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

FORM 10-K

(Mark One)

☒ **ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**
For the fiscal year ended December 31, 2022

☐ **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: 001-34632

CRYOPORT, INC.

(Exact Name of Registrant as Specified in its Charter)

Nevada **(State or other jurisdiction of incorporation or organization)**	**88-0313393** **(I.R.S. Employer Identification No.)**

112 Westwood Place, Suite 350
Brentwood, TN 37027
(Address of principal executive offices, including zip code)

(949) 470-2300
(Registrant's telephone number, including area code)

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, $0.001 par value	CYRX	The NASDAQ Stock Market LLC (The Nasdaq Capital Market)

Securities registered pursuant to Section 12(g) of the Act: Warrants to purchase Common Stock

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

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

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

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

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

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

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act. ☐

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

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 common stock held by non-affiliates of the registrant as of June 30, 2022 was $1.1 billion based on the closing sale price of such common equity on such date (excluding 13,318,229 shares of common stock held by directors and officers, and any stockholders whose ownership exceeds five percent of the shares outstanding as of June 30, 2022).

As of February 17, 2023, there were 48,335,779 shares of the registrant's common stock outstanding.

DOCUMENTS INCORPORATED BY REFERENCE

Portions of the registrant's proxy statement for the 2023 Annual Meeting of Stockholders are incorporated herein by reference in Part III of this Annual Report on Form 10-K where indicated. Such proxy statement will be filed with the U.S. Securities and Exchange Commission within 120 days of the registrant's fiscal year ended December 31, 2022.

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FORWARD-LOOKING STATEMENTS

References to the "Company," "Cryoport," "we," "us," "our" and other similar words refer to Cryoport Inc. and its consolidated subsidiaries, unless the context suggests otherwise. This Annual Report on Form 10-K (this "Form 10-K") contains certain forward-looking statements. These forward-looking statements involve a number of risks and uncertainties. These forward-looking statements can generally be identified as such because the context of the statement will include certain words, including but not limited to, "believes," "may," "will," "expects," "intends," "estimates," "anticipates," "plans," "seeks," "continues," "predicts," "potential," "likely," or "opportunity," and also contains predictions, estimates and other forward-looking statements within the meaning of Section 27A of the Securities Act of 1933, as amended (the "Securities Act"), and Section 21E of the Securities Exchange Act of 1934, as amended (the "Exchange Act"), and in reliance upon the safe harbor provisions of the Private Securities Litigation Reform Act of 1995. Such forward-looking statements are based on the current beliefs of the Company's management, as well as assumptions made by and information currently available to the Company's management. Readers of this Form 10-K should not put undue reliance on these forward-looking statements, which speak only as of the time this Form 10-K was filed with the Securities and Exchange Commission (the "SEC"). Reference is made in particular to forward-looking statements regarding our expectations about future business plans, new products or services, regulatory approvals, strategies, development timelines, prospective financial performance and opportunities, including potential acquisitions; expectations about future benefits of our acquisitions and our ability to successfully integrate those businesses and our plans related thereto; liquidity and capital resources; projected trends in the market in which we operate;; expectations relating to current supply chain impacts; inflationary pressures and the effects of foreign currency fluctuations; expectations relating to the impacts on our operations resulting from the ongoing war between Russia and Ukraine; anticipated regulatory filings or approvals with respect to the products of our clients; expectations about securing and maintaining strategic relationships with global couriers or large clinical research organizations; our future capital needs and ability to raise capital on favorable terms or at all; results of our research and development efforts; and approval of our patent applications. Forward-looking statements are inherently subject to risks and uncertainties, some of which cannot be predicted or quantified. The Company's actual results may differ materially from the results projected in the forward-looking statements. Factors that might cause such a difference include, but are not limited to, those discussed in this Form 10-K, including the "Risk Factors" in "Part I, Item 1A — Risk Factors" and in "Part II, Item 7 — Management's Discussion and Analysis of Financial Condition and Results of Operations," as well as those discussed in reports filed with the SEC after the date of this Form 10-K.

Past financial or operating performance is not necessarily a reliable indicator of future performance, and you should not use our historical performance to anticipate results or future period trends. We can give no assurances that any of the events anticipated by the forward-looking statements will occur or, if any of them do, what impact they will have on our results of operations and financial condition. Except as required by law, we do not undertake to update any such forward-looking statements and expressly disclaim any duty to update the information contained in this Form 10-K.

PART I

Item 1. *Business*

Overview

Cryoport is a global leader serving the life sciences industry as a provider of integrated temperature-controlled supply chain solutions supporting the life sciences in the biopharma/pharma, animal health, and reproductive medicine markets. Our mission is to support life and health worldwide through comprehensive, innovative, and highly differentiated temperature-controlled solutions, including apheresis collection and cryoprocessing, global logistics, technologically sophisticated packaging, biostorage and bio-services, informatics, and cryogenic systems for regenerative medicine, cellular therapies, and life science products and treatments that require unique, specialized temperature-controlled management.

With 48 strategic international locations, Cryoport's global platform provides mission-critical solutions to over 3,000 customers working in biopharma/pharma, animal health, and reproductive medicine companies, universities, research institutions, and government agencies. Our platform of solutions and services together with our global team of over 1,000 dedicated colleagues delivers a unique combination of innovative supply chain technologies and services through our industry-leading brands, including Cryoport Systems, IntegriCell™, CryoStork®, MVE Biological Solutions, CRYOPDP, and CRYOGENE.

Cryoport's advanced temperature-controlled supply chain platform is designed to support the global distribution of high-value commercial biologic and cell-based products and therapies regulated by the United States Food and Drug Administration (FDA), the European Medicines Association (EMA) and other international regulatory bodies. Cryoport's solutions are also relied upon for the support of pre-clinical, clinical trials, Investigational New Drug Applications (IND), Biologics License Applications (BLA), and New Drug Applications (NDA) with the FDA, as well as global clinical trials initiated in other geographies, where strict regulatory compliance and quality assurance is mandated.

Over the last several years, we have grown to become a leader in supporting the clinical trials and commercial launches of cell and gene therapies globally. As of December 31, 2022, we supported 654 clinical trials, of which 79 were in Phase 3, and ten (10) commercial therapies. We believe regenerative medicine advanced therapies that successfully advance through the clinical trial process and receive commercial approval from the respective regulatory agencies will represent opportunities to become significant revenue drivers for us as the majority of them will require comprehensive temperature-controlled supply chain support and other services at commercial scale. Additionally, we expect that most will select us as their critical supply chain solution partner as a result of our work in connection with their respective clinical trials and our long track record of innovation and market responsiveness.

In addition, Cryoport also supports the animal health market and the human reproductive market on a global basis with its advanced supply chain platform. The animal health market is mainly composed of supporting animal husbandry, as well as companion and recreation animal health. The human reproductive market is largely composed of In-Vitro Fertilization (IVF) support for patients and clinics.

