formed since the last day of the most recently ended fiscal year.

(o) Capital Stock Matters. The Common Stock conforms in all material respects to the description thereof contained in the Prospectus. All of the issued and outstanding shares of Common Stock have been duly authorized and validly issued, are fully paid and nonassessable and have been issued in compliance with all applicable federal and state securities laws. None of the

outstanding shares of Common Stock were issued in violation of any preemptive rights, rights of first refusal or other similar rights to subscribe for or purchase securities of the Company. There are no authorized or outstanding options, warrants, preemptive rights, rights of first refusal or other rights to purchase, or equity or debt securities convertible into or exchangeable or exercisable for, any capital stock of the Company or any of its subsidiaries other than those accurately described in all material respects in the Prospectus. The description of the Company's stock option, stock bonus and other stock plans or arrangements, and the options or other rights granted thereunder, set forth in the Prospectus accurately and fairly presents in all material respects the information required to be shown with respect to such plans, arrangements, options and rights.

(p) Non-Contravention of Existing Instruments; No Further Authorizations or Approvals Required. Neither the Company nor any of its subsidiaries is in violation of its charter or by-laws or is in default (or, with the giving of notice or lapse of time, would be in default) ("**Default**") under any indenture, mortgage, loan or credit agreement, note, contract, franchise, lease or other instrument to which the Company or any of its subsidiaries is a party or by which it or any of them may be bound, or to which any of the property or assets of the Company or any of its subsidiaries is subject (each, an "**Existing Instrument**"), except for such Defaults as would not, individually or in the aggregate, result in a Material Adverse Change. The Company's execution, delivery and performance of this Agreement and consummation of the transactions contemplated hereby and by the Prospectus (i) have been duly authorized by all necessary corporate action and will not result in any violation of the provisions of the charter or by-laws of the Company or any Subsidiary, (ii) will not conflict with or constitute a breach of, or Default under, or result in the creation or imposition of any lien, charge or encumbrance upon any property or assets of the Company or any of its subsidiaries pursuant to, or require the consent of any other party to, any Existing Instrument, except for such conflicts, breaches, Defaults, liens, charges or encumbrances as would not, individually or in the aggregate, result in a Material Adverse Change and (iii) will not result in any violation of any law, administrative regulation or administrative or court decree applicable to the Company or any Subsidiary, except for such violations as would not, individually or in the aggregate, result in a Material Adverse Change. No consent, approval, authorization or other order of, or registration or filing with, any court or other governmental or regulatory authority or agency, is required for the Company's execution, delivery and performance of this Agreement and consummation of the transactions contemplated hereby and by the Prospectus, except such as have been obtained or made by the Company and are in full force and effect under the Securities Act, applicable state securities or blue sky laws and from the Financial Industry Regulatory Authority ("**FINRA**").

(q) No Material Actions or Proceedings. Except as disclosed in the Prospectus, there is no legal or governmental proceeding to which the Company or any of its subsidiaries is a party or of which any property or assets of the Company or any of its subsidiaries is the subject, including any proceeding before the United States Food and Drug Administration of the U.S. Department of Health and Human Services ("**FDA**") or comparable federal, state, local, supranational or foreign governmental bodies (it being understood that the interaction between the Company and the FDA and such comparable governmental bodies relating to the product development and manufacturing processes shall not be deemed proceedings for purposes of this representation), which is required to be described in the Prospectus and is not described therein, or which, singularly or in the aggregate, if determined adversely to the Company or any of its subsidiaries, would reasonably be expected to have a Material Adverse Change; and no such

proceedings are, to the Company's knowledge, threatened by governmental or regulatory authorities or threatened by others. The Company is in compliance with all applicable federal, state, local, supranational and foreign laws, regulations, orders and decrees governing its business as prescribed by the FDA or any other federal, state or foreign agencies or bodies engaged in the regulation of pharmaceuticals, medical devices, equipment and supplies, or biohazardous substances or materials, except where noncompliance would not, individually or in the aggregate, have a Material Adverse Change. All product development and manufacturing activities conducted by or on behalf of the Company have been conducted by the Company, or to the Company's knowledge by third parties, in compliance with all applicable federal, state, supranational or foreign laws, rules, orders and regulations, except for such failure or failures to be in compliance as would not reasonably be expected to have, singly or in the aggregate, a Material Adverse Change. Neither the Company nor any of its subsidiaries is a party to any corporate integrity agreements, monitoring agreements, deferred prosecution agreements, deferred prosecution agreements, consent decrees, settlement orders, or similar agreements with or imposed by any governmental or regulatory authority. Additionally, neither the Company, any of its subsidiaries nor any of their respective employees, officers, directors, or agents has been excluded, suspended or debarred from participation in any U.S. health care program or human clinical research or, to the Company's knowledge, is subject to a governmental inquiry, investigation, proceeding, or other similar action that would reasonably be expected to result in debarment, suspension, or exclusion.

(r) All Necessary Permits, etc. The Company and each Subsidiary possess all licenses, certificates, authorizations and permits issued by, and have made all declarations and filings with, the appropriate local, state, federal, supranational or foreign governmental or regulatory agencies or bodies (including, without limitation, those administered by the FDA or by any foreign, federal, state or local governmental or regulatory authority) that are necessary for the ownership or lease of their respective properties or the conduct of their respective businesses as described in the Prospectus (collectively, the "**Governmental Permits**") except where any failures to possess or make the same would not reasonably be expected, individually or in the aggregate, to have a Material Adverse Change. The Company and its Subsidiaries are in compliance with all such Governmental Permits, except where noncompliance would not reasonably be expected to have a Material Adverse Change, and all such Governmental Permits are valid and in full force and effect, except where the invalidity or failure to be in full force and effect would not reasonably be expected, individually or in the aggregate, to have a Material Adverse Change. Neither the Company nor any Subsidiary has received written or, to the Company's knowledge, oral notification of any revocation, modification, suspension, termination, limitation, restriction or invalidation (or proceedings related thereto) of any such Governmental Permit and the Company has no reason to believe that any such Governmental Permit will not be renewed, except for such revocations, modifications, suspensions, terminations, or invalidations which would not reasonably be expected, individually or in the aggregate, to have a Material Adverse Change.

(s) Tax Law Compliance. The Company and its consolidated subsidiaries have filed all necessary federal, state and foreign income, property and franchise tax returns or have property requested extensions thereof and have paid all income, property and franchise taxes required to be paid by any of them and, if due and payable, any related or similar assessment, fine or penalty levied against any of them except as may be being contested in good faith and by appropriate proceedings, in each case, except such as would not reasonably be expected, individually or in the

aggregate, to have a Material Adverse Change. The Company has made adequate charges, accruals and reserves in the applicable financial statements referred to in Section 1(l) above in respect of all federal, state and foreign income, property and franchise taxes for all periods as to which the tax liability of the Company or any of its consolidated subsidiaries has not been finally determined.

(t) Company Not an "Investment Company". The Company has been advised of the rules and requirements under the Investment Company Act of 1940, as amended (the "**Investment Company Act**"). The Company is not, and after receipt of payment for the Common Stock will not be, an "investment company" within the meaning of Investment Company Act.

(u) Insurance. The Company and each of its subsidiaries carry, or are covered by, insurance in such amounts and covering such risks as the Company reasonably believes is adequate for the conduct of their respective businesses and the value of their respective properties. Neither the Company nor any of its subsidiaries has any reason to believe that it will not be able to renew its existing insurance coverage as and when such coverage expires or to obtain similar coverage from similar insurers as may be necessary to continue its business at a cost that would not have a Material Adverse Change. Neither the Company nor any of its subsidiaries has received written notice from any insurer, agent of such insurer or the broker of the Company or any of its subsidiaries that any material capital improvements or any other material expenditures (other than premium payments) are required or necessary to be made in order to continue such insurance.

(v) No Price Stabilization or Manipulation. The Company has not taken and will not take, directly or indirectly, any action designed to or that might be reasonably expected to cause or result in stabilization or manipulation of the price of any security of the Company to facilitate the sale or resale of the Placement Shares.

(w) Related Party Transactions. There are no business relationships or related-party transactions involving the Company or any Subsidiary or any other person required to be described in the Prospectus which have not been described as required.

(x) Exchange Act Compliance. The documents incorporated or deemed to be incorporated by reference in the Prospectus, at the time they were or hereafter are filed with the Commission, complied and will comply in all material respects with the requirements of the Exchange Act, and, when read together with the other information in the Prospectus, at the Settlement Dates, will not contain an untrue statement of a material fact or omit to state a material fact required to be stated therein or necessary to make the fact required to be stated therein or necessary to make the statements therein, in the light of the circumstances under which they were made, not misleading.

(y) No Unlawful Contributions or Other Payments. Neither the Company nor any of its subsidiaries nor, to the Company's knowledge, any director, officer, employee, agent, affiliate or other person acting on behalf of the Company or any Subsidiary has (i) used any corporate funds for any unlawful contribution, gift, entertainment or other unlawful expense relating to political activity; (ii) made any direct or indirect unlawful payment to any foreign or domestic government officials or employees, political parties or campaigns, political party officials, or candidates for political office from corporate funds; (iii) violated or is in violation of any provision of the U.S. Foreign Corrupt Practices Act of 1977, as amended, or any applicable anti-corruption laws, rules, or regulations of any other jurisdiction in which the Company or any

Subsidiary conducts business; or (iv) made any other unlawful bribe, rebate, payoff, influence payment, kickback or other unlawful payment to any person.

(z) Compliance with Money Laundering Laws. The operations of the Company and its subsidiaries are and have been conducted at all times in compliance with all applicable financial recordkeeping and reporting requirements, including those of the U.S. Bank Secrecy Act, as amended by Title III of the Uniting and Strengthening America by Providing Appropriate Tools Required to Intercept and Obstruct Terrorism Act of 2001 (USA PATRIOT Act), and the applicable anti-money laundering statutes of jurisdictions where the Company and its subsidiaries conduct business, the rules and regulations thereunder and any related or similar rules, regulations or guidelines, issued, administered or enforced by any governmental agency (collectively, the "**Anti-Money Laundering Laws**"), and no action, suit or proceeding by or before any court or governmental agency, authority, body or any arbitrator involving the Company or any of its subsidiaries with respect to Anti-Money Laundering Laws is pending, or to the knowledge of the Company, threatened.

(aa) Compliance with OFAC.

(A) Neither the Company nor any of its subsidiaries, nor any director, officer or employee thereof, nor to the Company's knowledge, any agent, affiliate, representative, or other person acting on behalf of the Company or any of its subsidiaries, is an individual or entity ("**Person**") that is, or is owned or controlled by a Person that is: (i) the subject of any sanctions administered or enforced by the U.S. Department of Treasury's Office of Foreign Assets Control ("**OFAC**"), the United Nations Security Council, the European Union ("**EU**"), Her Majesty's Treasury, or other relevant sanctions authority (collectively, "**Sanctions**"), nor (ii) located, organized, or resident in a country or territory that is the subject of a U.S. government embargo (including, without limitation, the so-called Donetsk People's Republic, the so-called Luhansk People's Republic, the Crimea Region of Ukraine, Cuba, Iran, North Korea and Syria).

(B) The Company will not, directly or indirectly, use the Net Proceeds, or lend, contribute or otherwise make available such Net Proceeds to any Subsidiary, joint venture partner or other Person: (i) to fund or facilitate any activities or business of or with any Person that, at the time of such funding or facilitation, is the subject of Sanctions, or in any country or territory that, at the time of such funding or facilitation, is the subject of a U.S. government embargo; or (ii) in any other manner that will result in a violation of Sanctions by any Person (including Cowen)

(C) For the past five (5) years, the Company and its subsidiaries have not knowingly engaged in, are not now knowingly engaged in, and will not engage in, any direct or indirect dealings or transactions with any Person that at the time of the dealing or transaction is or was the subject of Sanctions or any country or territory that, at the time of the dealing or transaction is or was the subject of a U.S. government embargo.

(bb) Accounting Controls. The Company and each of its subsidiaries maintains a system of "internal control over financial reporting" (as such term is defined in Rule 13a-15(f) of the General Rules and Regulations under the Exchange Act (the "**Exchange Act Rules**")) that complies with the requirements of the Exchange Act and has been designed by their respective principal executive and principal financial officers, or under their supervision, to provide reasonable assurances that (i) transactions are executed in accordance with management's general or specific authorizations; (ii) transactions are recorded as necessary to permit preparation of financial statements in conformity with GAAP and to maintain accountability for assets; (iii) access to assets is permitted only in accordance with management's general or specific authorization; (iv) the recorded accountability for assets is compared with existing assets at reasonable intervals and appropriate action is taken with respect to any differences and (v) interactive data in eXtensible Business Reporting Language included in the Registration Statement fairly presents the Commission's rules and guidelines applicable thereto. The Company's internal control over financial reporting is effective. Except as described in the Prospectus, since the end of the Company's most recent audited fiscal year, there has been (A) no material weakness in the Company's internal control over financial reporting (whether or not remediated) and (B) no change in the Company's internal control over financial reporting that has materially affected, or is reasonably likely to materially affect, the Company's internal control over financial reporting.

(cc) Disclosure Controls. The Company and its subsidiaries maintain disclosure controls and procedures (as such is defined in Rule 13a-15(e) of the Exchange Act Rules) that comply with the requirements of the Exchange Act; such disclosure controls and procedures have been designed to ensure that information required to be disclosed by the Company and its subsidiaries in reports that they file or submit under the Exchange Act is recorded, processed, summarized and reported within the time periods specified in the Commission's rules and forms, including controls and procedures designed to ensure that such information is accumulated and communicated to the Company's management to allow timely decisions regarding disclosures. The Company and its subsidiaries have conducted evaluations of the effectiveness of their disclosure controls as required by Rule 13a-15 of the Exchange Act.

(dd) Environmental Laws and Hazardous Materials. The Company and its subsidiaries are in compliance, in all material respects, with all foreign, federal, state and local rules, laws and regulations relating to the use, treatment, storage and disposal of hazardous or toxic substances or waste and protection of health and safety or the environment which are applicable to their businesses ("**Environmental Laws**"). There has been no storage, generation, transportation, handling, treatment, disposal, discharge, emission, or other release of any kind of toxic or other wastes or other hazardous substances by, due to, or caused by the Company or any of its subsidiaries (or, to the Company's knowledge, any other entity for whose acts or omissions the Company or any of its subsidiaries is or may otherwise be liable) upon any of the property now or previously owned or leased by the Company or any of its subsidiaries, or upon any other property, in violation of any law, statute, ordinance, rule, regulation, order, judgment, decree or permit or which would, under any law, statute, ordinance, rule (including rule of common law), regulation, order, judgment, decree or permit, give rise to any liability that would, singularly or in the aggregate, reasonably be expected to have a Material Adverse Change; and there has been no disposal, discharge, emission or other release of any kind onto such property or into the environment surrounding such property of any toxic or other wastes or other hazardous substances with respect to which the Company or any of its subsidiaries has knowledge.

(ee) Intellectual Property. The Company and its subsidiaries own or possess the valid right to use all (i) valid and enforceable patents, patent applications, trademarks, trademark registrations, service marks, service mark registrations, Internet domain name registrations, copyrights, copyright registrations, licenses, trade secret rights ("**Intellectual Property Rights**") and (ii) inventions, software, works of authorships, trademarks, service marks, trade names, databases, formulae, know how, Internet domain names and other intellectual property (including trade secrets and other unpatented and/or unpatentable proprietary confidential information, systems, or procedures) (collectively, "**Intellectual Property Assets**") necessary to conduct their respective businesses as currently conducted, and as proposed to be conducted and described in the Prospectus. The Company and its subsidiaries have not received any opinion from their legal counsel concluding that any activities of their respective businesses infringe, misappropriate, or otherwise violate, valid and enforceable Intellectual Property Rights of any other person, and have not received written notice of any challenge, which is to their knowledge still pending, by any other person to the rights of the Company and its subsidiaries with respect to any Intellectual Property Rights or Intellectual Property Assets owned or used by the Company or its subsidiaries. To the Company's knowledge, the Company and its subsidiaries' respective businesses as now conducted do not give rise to any infringement of, any misappropriation of, or other violation of, any valid and enforceable Intellectual Property Rights of any other person. All licenses for the use of the Intellectual Property Rights described in the Prospectus are valid, binding upon, and enforceable by or against the parties thereto in accordance to its terms. The Company has complied in all material respects with, and is not in breach nor has received any asserted or threatened claim of breach of any Intellectual Property license, and the Company has no knowledge of any breach or anticipated breach by any other person to any Intellectual Property license. Except as described in the Prospectus, no claim has been made against the Company alleging the infringement by the Company of any patent, trademark, service mark, trade name, copyright, trade secret, license in or other intellectual property right or franchise right of any person. The Company has taken all reasonable steps to protect, maintain and safeguard its Intellectual Property Rights, including the execution of appropriate nondisclosure and confidentiality agreements. The consummation of the transactions contemplated by this Agreement will not result in the loss or impairment of or payment of any additional amounts with respect to, nor require the consent of any other person in respect of, the Company's right to own, use, or hold for use any of the Intellectual Property Rights as owned, used or held for use in the conduct of the business as currently conducted. With respect to the use of the software in the Company's business as it is currently conducted, the Company has not experienced any material defects in such software including any material error or omission in the processing of any transactions other than defects which have been corrected, and to the Company's knowledge, no such software contains any device or feature designed to disrupt, disable, or otherwise impair the functioning of any software or is subject to the terms of any "open source" or other similar license that provides for the source code of the software to be publicly distributed or dedicated to the public.

(ff) Listing. The Company is subject to and in compliance in all material respects with the reporting requirements of Section 13 or Section 15(d) of the Exchange Act. The Common Stock is registered pursuant to Section 12(b) or Section 12(g) of the Exchange Act and is listed on the Nasdaq, and the Company has taken no action designed to, or reasonably likely to have the effect of, terminating the registration of the Common Stock under the Exchange Act or delisting the Common Stock from Nasdaq, nor has the Company received any notification that the Commission or Nasdaq is contemplating terminating such registration or listing. All of the

Placement Shares that have been or may be sold under this Agreement have been approved for listing on the Nasdaq, subject to official notice of issuance; the Company has taken all necessary actions to ensure that, upon and at all times after the Nasdaq shall have approved the Placement Shares for listing, it will be in compliance with all applicable corporate governance requirements set forth in the Nasdaq's listing rules that are then in effect.

(gg) Brokers. Except for Cowen, there is no broker, finder or other party that is entitled to receive from the Company any brokerage or finder's fee or other fee or commission as a result of any transactions contemplated by this Agreement.

(hh) No Outstanding Loans or Other Indebtedness. Except as described in the Prospectus, there are no outstanding loans, advances (except normal advances for business expenses in the ordinary course of business) or guarantees or indebtedness by the Company to or for the benefit of any of the officers or directors of the Company or any of the members of any of them.

(ii) No Reliance. The Company has not relied upon Cowen or legal counsel for Cowen for any legal, tax or accounting advice in connection with the offering and sale of the Placement Shares.

(jj) Compliance with Laws. The Company has not been advised, and has no reason to believe, that it and each of its subsidiaries are not conducting business in compliance with all applicable laws, rules and regulations of the jurisdictions in which it is conducting business, except where failure to be so in compliance would not reasonably be expected to result in a Material Adverse Change.