Cryoport's mission is to enable the life sciences to save and improve lives around the world by providing certainty throughout the temperature-controlled supply chain. Our people, innovative solutions, and industry leading technologies have been designed to exceed current standards to deliver certainty and de-risk the process across the entire temperature-controlled supply chain for the life sciences.

The Markets We Serve

Cryoport serves the life sciences industry as a trusted provider of integrated temperature-controlled supply chain solutions supporting the biopharma/pharma, animal health, and reproductive medicine markets.

Biopharma/Pharma. In the biopharma/pharma market, we are focused on supporting biopharma/pharma companies, primarily, in the saving of lives. From clinical research and development to clinical research organizations, to clinical trials for cell and gene therapies, to the storage and delivery of life-saving commercial cell and gene therapies, to the customers of biopharmaceutical /pharmaceutical organizations, to crucial points of care, we strive to address fundamental to advanced temperature-controlled storage, transport, packaging, fulfillment, and information challenges. Cell and gene therapies have become a rapidly growing area of biological drug development, with over $12 billion in funding raised in 2022. There were 1,457 cell and gene therapy developers worldwide, as reported by the Alliance for Regenerative Medicine (ARM) in its State of the Industry Briefing published on January 9, 2023. These developers have certain supply chain challenges that we believe our solutions are well tailored to address.

- ***Cell Therapies.*** As per ARM, cell therapy is "the administration of viable, often purified cells into a patient's body to grow, replace, or repair damaged tissue for the treatment of a disease. Cell therapies may be autologous, meaning that the patient receives cells from their own body, or they may be allogeneic, meaning the patient receives cells from a donor. Allogeneic cell therapies are often referred to as off-the-shelf therapies, as they are derived from a donor who is not the patient, enabling advance preparation and available to the patient immediately at the time of need."

- ***Gene Therapies.*** As per ARM, "gene therapy seeks to modify or introduce genes into a patient's body with the goal of durably treating, preventing, or potentially even curing disease, including several types of cancer, viral diseases, and inherited disorders."

Animal Health. In the animal health market, we provide support for animal reproduction, which primarily involves the production of protein. We also support medicine for the health of recreational and companion animals. Animal disease prevention and control rely on the safe transport and storage of vaccines and other biological materials around the world. Our secure temperature-controlled supply chain solutions are designed to help avoid costly delays through nonstop monitoring and complete fleet management from and to the origin and destination points as well as provide cryobiological storage equipment.

Reproductive Medicine. In the human reproductive medicine market, we are focused on supporting the creation of human life. This is primarily accomplished by supporting IVF, and related technologies, along with fertility networks globally. IVF materials receive one-on-one handling and individualized attention during the entire logistics process.

Acquisitions

We have further extended our solutions, capabilities, and global logistics network through the following acquisitions:

- In May 2019, we acquired Cryogene Labs (CRYOGENE), which is today an expanding state-of-the-art temperature-controlled biostorage solutions business strategically located in Houston, Texas. CRYOGENE is an industry leader in the management of pre-clinical and clinical biostorage services, including critical biological commodities supporting clinical research, the advancement of cell and gene therapy, and public health research. It provides customized, end-to-end chain of custody/chain of condition solutions for its clients. CRYOGENE's GMP (good manufacturing practices) operation is an FDA audited operation serving all temperature categories of the temperature-controlled supply chain for the life sciences.

- In October 2020, we acquired CRYOPDP, a leading global provider of innovative temperature-controlled logistics solutions for high value, time critical and temperature-sensitive biopharmaceutical/pharmaceuticals. CRYOPDP provides the biopharma market with temperature-controlled logistics, including packaging, pick-pack kit preparation, premium services, and specialty biopharma/pharma courier support. At the time of acquisition, CRYOPDP added a network of 22 global logistics centers located in 12 countries to our global network. These additions expanded our logistics network to provide "last mile" services and to better serve our global multi-national clients. They also added redundancies and backup that reduced supply chain risk for our clients.

- In October 2020, we also acquired MVE Biological Solutions (MVE), the global leader providing cryobiological storage and transportation systems for the life sciences industry through its advanced line of cryogenic systems including stainless-steel freezers, aluminum dewars and related ancillary equipment used in the storage and/or transport of life sciences commodities. MVE's three primary manufacturing facilities which are located in Ball Ground, GA, New Prague, MN and Chengdu, China. The acquisition was a vertical integration that, in addition to expanding our footprint to handle the growing demand driven by the growth in the cell and gene therapy market, was intended to further secure our supply of cryogenic systems. MVE's clients include cell and gene therapy, medical laboratories, biotech/pharmaceutical research facilities, blood and tissue banks, animal breeders, academic institutions, veterinary laboratories, large-scale biorepositories, fertility clinics, government agencies, and other institutions.

- In April 2021 and May 2021, we acquired Critical Transport Solutions Australia (CTSA) in Australia and F-airGate in Belgium, respectively, to further enhance CRYOPDP's existing global temperature-controlled logistics capabilities in the APAC and EMEA regions.

- In April 2022, we acquired Cell&Co BioServices in Clermont-Ferrand, France with additional operations in Pont-du-Château, France to further enhance our existing global temperature-controlled supply chain capabilities. Cell&Co BioServices is a bioservices business providing biorepository, kitting, and logistics services to the life sciences industry and now a part of Cryoport Systems' Global Supply Chain Center Network.

- In July 2022, we acquired Polar Expres based in Madrid, Spain, which provides temperature-controlled logistics solutions dedicated to the life sciences industry. Polar Expres operates logistics centers in Madrid and Barcelona supporting the rapidly growing life sciences market. This acquisition further expanded CRYOPDP's footprint in the EMEA region.

- In July 2022, we also acquired Cell Matters based in Liège, Belgium, a company with cryobiology expertise, providing cryo-process optimization, cryoprocessing, and cryopreservation solutions to the life sciences industry. This acquisition is tied to Cryoport Systems' new initiative to establish standardized, integrated apheresis collection, processing, biostorage, and distribution solutions for cellular therapies. The new platform will leverage the cryo-processing expertise of Cell Matters (rebranded IntegriCell™) to provide consistent, high-quality cellular starting material for use in the manufacture of life-saving cellular therapies.

Cryoport Products and Services

We continuously expand our products and services across the supply chain with innovative, technology-centric solutions to support the development and distribution of life sciences products and therapies.