(kk) Privacy Laws. The Company is, and at all times has been, in material compliance with all (i) applicable data privacy and security laws and regulations (including laws and regulations relating to the collection, storage, use, access, disclosure, processing, security, and transfer of Personal Data (as defined below), and data breach notification), and any rules or regulations implemented thereunder, including, without limitation, as applicable, the European Union General Data Protection Regulation (EU 2016/679) ("**GDPR**"); the GDPR as transposed into United Kingdom national law by operation of section 3 of the European Union (Withdrawal) Act 2018 and as amended by the Data Protection, Privacy and Electronic Communications (Addendums etc.) (EU Exit) Regulations 2019, together with the Data Protection Act 2018, the Data Protection, Privacy and Electronic Communications (Addendums etc.) (EU Exit) Regulations 2019; the California Consumer Privacy Act of 2018; and laws and regulations relating to e-commerce, sales, marketing, and electronic communications, including, without limitation, the U.S. CAN-SPAM Act, the U.S. Telephone Consumer Protection Act, and the U.S. Telemarketing Sales Rule; (ii) all applicable industry guidelines and self-regulatory programs, including to the extent applicable, the PCI Security Standards Council's Payment Card Industry Data Security Standard (PCI-DSS) and all other applicable security rules and requirements as promulgated by the PCI Security Standards Council, by any member thereof, or by any entity that functions as a card brand, card association, card network, payment processor, acquiring bank, merchant bank or issuing bank ((i)-(ii) collectively, "**Privacy Laws**"); and (iii) all contracts (or portions thereof) to which the Company or a subsidiary is a party that are applicable to the Company's or its subsidiaries' data processing activities ("**Privacy Agreements**"). The Company and its subsidiaries have in place, materially comply with, and take appropriate steps to ensure compliance

in all material respects with, their policies and procedures relating to data privacy and security and the processing, collection, storage, use, disclosure, transfer, handling and analysis of Personal Data and other information in the Company's, its subsidiaries' and its and their service providers' possession or control (the "**Policies**"). The Policies comply with applicable Privacy Laws in all material respects, do not contain any material omissions of the Company's then-current privacy practices, and do not contain any inaccurate, misleading, or deceptive disclosures. "**Personal Data**" means (i) a natural persons' name, street address, telephone number, email address, photograph, social security number, bank information, or customer or account number; (ii) any information that would qualify as "personally identifying information" under the Federal Trade Commission Act, as amended; (iii) "personal data" as defined by GDPR; (iv) any other data defined as "personal data", "personal information" or similar term under applicable Privacy Laws; and (v) any other piece of information that allows the identification of a natural person, or his or her family. The execution, delivery and performance of this Agreement or any other agreement referred to in this Agreement will not result in a breach of any Privacy Laws, Privacy Agreements or Policies. Neither the Company nor any of its subsidiaries, (A) has received notice of any actual or potential violation of, any Privacy Laws, or complaint related to the Company's or its subsidiaries use of Personal Data, and has no knowledge of any event or condition that would reasonably be expected to result in any such notice or complaint; (B) is currently conducting or paying for, in whole or in part, any investigation, remediation or other corrective action pursuant to any Privacy Law; or (C) is a party to any order, decree, or agreement that imposed any obligation or liability under any Privacy Law as a result of any violation or alleged violation of any Privacy Law.

(ll) IT Systems. There has been no security breach, or compromise, unauthorized acquisition, use, modification, disclosure or other misuse of, or damage, loss, or unauthorized access to, any of the Company's or its subsidiaries' information technology and computer systems, networks, hardware, software, data (including Personal Data, intellectual property, confidential information, the data of the Company's and its subsidiaries' respective customers, employees, suppliers, vendors, and any third party data maintained by or on behalf of the foregoing Persons), equipment or technology ("**IT Systems and Data**") or any IT Systems and Data in the possession or control of a Company or subsidiary service provider (each, a "**Security Incident**"), except for those that have been remedied without material cost or liability, and (i) the Company and its subsidiaries have not been notified of, and have no knowledge of any event or condition that would reasonably be expected to result in a Security Incident; and (ii) the Company and its subsidiaries have implemented reasonable measures to protect the IT Systems and Data from damage, loss, and unauthorized access, acquisition, use, modification, disclosure or other misuse, including backup and disaster recovery technology consistent with industry standards and practice.

(mm) Export and Import Laws. Each of the Company and the Subsidiaries, and, to the Company's knowledge, each of their affiliates and any director, officer, agent or employee of, or other person associated with or acting on behalf of, the Company has acted at all times in compliance with applicable Export and Import Laws (as defined below) and there are no claims, complaints, charges, investigations or proceedings pending or expected or, to the knowledge of the Company, threatened between the Company or any of the Subsidiaries and any Governmental Authority under any Export or Import Laws. The term "**Export and Import Laws**" means the Arms Export Control Act, the International Traffic in Arms Regulations, the Export Administration Act of 1979, as amended, the Export Administration Regulations, and all other

laws and regulations of the United States government regulating the provision of services to non-U.S. parties or the export and import of articles or information from and to the United States of America, and all similar laws and regulations of any foreign government regulating the provision of services to parties not of the foreign country or the export and import of articles and information from and to the foreign country to parties not of the foreign country.

(nn) Regulatory Matters. The product development and manufacturing activities conducted by or on behalf of the Company that are described in the Prospectus (the "**Company Product Development and Manufacturing**") were and, if still pending, are being, conducted in all material respects in accordance with protocols, procedures, specifications and controls pursuant to, where applicable, accepted professional scientific, manufacturing and quality standards; the descriptions of products resulting from the Company Product Development and Manufacturing contained in the Prospectus are accurate in all material respects; the Company has no knowledge of any other products or manufacturing activities not described in the Prospectus, the results of which are inconsistent with or call in question the results described or referred to in the Prospectus; and the Company has not received any written notices or correspondence (or, to the Company's knowledge, any oral communication) from the FDA or any supranational, foreign, state or local governmental body exercising comparable authority requiring the termination, suspension or material modification of any Company Product Development and Manufacturing, except for such termination, suspension or material modification which would not reasonably be expected to have a Material Adverse Change and, to the Company's knowledge, there are no reasonable grounds for the same. The manufacture of the Company's products by or on behalf of the Company, to the knowledge of the Company, is being conducted in compliance with all applicable statutes, rules, regulations and policies of the FDA or by any supranational, foreign, federal, state or local governmental body exercising comparable regulatory authority, to which the Company is subject, except where the failure to so comply, whether individually or in the aggregate, would not reasonably be expected to have a Material Adverse Change.

(oo) Testing. The Company has not conducted any human clinical trials subject to certain regulatory requirements, including, but not limited to Investigational Device Exemption or Good Clinical Practice regulations as required by the FDA or by any supranational, foreign, federal, state or local governmental body exercising comparable regulatory authority.

(pp) Regulatory Compliance. The Company has not received any unresolved FDA Form 483, notice of adverse filing, warning letter, untitled letter or other correspondence or notice from the FDA, or any other court or arbitrator or federal, state, local, or foreign governmental or regulatory authority, alleging or asserting material noncompliance with the Federal Food, Drug and Cosmetic Act (21 U.S..C § 301 et seq.) (the "**FDCA**"). The Company and its directors, officers, employees and agents are and have been in material compliance with applicable health care laws, including without limitation, the FDCA, the Federal Trade Commission Act and the regulation promulgated pursuant to such laws, and comparable state laws, and all other local, state, federal, national, supranational, and foreign laws, manual provisions, policies and administrative guidance relating to the regulation of the Company (collectively, "**Health Care Laws**"). The Company has not knowingly made an untrue statement of material fact or fraudulent statement to any governmental agent or authority, or knowingly committed an act, or knowingly made a written submission that, at the time such disclosure or act, as applicable, was made, would reasonably be expected to be in violation of any Health Care Law. The Company has not, either voluntarily or

involuntarily, initiated, conducted or issued or caused to be initiated, conducted or issued, any recall, correction, market withdrawal or replacement, safety alert, post-sale warning, or other notice or action relating to the alleged lack of safety or quality of any product or any alleged product defect or violation and, to the Company's knowledge, no third-party has initiated or conducted any such notice or action. Neither the Company nor any of its officers, directors, employees, or agents has been or is currently excluded from participation in any federal or state healthcare program. Neither the Company nor, to the Company's knowledge, any of its officers, directors, employees, or agents has been or is currently "suspended" or "debarred" from selling products to the U.S. government or its agencies pursuant to the Federal Acquisition Regulation relating to debarment and suspension applicable to federal government agencies under 48 C.F.R. Subpart 9.4.

(qq) Title to Real and Personal Property. The Company does not own any real property and the Company and each of its subsidiaries have valid and marketable rights to lease or otherwise use, all items of real or personal property which are material to the business of the Company and its subsidiaries taken as a whole, in each case free and clear of all liens, encumbrances, security interests, claims and defects that (i) do not, singularly or in the aggregate, materially affect the value of such property and do not materially interfere with the use made and proposed to be made of such property by the Company or any of its subsidiaries or (ii) would not reasonably be expected, singularly or in the aggregate, to have a Material Adverse Change.

(rr) No Labor Dispute. There is (A) no significant unfair labor practice complaint pending against the Company, or any of its subsidiaries, nor to the Company's knowledge, threatened against it or any of its subsidiaries, before the National Labor Relations Board, any state or local labor relation board or any foreign labor relations board, and no significant grievance or significant arbitration proceeding arising out of or under any collective bargaining agreement is so pending against the Company or any of its subsidiaries, or, to the Company's knowledge, threatened against it and (B) no labor disturbance by or dispute with, employees of the Company or any of its subsidiaries exists or, to the Company's knowledge, is threatened, and the Company is not aware of any existing or imminent labor disturbance by the employees of any of its or its subsidiaries' principal suppliers, manufacturers, customers or contractors, that would reasonably be expected, singularly or in the aggregate, to have a Material Adverse Change. The Company is not aware that any key employee or significant group of employees of the Company or any subsidiary plans to terminate employment with the Company or any such subsidiary.

(ss) Compliance with ERISA. No "prohibited transaction" (as defined in Section 406 of the Employee Retirement Income Security Act of 1974, as amended, including the regulations and published interpretations thereunder ("**ERISA**"), or Section 4975 of the Internal Revenue Code of 1986, as amended from time to time (the "**Code**")) or "accumulated funding deficiency" (as defined in Section 302 of ERISA) or any of the events set forth in Section 4043(b) of ERISA (other than events with respect to which the thirty (30)-day notice requirement under Section 4043 of ERISA has been waived) has occurred or would reasonably be expected to occur with respect to any employee benefit plan of the Company or any of its subsidiaries which would, singularly or in the aggregate, have a Material Adverse Change. Each employee benefit plan of the Company or any of its subsidiaries is in compliance in all material respects with applicable law, including ERISA and the Code. The Company and its subsidiaries have not incurred and could not reasonably be expected to incur liability under Title IV of ERISA with respect to the termination

of, or withdrawal from, any pension plan (as defined in ERISA). Each pension plan for which the Company or any of its subsidiaries would have any liability that is intended to be qualified under Section 401(a) of the Code is so qualified, and, to the Company's knowledge, nothing has occurred, whether by action or by failure to act, which could, singularly or in the aggregate, cause the loss of such qualification.

(tt) No Undisclosed Relationships. No relationship, direct or indirect, exists between or among the Company or any of its subsidiaries on the one hand, and the directors, officers, stockholders (or analogous interest holders), customers or suppliers of the Company or any of its affiliates on the other hand, which is required to be described in the Prospectus and which is not so described.

(uu) Statistical and Market Data. The statistical and market related data included in the Prospectus are based on or derived from sources that the Company believes to be reliable and accurate, and such data agree with the sources from which they are derived.

(vv) No Acquisitions or Dispositions. Except as are described in the Prospectus, there are no contracts, letters of intent, term sheets, agreement, arrangements or understandings with respect to the direct or indirect acquisition or disposition by the Company of material interests in real or personal property.

(ww) Other At The Market Sales Agreements. The Company is not a party to any agreement with an agent or underwriter for any other "at the market" offering.

Any certificate signed by an officer of the Company and delivered to Cowen or to counsel for Cowen pursuant to or in connection with this Agreement shall be deemed to be a representation and warranty by the Company to Cowen as to the matters set forth therein.

The Company acknowledges that Cowen and, for purposes of the opinions to be delivered pursuant to Section 7 hereof, counsel to the Company and counsel to Cowen, will rely upon the accuracy and truthfulness of the foregoing representations and hereby consents to such reliance.

7. Covenants of the Company. The Company covenants and agrees with Cowen that:

(a) Registration Statement Amendments. After the date of this Agreement and during any period in which a Prospectus relating to any Placement Shares is required to be delivered by Cowen under the Securities Act (including in circumstances where such requirement may be satisfied pursuant to Rule 172 under the Securities Act), (i) the Company will notify Cowen promptly of the time when any subsequent amendment to the Registration Statement, other than documents incorporated by reference, has been filed with the Commission and/or has become effective or any subsequent supplement to the Prospectus has been filed and of any request by the Commission for any amendment or supplement to the Registration Statement or Prospectus or for additional information (insofar as it relates to the transactions contemplated hereby), (ii) the Company will prepare and file with the Commission, promptly upon Cowen's reasonable request, any amendments or supplements to the Registration Statement or Prospectus that, in Cowen's reasonable opinion, may be necessary or advisable in connection with the distribution of the Placement Shares by Cowen (*provided, however*, that the failure of Cowen to make such request shall not relieve the Company of any obligation or liability hereunder, or affect Cowen's right to

rely on the representations and warranties made by the Company in this Agreement); (iii) the Company will not file any amendment or supplement to the Registration Statement or Prospectus, other than documents incorporated by reference, relating to the Placement Shares or a security convertible into the Placement Shares unless a copy thereof has been submitted to Cowen within a reasonable period of time before the filing and Cowen has not reasonably objected thereto (*provided, however*, that the failure of Cowen to make such objection shall not relieve the Company of any obligation or liability hereunder, or affect Cowen's right to rely on the representations and warranties made by the Company in this Agreement and *provided further*, that the only remedy Cowen shall have with respect to the failure by the Company to make such filing shall be to cease making sales under this Agreement until such amendment or supplement is filed) and the Company will furnish to Cowen at the time of filing thereof a copy of any document that upon filing is deemed to be incorporated by reference into the Registration Statement or Prospectus, except for those documents available via EDGAR; (iv) the Company will cause each amendment or supplement to the Prospectus, other than documents incorporated by reference, to be filed with the Commission as required pursuant to the applicable paragraph of Rule 424(b) of the Securities Act, and (v) prior to the termination of this Agreement, the Company will notify Cowen if at any time the Registration Statement shall no longer be effective as a result of the passage of time pursuant to Rule 415 under the Securities Act or otherwise. Prior to the initial sale of any Placement Shares, the Company shall file a final Prospectus Supplement pursuant to Rule 424(b) of the Securities Act relating to the Placement Shares.

(b) Notice of Commission Stop Orders. The Company will advise Cowen, promptly after it receives notice or obtains knowledge thereof, of the issuance or threatened issuance by the Commission of any stop order suspending the effectiveness of the Registration Statement, of the suspension of the qualification of the Placement Shares for offering or sale in any jurisdiction, or of the initiation or threatening of any proceeding for any such purpose; and it will promptly use its commercially reasonable efforts to prevent the issuance of any stop order or to obtain its withdrawal if such a stop order should be issued.

(c) Delivery of Prospectus; Subsequent Changes. During any period in which a Prospectus relating to the Placement Shares is required to be delivered by Cowen under the Securities Act with respect to a pending sale of the Placement Shares, (including in circumstances where such requirement may be satisfied pursuant to Rule 172 under the Securities Act), the Company will comply with all requirements imposed upon it by the Securities Act, as from time to time in force, and to file on or before their respective due dates all reports (taking into account any extensions available under the Exchange Act) and any definitive proxy or information statements required to be filed by the Company with the Commission pursuant to Sections 13(a), 13(c), 14, 15(d) or any other provision of or under the Exchange Act. If during such period any event occurs as a result of which the Prospectus as then amended or supplemented would include an untrue statement of a material fact or omit to state a material fact necessary to make the statements therein, in the light of the circumstances then existing, not misleading, or if during such period it is necessary to amend or supplement the Registration Statement or Prospectus to comply with the Securities Act, the Company will promptly notify Cowen to suspend the offering of Placement Shares during such period and the Company will promptly amend or supplement the Registration Statement or Prospectus (at the expense of the Company) so as to correct such statement or omission or effect such compliance, *provided, however*, that the Company may delay

any such amendment or supplement if (i) in the reasonable judgment of the Company, it is in the best interest of the Company to do so and (ii) no Placement Notice is in effect during such time.

(d) Listing of Placement Shares. During any period in which the Prospectus relating to the Placement Shares is required to be delivered by Cowen under the Securities Act with respect to a pending sale of the Placement Shares (including in circumstances where such requirement may be satisfied pursuant to Rule 172 under the Securities Act), the Company will use its commercially reasonable efforts to cause the Placement Shares to be listed on Nasdaq and to qualify the Placement Shares for sale under the securities laws of such jurisdictions as Cowen reasonably designates and to continue such qualifications in effect so long as required for the distribution of the Placement Shares; *provided*, *however,* that the Company shall not be required in connection therewith to qualify as a foreign corporation or dealer in securities or file a general consent to service of process in any jurisdiction.

(e) Delivery of Registration Statement and Prospectus. The Company will furnish to Cowen and its counsel (at the expense of the Company) copies of the Registration Statement, the Prospectus (including all documents incorporated by reference therein) and all amendments and supplements to the Registration Statement or Prospectus that are filed with the Commission during any period in which a Prospectus relating to the Placement Shares is required to be delivered under the Securities Act (including all documents filed with the Commission during such period that are deemed to be incorporated by reference therein), in each case as soon as reasonably practicable and in such quantities as Cowen may from time to time reasonably request and, at Cowen's request, will also furnish copies of the Prospectus to each exchange or market on which sales of the Placement Shares may be made; *provided*, *however,* that the Company shall not be required to furnish any document (other than the Prospectus) to Cowen to the extent such document is available on EDGAR.

(f) Earnings Statement. The Company will make generally available to its security holders as soon as practicable, but in any event not later than 15 months after the end of the Company's current fiscal quarter, an earnings statement covering a 12-month period that satisfies the provisions of Section 11(a) and Rule 158 of the Securities Act.

(g) Expenses. The Company, whether or not the transactions contemplated hereunder are consummated or this Agreement is terminated, in accordance with the provisions of Section 11 hereunder, will pay the following expenses all incident to the performance of its obligations hereunder, including, but not limited to, expenses relating to (i) the preparation, printing and filing of the Registration Statement and each amendment and supplement thereto, of each Prospectus and of each amendment and supplement thereto, (ii) the preparation, issuance and delivery of the Placement Shares, (iii) the qualification of the Placement Shares under securities laws in accordance with the provisions of Section 7(d) of this Agreement, including filing fees (provided, however, that any fees or disbursements of counsel for Cowen in connection therewith shall be paid by Cowen except as set forth in (vii) below), (iv) the printing and delivery to Cowen of copies of the Prospectus and any amendments or supplements thereto, and of this Agreement, (v) the fees and expenses incurred in connection with the listing or qualification of the Placement Shares for trading on Nasdaq, (vi) the filing fees and expenses, if any, of the Commission, (vii) the filing fees for filings with the FINRA Corporate Financing Department, and (viii) the reasonable fees and disbursements of Cowen's outside counsel in connection with this Agreement in an amount not to exceed $75,000.