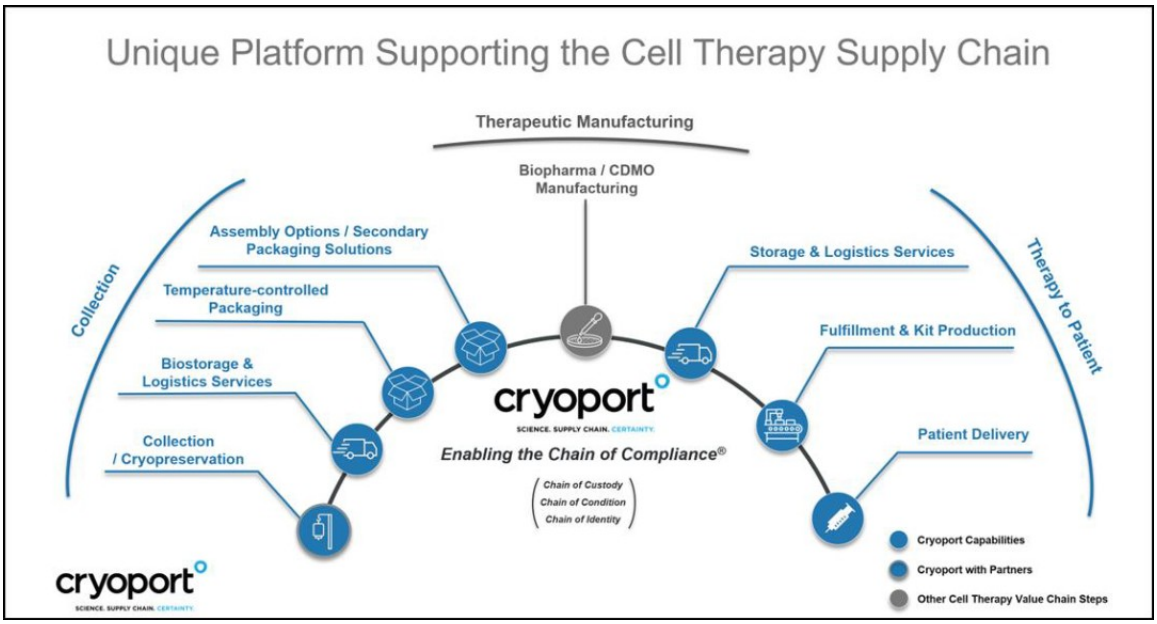


Figure 1: Cryoport's products and services supporting cell therapy development and distribution.

Our suite of market leading products and services include, but are not limited to the following:

Cryoport Express® Shippers - Cryoport Express® Shippers range from liquid nitrogen dry vapor shippers (-150℃) to our C3™ Shippers (2-8℃), which are powered by phase-change materials. The Cryoport Express® Shippers are precision-engineered assemblies that are reliable, cost-effective, and reusable or recyclable. Our liquid nitrogen dry vapor Cryoport Express® Shippers utilize an innovative application of 'dry vapor' liquid nitrogen technology and, most often, include a SmartPak™ Condition Monitoring System. Cryoport Express® Shippers meet IATA requirements for transport, including Class 6.2 infectious substances, are also ISTA "Transit Tested" certified and carry the CE ("Conformité Européenne") mark demonstrating conformance with European Union ("EU") health, safety, and environmental protection standards.

Cryoport ELITE™ Shipper Systems

- **Cryoport ELITE™ -80°C Gene Therapy Shipper** - As the first product in a high-performance line of Cryoport ELITE™ Shippers, the company has designed a best-in-class family of -80°C shippers that have superior temperature management properties as well as incorporate next generation protection, handling, and data collection and management systems including our SmartPak™ Condition Monitoring System. The Cryoport ELITE™ shipper line has been developed in conjunction with one of the leaders in the gene therapy space for clinical and commercial gene therapy distribution. The ELITE™ shipper platform will be launched during the first quarter of 2023.

- **Cryoport ELITE™ Cryosphere™ Shipper** - The second product in the new high-performance line of Cryoport ELITE™ Shippers is the Cryosphere™, which is a revolutionary gravitationally stabilized shipper that is the most advanced cryogenic shipper to support the cell and gene therapy and other life sciences markets. This shipper is designed to passively stabilize the payload through an internal gravitational sphere, thereby keeping the payload in an upright orientation regardless of the external shipper orientation. This innovative technology further mitigates one of the key risks during storage, handling, and transport, which is maintaining constant cryogenic temperatures. In addition, the Cryosphere™ has advanced shock and vibration absorption properties to further protect its payload and it will be outfitted with Cryoport's state-of-the-art condition monitoring systems. It has also been designed to be ergonomically friendly for our manufacturing and clinical partners providing a better user experience than other products in the market. The Cryosphere™ is expected to be launched during the second quarter of 2023.

Cryoport Consulting Services – Cryoport Consulting Services functions in an expert advisory capacity to offer solutions to address risk factors present in temperature-controlled supply chain and logistics. To develop tailored scalable solutions, our cross-functional team collaborates with our clients to understand supply chain, logistics, time, shipper, and packaging concerns. Cryoport Consulting Services employs a structured approach to managing, executing, and developing risk mitigation plans. Our clients benefit from our quality driven processes and solutions delivered by our high integrity team leveraging industry-standard best practices and years of experience partnering with leading regenerative medicine companies from early clinical through post-commercialization. Service solutions range from comprehensive physical, thermal and shipping qualifications of shipping systems and/or packaging to developing user-friendly custom packaging solutions focused on the challenges unique to our regenerative medicine customers. Through our Packaging Center of Excellence we serve our clients in biopharma/pharma, animal health, and reproductive medicine markets by providing state-of-the-art customized packaging, testing, qualification capabilities and a host of other services.

Cryoport Bioservices – In June 2022, Cryoport Systems launched its first two Global Supply Chain Centers in Houston, Texas and Morris Plains, New Jersey. These state-of-the-art facilities combine our existing logistics processes and capabilities with our new, cutting edge Bioservices infrastructure – all under one roof, as Cryoport Systems' Global Supply Chain Center Network. These new Cryoport Systems' Global Supply Chain Centers offer a new and fully integrated approach designed to support cell and gene therapies including comprehensive controlled temperature storage, fulfilment, kit production, secondary packaging, labelling of therapeutic products and GMP raw materials storage along with advanced world class logistics. In April 2022, we acquired Cell&Co BioServices in Clermont-Ferrand, France with additional bioservices operations in Pont-du-Château, France to accelerate the setup of our bioservices capabilities in the EMEA region. Further expansion of the Cryoport Systems' Global Supply Chain Center Network is expected to include additional sites in the Americas, EMEA and APAC regions. The addition of these facilities and services provides for our clients' increasing need for comprehensive and integrated solutions offerings and the expected growth in the global biostorage and bioservices markets, which are driven by the acceleration of clinical trials and the commercialization of regenerative medicine therapies on a global basis.