(h) Use of Proceeds. The Company will use the Net Proceeds as described in the Prospectus in the section entitled "Use of Proceeds."

(i) Notice of Other Sales. During the pendency of any Placement Notice given hereunder, and for 5 trading days following the termination of any Placement Notice given hereunder, the Company shall provide Cowen notice as promptly as reasonably possible before it offers to sell, contracts to sell, sells, grants any option to sell or otherwise disposes of any shares of Common Stock (other than Placement Shares offered pursuant to the provisions of this Agreement) or securities convertible into or exchangeable for Common Stock, warrants or any rights to purchase or acquire Common Stock; *provided*, that such notice shall not be required in connection with the (i) issuance, grant or sale of Common Stock, options to purchase shares of Common Stock or Common Stock issuable upon the exercise of options or other equity awards pursuant to any stock option, stock bonus, employee stock purchase, or other stock plan or arrangement described in the Prospectus, (ii) the issuance of securities in connection with an acquisition, merger or sale, purchase of assets, or other collaboration or strategic transaction, (iii) the issuance or sale of Common Stock pursuant to any dividend reinvestment plan that the Company may adopt from time to time provided the implementation of such is disclosed to Cowen in advance, (iv) any shares of common stock issuable upon the exchange, conversion or redemption of securities or the exercise of warrants, options or other rights in effect or outstanding, or (v) adopt a new equity incentive or purchase plan, and file a registration statement on Form S-8 under the Securities Act to register the offer and sale of securities to be issued pursuant to such new equity incentive or purchase plan, and issue securities pursuant to such new equity incentive or purchase plan (including, without limitation, the issuance of shares of Common Stock upon the exercise of options or other securities issued pursuant to such new equity incentive or purchase plan), provided that such new equity incentive or purchase plan satisfies the transaction requirements of General Instruction A.1 of Form S-8 under the Securities Act.

(j) Change of Circumstances. The Company will, at any time during a fiscal quarter in which the Company intends to tender a Placement Notice or sell Placement Shares, advise Cowen promptly after it shall have received notice or obtained knowledge thereof, of any information or fact that would alter or affect in any material respect any opinion, certificate, letter or other document provided to Cowen pursuant to this Agreement.

(k) Due Diligence Cooperation. The Company will cooperate with any reasonable due diligence review conducted by Cowen or its agents in connection with the transactions contemplated hereby, including, without limitation, providing information and making available documents and senior corporate officers, during regular business hours and at the Company's principal offices, as Cowen may reasonably request.

(l) Required Filings Relating to Placement of Placement Shares. The Company agrees that on such dates as the Securities Act shall require, the Company will (i) file a prospectus supplement with the Commission under the applicable paragraph of Rule 424(b) under the Securities Act (each and every filing under Rule 424(b), a "**Filing Date**"), and (ii) deliver such number of copies of each such prospectus supplement to each exchange or market on which such sales were effected as may be required by the rules or regulations of such exchange or market. The Company shall disclose in its quarterly reports on Form 10-Q and in its annual reports on Form 10-K, the number of the Placement Shares sold through Cowen under this Agreement, and the gross proceeds and Net Proceeds to the Company from the sale of the Placement Shares and the

compensation paid by the Company with respect to sales of the Placement Shares pursuant to this Agreement during the relevant quarter or, in the case of an Annual Report on Form 10-K, during the fiscal year covered by such Annual Report and the fourth quarter of such fiscal year.

(m) Bring-Down Dates; Certificate. On or prior to the First Delivery Date and each time (i) the Company files the Prospectus relating to the Placement Shares or amends or supplements the Registration Statement or the Prospectus relating to the Placement Shares (other than a prospectus supplement filed in accordance with Section 7(l) of this Agreement) by means of a post-effective amendment, sticker, or supplement but not by means of incorporation of document(s) by reference to the Registration Statement or the Prospectus relating to the Placement Shares; (ii) the Company files an annual report on Form 10-K under the Exchange Act; (iii) the Company files its quarterly reports on Form 10-Q under the Exchange Act; or (iv) the Company files a report on Form 8-K containing amended financial information (other than an earnings release or other information "furnished" pursuant to Items 2.02, 7.01 or 9.01 of Form 8-K) under the Exchange Act (each date of filing of one or more of the documents referred to in clauses (i) through (iv) shall be a "**Bring-Down Date**"); the Company shall furnish Cowen with a certificate, in the form attached hereto as Exhibit 7(m) within three (3) Trading Days of any Bring-Down Date if requested by Cowen. The requirement to provide a certificate under this Section 7(m) shall be waived for any Bring-Down Date occurring at a time at which no Placement Notice is pending, which waiver shall continue until the earlier to occur of the date the Company delivers a Placement Notice hereunder (which for such calendar quarter shall be considered a Bring-Down Date) and the next occurring Bring-Down Date; *provided*, *however*, that such waiver shall not apply for any Bring-Down Date on which the Company files its annual report on Form 10-K. Notwithstanding the foregoing, if the Company subsequently decides to sell Placement Shares following a Bring-Down Date when the Company relied on such waiver and did not provide Cowen with a certificate under this Section 7(m), then before the Company delivers the Placement Notice or Cowen sells any Placement Shares, the Company shall provide Cowen with a certificate, in the form attached hereto as Exhibit 7(m), dated the date of the Placement Notice.

(n) Legal Opinion. On or prior to the First Delivery Date and within three (3) Trading Days of each Bring-Down Date with respect to which the Company is obligated to deliver a certificate in the form attached hereto as Exhibit 7(m) for which no waiver is applicable, the Company shall cause to be furnished to Cowen a written opinion of Paul Hastings LLP ("Company Counsel"), or other counsel reasonably satisfactory to Cowen, in form and substance reasonably satisfactory to Cowen and its counsel, dated the date that the opinion is required to be delivered; *provided*, *however*, that in lieu of such opinions for subsequent Bring-Down Dates, counsel may furnish Cowen with a letter (a "**Reliance Letter**") to the effect that Cowen may rely on a prior opinion delivered under this Section 7(n) to the same extent as if it were dated the date of such letter (except that statements in such prior opinion shall be deemed to relate to the Registration Statement and the Prospectus as amended or supplemented at such Bring-Down Date).

(o) Comfort Letter. On or prior to the First Delivery Date and within three (3) Trading Days of each Bring-Down Date with respect to which the Company is obligated to deliver a certificate in the form attached hereto as Exhibit 7(m) for which no waiver is applicable, the Company shall cause its independent accountants to furnish Cowen letters (the "**Comfort Letters**"), dated the date the Comfort Letter is delivered, in form and substance reasonably satisfactory to Cowen, (i) confirming that they are an independent registered public accounting

firm within the meaning of the Securities Act and the PCAOB, (ii) stating, as of such date, the conclusions and findings of such firm with respect to the financial information and other matters ordinarily covered by accountants' "comfort letters" to Cowen in connection with registered public offerings (the first such letter, the **"Initial Comfort Letter"**) and (iii) updating the Initial Comfort Letter with any information that would have been included in the Initial Comfort Letter had it been given on such date and modified as necessary to relate to the Registration Statement and the Prospectus, as amended and supplemented to the date of such letter.

(p) Market Activities. The Company will not, directly or indirectly, (i) take any action designed to cause or result in, or that constitutes or might reasonably be expected to constitute, the stabilization or manipulation of the price of any security of the Company to facilitate the sale or resale of the Placement Shares or (ii) sell, bid for, or purchase the Common Stock to be issued and sold pursuant to this Agreement, or pay anyone any compensation for soliciting purchases of the Placement Shares other than Cowen; provided, however, that the Company may bid for and purchase shares of its common stock in accordance with Rule 10b-18 under the Exchange Act.

(q) Insurance. The Company and its subsidiaries shall maintain, or cause to be maintained, insurance in such amounts and covering such risks as is reasonable and customary for the business for which it is engaged.

(r) Compliance with Laws. The Company and each of its subsidiaries shall maintain, or cause to be maintained, all material permits, licenses and other authorizations required by federal, state and local law in order to conduct their businesses as described in the Prospectus, and the Company and each of its subsidiaries shall conduct their businesses, or cause their businesses to be conducted, in substantial compliance with such permits, licenses and authorizations and with applicable Health Care Laws, environmental laws, except where the failure to maintain or be in compliance with such permits, licenses and authorizations could not reasonably be expected to result in a Material Adverse Change.

(s) Investment Company Act. The Company will conduct its affairs in such a manner so as to reasonably ensure that neither it nor its subsidiaries will be or become, at any time prior to the termination of this Agreement, an "investment company," as such term is defined in the Investment Company Act, assuming no change in the Commission's current interpretation as to entities that are not considered an investment company.

(t) Securities Act and Exchange Act. The Company will use its reasonable best efforts to comply with all requirements imposed upon it by the Securities Act and the Exchange Act as from time to time in force, so far as necessary to permit the continuance of sales of, or dealings in, the Placement Shares as contemplated by the provisions hereof and the Prospectus.

(u) No Offer to Sell. Other than a Permitted Free Writing Prospectus, neither Cowen nor the Company (including its agents and representatives, other than Cowen in its capacity as such) will make, use, prepare, authorize, approve or refer to any written communication (as defined in Rule 405 under the Securities Act), required to be filed with the Commission, that constitutes an offer to sell or solicitation of an offer to buy Common Stock hereunder.

(v) Sarbanes-Oxley Act. The Company and its subsidiaries will use their best efforts to comply with all effective applicable provisions of the Sarbanes-Oxley Act.

(w) Affirmation. Each Placement Notice delivered by the Company to Cowen shall be deemed to be (i) an affirmation that the representations, warranties and agreements of the Company herein contained and contained in any certificate delivered to Cowen pursuant hereto are true and correct at the time of delivery of such Placement Notice, and (ii) an undertaking that such representations, warranties and agreements will be true and correct on any applicable Time of Sale and Settlement Date, as though made at and as of each such time (it being understood that such representations, warranties and agreements shall relate to the Registration Statement and the Prospectus as amended and supplemented to the time of such Placement Notice acceptance).

(x) Renewal. If immediately prior to the third anniversary (the "**Renewal Deadline**") of the initial effective date of the Registration Statement, the aggregate gross sales price of Placement Shares sold by the Company is less than the Maximum Amount and this Agreement has not expired or been terminated, the Company will, prior to the Renewal Deadline, file, if it has not already done so and is eligible to do so, a new shelf registration statement relating to the Placement Shares, in a form reasonably satisfactory to Cowen, and, if not automatically effective, will use its commercially reasonable efforts to cause such registration statement to be declared effective within 60 days after the Renewal Deadline. The Company will take all other action necessary or appropriate to permit the issuance and sale of the Placement Shares to continue as contemplated in the expired registration statement relating to the Placement Shares. References herein to the Registration Statement shall include such new shelf registration statement.

(y) General Instruction I.B.6. of Form S-3. If, from and after the date of this Agreement, the Company is no longer eligible to use Form S-3 (including pursuant to General Instruction I.B.6.) at the time it files with the Commission an annual report on Form 10-K or any post-effective amendment to the Registration Statement, then it shall promptly notify Cowen and, within two business days after the date of filing of such annual report on Form 10-K or amendment to the Registration Statement, the Company shall file a new prospectus supplement with the Commission reflecting the number of shares of Common Stock available to be offered and sold by the Company under this Agreement pursuant to General Instruction I.B.6. of Form S-3; provided, however, that the Company may delay the filing of any such prospectus supplement for up to 30 days if, in the reasonable judgment of the Company, it is in the best interest of the Company to do so, provided that no Placement Notice is in effect or pending during such time. Until such time as the Company shall have corrected such misstatement or omission or effected such compliance, the Company shall not notify Cowen to resume the offering of Placement Shares.

8. Conditions to Cowen's Obligations. The obligations of Cowen hereunder with respect to a Placement Notice will be subject to the continuing accuracy and completeness of the representations and warranties made by the Company herein, to the due performance by the Company of its obligations hereunder and thereunder, to the completion by Cowen of a due diligence review satisfactory to Cowen in its reasonable judgment, and to the continuing satisfaction (or waiver by Cowen in its sole discretion) of the following additional conditions:

(a) Registration Statement Effective. The Registration Statement shall be effective and shall be available for (i) all sales of Placement Shares issued pursuant to all prior Placement Notices and (ii) the sale of all Placement Shares contemplated to be issued pursuant to any Placement Notice.

(b) No Material Notices. None of the following events shall have occurred and be continuing: (i) receipt by the Company or any of its subsidiaries of any request for additional information from the Commission or any other federal or state governmental authority during the period of effectiveness of the Registration Statement, the response to which would require any post-effective amendments or supplements to the Registration Statement or the Prospectus; (ii) the issuance by the Commission or any other federal or state governmental authority of any stop order suspending the effectiveness of the Registration Statement or the initiation of any proceedings for that purpose; (iii) receipt by the Company of any notification with respect to the suspension of the qualification or exemption from qualification of any of the Placement Shares for sale in any jurisdiction or the initiation or threatening of any proceeding for such purpose; or (iv) the occurrence of any event that makes any material statement made in the Registration Statement or the Prospectus or any material document incorporated or deemed to be incorporated therein by reference untrue in any material respect or that requires the making of any changes in the Registration Statement, related Prospectus or such documents so that, in the case of the Registration Statement, it will not contain any materially untrue statement of a material fact or omit to state any material fact required to be stated therein or necessary to make the statements therein not misleading and, that in the case of the Prospectus, it will not contain any materially untrue statement of a material fact or omit to state any material fact required to be stated therein or necessary to make the statements therein, in the light of the circumstances under which they were made, not misleading.

(c) No Misstatement or Material Omission. Cowen shall not have advised the Company that the Registration Statement or Prospectus, or any amendment or supplement thereto, contains an untrue statement of fact that in Cowen's reasonable opinion is material, or omits to state a fact that in Cowen's reasonable opinion is material and is required to be stated therein or is necessary to make the statements therein not misleading.

(d) Material Changes. Except as contemplated in the Prospectus, or disclosed in the Company's reports filed with the Commission, there shall not have been any material adverse change, on a consolidated basis, in the authorized capital stock of the Company or any Material Adverse Change or any development that would reasonably be expected to result in a Material Adverse Change, or any downgrading in or withdrawal of the rating assigned to any of the Company's securities (other than asset backed securities) by any rating organization or a public announcement by any rating organization that it has under surveillance or review its rating of any of the Company's securities (other than asset backed securities), the effect of which, in the case of any such action by a rating organization described above, in the reasonable judgment of Cowen (without relieving the Company of any obligation or liability it may otherwise have), is so material as to make it impracticable or inadvisable to proceed with the offering of the Placement Shares on the terms and in the manner contemplated in the Prospectus.

(e) Company Counsel Legal Opinion. Cowen shall have received the opinions of Company Counsel required to be delivered pursuant to Section 7(n) on or before the date on which such delivery of such opinion is required pursuant to Section 7(n).

(f) Cowen Counsel Legal Opinion. Cowen shall have received from DLA Piper LLP (US), counsel for Cowen, such opinion or opinions, on or before the date on which the delivery of the Company Counsel legal opinion is required pursuant to Section 7(n), with respect

to such matters as Cowen may reasonably require, and the Company shall have furnished to such counsel such documents as they reasonably request for enabling them to pass upon such matters.

(g) Comfort Letter. Cowen shall have received the Comfort Letter required to be delivered pursuant to Section 7(o) on or before the date on which such delivery of such Comfort Letter is required pursuant to Section 7(o).

(h) Representation Certificate. Cowen shall have received the certificate required to be delivered pursuant to Section 7(m) on or before the date on which delivery of such certificate is required pursuant to Section 7(m).

(i) Secretary's Certificate. On or prior to the First Delivery Date, Cowen shall have received a certificate, signed on behalf of the Company by its corporate secretary, in form and substance satisfactory to Cowen and its counsel.

(j) No Suspension. Trading in the Common Stock shall not have been suspended on Nasdaq.

(k) Other Materials. On each date on which the Company is required to deliver a certificate pursuant to Section 7(m), the Company shall have furnished to Cowen such appropriate further information, certificates and documents as Cowen may have reasonably requested. All such opinions, certificates, letters and other documents shall have been in compliance with the provisions hereof. The Company will furnish Cowen with such conformed copies of such opinions, certificates, letters and other documents as Cowen shall have reasonably requested.

(l) Securities Act Filings Made. All filings with the Commission required by Rule 424 under the Securities Act to have been filed prior to the issuance of any Placement Notice hereunder shall have been made within the applicable time period prescribed for such filing by Rule 424.

(m) Approval for Listing. The Placement Shares shall either have been (i) approved for listing on Nasdaq, subject only to notice of issuance, or (ii) the Company shall have filed an application for listing of the Placement Shares on Nasdaq at, or prior to, the issuance of any Placement Notice.

(n) FINRA. FINRA shall have raised no unresolved objection to the fairness and reasonableness of the terms of this Agreement or the transactions contemplated hereby.

(o) No Termination Event. There shall not have occurred any event that would permit Cowen to terminate this Agreement pursuant to Section 11(a).

9. Indemnification and Contribution.

(a) Company Indemnification. The Company agrees to indemnify and hold harmless Cowen, the directors, officers, partners, employees and agents of Cowen and each person, if any, who (i) controls Cowen within the meaning of Section 15 of the Securities Act or Section 20 of the Exchange Act, or (ii) is controlled by or is under common control with Cowen from and against any and all losses, claims, liabilities, expenses and damages (including, but not limited to, any and all reasonable investigative, legal and other expenses incurred in connection with, and

any and all amounts paid in settlement (in accordance with Section 9(c)) of, any action, suit or proceeding between any of the indemnified parties and any indemnifying parties or between any indemnified party and any third party, or otherwise, or any claim asserted), as and when incurred, to which Cowen, or any such person, may become subject under the Securities Act, the Exchange Act or other federal or state statutory law or regulation, at common law or otherwise, insofar as such losses, claims, liabilities, expenses or damages arise out of or are based, directly or indirectly, on (x) any untrue statement or alleged untrue statement of a material fact contained in the Registration Statement or the Prospectus or any amendment or supplement to the Registration Statement or the Prospectus or in any free writing prospectus or in any application or other document executed by or on behalf of the Company or based on written information furnished by or on behalf of the Company filed in any jurisdiction in order to qualify the Common Stock under the securities laws thereof or filed with the Commission, (y) the omission or alleged omission to state in any such document a material fact required to be stated in it or necessary to make the statements in it not misleading or (z) any breach by any of the indemnifying parties of any of their respective representations, warranties and agreements contained in this Agreement; *provided*, *however*, that this indemnity agreement shall not apply to the extent that such loss, claim, liability, expense or damage arises from the sale of the Placement Shares pursuant to this Agreement and is caused directly or indirectly by an untrue statement or omission made in reliance upon and in conformity with solely Agent's Information. "Agent's Information" means, solely, the following information in the Prospectus: the third sentence of the eighth paragraph under the caption "Plan of Distribution" in the Prospectus. This indemnity agreement will be in addition to any liability that the Company might otherwise have.

(b) Cowen Indemnification. Cowen agrees to indemnify and hold harmless the Company and its directors and each officer of the Company that signed the Registration Statement, and each person, if any, who (i) controls the Company within the meaning of Section 15 of the Securities Act or Section 20 of the Exchange Act or (ii) is controlled by or is under common control with the Company against any and all loss, liability, claim, damage and expense described in the indemnity contained in Section 9(a), as incurred, but only with respect to untrue statements or omissions, or alleged untrue statements or omissions, made in the Registration Statement (or any amendments thereto) or the Prospectus (or any amendment or supplement thereto) in reliance upon and in conformity with the Agent's Information.

(c) Procedure. Any party that proposes to assert the right to be indemnified under this Section 9 will, promptly after receipt of notice of commencement of any action against such party in respect of which a claim is to be made against an indemnifying party or parties under this Section 9, notify each such indemnifying party of the commencement of such action, enclosing a copy of all papers served, but the omission so to notify such indemnifying party will not relieve the indemnifying party from (i) any liability that it might have to any indemnified party otherwise than under this Section 9 and (ii) any liability that it may have to any indemnified party under the foregoing provision of this Section 9 unless, and only to the extent that, such omission results in the forfeiture of substantive rights or defenses by the indemnifying party. If any such action is brought against any indemnified party and it notifies the indemnifying party of its commencement, the indemnifying party will be entitled to participate in and, to the extent that it elects by delivering written notice to the indemnified party promptly after receiving notice of the commencement of the action from the indemnified party, jointly with any other indemnifying party similarly notified, to assume the defense of the action, with counsel reasonably satisfactory to the indemnified party,

and after notice from the indemnifying party to the indemnified party of its election to assume the defense, the indemnifying party will not be liable to the indemnified party for any legal or other expenses except as provided below and except for the reasonable costs of investigation subsequently incurred by the indemnified party in connection with the defense. The indemnified party will have the right to employ its own counsel in any such action, but the fees, expenses and other charges of such counsel will be at the expense of such indemnified party unless (1) the employment of counsel by the indemnified party has been authorized in writing by the indemnifying party, (2) the indemnified party has reasonably concluded (based on advice of counsel) that there may be legal defenses available to it or other indemnified parties that are different from or in addition to those available to the indemnifying party, (3) a conflict or potential conflict exists (based on advice of counsel to the indemnified party) between the indemnified party and the indemnifying party (in which case the indemnifying party will not have the right to direct the defense of such action on behalf of the indemnified party) or (4) the indemnifying party has not in fact employed counsel to assume the defense of such action within a reasonable time after receiving notice of the commencement of the action, in each of which cases the reasonable fees, disbursements and other charges of counsel will be at the expense of the indemnifying party or parties. It is understood that the indemnifying party or parties shall not, in connection with any proceeding or related proceedings in the same jurisdiction, be liable for the reasonable fees, disbursements and other charges of more than one separate firm admitted to practice in such jurisdiction at any one time for all such indemnified party or parties. All such fees, disbursements and other charges will be reimbursed by the indemnifying party promptly as they are incurred after the indemnifying party receives a written invoice relating to fees, disbursements and other charges in reasonable detail. An indemnifying party will not, in any event, be liable for any settlement of any action or claim effected without its written consent. No indemnifying party shall, without the prior written consent of each indemnified party, settle or compromise or consent to the entry of any judgment in any pending or threatened claim, action or proceeding relating to the matters contemplated by this Section 9 (whether or not any indemnified party is a party thereto), unless such settlement, compromise or consent includes an unconditional release of each indemnified party from all liability arising or that may arise out of such claim, action or proceeding.

(d) Contribution. In order to provide for just and equitable contribution in circumstances in which the indemnification provided for in the foregoing paragraphs of this Section 9 is applicable in accordance with its terms but for any reason is held to be unavailable from the Company or Cowen, the Company and Cowen will contribute to the total losses, claims, liabilities, expenses and damages (including any investigative, legal and other expenses reasonably incurred in connection with, and any amount paid in settlement of, any action, suit or proceeding or any claim asserted, but after deducting any contribution received by the Company from persons other than Cowen, such as persons who control the Company within the meaning of the Securities Act, officers of the Company who signed the Registration Statement and directors of the Company, who also may be liable for contribution) to which the Company and Cowen may be subject in such proportion as shall be appropriate to reflect the relative benefits received by the Company on the one hand and Cowen on the other. The relative benefits received by the Company on the one hand and Cowen on the other hand shall be deemed to be in the same proportion as the total Net Proceeds from the sale of the Placement Shares (before deducting expenses) received by the Company bear to the total compensation received by Cowen from the sale of Placement Shares on behalf of the Company. If, but only if, the allocation provided by the foregoing sentence is not permitted by applicable law, the allocation of contribution shall be made in such proportion as is appropriate to

reflect not only the relative benefits referred to in the foregoing sentence but also the relative fault of the Company, on the one hand, and Cowen, on the other, with respect to the statements or omission that resulted in such loss, claim, liability, expense or damage, or action in respect thereof, as well as any other relevant equitable considerations with respect to such offering. Such relative fault shall be determined by reference to, among other things, whether the untrue or alleged untrue statement of a material fact or omission or alleged omission to state a material fact relates to information supplied by the Company or Cowen, the intent of the parties and their relative knowledge, access to information and opportunity to correct or prevent such statement or omission. The Company and Cowen agree that it would not be just and equitable if contributions pursuant to this Section 9(d) were to be determined by pro rata allocation or by any other method of allocation that does not take into account the equitable considerations referred to herein. The amount paid or payable by an indemnified party as a result of the loss, claim, liability, expense, or damage, or action in respect thereof, referred to above in this Section 9(d) shall be deemed to include, for the purpose of this Section 9(d), any legal or other expenses reasonably incurred by such indemnified party in connection with investigating or defending any such action or claim to the extent consistent with Section 9(c) hereof. Notwithstanding the foregoing provisions of this Section 9(d), Cowen shall not be required to contribute any amount in excess of the commissions received by it under this Agreement and no person found guilty of fraudulent misrepresentation (within the meaning of Section 11(f) of the Securities Act) will be entitled to contribution from any person who was not guilty of such fraudulent misrepresentation. For purposes of this Section 9(d), any person who controls a party to this Agreement within the meaning of the Securities Act, and any officers, directors, partners, employees or agents of Cowen, will have the same rights to contribution as that party, and each officer of the Company who signed the Registration Statement will have the same rights to contribution as the Company, subject in each case to the provisions hereof. Any party entitled to contribution, promptly after receipt of notice of commencement of any action against such party in respect of which a claim for contribution may be made under this Section 9(d), will notify any such party or parties from whom contribution may be sought, but the omission to so notify will not relieve that party or parties from whom contribution may be sought from any other obligation it or they may have under this Section 9(d) except to the extent that the failure to so notify such other party materially prejudiced the substantive rights or defenses of the party from whom contribution is sought. Except for a settlement entered into pursuant to the last sentence of Section 9(c) hereof, no party will be liable for contribution with respect to any action or claim settled without its written consent if such consent is required pursuant to Section 9(c) hereof.

10. Representations and Agreements to Survive Delivery. The indemnity and contribution agreements contained in Section 9 of this Agreement and all representations and warranties of the Company herein or in certificates delivered pursuant hereto shall survive, as of their respective dates, regardless of (i) any investigation made by or on behalf of Cowen, any controlling persons, or the Company (or any of their respective officers, directors or controlling persons), (ii) delivery and acceptance of the Placement Shares and payment therefor or (iii) any termination of this Agreement.

11. Termination.

(a) Cowen shall have the right by giving written notice as hereinafter specified at any time to terminate this Agreement if (i) any Material Adverse Change, or any development that

would reasonably be expected to result in a Material Adverse Change has occurred that, in the reasonable judgment of Cowen, would materially impair the ability of Cowen to sell the Placement Shares hereunder, (ii) the Company shall have failed, refused or been unable to perform any agreement on its part to be performed hereunder; provided, however, in the case of any failure of the Company to deliver (or cause another person to deliver) any certification, opinion, or letter required under Sections 7(m), 7(n), or 7(o), Cowen's right to terminate shall not arise unless such failure to deliver (or cause to be delivered) continues for more than thirty (30) days from the date such delivery was required, (iii) any other condition of Cowen's obligations hereunder is not fulfilled, (iv) any other condition of Cowen's obligations hereunder is not fulfilled, or (v), any suspension or limitation of trading in the Placement Shares or in securities generally on Nasdaq shall have occurred. Any such termination shall be without liability of any party to any other party except that the provisions of Section 7(g) (Expenses), Section 9 (Indemnification and Contribution), Section 10 (Representations and Agreements to Survive Delivery), Section 16 (Applicable Law; Consent to Jurisdiction) and Section 17 (Waiver of Jury Trial) hereof shall remain in full force and effect notwithstanding such termination. If Cowen elects to terminate this Agreement as provided in this Section 11(a), Cowen shall provide the required written notice as specified in Section 12 (Notices).

(b) The Company shall have the right, by giving five (5) days' notice as hereinafter specified to terminate this Agreement in its sole discretion at any time after the date of this Agreement. Any such termination shall be without liability of any party to any other party except that the provisions of Section 7(g), Section 9, Section 10, Section 16 and Section 17 hereof shall remain in full force and effect notwithstanding such termination.

(c) Cowen shall have the right, by giving ten (10) days' notice as hereinafter specified to terminate this Agreement in its sole discretion at any time after the date of this Agreement. Any such termination shall be without liability of any party to any other party except that the provisions of Section 7(g), Section 9, Section 10, Section 16 and Section 17 hereof shall remain in full force and effect notwithstanding such termination.

(d) Unless earlier terminated pursuant to this Section 11, this Agreement shall automatically terminate upon the issuance and sale of all of the Placement Shares through Cowen on the terms and subject to the conditions set forth herein; *provided* that the provisions of Section 7(g), Section 9, Section 10, Section 16 and Section 17 hereof shall remain in full force and effect notwithstanding such termination.

(e) This Agreement shall remain in full force and effect unless terminated pursuant to Sections 11(a), (b), (c), or (d) above or otherwise by mutual agreement of the parties; *provided, however,* that any such termination by mutual agreement shall in all cases be deemed to provide that Section 7(g), Section 9, Section 10, Section 16 and Section 17 shall remain in full force and effect.

(f) Any termination of this Agreement shall be effective on the date specified in such notice of termination; *provided, however,* that such termination shall not be effective until the close of business on the date of receipt of such notice by Cowen or the Company, as the case may be. If such termination shall occur prior to the Settlement Date for any sale of Placement Shares, such Placement Shares shall settle in accordance with the provisions of this Agreement.

12. Notices. All notices or other communications required or permitted to be given by any party to any other party pursuant to the terms of this Agreement shall be in writing, unless otherwise specified in this Agreement, and if sent to Cowen, shall be delivered to Cowen at Cowen and Company, LLC, 599 Lexington Avenue, New York, NY 10022, fax no. 646-562-1130, Attention: General Counsel, email: Bradley.friedman@cowen.com; or if sent to the Company, shall be delivered to Alpha Teknova, Inc. Attention: General Counsel, email damon.terrill@teknova.com, with a copy to Paul Hastings LLP, attention: Elizabeth Razzano, email: elizabethrazzano@paulhastings.com. Each party to this Agreement may change such address for notices by sending to the parties to this Agreement written notice of a new address for such purpose. Each such notice or other communication shall be deemed given (i) when delivered personally or by verifiable facsimile transmission (with an original to follow) on or before 4:30 p.m., New York City time, on a Business Day (as defined below), or, if such day is not a Business Day on the next succeeding Business Day, (ii) on the next Business Day after timely delivery to a nationally-recognized overnight courier and (iii) on the Business Day actually received if deposited in the U.S. mail (certified or registered mail, return receipt requested, postage prepaid). For purposes of this Agreement, "**Business Day**" shall mean any day on which the Nasdaq and commercial banks in the City of New York are open for business.

13. Successors and Assigns. This Agreement shall inure to the benefit of and be binding upon the Company and Cowen and their respective successors and the affiliates, controlling persons, officers and directors referred to in Section 9 hereof. References to any of the parties contained in this Agreement shall be deemed to include the successors and permitted assigns of such party. Nothing in this Agreement, express or implied, is intended to confer upon any party other than the parties hereto or their respective successors and permitted assigns any rights, remedies, obligations or liabilities under or by reason of this Agreement, except as expressly provided in this Agreement. Neither party may assign its rights or obligations under this Agreement without the prior written consent of the other party; *provided*, *however*, that Cowen may assign its rights and obligations hereunder to an affiliate of Cowen without obtaining the Company's consent.

14. Adjustments for Share Splits. The parties acknowledge and agree that all share-related numbers contained in this Agreement shall be adjusted to take into account any share split, share dividend or similar event effected with respect to the Common Stock.

15. Entire Agreement; Amendment; Severability. This Agreement (including all schedules and exhibits attached hereto and Placement Notices issued pursuant hereto) constitutes the entire agreement and supersedes all other prior and contemporaneous agreements and undertakings, both written and oral, among the parties hereto with regard to the subject matter hereof. Neither this Agreement nor any term hereof may be amended except pursuant to a written instrument executed by the Company and Cowen. In the event that any one or more of the provisions contained herein, or the application thereof in any circumstance, is held invalid, illegal or unenforceable as written by a court of competent jurisdiction, then such provision shall be given full force and effect to the fullest possible extent that it is valid, legal and enforceable, and the remainder of the terms and provisions herein shall be construed as if such invalid, illegal or unenforceable term or provision was not contained herein, but only to the extent that giving effect to such provision and the remainder of the terms and provisions hereof shall be in accordance with the intent of the parties as reflected in this Agreement.

16. Applicable Law; Consent to Jurisdiction. This Agreement shall be governed by, and construed in accordance with, the internal laws of the State of New York without regard to the principles of conflicts of laws. Each party hereby irrevocably submits to the non-exclusive jurisdiction of the state and federal courts sitting in the City of New York, borough of Manhattan, for the adjudication of any dispute hereunder or in connection with any transaction contemplated hereby, and hereby irrevocably waives, and agrees not to assert in any suit, action or proceeding, any claim that it is not personally subject to the jurisdiction of any such court, that such suit, action or proceeding is brought in an inconvenient forum or that the venue of such suit, action or proceeding is improper. Each party hereby irrevocably waives personal service of process and consents to process being served in any such suit, action or proceeding by mailing a copy thereof (certified or registered mail, return receipt requested) to such party at the address in effect for notices to it under this Agreement and agrees that such service shall constitute good and sufficient service of process and notice thereof. Nothing contained herein shall be deemed to limit in any way any right to serve process in any manner permitted by law.

17. Waiver of Jury Trial. The Company and Cowen each hereby irrevocably waives any right it may have to a trial by jury in respect of any claim based upon or arising out of this Agreement or any transaction contemplated hereby.

18. Recognition of the U.S. Special Resolution Regimes. In the event that Cowen is a Covered Entity and becomes subject to a proceeding under a U.S. Special Resolution Regime, the transfer from Cowen of this Agreement, and any interest and obligation in or under this Agreement, will be effective to the same extent as the transfer would be effective under the U.S. Special Resolution Regime if this Agreement, and any such interest and obligation, were governed by the laws of the United States or a state of the United States.

In the event that Cowen is a Covered Entity and Cowen or a BHC Act Affiliate of Cowen becomes subject to a proceeding under a U.S. Special Resolution Regime, Default Rights under this Agreement that may be exercised against Cowen are permitted to be exercised to no greater extent than such Default Rights could be exercised under the U.S. Special Resolution Regime if this Agreement were governed by the laws of the United States or a state of the United States.

For purposes of this Agreement, (A) "**BHC Act Affiliate**" has the meaning assigned to the term "affiliate" in, and shall be interpreted in accordance with, 12 U.S.C. § 1841(k); (B) "**Covered Entity**" means any of the following: (i) a "covered entity" as that term is defined in, and interpreted in accordance with, 12 C.F.R. § 252.82(b); (ii) a "covered bank" as that term is defined in, and interpreted in accordance with, 12 C.F.R. § 47.3(b); or (iii) a "covered FSI" as that term is defined in, and interpreted in accordance with, 12 C.F.R. § 382.2(b); (C) "**Default Right**" has the meaning assigned to that term in, and shall be interpreted in accordance with, 12 C.F.R. §§ 252.81, 47.2 or 382.1, as applicable; and (D) "**U.S. Special Resolution Regime**" means each of (i) the Federal Deposit Insurance Act and the regulations promulgated thereunder and (ii) Title II of the Dodd-Frank Wall Street Reform and Consumer Protection Act and the regulations promulgated thereunder.

19. Absence of Fiduciary Relationship. The Company acknowledges and agrees that:

(a) Cowen has been retained solely to act as an arm's length contractual counterparty to the Company in connection with the sale of the Placement Shares contemplated

hereby and that no fiduciary, advisory or agency relationship between the Company and Cowen has been created in respect of any of the transactions contemplated by this Agreement, irrespective of whether Cowen has advised or is advising the Company on other matters;

(b) the Company is capable of evaluating and understanding and understands and accepts the terms, risks and conditions of the transactions contemplated by this Agreement;

(c) the Company has been advised that Cowen and its affiliates are engaged in a broad range of transactions which may involve interests that differ from those of the Company and that Cowen has no obligation to disclose such interests and transactions to the Company by virtue of any fiduciary, advisory or agency relationship; and

(d) the Company waives, to the fullest extent permitted by law, any claims it may have against Cowen, for breach of fiduciary duty or alleged breach of fiduciary duty and agrees that Cowen shall have no liability (whether direct or indirect) to the Company in respect of such a fiduciary claim or to any person asserting a fiduciary duty claim on behalf of or in right of the Company, including stockholders, partners, employees or creditors of the Company.

20. Counterparts. This Agreement may be executed in two or more counterparts, each of which shall be deemed an original, but all of which together shall constitute one and the same instrument. Delivery of an executed Agreement by one party to the other may be made by facsimile or electronic transmission (including pdf or any electronic signature complying with the U.S. federal ESIGN Act of 2000, e.g., www.docusign.com or www.echosign.com) or other transmission method and any counterpart so delivered shall be deemed to have been duly and validly delivered and be valid and effective for all purposes.

[Remainder of Page Intentionally Blank]

If the foregoing correctly sets forth the understanding between the Company and Cowen, please so indicate in the space provided below for that purpose, whereupon this letter shall constitute a binding agreement between the Company and Cowen.

Very truly yours,

COWEN AND COMPANY, LLC

By: /s/ Michael Murphy
Name: Michael Murphy
Title: Managing Director

ACCEPTED as of the date first-above written:

ALPHA TEKNOVA, INC.

By: /s/ Stephen Gunstream
Name: Stephen Gunstream
Title: President and Chief Executive Officer

SCHEDULE 1

FORM OF PLACEMENT NOTICE

From: [ ]
Cc: [ ]
To: [ ]
Subject: Cowen At the Market Offering—Placement Notice

Gentlemen:

Pursuant to the terms and subject to the conditions contained in the Sales Agreement between Alpha Teknova, Inc. (the "Company"), and Cowen and Company, LLC ("Cowen") dated March 30, 2023 (the "Agreement"), I hereby request on behalf of the Company that Cowen sell up to [ ] shares of the Company's common stock, par value $0.00001 per share, at a minimum market price of $_____ per share. Sales should begin on the date of this Notice and shall continue until [DATE] [all shares are sold][, with a maximum of [__] shares to be sold per Trading Day].