CRYOGENE - provides unparalleled solutions for the provision of pre-clinical temperature-controlled biological materials management services to the life sciences industry. These services include comprehensive specimen storage, processing, collection, and retrieval at our recently expanded CRYOGENE operations in Houston, Texas, which is a cGMP-compliant operation. CRYOGENE is currently in the planning stage to expand its operations to San Antonio, Texas and Philadelphia, Pennsylvania.

CRYOPDP Temperature-controlled Logistics - CRYOPDP is a specialist providing global and innovative temperature-controlled logistics solutions to the biopharmaceutical/pharmaceuticals industry. CRYOPDP operates with expertise an exhaustive range of temperature-controlled logistics services including temperature-controlled packaging and premium transport solutions from cryogenic temperature (-196°C to -150°C) to controlled ambient (+15°C to +25°C).

IntegriCell™ Services – in conjunction with our recent acquisition of Cell Matters in July of 2022, Cryoport has launched its IntegriCell™ service platform. The IntegriCell™ platform is designed as a first-to-market, fully standardized apheresis collection and cryo-processing platform that is expected to be built out on a global basis. The platform services include apheresis/leukapheresis collection, Cryoshuttle™ transportation services, cryo-process optimization, cryo-processing services, and biostorage to provide a more consistent starting product and increased patient accessibility into the community care setting for regenerative medicine therapies.

MVE Biological Solutions

- **MVE Biological Solutions' Fusion® Cryogenic System** - is the world's first and only self-sustaining cryogenic freezer. The MVE Fusion® can operate as a stand-alone unit, requiring no on-going liquid nitrogen supply or connection to an

external liquid nitrogen source. Fusion® cryogenic freezers are a perfect solution for remote geographic locations, isolated laboratories, high elevation facilities, or facilities without existing liquid nitrogen infrastructure.

- **MVE Biological Solutions' Vario® Cryogenic System** – is an innovative cryogenic freezer system that can support temperatures anywhere between -20°C and -150°C. In addition to providing greater flexibility, the Vario® series of cryogenic freezer systems provide effective and consistent temperature profiles with less than 1% of the power consumption and a 70% reduction in overall operating cost savings compared to traditional mechanical freezers.

Competitive Advantages

With our first-to-market integrated platform of technology-driven supply chain solutions serving the life sciences industry, we have established a substantial lead over potential competitors by focusing on de-risking critical processes central to the manufacture of cell and gene therapies. Working with our in-depth knowledge of information technology, cryopreservation, packaging, temperature-controlled logistics, bioservices, and cryogenic systems, our management, technical, business development and service support teams approach our growing markets with valued insights, adaptability, innovation, creative thinking and a mindset of problem resolution which will provide clients with certainty of performance.

The most common alternatives to Cryoport's platform of solutions are "older technologies" and/or systems as well as partial, non-integrated and/or non-regulated, non-validated solutions. In fact, a portion of the biopharma market and much of the animal health and reproductive medicine markets still use liquid nitrogen and/or dry ice with no monitoring or ongoing validation processes for equipment and/or procedures. Non-integrated systems with assets and technologies managed by multiple entities introduce gaps in policies, procedures, information, and validation of the supply chain solutions which in turn create inherent and material risks during the biostorage, packaging, fulfillment, information gathering, transport processes and other related activities required to securely deliver biopharma products and services in the life sciences.

Through our experience, we know that supply chain processes can have a large impact on temperature sensitive product/commodity conditions. This is especially important for high value, and, at times, irreplaceable commodities for which we provide products and services, whether in support of research, clinical trials or commercial distribution. We therefore seek to exceed the most demanding standards in the industry, e.g., ISO 13485, ISO 21973, ISO 9001, STA (International Safe Transit Association), IATA (International Air Transport Association), to name a few.

Throughout our company, we have implemented Quality-by-Design processes that allow us to assess internal and in-field events including the impact of packaging and supply chain processes and procedures on the commodity being shipped, and the equipment being used for each individual shipment. With the acquisition of CRYOPDP, Cryoport now has increasing control and accountability around distribution which in turn provides better performance and risk management for our clients and their critical therapies. We have been qualified as a trusted temperature-controlled solutions provider for hundreds of life sciences companies, institutions, and governments. We supported 654 clinical trials in the regenerative medicine space as of December 31, 2022. Cryoport and CRYOPDP have logged over 500,000 shipments to over 100 countries with hundreds of different types of life sciences materials in the last 12 months.

Cryoport Systems' Cryoportal® Logistics Management System (Cryoportal®) is an important backbone technology that is integrated with our partners, such as FedEx, UPS, DHL, Be-The-Match Biotherapies, Lonza, and others. The Cryoportal® Logistics Management System handles order entry, keeps track of our global inventory, and provides algorithms for predictive analysis on every shipment while in transit, globally. Cryoport Systems' customer service team monitors every in-transit shipment 24/7/365 and, by leveraging the Cryoportal®, they have the unique ability to see issues that arise and take corrective measures up to and including intervention to potentially save a shipment in trouble.

Embedded within the Cryoportal® is our Chain of Compliance®, which is important for regulatory reasons and risk mitigation to our processes. Each of our reusable products, including every Cryoport Express® and ELITE™ shipper and every SmartPak® Condition Monitoring System, has a unique ID attached for its entire life. Thereby, Cryoport personnel can pull any Cryoport shipper out of our fleet and provide customers and/or regulatory agencies with its (and all its components) entire history including every journey it has taken, for whom it was shipped, the contents shipped, the Cryoport shipper's performance during transit, and the time of its return to a Cryoport Systems' Global Logistics facility. It also provides technician log information on the validated cleaning process, recertification process of the unit and its components, and recalibration of the SmartPak® Condition Monitoring System as being acceptable for its next use. All this traceability is securely stored in our Cryoportal® Logistics Management System for our clients to access at any time. We believe that this represents a significant differentiator for Cryoport in the markets it serves.

The acquisition of CRYOPDP in 2020 significantly expanded Cryoport's global logistics network through its current 27 offices/logistics centers in 15 countries. During 2022, it further expanded both organically as well as through further development of locations in India and the acquisitions in Ireland, Belgium, Spain and Australia. CRYOPDP has more than 25 years of experience serving the life sciences industry as a specialty courier with innovative and dependable temperature-controlled logistics solutions focused on the pharma/biopharma market.

The acquisition of MVE Biological Solutions in 2020 enabled Cryoport to become the leading global provider of cryogenic systems and solutions. MVE Biological Solutions' is a leader in the supply of cryogenic systems globally and it is an important part of our global supply chain platform. With its long history of producing the highest quality, most dependable products in the industry, it has set the standard for the manufacture of cryogenic systems including vacuum insulated products, freezer, and shipper solutions used for storage and/or distribution of critical biological material for almost 60 years. MVE Biological Solutions' equipment is used extensively throughout the life sciences industry and is known for providing the trusted cryogenic storage and/or transportation solutions within the pharma/biopharma, animal health and reproductive medicine markets.