SCHEDULE 2

Notice Parties

Company

Paul Grossman	Director
Matt Mackowski	Director
Bob McNamara	Director
Stephen Gunstream	President and Chief Executive Officer

Cowen

Michael J. Murphy	Managing Director
William Follis	Managing Director

SCHEDULE 3

Compensation

Cowen shall be paid compensation up to 3% of the gross proceeds from the sales of Placement Shares pursuant to the terms of this Agreement.

Exhibit 7(m)

OFFICER CERTIFICATE

The undersigned, the duly qualified and elected _____, of Alpha Teknova, Inc**.** ("**Company**"), a Delaware corporation, does hereby certify in such capacity and on behalf of the Company, pursuant to Section 7(m) of the Sales Agreement dated March 30, 2023 (the "**Sales Agreement**") between the Company and Cowen and Company, LLC, that to the best of the knowledge of the undersigned.

(i) The representations and warranties of the Company in Section 6 of the Sales Agreement (A) to the extent such representations and warranties are subject to qualifications and exceptions contained therein relating to materiality or Material Adverse Change, are true and correct on and as of the date hereof with the same force and effect as if expressly made on and as of the date hereof, except for those representations and warranties that speak solely as of a specific date and which were true and correct as of such date, and (B) to the extent such representations and warranties are not subject to any qualifications or exceptions, are true and correct in all material respects as of the date hereof as if made on and as of the date hereof with the same force and effect as if expressly made on and as of the date hereof except for those representations and warranties that speak solely as of a specific date and which were true and correct as of such date; *provided*, *however*, that such representations and warranties also shall be qualified by the disclosure included or incorporated by reference in the Registration Statement and Prospectus; and

(ii) The Company has complied with all agreements and satisfied all conditions on its part to be performed or satisfied pursuant to the Sales Agreement at or prior to the date hereof.

By:_____
Name:
Title:

Date:_____

DESCRIPTION OF SECURITIES OF ALPHA TEKNOVA, INC.

General

The authorized capital stock of Alpha Teknova, Inc. (referred to herein as "Teknova," "company," "we," "us" and "our") consists of:

- 490,000,000 shares of common stock, $0.00001 par value per share ("common stock**")**; and
- 10,000,000 shares of undesignated preferred stock, $0.00001 par value per share ("preferred stock").

Common Stock

Except as otherwise expressly provided in our amended and restated certificate of incorporation or as required by applicable law, all shares of common stock have the same rights and privileges and rank equally, share ratably, and are identical in all respects as to all matters, including, without limitation, those described below:

Dividend Rights

The holders of common stock will be entitled to receive ratably those dividends, if any, that may be declared from time to time by our board of directors out of funds legally available. Any future determination to pay dividends on our capital stock will be subject to applicable laws, and will depend on our earnings, if any, financial condition, results of operations, capital requirements, and such other factors that our board of directors deems relevant.

Voting Rights

The holders of common stock are entitled to one vote per share on all matters to be voted upon by the stockholders.

Right to Receive Liquidation Distributions

In the event of a liquidation, dissolution, or winding up of our company, the holders of common stock are entitled to share ratably in all assets remaining after payment of liabilities, subject to prior distribution rights of preferred stock, if any, then outstanding.

No Preemptive or Similar Rights

The common stock has no preemptive or conversion rights or other subscription rights. There are no redemption or sinking fund provisions applicable to the common stock.

Listing

Our common stock is listed on the Nasdaq Global Market under the symbol "TKNO."

Preferred Stock

Our amended and restated certificate of incorporation authorizes our board of directors, subject to limitations prescribed by Delaware law, to issue up to 10,000,000 shares of our preferred stock in one or more series, to determine and fix from time to time the number of shares to be included in each such series, and to fix the designations, powers, rights, and preferences of the shares of each such series, and the qualifications, limitations, and restrictions thereof, including voting rights (if any), dividend rights, dissolution rights, conversion rights, exchange rights, and redemption rights, in each case without further vote or action by our stockholders. Our board of directors can also increase or decrease the number of shares of any such series, but not below the number of shares of such series then outstanding, without any further vote or action by our stockholders.

Our board of directors may authorize the issuance of preferred stock with voting or conversion rights that could adversely affect the voting power or other rights of the holders of our common stock. The issuance of preferred

stock, while providing flexibility in connection with possible acquisitions and other corporate purposes, could, among other things, have the effect of delaying, deferring, or preventing a change in control and may adversely affect the market price of our common stock and the voting and other rights of the holders of our common stock.

Registration Rights

Our investors' rights agreement, dated as of January 14, 2019, with certain of our stockholders identified therein grants such stockholders certain registration rights in respect of the "registrable securities" held by them, which securities include (i) any common stock held by investors party to our investors' rights agreement; (ii) any common stock issued or issuable, directly or indirectly, upon conversion and/or exercise of any of our other securities held by the investors party to our investors' rights agreement; and (iii) any common stock issued as, or issuable upon the conversion or exercise of any warrant, right, or other security that is issued as, a dividend or other distribution with respect to, or in exchange for or in replacement of, the securities in clauses (i) and (ii). The registration of shares of our common stock pursuant to the exercise of these registration rights would enable the holders thereof to sell such shares without restriction under the Securities Act of 1933, as amended ("Securities Act") when the applicable registration statement is declared effective. Under our investors' rights agreement, we will pay all expenses relating to such registrations, including the fees of one counsel for the participating holders, and the holders will pay all underwriting discounts, commissions, and stock transfer taxes relating to the sale of their shares. Our investors' rights agreement also includes customary indemnification and procedural terms.

These registration rights will expire on the earlier of (i) a deemed liquidation event, subject to certain exceptions; (ii) a transaction in which a person or group of related persons acquires more than 50% of our outstanding voting stock, subject to certain exceptions; and (iii) such time as Rule 144 of the Securities Act ("Rule 144") or another similar exemption under the Securities Act is available for the sale of all of such holders' shares without limitation during a three-month period without registration.

Demand Registration Rights

The holders of not less than 50% of the registrable securities then outstanding may request that we file a registration statement on Form S-1 with respect to at least 40% of the then-outstanding registrable securities (or a lesser percentage, if the anticipated aggregate offering price, net of selling expenses, would exceed $15.0 million).

Once we are eligible to use a registration statement on Form S-3, the holders of not less than 30% of the registrable shares then outstanding may request that we file a registration statement on Form S-3 with respect to such holders' registrable securities then outstanding, if the aggregate offering price of the registrable securities, net of selling expenses, is expected to exceed $5.0 million.

Piggyback Registration Rights

In the event that we propose to register any of our securities under the Securities Act, either for our own account or for the account of other security holders, the stockholders party to our investors' rights agreement will be entitled to certain "piggyback" registration rights allowing them to include their registrable securities in such registration, subject to certain marketing and other limitations. As a result, whenever we propose to file a registration statement under the Securities Act other than with respect to a demand registration, a registration statement on Form S-4 or S-8, or a registration to register debt securities and underlying common stock, these holders will be entitled to notice of the registration and will have the right to include their registrable securities in the registration subject to certain limitations.

Anti-Takeover Matters in our Governing Documents and Under Delaware Law

Certain provisions of Delaware law, along with our amended and restated certificate of incorporation and our amended and restated bylaws, all of which are summarized below, may have the effect of delaying, deferring, or discouraging another person from acquiring control of our company. These provisions are intended to discourage coercive takeover practices and inadequate takeover bids. These provisions are also designed, in part, to encourage persons seeking to acquire control of our company to first negotiate with our board of directors. However, these

provisions could have the effect of delaying, discouraging, or preventing attempts to acquire us, which could deprive our stockholders of opportunities to sell their shares of common stock at prices higher than prevailing market prices.

Authorized but Unissued Capital Stock

The authorized but unissued shares of common stock and preferred stock are available for future issuance without stockholder approval, subject to any limitations imposed by the rules of The Nasdaq Stock Market LLC. These additional shares may be used for a variety of corporate finance transactions, acquisitions, and employee benefit plans. The existence of authorized but unissued and unreserved common stock and preferred stock could make more difficult or discourage an attempt to obtain control of us by means of a proxy contest, tender offer, merger, or otherwise.

Classified Board of Directors

Our amended and restated certificate of incorporation provides that our board of directors is divided into three classes, with the classes as nearly equal in number as possible and each class serving three-year staggered terms. The directors in each class will serve for a three-year term (other than the directors initially assigned to Class I, whose initial terms expired at our 2022 Annual Meeting of Stockholders, and Class II, whose initial terms shall expire at our 2023 Annual Meeting of Stockholders), one class being elected each year by our stockholders. This system of electing and removing directors may tend to discourage a third party from making a tender offer or otherwise attempting to obtain control of us, because it generally makes it more difficult for stockholders to replace a majority of the directors.

Our amended and restated certificate of incorporation also provides that the total number of directors shall be determined from time to time exclusively by our board of directors; *provided* that, at any time Telegraph Hill Partners IV, L.P. ("THP LP") and its affiliate THP IV Affiliates Fund, LLC ("THP LLC," and together with THP LP, "THP") beneficially owns, in the aggregate, at least 50% in voting power of the then-outstanding shares of stock of the company entitled to vote generally in the election of directors, the stockholders may also fix the number of directors by resolution adopted by the stockholders.

Removal of Directors; Vacancies

Our amended and restated certificate of incorporation provides that, subject to the rights of holders of any series of our preferred stock, directors may be removed with or without cause by the affirmative vote of the holders of a majority in voting power of the then-outstanding shares of stock of our company entitled to vote generally in the election of such directors; *provided*, *however*, that, from and after the time that THP first ceases to beneficially own more than 50% in voting power of the then-outstanding shares of stock of the Company entitled to vote generally in the election of directors (the "THP Trigger Event"), any such director or all such directors may be removed only for cause and only by the affirmative vote of the holders of at least 66 2/3% in voting power of all the then-outstanding shares of stock of our company entitled to vote thereon, voting together as a single class.

In addition, our amended and restated certificate of incorporation provides that, subject to the rights of the holders of any series of our preferred stock and except as otherwise provided therein, any vacancy resulting from the death, resignation, removal, or disqualification of a director or other cause, or any newly created directorship in the board of directors, may be filled by a majority of the directors then in office or by our stockholders; *provided*, *however*, that from and after the THP Trigger Event, any vacancy resulting from the death, resignation, removal, or disqualification of a director or other cause, or any newly created directorship in the board of directors, shall be filled only by a majority of the directors then in office and shall not be filled by our stockholders.

These provisions may have the effect of deferring, delaying, or discouraging hostile takeovers, changes in control of us, or changes in our management.

Delaware Anti-Takeover Law

Our amended and restated certificate of incorporation provides that we will opt out of Section 203 ("Section 203") of the General Corporation Law of the State of Delaware, as amended, ("DGCL") until such time as THP beneficially owns, in the aggregate, less than a majority of the total voting power of all the then-outstanding shares of stock of our company entitled to vote generally in the election of directors, at which time we shall immediately and automatically become governed by Section 203.

Section 203 prohibits persons deemed to be "interested stockholders" from engaging in a "business combination" with a publicly held Delaware corporation for three years following the date such persons become interested stockholders, unless the business combination is, or the transaction in which the person became an interested stockholder was, approved in a prescribed manner or another prescribed exception applies. Generally, an "interested stockholder" is a person who, together with affiliates and associates, owns, or within three years prior to the determination of interested stockholder status did own, 15% or more of a corporation's voting stock. Generally, a "business combination" includes a merger, asset or stock sale, or other transaction resulting in a financial benefit to the interested stockholder. The existence of this provision may have an anti-takeover effect with respect to transactions that are not approved in advance by our board, including discouraging attempts that might result in a premium over the market price for the shares of common stock held by stockholders.

Our amended and restated certificate of incorporation provides that THP (together with its affiliates, successors, and assigns) will not be deemed to be an "interested stockholder" regardless of the percentage of ownership of the total voting power of all the then-outstanding shares of stock of our entitled to vote generally in the election of directors beneficially owned by them.

No Cumulative Voting

Under Delaware law, the right to vote cumulatively does not exist unless the certificate of incorporation specifically authorizes cumulative voting. Our amended and restated certificate of incorporation does not authorize cumulative voting. Therefore, stockholders holding a majority of the shares of our stock entitled to vote generally in the election of directors will be able to elect all of our directors.

Special Stockholder Meetings

Our amended and restated certificate of incorporation provides that, subject to the rights of the holders of any series of preferred stock with respect to such series of preferred stock, special meetings of stockholders may only be called by order of the Chairman of our board of directors, our board of directors, or our Chief Executive Officer; *provided, however*, that at any time prior to the THP Trigger Event, special meetings of our stockholders may also be called by or at the direction of our board of directors or the Chairman of our board of directors at the request of THP. Our amended and restated bylaws prohibit the conduct of any business at a special meeting other than as specified in the notice for such meeting. These provisions may have the effect of deferring, delaying, or discouraging hostile takeovers or changes in control or management.

Director Nominations and Stockholder Proposals

Our amended and restated bylaws establish advance notice procedures with respect to stockholder proposals and the nomination of candidates for election as directors, other than nominations made by or at the direction of the board of directors or a committee of the board of directors. In order for any matter to be "properly brought" before a meeting, a stockholder must comply with advance notice requirements and provide us with certain information.

Generally, to be timely, a stockholder's notice must be received at our principal executive offices not less than 90 days nor more than 120 days prior to the first anniversary date of the immediately preceding annual meeting of stockholders. Our amended and restated bylaws specify requirements as to the form and content of a stockholder's notice. Our amended and restated bylaws allow the chair of a meeting of the stockholders to adopt rules and regulations for the conduct of that meeting that may have the effect of precluding the conduct of certain business at that meeting if the rules and regulations are not followed. These provisions may also defer, delay, or discourage a

potential acquirer from conducting a solicitation of proxies to elect the acquirer's own slate of directors or otherwise attempting to influence or obtain control.

Stockholder Action by Written Consent

Pursuant to Section 228 of the DGCL, any action required to be taken at any annual or special meeting of the stockholders may be taken without a meeting, without prior notice, and without a vote if a consent or consents in writing, setting forth the action so taken, is or are signed by the holders of outstanding stock having not less than the minimum number of votes that would be necessary to authorize or take such action at a meeting at which all shares of our stock entitled to vote thereon were present and voted, unless the certificate of incorporation provides otherwise. Our amended and restated certificate of incorporation precludes stockholder action by written consent upon the occurrence of the THP Trigger Event.

Amendment of Certificate of Incorporation or Bylaws

The DGCL provides generally that the affirmative vote of a majority of the shares entitled to vote on any matter is required to amend a corporation's certificate of incorporation or bylaws, unless a corporation's certificate of incorporation or bylaws, as the case may be, requires a greater percentage.

Our amended and restated certificate of incorporation provides that, upon the occurrence of the THP Trigger Event, the affirmative vote of the holders of at least 66 2/3% of the voting power of the then-outstanding shares of stock entitled to vote thereon, voting together as a single class, is required to alter, amend, or repeal the following provisions of our amended and restated certificate of incorporation: Article V (Board of Directors), Article VI (Consent of Stockholders in Lieu of Meeting; Special Meetings of Stockholders), Article VII (Limitation of Liability), Article VIII (Corporate Opportunities and Competition), Article IX (Exclusive Forum), and Article X (Section 203 of the DGCL), and Article XI (Amendment of Certificate of Incorporation and Bylaws).

Our amended and restated certificate of incorporation, and our amended and restated bylaws provide that, upon the occurrence of the THP Trigger Event, the affirmative vote of the holders of at least 66 2/3% of the voting power of the then-outstanding shares of stock entitled to vote thereon, voting together as a single class, will be required to alter, amend, or repeal our amended and restated bylaws.

The provisions of the DGCL, our amended and restated certificate of incorporation and our amended and restated bylaws could have the effect of discouraging others from attempting hostile takeovers and, as a consequence, they may also inhibit temporary fluctuations in the market price of our common stock that often result from actual or rumored hostile takeover attempts. These provisions may also have the effect of preventing changes in the composition of our board and management. It is possible that these provisions could make it more difficult to accomplish transactions that stockholders may otherwise deem to be in their best interests.

Exclusive Forum

Our amended and restated certificate of incorporation provides that, unless we consent in writing to the selection of an alternative forum, the Court of Chancery of the State of Delaware (or, if and only if the Court of Chancery of the State of Delaware lacks subject matter jurisdiction, any state court located within the State of Delaware or, if and only if all such state courts lack subject matter jurisdiction, the federal district court for the District of Delaware) shall, to the fullest extent permitted by law, be the sole and exclusive forum for (i) any derivative action or proceeding brought on our behalf, (ii) any action asserting a claim of breach of a fiduciary duty owed by any of our current or former directors, officers, employees, or stockholders to us or our stockholders, (iii) any action asserting a claim against us or any of our current or former directors, officers, employees, or stockholders arising pursuant to any provision of the DGCL or of our amended and restated certification of incorporation or our amended and restated bylaws, (iv) any claim or cause of action seeking to interpret, apply, enforce, or determine the validity of our amended and restated certification of incorporation or our amended and restated bylaws, (v) any action or proceeding asserting a claim against us or any of our current or former directors, officers, employees, or stockholders as to which the DGCL confers jurisdiction to the Court of Chancery of the State of Delaware, or (vi) any action asserting a claim governed by the internal affairs doctrine of the law of the State of Delaware. The

foregoing exclusive forum provisions will not apply to claims arising under the Exchange Act or any other claim for which the federal courts have exclusive jurisdiction.

In addition, our amended and restated certificate of incorporation provides that, unless we consent in writing to the selection of an alternative forum, the federal district courts of the United States of America shall be the exclusive forum for the resolution of any complaint asserting a cause of action arising under the Securities Act.

These choice of forum provisions may have the effect of discouraging lawsuits against our directors and officers. The enforceability of similar choice of forum provisions in other companies' certificates of incorporation has been challenged in legal proceedings and there is uncertainty as to whether a court would enforce such provisions. In addition, investors cannot waive compliance with the federal securities laws and the rules and regulations thereunder. It is possible that, in connection with any applicable action brought against us, a court could find the choice of forum provisions contained in our amended and restated certificate of incorporation to be inapplicable or unenforceable in such action. Any person or entity purchasing or otherwise acquiring any interest in shares of our capital stock shall be deemed to have notice of and consented to the forum provisions in our amended and restated certificate of incorporation.

Exhibit 5.1

PAUL HASTINGS

March 30, 2023

Alpha Teknova, Inc.
2451 Bert Drive
Hollister, CA 95023

Re: Registration Statement on Form S-3

Ladies and Gentlemen:

We have acted as counsel to Alpha Teknova, Inc., a Delaware corporation (the "***Company***"), in connection with the execution and delivery of that certain Sales Agreement, dated March 30, 2023 (the "***Sales Agreement***"), by and between the Company and Cowen and Company, LLC. We refer to the Registration Statement on Form S-3 (File No. 333- 265987) (the "***Registration Statement***"), filed by the Company with the Securities and Exchange Commission (the "***Commission***") under the Securities Act of 1933, as amended (the "***Act***"), on July 1, 2022, which was declared effective by the Commission on July 12, 2022. Pursuant to the Registration Statement, the Company is issuing up to $14,500,000 of shares (the "***Shares***") of the Company's common stock, par value $0.00001 per share ("***Common Stock***"). The Shares are to be sold by the Company pursuant to the Sales Agreement.

This opinion letter is being furnished in accordance with the requirements of Item 601(b)(5) of Regulation S-K under the Act.

As such counsel and for purposes of our opinion set forth below, we have examined and relied upon originals or copies, certified or otherwise identified to our satisfaction, of such documents, resolutions, certificates and other instruments of the Company and corporate records furnished to us by the Company, and have reviewed certificates of public officials, statutes, records and such other instruments and documents as we have deemed necessary or appropriate as a basis for the opinion set forth below, including without limitation:

(i) the Registration Statement;

(ii) the base prospectus, dated July 12, 2022, in the form in which it appears in the Registration Statement at the time the Registration Statement become effective (the "***Base Prospectus***");

(iii) the prospectus supplement, dated March 30, 2023 (the " ***ATM Prospectus Supplement***" and together with the Base Prospectus, the "***ATM Prospectus***"), to the Registration Statement, which supplement was filed with the Commission pursuant to Rule 424(b) under the Act;

(iii) the Amended and Restated Certificate of Incorporation of the Company, as certified as of March 30, 2023, by the Secretary of State of the State of Delaware (the "***Charter***");

(iv) the Amended and Restated Bylaws of the Company as presently in effect, as certified by an officer of the Company as of March 30, 2023;

(v) the Sales Agreement;

(vi) a certificate, dated as of March 30, 2023, from the Secretary of State of the State of Delaware certifying as to the existence and good standing of the Company under the laws of the State of Delaware (the "***Good Standing Certificate***"); and

(vii) resolutions adopted by the board of directors of the Company, certified by an officer of the Company, relating to, among other things, the approval of the Sales Agreement, and the registration, sale and issuance of the Shares (the "***Resolutions***").

In addition to the foregoing, we have made such investigations of law as we have deemed necessary or appropriate as a basis for the opinion set forth in this opinion letter.

In such examination and in rendering the opinion expressed below, we have assumed, without independent investigation or verification: (i) the genuineness of all signatures on all agreements, instruments, corporate records, certificates and other documents submitted to us; (ii) the authenticity and completeness of all agreements, instruments, corporate records, certificates and other documents submitted to us as originals; (iii) that all agreements, instruments, corporate records, certificates and other documents submitted to us as certified, electronic, facsimile, conformed, photostatic or other copies conform to originals thereof, and that such originals are authentic and complete; (iv) the legal capacity, competency and authority of all persons or entities (other than the Company) executing all agreements, instruments, corporate records, certificates and other documents submitted to us; (v) the due authorization, execution and delivery of all agreements, instruments, corporate records, certificates and other documents by all parties thereto (other than the Company); (vi) that no documents submitted to us have been amended or terminated orally or in writing except as has been disclosed to us in writing; (vii) that the statements contained in the certificates and comparable documents of public officials, officers and representatives of the Company and other persons on which we have relied for the purposes of this opinion letter are true and correct on and as of the date hereof; (viii) that there has not been any change in the good standing status of the Company from that reported in the Good Standing Certificate; (ix) that each of the officers and directors of the Company has properly exercised his or her fiduciary duties; and (x) the Shares will not be issued or transferred in violation of any restriction contained in the Charter and that upon the issuance of any of the Shares, the total number of shares of Common Stock issued and outstanding will not exceed the total number of shares of Common Stock that the Company is then authorized to issue under the Charter. As to all questions of fact material to this opinion letter, and as to the materiality of any fact or other matter referred to herein, we have relied (without independent investigation or verification) upon representations and certificates or comparable documents of officers and representatives of the Company. Our knowledge of the Company and its legal and other affairs is limited by the scope of our engagement, which scope includes the delivery of this opinion letter. We do not represent the Company with respect to all legal matters or issues. The Company may employ other

independent counsel and, to our knowledge, handles certain legal matters and issues without the assistance of independent counsel.

Based upon the foregoing, and in reliance thereon, and subject to the assumptions, limitations, qualifications and exceptions set forth herein, we are of the opinion that the issuance of the Shares has been duly authorized by all necessary corporate action on the part of the Company and, upon issuance, delivery and payment therefor in the manner contemplated by the Resolutions, the Registration Statement and the ATM Prospectus and in accordance with the Sales Agreement, the Shares will be validly issued, fully paid and nonassessable.

Without limiting any of the other limitations, exceptions, assumptions and qualifications stated elsewhere herein, we express no opinion with regard to the applicability or effect of the laws of any jurisdiction other than the General Corporation Law of the State of Delaware, as in effect on the date of this opinion letter.

This opinion letter deals only with the specified legal issues expressly addressed herein, and you should not infer any opinion that is not explicitly stated herein from any matter addressed in this opinion letter. This opinion letter is rendered solely in connection with the offering of the Shares as described in the Registration Statement and the ATM Prospectus. This opinion letter is rendered as of the date hereof, and we assume no obligation to advise you or any other person with regard to any change after the date hereof in the circumstances or the law that may bear on the matters set forth herein, even if the change may affect the legal analysis or a legal conclusion or other matters in this opinion letter.

We hereby consent to the filing of this opinion letter as Exhibit 5.1 to a Current Report on Form 8-K of the Company for incorporation by reference in the Registration Statement and to the reference to our firm under the heading “Legal Matters” in the ATM Prospectus. In giving such consent, we do not hereby admit that we are within the category of persons whose consent is required under Section 7 of the Act or the rules or regulations of the Commission thereunder.

Very truly yours,

/s/ Paul Hastings LLP

Exhibit 10.22

FIRST AMENDMENT TO LEASE AGREEMENT

This FIRST AMENDMENT TO LEASE AGREEMENT ("**Amendment**"), dated as of the 1st day of December, 2022 (for purposes of this Amendment, the **"Effective Date"**), is entered into between Ken & Jill Gimelli, LLC, a California limited liability company ("**Lessor**") and Alpha Teknova, Inc., a Delaware corporation ("**Lessee**" and, together with Lessor, collectively referred to herein as the "**Parties**").

WHEREAS, Lessor and Lessee entered into that certain Commercial Lease Agreement dated October 7th, 2020, relating to premises located at both of (1) 2451 Bert Drive, containing approximately 19,000 square feet, and (2) 2320 Technology Parkway, containing approximately 27,390 square feet, each in Hollister, California, and as more particularly described therein, together with the buildings constructed thereon and the other easements, rights, and appurtenances stated therein (collectively, the **"Lease"**); and

WHEREAS, Lessor and Lessee have agreed to amend the Lease, upon the terms and conditions hereinafter set forth; and

WHEREAS, all capitalized terms used but not defined in this Amendment shall have the meanings given to them in the Lease.

NOW, THEREFORE, for good and valuable consideration and the mutual covenants, terms, and conditions set forth herein, the receipt and sufficiency of which are hereby acknowledged, the Parties amend the Lease as of the Effective Date, as follows:

1. Lease Term. As to the Premises located at 2320 Technology Parkway only, the Term of the Lease shall be extended from five (5) to twelve (12) years. Accordingly, Section 2.01 of the Lease shall be and is hereby deleted in its entirely and replaced with the following:

"**Section 2.01. Original Term.**

(A) As to the Premises of which the building at 2320 Technology Parkway is a part, the term of this Lease shall be for a period of twelve (12) years commencing at 12:01 A.M. on October 7th, 2020, and ending at 12:01 A.M. on September 30, 2032, unless earlier terminated in accordance with this Lease; provided, however, that Lessee shall have the right, but not the obligation, to extend the Term for an additional five (5) years, ending at 12:01 am on September 30, 2037, with annual increases in Rent consistent with Section 3.01(a) of this Lease.

(B) As to the Premises of which the building at 2451 Bert Drive is a part, the term of this Lease shall be for a period of five (5) years commencing at 12:01 A.M. on October 7th, 2020, and ending at 12:01 A.M. on September 30, 2025, unless earlier terminated in accordance with this Lease; provided, however, that Lessee shall have the right, but not the obligation, to extend the Term for an additional 2 (two) years, ending at 12:01 am on September 30, 2027.

References in this Lease to the "Term" shall be to the term of this Lease relating to either or both of the Premises described in this Section as the context requires."

2. Fixed Rent and Additional Rent. Taking account of the extension of the Term of the Lease as to the Premises including the building located at 2320 Technology Parkway, and to reflect the agreement between the Parties to modify the rate at which Rent will increase annually during the period of that extension, Section 3.01(a) of the Lease shall be and is hereby amended so that it reads:

"(a) Other than as set forth in Section 3.01(b) of this Lease, Lessee agrees to pay to Lessor during the Term specified in Section 2.01, monthly rent ("Rent"), due on the first day of every month, which shall increase three percent (3%) annually on October 1 of each year through Year 5 of the Term, and then four percent (4%) annually from Year 6 through Year 12 of the Term (and any extension thereof) applicable to the building located at 2320 Technology Parkway within the Premises. Lessee also agrees to pay to Lessor modified NNN ("NNN"), which shall include real property tax, building insurance, and building maintenance. Rent and NNN shall be paid pursuant to the following schedule:

	2451 Bert	Bert NNN	2320 Technology	Technology NNN
Year 1: 1/1/2021 - 6/30/2021	18,050.00	1,829.36	18,895.50	1,907.68
7/01/2021-9/30/2021			26,020.50	2626.93
Year 2: 10/01/2021 - 9/30/2022	18,591.50	1,829.36	26,801.12	2,626.93
Year 3: 10/01/2022 - 9/30/2023	19,148.20	1,829.36	27,603.64	2,626.93
Year 4: 10/01/2023 - 9/30/2024	19,722.00	1,829.36	28,430.82	2,626.93
Year 5: 10/01/2024 - 9/30/2025	20,311.00	1,829.36	29,279.91	2,626.93

Year 6: 10/01/2025 – 9/30/2026			30,451.11	2,626.93

Year 7: 10/01/26 – 9/30/2027			31,669.15	2,626.93
Year 8: 10/01/27 – 9/30/2028			32,935.92	2,626.93
Year 9: 10/01/28 – 9/30/2029			34,253.36	2,626.93
Year 10: 10/01/29 - 9/30/2030			35,623.49	2,626.93
Year 11: 10/01/30 – 9/30/2031			37,048.43	2,626.93
Year 12: 10/01/31 – 9/30/2032			38,530.37	2,626.93

Lessee shall pay all Rent without deduction to Lessor at the address set forth herein for mailing notices to Lessor, or at any other place or places that Lessor may from time to time designate by written notice given to Lessee."

3. Repairs by Lessee. To more precisely reflect the intentions of the Parties regarding the maintenance of air conditioning systems and roofs present on the Premises, Section 4.02(b) of the Lease shall be amended so that it reads in its entirety as follows:

> "(i) Regularly employ a heating and air conditioning maintenance firm to service and maintain the heating and air conditioning system on the Premises in good working order, provided, however, that Lessor shall be responsible for making, and the cost of, any major repairs and replacements of the heating and air conditioning system in the building on the Premises located at 2451 Bert Drive only; and (ii) notwithstanding this Agreement's Section 4.01, make any and all repairs to (including major repairs to and replacements of) the heating and air conditioning system and to the roof of the building on the Premises located at 2320 Technology Parkway that may be required from time to time;"

4. Lessee Alternations. To take account of events having occurred between the effective date of the Lease and the Effective Date of this Amendment, (a) the second sentence of Section 4.03 of the Lease shall be deleted in its entirety, and (b) the first sentence hereby amended so that it reads:

"Lessor acknowledges and agrees that, during the first year of the Term, Lessee intends to invest substantially in the buildings so that they are suitable for the conduct by Lessee of Lessee's business (the "Initial Renovation Project")."

5. Lessee Improvements and Trade Fixtures. To correct a drafting error, the second sentence of Section 4.04(a) of the Lease shall be deleted in its entirety.

6. Surrender of Premises. To better reflect the intentions of the Parties as they relate to the surrender of the Premises at the termination of the Lease, Section 4.07 of the Lease shall be amended so that it reads in its entirety, after the heading, as follows:

"On expiration of the Term or earlier termination, Lessee shall promptly surrender possession of the Premises to Lessor in as good condition as the Premises are on the date of this Lease, reasonable wear and tear excepted, and shall, at Lessor's election but at Lessee's expense, remove those of Tenant's remaining fixtures and improvements from the building on the Premises located at 2320 Technology Parkway that, in Lessor's reasonable discretion, would otherwise make that building unsuitable for use as a commercial warehouse."

7. Lessor Improvements. Section 4.08 shall be added and read in its entirety: "Within a reasonable period of time after Lessee has completed the relevant aspects of the Initial Renovation Project, Lessor shall install appropriate lighting adjacent to the sidewalk located outside the building on the Premises located at 2320 Technology Parkway."

8. Notices. To take account of a change to Lessee's business address, Section 10.02 of the Lease shall be and is hereby amended so that the street number in Lessee's notice address is identified as "2451 Bert Drive".

9. Schedule 1. To take account of the decision by Lessor and Lessee together not to create the schedule contemplated by the original Section 4.03 of the Lease, the Lease shall be and hereby is amended by deleting Schedule 1 its entirety.

10. No Default. Lessor and Lessee hereby affirm that as of the Effective Date no breach, default, or other act, error, or omission which, with the giving of notice or passage of time or both, would constitute a breach or default by either Party has occurred and is continuing under the Lease.

11. Affirmation of Lease Terms. Except as amended by this Amendment, Lessor and Lessee hereby ratify the Lease and agree that the Lease shall remain unchanged and shall continue in full force and effect. If there is any conflict between the terms of the Lease and the terms set forth in this Amendment, the terms specifically set out in this Amendment shall control. From and after the Effective Date, all references to "the Lease" or "this Lease" in the Lease shall mean the Lease as amended by this Amendment.

12. Mutual Authorization Representation. Lessor and Lessee hereby represent and warrant to each other that: (a) this Amendment (and each term and provision hereof) has been duly and appropriately authorized by such party through proper written corporate action and approval; and (b) no additional consent, agreement, or approval is required with respect hereto.

13. Miscellaneous.

(a) Entire Agreement. This Amendment contains the entire understanding and agreement between the Parties with respect to the matters addressed herein.

(b) Amendment and Modification. This Amendment may be modified only by an agreement in writing and signed by both Lessor and Lessee.

(c) Further Assurances. Each of the Parties shall deliver to the other any further instruments or documents that may be reasonably required to establish to the satisfaction of the other party that it has agreed to be bound by and become liable under the terms and conditions of the Lease and this Amendment.

IN WITNESS WHEREOF, the Parties hereto have executed this Amendment with effect as of the Effective Date.

LESSOR	LESSEE
/s/ Ken Gimelli	/s/ Stephen Gunstream
Ken Gimelli	Stephen Gunstream – President & CEO
Ken & Jill Gimelli, LLC	Alpha Teknova, Inc.

Exhibit 10.26

Pursuant to Regulation S-K, Item 601(a)(5), the schedules and exhibits to Amendment No. 2 to Amended and Restated Credit and Security Agreement (Term Loan) as referred to herein have not been filed. The Registrant agrees to furnish supplementally a copy of any omitted schedules or exhibits to the Securities and Exchange Commission upon request.

AMENDMENT NO. 2 TO AMENDED AND RESTATED CREDIT AND SECURITY AGREEMENT (TERM LOAN)

This AMENDMENT NO. 2 TO AMENDED AND RESTATED CREDIT AND SECURITY AGREEMENT (TERM LOAN) (this "**Agreement**") is made as of March 28, 2023, by and among **ALPHA TEKNOVA, INC.**, a Delaware corporation ("**Borrower**"), **MIDCAP FINANCIAL TRUST**, a Delaware statutory trust, as Agent (in such capacity, together with its successors and assigns, "**Agent**") and the other financial institutions or other entities from time to time parties to the Credit Agreement referenced below, each as a Lender.

RECITALS

A. Agent, Lenders and Borrower have entered into that certain Amended and Restated Credit and Security Agreement (Term Loan), dated as of May 10, 2022 (as amended by that certain Amendment No. 1 to Amended and Restated Credit and Security Agreement (Term Loan), dated as of November 8, 2022, and as further amended, restated, supplemented or otherwise modified prior to the date hereof, the "**Existing A&R Credit Agreement**" and as the same is amended hereby and as it may be further amended, restated, supplemented and modified from time to time, the "**Credit Agreement**"), pursuant to which the Lenders have agreed to make certain advances of money and to extend certain financial accommodations to Borrower in the amounts and manner set forth in the Credit Agreement.

B. Borrower has requested, and Agent and Lenders have agreed, to amend certain provisions of the Existing A&R Credit Agreement, in each case, in accordance with the terms and subject to the conditions set forth herein.

AGREEMENT

NOW, THEREFORE, in consideration of the foregoing, the terms and conditions set forth in this Agreement, and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, Agent, Lenders and Borrower hereby agree as follows:

1. **Defined Terms; Recitals**. This Agreement shall constitute a Financing Document and the Recitals and each reference to the Credit Agreement, unless otherwise expressly noted, will be deemed to reference the Credit Agreement as amended hereby. Capitalized terms used but not otherwise defined herein shall have the meanings ascribed to them in the Credit Agreement (including those capitalized terms used in the Recitals hereto).

2. **Amendments to Existing A&R Credit Agreement**. Subject to the terms and conditions of this Agreement, including, without limitation, the conditions to effectiveness set forth in Section 4 below, each of the parties hereto agrees to amend the Existing A&R Credit Agreement as follows:

(a) Section 1.1 of the Existing A&R Credit Agreement is hereby amended by adding the following definitions in alphabetical order therein:

""**Second Amendment**" means that certain Amendment No. 2 to Amended and Restated Credit and Security Agreement (Term Loan) dated the Second Amendment Effective Date, by and among Borrowers, Agent and the Lenders party thereto."

""**Second Amendment Effective Date**" means March 28, 2023."

(b) Section 1.1 of the Existing A&R Credit Agreement is hereby amended by amending and restating the definitions of "Applicable Margin", "Base Rate", "Floor", "Term Loan Tranche 5 Activation Date", and "Term Loan Tranche 6 Activation Date" respectively, as follows:

""**Applicable Margin**" means seven percent (7.00%)."

""**Base Rate**" means a per annum rate of interest equal to the greater of (a) the Floor and (b) a per annum rate of interest equal to the rate of interest announced, from time to time, within Wells Fargo Bank, National Association ("**Wells Fargo**") at its principal office in San Francisco as its "prime rate," with the understanding that the "prime rate" is one of Wells Fargo's base rates (not necessarily the lowest of such rates) and serves as the basis upon which effective rates of interest are calculated for those loans making reference thereto and is evidenced by the recording thereof after its announcement in such internal publications as Wells Fargo may designate; *provided, however,* that Agent may, upon prior written notice to Borrower, choose a reasonably comparable index or source to use as the basis for the Base Rate."

""**Floor**" means the rate per annum of interest equal to four and a half percent (4.50%)."

""**Term Loan Tranche 5 Activation Date**" means the date, if any, occurring after July 1, 2023 and prior to the Term Loan Tranche 5 Commitment Termination Date and on which Agent and each Lender with a Term Loan Tranche 5 Commitment Amount consents in writing in their sole discretion to a written request from Borrowers to activate the Term Loan Tranche 5 Commitment."

""**Term Loan Tranche 6 Activation Date**" means the date, if any, occurring after January 1, 2024 and prior to the Term Loan Tranche 6 Commitment Termination Date and on which Agent and each Lender with a Term Loan Tranche 6 Commitment Amount consents in writing in their sole discretion to a written request from Borrowers to activate the Term Loan Tranche 6 Commitment."