Segment Reporting

The Company continually monitors and reviews its segment reporting structure in accordance with authoritative guidance to determine whether any changes have occurred that would impact its reportable operating segments. Operating segments are defined as components of an enterprise about which separate financial information is available that is evaluated regularly by the chief operating decision maker in deciding how to allocate resources and in assessing operating performance. The chief operating decision maker ("CODM") is our Chief Executive Officer. Up until the fourth quarter of 2020, we managed, reported and evaluated our business in the following two reportable operating segments: Global Logistics Solutions and Global Bioservices. During the fourth quarter of 2020, our CODM changed how he makes operating decisions, assesses the performance of the business and allocates resources in a manner that caused our operating segments to change as a result of the MVE Biological Solutions and CRYOPDP acquisitions. In consideration of Financial Accounting Standards Board's ("FASB") Accounting Standards Codification ("ASC"), *Segment Reporting*, we determined that we are not organized around specific products and services, geographic regions, or regulatory environments. Accordingly, beginning with the fourth quarter of 2020, we realigned our reporting structure, resulting in a single reportable segment. The Company has adjusted its financial statements for historical periods to reflect this change in segment reporting and show its financial results without segments for all periods presented. See Part II, Item 7 – Management's Discussion and Analysis of Financial Condition and Results of Operations, in this Form 10-K for further discussion.

Customers and Distribution

As a result of growing globalization in cell and gene therapy (regenerative medicine), biologics, biopharma, biotechnology, clinical trials, distribution of biopharmaceutical products, animal health and reproductive medicine, the requirement for effective and reliable solutions for keeping clinical samples, pharmaceutical products and other specimen at controlled temperatures requires more sophisticated supply chain solutions in areas such as distribution, complex shipping routes, extended shipping times, potential custom delays, general logistics challenges, biostorage, etc. We believe that our platform of temperature-controlled supply chain solutions, expertise, and geographic footprint enables us to take advantage of the growing demand for effective and efficient global transport and biostorage of temperature sensitive life sciences commodities. This is especially the case for the new therapies being developed in the regenerative medicine market, such as autologous and allogeneic CAR T-cell therapies, that require tightly controlled temperatures through the development, biostorage, transportation, and delivery processes to maintain efficacy and safety.

During the years ended December 31, 2022, 2021 and 2020, no single customer accounted for over 10% of our total revenues.

Our geographical revenues, by origin, for the years ended December 31, 2022, 2021 and 2020, were as follows:

	2022	2021	2020
Americas	54.0 %	54.0 %	63.0 %
Europe, the Middle East and Africa (EMEA)	28.2 %	26.7 %	25.8 %
Asia Pacific (APAC)	17.8 %	19.3 %	11.2 %

Customer types

Our major customer types include:

Clinical Trials - Every pharmaceutical or biopharma company developing a new drug or therapy must seek development protocol approval by regulatory bodies, e.g., the FDA or EMA. Usually, these agencies require clinical trials to be designed to test the safety and efficacy of the potential new drug or therapy among other things. Importantly, clinical trial specimens are often irreplaceable because each one represents clinical data at a prescribed point in time, in a series of specimens on a given patient, who may be participating in a trial for up to several years. Sample integrity and information gathering during the transportation and biostorage process is vital to retaining patients in each trial and staying on schedule.

Biotechnology and Diagnostic Companies - The biotechnology market includes basic and applied research and development in diverse areas such as stem cells, gene therapy, DNA tumor vaccines, tissue engineering, genomics, blood products, etc. Companies participating in the foregoing fields rely on temperature-controlled storage and transport of specimens in connection with their research and development efforts, for which our suite of global temperature-controlled supply chain solutions are ideally suited.

Cell Therapy Companies - Rapid advancements are underway in the research and development of cell-based therapies, which involve cellular material being infused into a patient. In allogeneic cell therapies, the donor is a different person than the recipient of the cells. Autologous cell therapy is a personalized therapeutic intervention that uses an individual's cells, which are cultured and expanded outside the body, and reintroduced into the individual. Once cells are manufactured into a cellular therapy, in either case, they must be stored and shipped cryogenically for which our Cryoport Express® and Cryoport ELITE™ Shipper solutions, CRYOPDP logistics solutions, CRYOGENE's biostorage capabilities, and MVE Biological Solutions' cryogenic systems are ideally suited.

Contract Research, Development & Manufacturing Companies - Increasingly, as evidenced by our strategic partnership with Lonza, CRO's and Contract Development and Manufacturing Organizations ("CDMOs") are engaging our services exclusively in conjunction with their contract services platform to provide a higher level of service to our mutual client base. We anticipate that these relationships, which are mutually beneficial to both parties as well as our client base, will accelerate and expand to include our entire portfolio of services as cell and gene therapy clinical trials advance and as commercial therapies ramp on a global basis.

Central Laboratories - With the increase and globalization of clinical studies and trials, supply chain support has become more complex and ensuring sample integrity has become more challenging. Reliable, specialty courier costs are now consuming an increasing portion of global protocol budgets. Thus, we believe laboratories performing the testing of samples collected during the conduct of these global multi-site studies are looking for cost effective, state-of-the-art temperature-controlled supply chain solutions. CRYOPDP's services and its global network of logistic centers have successfully supported central laboratories throughout the world for many years.

Fertility Clinics and IVF - Maintaining cryogenic temperatures during shipping and transfer of In Vitro Fertilization (IVF) specimens like eggs, sperm, or embryos is critical for cell integrity to retain viability, stabilize the cells, and ensure reproducible results and successful IVF treatment. We believe that Cryoport Systems solutions for reproductive medicine are very compelling and well received. Additionally, MVE Biological Solutions supplies cryogenic systems to fertility clinics that wish to store and/or ship reproductive materials in their possession

Animal Health Companies - Our focus in Animal Health is supporting protein production. We provide cryogenic storage dewars to bovine breeders for the support of beef and milk production through artificial insemination, on a global basis. We also provide temperature-controlled supply chain services for advanced vaccines, primarily for aviary. MVE Biological Solutions and Cryoport Systems are our primary participants in this market. We also support therapies for companion and recreational animals which include canine and equine, in addition to veterinary laboratories and other animal related reproductive and health areas.

University and Health Center Research Facilities - Research is conducted globally at major universities and health centers and is often done in collaboration with others which requires using Cryoport Express® Shippers, CRYOPDP, and/or CRYOGENE services. Our broad line of products and services provide solutions tailored to these institutions and individual researchers.