(c) The definition of "SOFR Interest Rate" in Section 1.1 of the Existing A&R Credit Agreement is hereby amended by adding the word "than" before "the Floor" in such definition.

(d) The definition of "Term Loan Tranche 4 Activation Date" in Section 1.1 of the Existing A&R Credit Agreement is hereby amended by deleting the words "in accordance with the terms of this Agreement" at the end of such definition.

(e) Section 2.2(h) of the Existing A&R Credit Agreement is hereby amended by deleting each reference to "First Amendment Effective Date" therein and replacing such reference with "Second Amendment Effective Date".

(f) Section 6.2 of the Existing A&R Credit Agreement is hereby amended and restated in its entirety as follows:

"Section 6.2 Minimum Cash. Commencing on the Second Amendment Effective Date and continuing at all times thereafter, Borrowers shall not permit Borrower Unrestricted Cash, at any time, to be less than Ten Million Dollars ($10,000,000)."

(g) Clause (e) of Section 7.2 of the Existing A&R Credit Agreement is hereby amended and restated as follows:

"(e) with respect to Term Loan Tranche 5, (A) the Term Loan Tranche 5 Activation Date has occurred and (B) Agent and Lenders have received such documentation and information as Agent or any Lender with a Term Loan Tranche 5 Commitment Amount may reasonably request and such information and documentation shall be satisfactory to Agent and each Lender with a Term Loan Tranche 5 Commitment Amount;"

(h) Clause (f) of Section 7.2 of the Existing A&R Credit Agreement is hereby amended and restated as follows:

"(f) [reserved];"

(i) Clause (g) of Section 7.2 of the Existing A&R Credit Agreement is hereby amended and restated as follows:

"(g) with respect to Term Loan Tranche 6, (A) the Term Loan Tranche 6 Activation Date has occurred and (B) Agent and Lenders have received such documentation and information as Agent or any Lender with a Term Loan Tranche 5 Commitment Amount may reasonably request and such information and documentation shall be satisfactory to Agent and each Lender with a Term Loan Tranche 5 Commitment Amount;"

(j) Clause (h) of Section 7.2 of the Existing A&R Credit Agreement is hereby amended and restated as follows:

"(h) [reserved];"

(k) Exhibit B of the Existing A&R Credit Agreement is hereby deleted in its entirety and replaced with the Exhibit B attached as Annex 1 hereto.

(l) Schedule 6.1 of the Existing A&R Credit Agreement is hereby deleted in its entirety and replaced with Schedule 6.1 attached as Annex 2 hereto.

3. **Representations and Warranties; Reaffirmation of Security Interest.** Each Borrower hereby confirms that all of the representations and warranties set forth in the Credit Agreement are true and correct in all material respects (without duplication of any materiality qualifier in the text of such representation or warranty) with respect to such Borrower as of the date hereof except to the extent that any such representation or warranty relates to a specific date in which case such representation or warranty shall be true and correct in all material respects (without duplication of any materiality qualifier in the text of such representation or warranty) as of such earlier date. Without limiting the foregoing, each Borrower represents and warrants that, as of the date hereof, both immediately prior to and immediately after giving effect to this Agreement, no Event of Default, or to such Borrower's knowledge, Default, has occurred and

is continuing. Nothing herein is intended to impair or limit the validity, priority or extent of Agent's security interests in and Liens on the Collateral. Each Borrower acknowledges and agrees that each of this Agreement, the Credit Agreement and the other Financing Documents to which it is a party constitutes the valid and binding agreement or instrument of such Borrower, enforceable against such Borrower in accordance with its respective terms, except as the enforceability thereof may be limited by bankruptcy, insolvency or other similar laws relating to the enforcement of creditors' rights generally and by general equitable principles.

4. **Conditions to Effectiveness.** This Agreement shall become effective as of the date on which each of the following conditions has been satisfied (or waived in writing by the Agent and the Lenders), as determined by Agent in its sole discretion:

(a) Borrower and Lenders shall each have delivered to Agent this Agreement, executed by an authorized officer of each such Person;

(b) Agent shall have received a duly executed copy of the Amendment No. 2 to Amended and Restated Credit and Security Agreement (Revolving Loan), dated as of the date hereof, in respect of the Affiliated Credit Agreement;

(c) Agent shall have received a duly executed copy of the Amended and Restated Fee Letter, dated as of the date hereof;

(d) all representations and warranties of Borrowers contained herein shall be true and correct in all material respects (without duplication of any materiality qualifier in the text of such representation or warranty) as of the date hereof except to the extent that any such representation or warranty relates to a specific date in which case such representation or warranty shall be true and correct in all material respects (or, in the case of any representation or warranty that is, by its terms, qualified by materiality, in all respects) as of such earlier date (and such parties' delivery of their respective signatures hereto shall be deemed to be its certification thereof); and

(e) prior to and after giving effect to the agreements set forth herein, no Default or Event of Default shall exist under any of the Financing Documents.

5. **Costs and Fees**. Borrowers shall be responsible for the payment of all reasonable, documented and invoiced out-of-pocket costs and fees of Agent's counsel incurred in connection with the preparation, negotiation, execution and delivery of this Agreement and any related Financing Documents.

6. **Release**. In consideration of the agreements of Agent and Lenders contained herein and for other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, Borrower, voluntarily, knowingly, unconditionally and irrevocably, with specific and express intent, for and on behalf of itself and all of its respective parents, subsidiaries, affiliates, members, managers, predecessors, successors, and assigns, and each of its respective current and former directors, officers, shareholders, agents, and employees, and each of its respective predecessors, successors, heirs, and assigns (individually and collectively, the "**Releasing Parties**") does hereby fully and completely release, acquit and forever discharge each of Agent, Lenders, and each their respective parents, subsidiaries, affiliates, members, managers, shareholders, directors, officers and employees, and each of their respective predecessors, successors, heirs, and assigns (individually and collectively, the "Released Parties"), of and from any and all actions, causes of action, suits, debts, disputes, damages, claims, obligations, liabilities, costs, expenses and demands of any kind whatsoever, at law or in equity, whether matured or unmatured, liquidated or unliquidated, vested or contingent, choate or inchoate, known or unknown that the Releasing Parties (or any of them) has against the Released Parties or any of them (whether directly or indirectly), based in whole or in part on facts, whether or not now known, existing on or before the date hereof, that

relate to, arise out of or otherwise are in connection with: (i) any or all of the Financing Documents or transactions contemplated thereby or any actions or omissions in connection therewith or (ii) any aspect of the dealings or relationships between or among any Borrower, on the one hand, and any or all of the Released Parties, on the other hand, relating to any or all of the documents, transactions, actions or omissions referenced in clause (i) hereof, in each case, based in whole or in part on facts, whether or not now known, existing before the date hereof. Borrower acknowledges that the foregoing release is a material inducement to Agent's and each Lender's decision to enter into this Agreement and agree to the modifications contemplated hereunder, and has been relied upon by Agent and Lenders in connection therewith.

7. **No Waiver or Novation.** The execution, delivery and effectiveness of this Agreement shall not operate as a waiver of any right, power or remedy of Agent, nor constitute a waiver of any provision of the Credit Agreement, the Financing Documents or any other documents, instruments and agreements executed or delivered in connection with any of the foregoing. Nothing herein is intended or shall be construed as a waiver of any existing Defaults or Events of Default under the Credit Agreement or the other Financing Documents or any of Agent's rights and remedies in respect of such Defaults or Events of Default. This Agreement (together with any other document executed in connection herewith) is not intended to be, nor shall it be construed as, a novation of the Credit Agreement.

8. **Affirmation.** Except as specifically amended pursuant to the terms hereof, each Borrower hereby acknowledges and agrees that the Existing A&R Credit Agreement and all other Financing Documents (and all covenants, terms, conditions and agreements therein) shall remain in full force and effect, and are hereby ratified and confirmed in all respects by such Borrower. Each Borrower covenants and agrees to comply with all of the terms, covenants and conditions of the Existing A&R Credit Agreement and the other Financing Documents, notwithstanding any prior course of conduct, waivers, releases or other actions or inactions on Agent's or any Lender's part which might otherwise constitute or be construed as a waiver of or amendment to such terms, covenants and conditions.

9. **Miscellaneous**.

(a) Reference to the Effect on the Credit Agreement. Upon the effectiveness of this Agreement, (i) this Agreement shall constitute a "Financing Document" under and as defined in the Credit Agreement and the other Financing Documents and (ii) each reference in the Credit Agreement to "this Agreement," "hereunder," "hereof," "herein," or words of similar import shall mean and be a reference to the Credit Agreement, as amended by this Agreement.

(b) Incorporation of Credit Agreement Provisions. The provisions contained in Section 11.6 (*Indemnification*), Section 12.7 (*Waiver of Consequential and Other Damages*), Section 12.8 (*Governing Law; Submission to Jurisdiction*) and Section 12.9 (*Waiver of Jury Trial*) of the Credit Agreement are incorporated herein by reference to the same extent as if reproduced herein in their entirety.

(c) GOVERNING LAW. THIS AGREEMENT AND ALL DISPUTES AND OTHER MATTERS RELATING HERETO OR THERETO OR ARISING THEREFROM (WHETHER SOUNDING IN CONTRACT LAW, TORT LAW OR OTHERWISE), SHALL BE GOVERNED BY, AND SHALL BE CONSTRUED AND ENFORCED IN ACCORDANCE WITH, THE LAWS OF THE STATE OF NEW YORK, WITHOUT REGARD TO CONFLICTS OF LAWS PRINCIPLES (OTHER THAN SECTION 5-1401 OF THE GENERAL OBLIGATIONS LAW).

(d) SUBMISSION TO JURISDICTION. BORROWER HEREBY CONSENTS TO THE JURISDICTION OF ANY STATE OR FEDERAL COURT LOCATED IN THE STATE OF NEW YORK IN THE CITY OF NEW YORK, BOROUGH OF MANHATTAN, AND IRREVOCABLY AGREES THAT ALL ACTIONS OR PROCEEDINGS ARISING OUT OF OR RELATING TO THIS

AGREEMENT OR THE OTHER FINANCING DOCUMENTS SHALL BE LITIGATED IN SUCH COURTS. BORROWER EXPRESSLY SUBMITS AND CONSENTS TO THE JURISDICTION OF THE AFORESAID COURTS AND WAIVES ANY DEFENSE OF FORUM NON CONVENIENS. BORROWER HEREBY WAIVES PERSONAL SERVICE OF ANY AND ALL PROCESS AND AGREES THAT ALL SUCH SERVICE OF PROCESS MAY BE MADE UPON BORROWER BY CERTIFIED OR REGISTERED MAIL, RETURN RECEIPT REQUESTED, ADDRESSED TO BORROWER AT THE ADDRESS SET FORTH IN SECTION 12.3 OF THE CREDIT AGREEMENT AND SERVICE SO MADE SHALL BE COMPLETE TEN (10) DAYS AFTER THE SAME HAS BEEN POSTED.

(e) WAIVER OF JURY TRIAL. BORROWER, AGENT AND THE LENDERS HEREBY IRREVOCABLY WAIVES ANY AND ALL RIGHT TO TRIAL BY JURY IN ANY LEGAL ACTION OR PROCEEDING ARISING OUT OF OR RELATING TO THIS AGREEMENT OR THE TRANSACTIONS CONTEMPLATED HEREBY AND AGREES THAT ANY SUCH ACTION OR PROCEEDING SHALL BE TRIED BEFORE A COURT AND NOT BEFORE A JURY. BORROWER, AGENT AND EACH LENDER ACKNOWLEDGES THAT THIS WAIVER IS A MATERIAL INDUCEMENT TO ENTER INTO A BUSINESS RELATIONSHIP, THAT EACH HAS RELIED ON THE WAIVER IN ENTERING INTO THIS AGREEMENT, AND THAT EACH WILL CONTINUE TO RELY ON THIS WAIVER IN THEIR RELATED FUTURE DEALINGS. BORROWER, AGENT AND EACH LENDER WARRANTS AND REPRESENTS THAT IT HAS HAD THE OPPORTUNITY OF REVIEWING THIS JURY WAIVER WITH LEGAL COUNSEL, AND THAT IT KNOWINGLY AND VOLUNTARILY WAIVES ITS JURY TRIAL RIGHTS.

(f) Headings. Section headings in this Agreement are included for convenience of reference only and shall not constitute a part of this Agreement for any other purpose.

(g) Counterparts. This Agreement may be signed in any number of counterparts, each of which shall be deemed an original and all of which when taken together shall constitute one and the same instrument. Delivery of an executed counterpart of this Agreement by facsimile or by electronic mail delivery of an electronic version (e.g., .pdf or .tif file) of an executed signature page shall be effective as delivery of an original executed counterpart hereof and shall bind the parties hereto.

(h) Entire Agreement. This Agreement constitutes the entire agreement and understanding among the parties hereto and supersedes any and all prior agreements and understandings, oral or written, relating to the subject matter hereof.

(i) Severability. In case any provision of or obligation under this Agreement shall be invalid, illegal or unenforceable in any applicable jurisdiction, the validity, legality and enforceability of the remaining provisions or obligations, or of such provision or obligation in any other jurisdiction, shall not in any way be affected or impaired thereby.

(j) Successors/Assigns. This Agreement shall bind, and the rights hereunder shall inure to, the respective successors and assigns of the parties hereto, subject to the provisions of the Credit Agreement and the other Financing Documents.

[SIGNATURES APPEAR ON FOLLOWING PAGES]

IN WITNESS WHEREOF, intending to be legally bound, the undersigned have executed this Agreement as of the day and year first hereinabove set forth.

AGENT: MIDCAP FINANCIAL TRUST

By: Apollo Capital Management, L.P.,
its investment manager

By: Apollo Capital Management GP, LLC,
its general partner

By: /s/ Maurice Amsellem
Name: Maurice Amsellem
Title: Authorized Signatory

LENDERS:

MIDCAP FINANCIAL TRUST

By: Apollo Capital Management, L.P.,
its investment manager

By: Apollo Capital Management GP, LLC,
its general partner

By: /s/ Maurice Amsellem
Name: Maurice Amsellem
Title: Authorized Signatory

LENDERS:

MIDCAP FUNDING XIII TRUST

By: Apollo Capital Management, L.P.,
its investment manager

By: Apollo Capital Management GP, LLC,
its general partner

By: /s/ Maurice Amsellem
Name: Maurice Amsellem
Title: Authorized Signatory

LENDERS: ELM 2020-3 TRUST

By: MidCap Financial Services Capital Management, LLC, as Servicer

By: /s/ John O'Dea
Name: John O'Dea
Title: Authorized Signatory

ELM 2020-4 TRUST

By: MidCap Financial Services Capital Management, LLC, as Servicer

By: /s/ John O'Dea
Name: John O'Dea
Title: Authorized Signatory

BORROWER: **ALPHA TEKNOVA, INC.**

By: /s/ Matthew Lowell
Name: Matthew Lowell
Title: Chief Financial Officer

Pursuant to Regulation S-K, Item 601(a)(5), the schedules and exhibits to Amendment No. 2 to Amended and Restated Credit and Security Agreement (Revolving Loan) as referred to herein have not been filed. The Registrant agrees to furnish supplementally a copy of any omitted schedules or exhibits to the Securities and Exchange Commission upon request.

AMENDMENT NO. 2 TO AMENDED AND RESTATED CREDIT AND SECURITY AGREEMENT (REVOLVING LOAN)

This AMENDMENT NO. 2 TO AMENDED AND RESTATED CREDIT AND SECURITY AGREEMENT (REVOLVING LOAN) (this "**Agreement**") is made as of March 28, 2023, by and among **ALPHA TEKNOVA, INC.**, a Delaware corporation ("**Borrower**"), **MIDCAP FUNDING IV TRUST**, a Delaware statutory trust, as Agent (in such capacity, together with its successors and assigns, "**Agent**") and the other financial institutions or other entities from time to time parties to the Credit Agreement referenced below, each as a Lender.

RECITALS

A. Agent, Lenders and Borrower have entered into that certain Amended and Restated Credit and Security Agreement (Revolving Loan), dated as of May 10, 2022 (as amended by that certain Amendment No. 1 to Amended and Restated Credit and Security Agreement (Revolving Loan), dated as of November 8, 2022, and as further amended, restated, supplemented or otherwise modified prior to the date hereof, the "**Existing A&R Credit Agreement**" and as the same is amended hereby and as it may be further amended, restated, supplemented and modified from time to time, the "**Credit Agreement**"), pursuant to which the Lenders have agreed to make certain advances of money and to extend certain financial accommodations to Borrower in the amounts and manner set forth in the Credit Agreement.

B. Borrower has requested, and Agent and Lenders have agreed, to amend certain provisions of the Existing A&R Credit Agreement, in each case, in accordance with the terms and subject to the conditions set forth herein.

AGREEMENT

NOW, THEREFORE, in consideration of the foregoing, the terms and conditions set forth in this Agreement, and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, Agent, Lenders and Borrower hereby agree as follows:

1. **Defined Terms; Recitals**. This Agreement shall constitute a Financing Document and the Recitals and each reference to the Credit Agreement, unless otherwise expressly noted, will be deemed to reference the Credit Agreement as amended hereby. Capitalized terms used but not otherwise defined herein shall have the meanings ascribed to them in the Credit Agreement (including those capitalized terms used in the Recitals hereto).

2. **Amendments to Existing A&R Credit Agreement**. Subject to the terms and conditions of this Agreement, including, without limitation, the conditions to effectiveness set forth in Section 4 below, each of the parties hereto agrees to amend the Existing A&R Credit Agreement as follows:

(a) Section 1.1 of the Existing A&R Credit Agreement is hereby amended by adding the following definitions in alphabetical order therein:

""**Second Amendment**" means that certain Amendment No. 2 to Amended and Restated Credit and Security Agreement (Revolving Loan) dated the Second Amendment Effective Date, by and among Borrowers, Agent and the Lenders party thereto."

""**Second Amendment Effective Date**" means March 28, 2023."

(b) Section 1.1 of the Existing A&R Credit Agreement is hereby amended by amending and restating the definitions of "Applicable Margin", "Base Rate", and "Floor", respectively, as follows:

""**Applicable Margin**" means four percent (4.00%)."

""**Base Rate**" means a per annum rate of interest equal to the greater of (a) the Floor and (b) a per annum rate of interest equal to the rate of interest announced, from time to time, within Wells Fargo Bank, National Association ("**Wells Fargo**") at its principal office in San Francisco as its "prime rate," with the understanding that the "prime rate" is one of Wells Fargo's base rates (not necessarily the lowest of such rates) and serves as the basis upon which effective rates of interest are calculated for those loans making reference thereto and is evidenced by the recording thereof after its announcement in such internal publications as Wells Fargo may designate; *provided, however,* that Agent may, upon prior written notice to Borrower, choose a reasonably comparable index or source to use as the basis for the Base Rate."

""**Floor**" means the rate per annum of interest equal to four and a half percent (4.50%)."

(c) The definition of "SOFR Interest Rate" in Section 1.1 of the Existing A&R Credit Agreement is hereby amended by adding the word "than" before "the Floor" in such definition.

(d) Section 2.2(g) of the Existing A&R Credit Agreement is hereby amended by deleting each reference to "First Amendment Effective Date" therein and replacing such reference with "Second Amendment Effective Date".

(e) Section 6.2 of the Existing A&R Credit Agreement is hereby amended and restated in its entirety as follows:

"Section 6.2 Minimum Cash. Commencing on the Second Amendment Effective Date and continuing at all times thereafter, Borrowers shall not permit Borrower Unrestricted Cash, at any time, to be less than Ten Million Dollars ($10,000,000)."

(f) Exhibit B of the Existing A&R Credit Agreement is hereby deleted in its entirety and replaced with the Exhibit B attached as Annex 1 hereto.

(g) Schedule 6.1 of the Existing A&R Credit Agreement is hereby deleted in its entirety and replaced with Schedule 6.1 attached as Annex 2 hereto.

3. **Representations and Warranties; Reaffirmation of Security Interest.** Each Borrower hereby confirms that all of the representations and warranties set forth in the Credit Agreement are true and correct in all material respects (without duplication of any materiality qualifier in the text of such representation or warranty) with respect to such Borrower as of the date hereof except to the extent that any such representation or warranty relates to a specific date in which case such representation or warranty shall be true and correct in all material respects (without duplication of any materiality qualifier in the text of

such representation or warranty) as of such earlier date. Without limiting the foregoing, each Borrower represents and warrants that, as of the date hereof, both immediately prior to and immediately after giving effect to this Agreement, no Event of Default, or to such Borrower's knowledge, Default, has occurred and is continuing. Nothing herein is intended to impair or limit the validity, priority or extent of Agent's security interests in and Liens on the Collateral. Each Borrower acknowledges and agrees that each of this Agreement, the Credit Agreement and the other Financing Documents to which it is a party constitutes the valid and binding agreement or instrument of such Borrower, enforceable against such Borrower in accordance with its respective terms, except as the enforceability thereof may be limited by bankruptcy, insolvency or other similar laws relating to the enforcement of creditors' rights generally and by general equitable principles.

4. **Conditions to Effectiveness.** This Agreement shall become effective as of the date on which each of the following conditions has been satisfied (or waived in writing by the Agent and the Lenders), as determined by Agent in its sole discretion:

(a) Borrower and Lenders shall each have delivered to Agent this Agreement, executed by an authorized officer of each such Person;

(b) Agent shall have received a duly executed copy of the Amendment No. 2 to Amended and Restated Credit and Security Agreement (Term Loan), dated as of the date hereof, in respect of the Affiliated Credit Agreement;

(c) all representations and warranties of Borrowers contained herein shall be true and correct in all material respects (without duplication of any materiality qualifier in the text of such representation or warranty) as of the date hereof except to the extent that any such representation or warranty relates to a specific date in which case such representation or warranty shall be true and correct in all material respects (or, in the case of any representation or warranty that is, by its terms, qualified by materiality, in all respects) as of such earlier date (and such parties' delivery of their respective signatures hereto shall be deemed to be its certification thereof); and

(d) prior to and after giving effect to the agreements set forth herein, no Default or Event of Default shall exist under any of the Financing Documents.

5. **Costs and Fees**. Borrowers shall be responsible for the payment of all reasonable, documented and invoiced out-of-pocket costs and fees of Agent's counsel incurred in connection with the preparation, negotiation, execution and delivery of this Agreement and any related Financing Documents.

6. **Release**. In consideration of the agreements of Agent and Lenders contained herein and for other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, Borrower, voluntarily, knowingly, unconditionally and irrevocably, with specific and express intent, for and on behalf of itself and all of its respective parents, subsidiaries, affiliates, members, managers, predecessors, successors, and assigns, and each of its respective current and former directors, officers, shareholders, agents, and employees, and each of its respective predecessors, successors, heirs, and assigns (individually and collectively, the "**Releasing Parties**") does hereby fully and completely release, acquit and forever discharge each of Agent, Lenders, and each their respective parents, subsidiaries, affiliates, members, managers, shareholders, directors, officers and employees, and each of their respective predecessors, successors, heirs, and assigns (individually and collectively, the "Released Parties"), of and from any and all actions, causes of action, suits, debts, disputes, damages, claims, obligations, liabilities, costs, expenses and demands of any kind whatsoever, at law or in equity, whether matured or unmatured, liquidated or unliquidated, vested or contingent, choate or inchoate, known or unknown that the Releasing Parties (or any of them) has against the Released Parties or any of them (whether directly or indirectly), based in whole or in part on facts, whether or not now known, existing on or before the date hereof, that

relate to, arise out of or otherwise are in connection with: (i) any or all of the Financing Documents or transactions contemplated thereby or any actions or omissions in connection therewith or (ii) any aspect of the dealings or relationships between or among any Borrower, on the one hand, and any or all of the Released Parties, on the other hand, relating to any or all of the documents, transactions, actions or omissions referenced in clause (i) hereof, in each case, based in whole or in part on facts, whether or not now known, existing before the date hereof. Borrower acknowledges that the foregoing release is a material inducement to Agent's and each Lender's decision to enter into this Agreement and agree to the modifications contemplated hereunder, and has been relied upon by Agent and Lenders in connection therewith.

7. **No Waiver or Novation.** The execution, delivery and effectiveness of this Agreement shall not operate as a waiver of any right, power or remedy of Agent, nor constitute a waiver of any provision of the Credit Agreement, the Financing Documents or any other documents, instruments and agreements executed or delivered in connection with any of the foregoing. Nothing herein is intended or shall be construed as a waiver of any existing Defaults or Events of Default under the Credit Agreement or the other Financing Documents or any of Agent's rights and remedies in respect of such Defaults or Events of Default. This Agreement (together with any other document executed in connection herewith) is not intended to be, nor shall it be construed as, a novation of the Credit Agreement.

8. **Affirmation.** Except as specifically amended pursuant to the terms hereof, each Borrower hereby acknowledges and agrees that the Existing A&R Credit Agreement and all other Financing Documents (and all covenants, terms, conditions and agreements therein) shall remain in full force and effect, and are hereby ratified and confirmed in all respects by such Borrower. Each Borrower covenants and agrees to comply with all of the terms, covenants and conditions of the Existing A&R Credit Agreement and the other Financing Documents, notwithstanding any prior course of conduct, waivers, releases or other actions or inactions on Agent's or any Lender's part which might otherwise constitute or be construed as a waiver of or amendment to such terms, covenants and conditions.

9. **Miscellaneous**.

(a) Reference to the Effect on the Credit Agreement. Upon the effectiveness of this Agreement, (i) this Agreement shall constitute a "Financing Document" under and as defined in the Credit Agreement and the other Financing Documents and (ii) each reference in the Credit Agreement to "this Agreement," "hereunder," "hereof," "herein," or words of similar import shall mean and be a reference to the Credit Agreement, as amended by this Agreement.

(b) Incorporation of Credit Agreement Provisions. The provisions contained in Section 11.6 (*Indemnification*), Section 12.7 (*Waiver of Consequential and Other Damages*), Section 12.8 (*Governing Law; Submission to Jurisdiction*) and Section 12.9 (*Waiver of Jury Trial*) of the Credit Agreement are incorporated herein by reference to the same extent as if reproduced herein in their entirety.

(c) GOVERNING LAW. THIS AGREEMENT AND ALL DISPUTES AND OTHER MATTERS RELATING HERETO OR THERETO OR ARISING THEREFROM (WHETHER SOUNDING IN CONTRACT LAW, TORT LAW OR OTHERWISE), SHALL BE GOVERNED BY, AND SHALL BE CONSTRUED AND ENFORCED IN ACCORDANCE WITH, THE LAWS OF THE STATE OF NEW YORK, WITHOUT REGARD TO CONFLICTS OF LAWS PRINCIPLES (OTHER THAN SECTION 5-1401 OF THE GENERAL OBLIGATIONS LAW).

(d) SUBMISSION TO JURISDICTION. BORROWER HEREBY CONSENTS TO THE JURISDICTION OF ANY STATE OR FEDERAL COURT LOCATED IN THE STATE OF NEW YORK IN THE CITY OF NEW YORK, BOROUGH OF MANHATTAN, AND IRREVOCABLY AGREES THAT ALL ACTIONS OR PROCEEDINGS ARISING OUT OF OR RELATING TO THIS

AGREEMENT OR THE OTHER FINANCING DOCUMENTS SHALL BE LITIGATED IN SUCH COURTS. BORROWER EXPRESSLY SUBMITS AND CONSENTS TO THE JURISDICTION OF THE AFORESAID COURTS AND WAIVES ANY DEFENSE OF FORUM NON CONVENIENS. BORROWER HEREBY WAIVES PERSONAL SERVICE OF ANY AND ALL PROCESS AND AGREES THAT ALL SUCH SERVICE OF PROCESS MAY BE MADE UPON BORROWER BY CERTIFIED OR REGISTERED MAIL, RETURN RECEIPT REQUESTED, ADDRESSED TO BORROWER AT THE ADDRESS SET FORTH IN SECTION 12.3 OF THE CREDIT AGREEMENT AND SERVICE SO MADE SHALL BE COMPLETE TEN (10) DAYS AFTER THE SAME HAS BEEN POSTED.

(e) WAIVER OF JURY TRIAL. BORROWER, AGENT AND THE LENDERS HEREBY IRREVOCABLY WAIVES ANY AND ALL RIGHT TO TRIAL BY JURY IN ANY LEGAL ACTION OR PROCEEDING ARISING OUT OF OR RELATING TO THIS AGREEMENT OR THE TRANSACTIONS CONTEMPLATED HEREBY AND AGREES THAT ANY SUCH ACTION OR PROCEEDING SHALL BE TRIED BEFORE A COURT AND NOT BEFORE A JURY. BORROWER, AGENT AND EACH LENDER ACKNOWLEDGES THAT THIS WAIVER IS A MATERIAL INDUCEMENT TO ENTER INTO A BUSINESS RELATIONSHIP, THAT EACH HAS RELIED ON THE WAIVER IN ENTERING INTO THIS AGREEMENT, AND THAT EACH WILL CONTINUE TO RELY ON THIS WAIVER IN THEIR RELATED FUTURE DEALINGS. BORROWER, AGENT AND EACH LENDER WARRANTS AND REPRESENTS THAT IT HAS HAD THE OPPORTUNITY OF REVIEWING THIS JURY WAIVER WITH LEGAL COUNSEL, AND THAT IT KNOWINGLY AND VOLUNTARILY WAIVES ITS JURY TRIAL RIGHTS.

(f) Headings. Section headings in this Agreement are included for convenience of reference only and shall not constitute a part of this Agreement for any other purpose.

(g) Counterparts. This Agreement may be signed in any number of counterparts, each of which shall be deemed an original and all of which when taken together shall constitute one and the same instrument. Delivery of an executed counterpart of this Agreement by facsimile or by electronic mail delivery of an electronic version (e.g., .pdf or .tif file) of an executed signature page shall be effective as delivery of an original executed counterpart hereof and shall bind the parties hereto.

(h) Entire Agreement. This Agreement constitutes the entire agreement and understanding among the parties hereto and supersedes any and all prior agreements and understandings, oral or written, relating to the subject matter hereof.

(i) Severability. In case any provision of or obligation under this Agreement shall be invalid, illegal or unenforceable in any applicable jurisdiction, the validity, legality and enforceability of the remaining provisions or obligations, or of such provision or obligation in any other jurisdiction, shall not in any way be affected or impaired thereby.

(j) Successors/Assigns. This Agreement shall bind, and the rights hereunder shall inure to, the respective successors and assigns of the parties hereto, subject to the provisions of the Credit Agreement and the other Financing Documents.

[SIGNATURES APPEAR ON FOLLOWING PAGES]

IN WITNESS WHEREOF, intending to be legally bound, the undersigned have executed this Agreement as of the day and year first hereinabove set forth.

AGENT: MIDCAP FUNDING IV TRUST

By: Apollo Capital Management, L.P.,
its investment manager

By: Apollo Capital Management GP, LLC,
its general partner

By: /s/ Maurice Amsellem
Name: Maurice Amsellem
Title: Authorized Signatory

LENDER:

MIDCAP FUNDING IV TRUST

By: Apollo Capital Management, L.P.,
its investment manager

By: Apollo Capital Management GP, LLC,
its general partner

By: /s/ Maurice Amsellem
Name: Maurice Amsellem
Title: Authorized Signatory

BORROWER: **ALPHA TEKNOVA, INC.**

By: /s/ Matthew Lowell
Name: Matthew Lowell
Title: Chief Financial Officer

Exhibit 10.30

Teknova Non-Employee Director Compensation Policy

In June 2021, our board of directors, upon the recommendation of our Compensation Committee, adopted our Non-Employee Director Compensation Policy for the compensation of our non-employee, independent directors. In June 2022, our board of directors, upon the recommendation of our Compensation Committee, modified the equity portions of the policy.

Under the policy, each of our non-employee, independent directors is eligible to receive annual retainers for board and committee service as follows:

Compensation Element	Annual Amount
Board Member Annual Cash Compensation	
Annual Retainer	$40,000
Non-executive Chair	$40,000[1]
Annual Committee Chair Annual Cash Compensation	
Audit Committee	$20,000
Compensation Committee	$15,000
Nominating/Governance Committee	$10,000
Annual Committee Member Annual Cash Compensation	
Audit Committee	$10,000
Compensation Committee	$7,500
Nominating/Governance Committee	$5,000
Equity Awards	
Initial Grant[2]	$240,000[3]
Annual Grant[4]	$120,000[5]

(1) This amount is in addition to the annual retainer amount.

(2) Initial awards granted upon appointment to the board of directors shall consist of stock options that vest monthly over three years from the date of grant and annual awards granted thereafter would cliff vest after one year from the date of grant.

(3) The grant date fair value of any option grant shall be calculated in accordance with Financial Accounting Standards Board Accounting Standards Codification Topic 718 ("ASC Topic 718") (i.e., with the number of shares subject to such option to be determined by dividing the referenced amount by the Black-Scholes per share value).

(4) Annual awards may be granted to non-employee, independent directors if such directors have served as a director of the Company for a period of not less than six months. Annual awards consist of restricted stock units that vest in full on the first anniversary of the date of grant.

(5) The number of restricted stock units granted shall be equal to the lower of (i) $120,000 in value (based on the trailing thirty-day, not volume-weighted, average price of the Company's common stock), or (ii) the number that is equivalent to (and not more than) 0.05% of the shares of the Company's common stock issued and outstanding on the day of issuance. Notwithstanding the foregoing, the grant date fair value of any RSU grant is shall be based on the market value of the Company's common stock on the date of grant.

All annual cash compensation amounts are payable in equal quarterly installments in arrears, following the end of each quarter in which the service occurred, pro-rated for any partial months of service.

Our policy during fiscal years 2022 and 2021 provided that each new non-employee, independent director who joins our board of directors in connection with and following the closing of our initial public offering will receive an option to purchase shares of common stock under our 2021 Equity Incentive Plan (the "2021 Plan") having a value of $240,000 (the "Initial Grant"), with the number of shares subject to such option based on the grant date fair value of the underlying common stock, with such value being calculated in accordance with ASC Topic 718 (i.e., with the number of shares subject to such option to be determined by dividing the referenced amount by the Black-Scholes per share value). One-third of the shares subject to such options will vest on the first anniversary of the date of grant with the remaining shares subject to the option vesting in equal monthly installments thereafter over 24 months, subject to the non-employee director's continuous service with us on each applicable vesting date.

On the date of each annual meeting of our stockholders, each continuing non-employee, independent director will receive an equity grant (the "Annual Grant") under our 2021 Plan having a value of $120,000. Prior to June 2, 2022, our policy was that the Annual Grant would consist of option to purchase shares of common stock, with the number of shares subject to such option based on the fair market value of the underlying common stock, with such value being calculated in accordance ASC Topic 718 (i.e., with the number of shares subject to such option to be determined by dividing the referenced amount by the Black-Scholes per share value). One-third of the shares subject to such options will vest on the first anniversary of the date of grant with the remaining shares subject to the option vesting in equal monthly installments thereafter over 24 months, subject to the non-employee director's continuous service with us on each applicable vesting date. Beginning on June 2, 2022, our policy is that the Annual Grant will be made in restricted stock units, with the number of restricted stock units equal to the lower of (i) $120,000 in value (based on the trailing thirty-day, not volume-weighted, average price of the Company's common stock), or (ii) the number that is equivalent to (and not more than) 0.05% of the shares of the Company's common stock issued and outstanding on the day of issuance. The restricted stock units will vest in full on the first anniversary of the date of grant, subject to the non-employee director's continuous service with us on the vesting date.

Our non-employee, non-independent directors did not receive annual retainers for board and committee service during the fiscal years ended December 31, 2022, and 2021. Employee directors receive no additional compensation for their service as a director.

All of our independent directors are entitled to reimbursement of all reasonable out-of-pocket expenses incurred for their attendance at meetings of our board of directors or any committee thereof.

Exhibit 23.1

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We consent to the incorporation by reference in the following Registration Statements:

(1) Registration Statement (Form S-8 No. 333-257523) pertaining to the Alpha Teknova, Inc. 2016 Stock Plan, as amended, the Alpha Teknova, Inc. 2020 Equity Incentive Plan, as amended, the Alpha Teknova, Inc. 2021 Equity Incentive Plan, and the Alpha Teknova, Inc. 2021 Employee Stock Purchase Plan;

(2) Registration Statement (Form S-8 No. 333-262375) pertaining to the Alpha Teknova, Inc. 2021 Equity Incentive Plan and the Alpha Teknova, Inc. 2021 Employee Stock Purchase Plan;

(3) Registration Statement (Form S-8 No. 333-269460) pertaining to the Alpha Teknova, Inc. 2021 Equity Incentive Plan and the Alpha Teknova, Inc. 2021 Employee Stock Purchase Plan; and

(4) Registration Statement (Form S-3 No. 333-265987) pertaining to the Alpha Teknova, Inc. registration of common stock, preferred stock, debt securities, warrants, rights, and units.

of our reports dated March 30, 2023, with respect to the financial statements of Alpha Teknova, Inc., included in this Annual Report (Form 10-K) of Alpha Teknova, Inc. for the year ended December 31, 2022.

/s/ Ernst & Young LLP

San Jose, CA
March 30, 2023

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, Stephen Gunstream, certify that:

(1) I have reviewed this Annual Report on Form 10-K of Alpha Teknova, 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(s) 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)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) 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) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, 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;

(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 and 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(s) 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 that 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 30, 2023

By: /s/ Stephen Gunstream

Stephen Gunstream
President and 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, Matthew Lowell, certify that:

(1) I have reviewed this Annual Report on Form 10-K of Alpha Teknova, 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(s) 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)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) 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) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, 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;

(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 and 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(s) 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 that 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 30, 2023

By: /s/ Matthew Lowell

Matthew Lowell
Chief Financial Officer
(Principal Financial and Accounting Officer)

Exhibit 32.1

CERTIFICATION OF PRINCIPAL EXECUTIVE OFFICER AND PRINCIPAL FINANCIAL OFFICER 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 of Alpha Teknova, Inc. (the "Company") on Form 10-K for the period ending December 31, 2022, as filed with the Securities and Exchange Commission on the date hereof (the "Report"), the undersigned hereby certify, pursuant to 18 U.S.C. § 1350, as adopted pursuant to § 906 of the Sarbanes-Oxley Act of 2002, that:

(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 30, 2023

By: /s/ Stephen Gunstream

Stephen Gunstream
President and Chief Executive Officer
(Principal Executive Officer)

Date: March 30, 2023

By: /s/ Matthew Lowell

Matthew Lowell
Chief Financial Officer
(Principal Financial Officer)