Sales and Marketing

We serve clients throughout the life sciences industry and our sales and marketing initiatives are global in nature, focusing on addressing each customer's "pain points" and anticipated needs through best-in-class temperature-controlled supply chain solutions. Our marketing teams design and implement targeted digital campaigns to support our commercial strategy and promote our innovative portfolio of solutions and capabilities. Our marketing initiatives are designed to drive our business development, program management, consulting, other related activities and increase awareness of our advanced temperature-controlled supply chain solutions.

Competition

We believe Cryoport is unique in its offering, and we have not identified any competition that offers solutions that are as comprehensive or as widely proven in the global market as our platform of temperature-controlled supply chain solutions for the life sciences. However, we do have competition from companies that offer products and/or services that could be considered competitive to certain components or elements of our platform of temperature-controlled supply chain solutions, including specialty couriers, such as World Courier Group, Inc., Marken, Biocair and Quick Life Science Group, along with companies that offer products such as Biolife Solutions, Azenta Life Sciences, and IC Biomedical. In addition, life science companies may develop their own in-house temperature-controlled supply chain solutions, systems and procedures to cover their specific needs.

Engineering and Development

Our research, development, and engineering efforts are focused on continually investigating new technologies that can improve our services, improve the features of our products and solutions, and cause us to be most sensitive to market needs.

Cryoport Data Management Systems

SkyTrax™ Condition Monitoring System - SkyTrax™ is a next generation proprietary-designed Condition Monitoring System, custom-built for the cell and gene industry. In addition to being 4G/LTE compliant, cellular network agnostic, with a full sensor array to track location, temperature, humidity, light, shock, orientation, and geofencing, it will have Bluetooth and Wi-Fi capabilities, along with triple data redundancy, a best-in-class battery life, and bi-directional communication providing scannable airway bills, commercial invoices, loading and unloading instructions, security access features, and temperature data via an E-ink screen. It also can be reprogrammable remotely in support of critical in-field logistics needs. SkyTrax™ will be fully integrated into our Cryoport Express® and Cryoport ELITE™ Shipper Systems. The SkyTrax™ Condition Monitoring System is expected to be launched during the second half of 2023.

Cryoportal® 2.0 and UnITy™ - Cryoport Systems' Cryoportal® 2.0. Logistics Management Platforms is expected to be launched during the second quarter of 2023 and is ISO 21973 compliant as a supply chain management platform. In addition to managing all aspects of a given client shipment, it also manages all elements of the Chain of Compliance™ based aspects of the packaging as well including shipper management, requalification, and processing. Cryoportal® 2.0 is complemented by CRYOPDP's recently released UnITy™ Transportation Management System. UnITy™ provides functionalities in addition to transport management that include warehousing management, quality management, customer experience portal, mobile apps for track and trace during transport and storage as well as integration with transportation agents and business partners. The combination of these two powerful informatics platforms provides Cryoport clients with a comprehensive status of their clinical or commercial distribution activities, while supporting regulatory requirements and further sets Cryoport apart from competition.

Manufacturing and Raw Materials

Manufacturing - We source components for our products from multiple suppliers, including those that manufacture to our engineering specifications, using, in part, proprietary technology and know-how to mitigate supply chain risks. We also use "off-the-shelf" products, which we may modify to meet our requirements. For some components, there are relatively few alternate sources of supply and the establishment of additional or replacement suppliers may or may not be accomplished immediately. When this occurs, we endeavor to mitigate risk by locating an alternative qualified supplier and, as appropriate, increasing our inventory level. Additionally, there continues to be a worldwide shortage of semiconductor, memory and other electronic components affecting many industries. Certain of our MVE Biological Solutions products and our SmartPak system are dependent on some of these electronic components. A continued shortage of electronic components could impact us significantly and could cause us to experience extended lead times and increased prices from our suppliers. For additional information see "Part I, Item 1A—Risk Factors—Risk Related to Our Business—We depend on the availability of certain component products used in our solutions; delays or increased costs in the procurement of components manufactured by third parties could adversely affect our business operations, financial performance and results of operations, and we may experience customer dissatisfaction and harm to our reputation" in this Form 10-K for additional information.

Our vendor/partner relationships allow us to concentrate on further advancing and expanding our platform of systems, products, and solutions for the life sciences to meet the growing and varied demands for validated temperature-controlled solutions in the life sciences industry. We endeavor to keep our supply structure up to date and agile as it provides us the opportunity to rapidly scale to support our client's commercialization, systems, products, and solutions requirements; however, we are ever mindful of the work we must do to improve our current sourcing and to continue to mitigate risks therein.

Raw Materials - Various raw materials are used in the manufacture of our products and in the development of our technologies. Most raw materials are generally available from several alternate distributors and/or manufacturers. Where we have experienced significant difficulty in obtaining these raw materials, we have established alternative global sources or are working with the existing supplier to overcome its deficiency.

Patents, Copyrights, Trademarks, and Proprietary Rights

To remain competitive, we must develop and maintain protection on the proprietary aspects of our platform of technologies. We rely on a combination of patents, copyrights, trademarks, trade secret laws and confidentiality agreements to protect our intellectual property rights.

We file patent applications to protect innovations arising from our research, development and design. We currently own approximately 60 issued patents and have more than 100 pending patent applications throughout the world. Our patents generally protect certain aspects of our products and related technology. We also own common law and registered trademarks in the U.S. and in certain foreign countries to protect the names of our company, certain products, and key service brands. We own certain copyrights relating to certain aspects of our systems, products and services.

Our success is influenced, in part, by our ability to continue to develop proprietary products and technologies. It is desirable to obtain patent coverage for these products and technologies; however, some are protected as trade secrets. We intend to file trademark and patent applications covering any newly developed products, methods and technologies. However, there can be no guarantee that any of our pending or future filed applications will be issued as patents or registered as trademarks. There can be no guarantee that the various patent and trademark governmental agencies from around the world or some third party will not initiate an interference proceeding involving any of our pending applications or issued patents. Finally, there can be no guarantee that our issued patents or future issued patents, if any, will provide adequate protection from competition.

Patents provide some degree of protection for our proprietary technology. However, the pursuit and assertion of patent rights involve complex legal and factual determinations and, therefore, are characterized by significant uncertainty. In addition, the laws governing patent issuance and the scope of patent coverage continue to evolve. Moreover, the patent rights we possess or are pursuing generally cover our technologies to varying degrees. As a result, we cannot ensure that patents will issue from any of our patent applications, or that any of the issued patents will offer meaningful protection. In addition, our issued patents may be successfully challenged, invalidated, circumvented, or rendered unenforceable so that our patent rights may not create an effective barrier to competition. We must also pay maintenance fees at set intervals for our patents to not expire prematurely. The laws of some foreign countries may not protect our proprietary rights to the same extent as the laws of the United States. There can be no assurance that any patents issued to us will provide a legal basis for establishing an exclusive market for our products or provide us with any competitive advantages, or that patents of others will not have an adverse effect on our ability to do business or to continue to use our technologies freely. As with all patents, we may be subject to third parties filing claims that our technologies or products infringe on their intellectual property. We cannot predict whether third parties will assert such claims against us or whether those claims will hurt our business. If we are forced to defend against such claims, regardless of their merit, we may face costly litigation and diversion of management's attention and resources. As a result of any such disputes, we may have to develop, at a substantial cost, non-infringing technology or enter into licensing agreements. These agreements may be unavailable on terms acceptable to such third parties, or at all, which could seriously harm our business or financial condition.

With respect to our trademarks, we file and pursue trademark registrations on words, symbols, logos, and other source identifiers that clients use to associate our products and services with us. Although our registered trademarks carry a presumption of validity, they can be challenged and possibly invalidated and as such, we cannot guarantee that any trademark registration is infallible.

We also rely on trade secret protection of our intellectual property. We attempt to protect trade secrets by entering into confidentiality agreements with employees, consultants and third parties, although, in the past, we have not always obtained such agreements. It is possible that these agreements may be breached, invalidated, or rendered unenforceable, and if so, our trade secrets could be disclosed to our competitors. Despite the measures we have taken to protect our intellectual property, parties to such agreements may breach confidentiality provisions in our contracts or infringe or misappropriate our patents, copyrights, trademarks, trade secrets and other proprietary rights. In addition, third parties may independently discover or invent competitive technologies, or reverse engineer our trade secrets or other technology. Therefore, the measures we are taking to protect our proprietary technology may not be adequate.

Cryoport's Quality Assurance and Regulatory Affairs Programs

Cryoport is committed to quality, and this is reflected in all aspects of our global organization. From our innovative design of products and services to our continuous improvement initiatives, Cryoport has implemented comprehensive quality standards that match or exceed the stringent requirements within the markets we serve. Cryoport's Quality Management Systems have been designed, implemented, and certified to meet ISO 9001:2015 and ISO 13485 standards in key global locations, demonstrating the discipline necessary to maintain a positive compliance profile. With our strong foundation in ISO 9001:2015 and ISO 13485, we leverage industry-specific experience with applicable regulatory requirements, and industry expectations, to create processes and procedures that incorporate strong operational practices of checks with verification. Our Quality Management Systems are designed to ensure proper controls in manufacturing, temperature-controlled supply chain services, logistics, bioprocessing, customer/client education, contracting, processing, shipping and biostorage, accumulation, and communication.

Our Quality Management Systems incorporate notable good practice quality guidelines and regulations (GxP) elements, beyond those stipulated in ISO 9001:2015 and ISO 13485, to ensure our customers are supported in the manner necessary to maintain standards and to secure a positive compliance profile for Cryoport as a supplier and partner. Notable elements include, but are not limited to, Good Documentation Practices, Good Manufacturing Practices, Good Distribution Practices, archival processes and procedures, Supplier Controls, and Corrective Action and Preventive Action (CAPA) procedures, to highlight a few examples.

Through procedural requirements, Cryoport provides substantial risk-mitigation strategies throughout its full offering of products, systems, and services to support and maintain customer confidence. Metrics and key performance indicators are accumulated regularly, and are trended to predict, and mitigate, potential risks to operations. Operating and senior management utilized this information to enact decisions regarding procedures, processes, resource allocation, and corrective actions. Quality-driven initiatives are supported throughout our global organization. We are also subject to GMED, which is an international reference body in the certification of health care and medical devices quality management systems under ISO 9001, NF EN, and ISO 13485. As such, we are subject to audits by a Medical Device Single Audit Program (MDSAP) auditing organization. Cryoport's cryogenic biostorage facilities are routinely inspected by the FDA and The Foundation for the Accreditation of Cellular Therapy (FACT) to confirm regulatory compliance to industry requirements related to drug applications, filings, and maintenance of various cryogenically stored materials.

Government Regulation

Globally, Cryoport is subject to regulations in numerous country jurisdictions and international regulations relating to manufacturing, shipments, customs, import, export, safe working conditions, environmental protection, and disposal of hazardous or potentially hazardous substances. In addition, we must ensure compliance with economic sanctions and/or restrictions on individuals, corporations, or countries, and other government regulations affecting trade that may apply to our international cross border business activities.

The shipping of biologic products, biologic commodities, diagnostic specimens, infectious substances, and dangerous goods, whether via air or ground, falls under the jurisdictions of many country, state, federal, local and international agencies. The quality of the packaging that protects such commodities is critical in determining successful shipping conditions and to ensure a commodity will arrive at its destination in a satisfactory condition. Meeting stringent regulations such as Dangerous Goods Regulations, ISTA, and IATA, as applicable, Cryoport has demonstrated compliance and adhesion to these requirements. Many of the regulations for transporting dangerous goods in the United States are determined by international rules formulated under the auspices of the United Nations. Dangerous goods are typically one-time shipments and are not a part of our routine services. When called upon to ship dangerous goods, Cryoport follows strict and stringent guidelines. International Civil Aviation Organization ("ICAO") is the United Nations organization that develops regulations (Technical Instructions) for the safe transport of dangerous goods by air. If shipment is by air, compliance with the rules established by the IATA is required. IATA is a trade association made up of airlines and air cargo couriers that publishes annual editions of the IATA Dangerous Goods Regulations. These regulations interpret and add to the ICAO Technical Instructions to reflect industry practices. Additionally, the Centers for Disease Control ("CDC") has regulations (published in the Code of Federal Regulations) for interstate shipping of specimens.

Our Cryoport Express® and ELITE™ Shippers meet Packing Instructions 602 and 650 and are certified for the shipment of Class 6.2 Dangerous Goods per the requirements of the ICAO Technical Instructions for the Safe Transport of Dangerous Goods by Air and IATA. Our present and planned future versions of the Cryoport SmartPak™ Condition Monitoring Systems will likely be subject to regulation by the Federal Aviation Administration ("FAA"), Federal Communications Commission ("FCC"), FDA, IATA and possibly other agencies which may be difficult to determine on a global basis. Additionally, our Chain of Compliance™ processes comply fully with ISO 21973 guidelines.

Storage of biological materials that are classified as drug products for human therapeutic use (either for investigational use or commercially approved) or materials used in the manufacture of drug products for human therapeutic use, is regulated by the FDA under Title 21 Code of Federal Regulations ("CFR") part 210 & 211. Facilities must be compliant with current GMP regulations which are enforced by the FDA through registration and audit. When drug products are exported to other countries, biostorage upon receipt must meet relevant local regulations.

Our MVE Biological Solutions cryogenic stainless-steel freezers and aluminum dewars are certified to the Medical Device Directive (MDD) in the EU. Additionally, registrations for import are in place for various countries with these requirements.

For additional information, see "Part I, Item 1A — Risk Factors—Risks Related to Regulatory and Legal Matters" in this Form 10-K.

Environmental, Social and Governance ("ESG") Program

Beginning in 2020 we initiated a formal internal review of our ESG policies, procedures, and performance. Subsequently in February 2021, we publicly disclosed ESG information based on the framework and standards set by the Sustainability Accounting Standards Board (SASB) and the Taskforce on Climate-related Financial Disclosures (TCFD). Building upon our first report, we began with the goal of developing a formal, thoughtful, comprehensive, and right-sized sustainability program that would be used as a foundation for effectively organizing, reporting, and measuring our performance to set ESG goals in the future.

In June 2021, we began a materiality assessment to guide our overall sustainability strategy. The intent of the materiality assessment was to understand what ESG topics were important to our key stakeholders, to take into consideration Cryoport's business strategy development, and to understand Cryoport's global internal priorities. There were three key activities for this phase of the process: Benchmarking against peer companies, ratings received from ISS, MSCI, and Sustainalytics, and interviews with key stakeholders.

The information and feedback received from the materiality assessment was aggregated into a customized and weighted materiality matrix. The following Materiality Matrix follows GRI Standards recommendations and plots topics based on their relative priority resulting from the materiality assessment.

Once the Materiality Matrix was developed, several meetings were conducted internally with our ESG committee and our Board of Directors' Nomination and Governance Committee to evaluate the findings.

As we proceeded on our ESG endeavor in 2022, our initial key focus was on Green House Gas (GHG) Emissions. GHG emissions were the foremost priority identified in our Materiality Matrix and represent a clear global significance for companies, consumers, and other stakeholders.

Cryoport engaged an ESG advisor upon completion of our Sustainability Strategy to assist in creating a report of our estimated global GHG emissions during 2021. The following summarizes that report.

Summary of our 2021 GHG Emissions Report

Methodology

We used the World Resource Institute's Greenhouse Gas Protocol - Corporate Accounting and Reporting Standard (Revised Edition) to calculate the company's GHG emissions. The standard provides accounting tools to measure, manage, and report on GHG emissions. This protocol classifies emissions into three "scopes." Scope 1 emissions includes direct GHG emissions, which occur from sources that are owned or controlled by a company. Scope 2 emissions include indirect GHG emission from purchased electricity. Scope 3 emissions include all other indirect GHG emissions.

Organizational Boundary

The reporting boundary for the purposes of the report is Cryoport, Inc. and its consolidated subsidiaries, which includes our four business units (MVE, Cryoport Systems, CRYOPDP and Cryogene) that was comprised of 41 facility locations across 13 countries (United States, China, Netherlands, Portugal, France, Belgium, United Kingdom, Poland, Germany, Singapore, India, South Korea, Australia) in 2021.

Scope

The scope of the report includes our Scope 1 emissions (Direct) and Scope 2 emissions (Indirect emissions from purchased electricity), but generally excludes Scope 3 emissions (Other indirect emissions). However, we did quantify Scope 3 emissions from business travel for three business units and waste for two business units because the data was readily available to quantify such emissions. The following sources of emissions were included in the scope of the report for the identified business units:

	Emission Type	Business Units	Source of Information
Scope 1	Stationary Combustion	MVE, Cryoport Systems, Cryogene, CRYOPDP	Actual natural gas consumption or spend data at the majority of locations
Scope 1	Mobile Sources	MVE, Cryoport Systems, Cryogene, CRYOPDP	Vehicle fleet information (e.g., make model, year), as well as vehicle mileages or fuel usage data
Scope 1	Refrigeration / AC Equipment Use	MVE, Cryoport Systems, Cryogene, CRYOPDP	Refrigerant types and recharge amounts
Scope 2	Purchased Electricity (Location-Based)	MVE, Cryoport Systems, Cryogene, CRYOPDP	Actual electricity consumption data at the majority of locations
Scope 3	Employee Business Travel	Cryoport Systems, CRYOPDP	Personal vehicle, airline, and rail mileages
Scope 3	Waste	MVE, CRYOPDP	Type and weight of waste streams

Some of the Scope 3 emissions that contribute to our global carbon footprint, but for which we determined that data was not reasonably available for us to quantify in this report include, but are not limited to, transportation and distribution provided by third parties in the performance of our services; use and end-of-life treatment of sold products; and purchased goods and services.

Assumptions

We used various assumptions to quantify GHG emissions in the report. As with any projections or estimates, actual results or numbers may vary based upon factors such as variations in processes and operations, availability and quality of data, and methodologies used for measurement and estimation. Changes to emission estimates may occur if updated data or emission methodologies become available. The following are some primary assumptions or estimates that we made in the report:

Stationary Combustion – Natural Gas. Natural gas usage for heating was estimated for several company locations based on either (i) square footage using a. US average intensity for offices of 21.3 SCF/ft^2, or (ii) spend data and regional utility rates, depending on what information was available.

Purchased Electricity (Location-Based). Electricity usage was estimated for several company locations based on either (i) square footage using a US average intensity for offices of 13.6 kWh/ft^2, or (ii) spend data and regional utility rates, depending on what information was available.

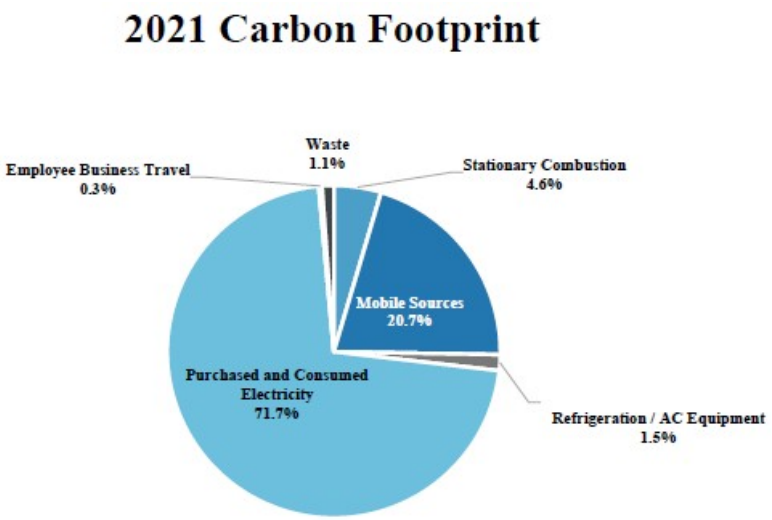
Utility Estimations. When there were gaps in electricity or natural gas data, the average of the prior and following months data was used to estimate the missing information.

Results

Our 2021 Total Emissions, as calculated in the report are as follows:

	Emission Type	**2021 Total Emissions (MT CO_2-e)**
Scope 1	Stationary Combustion	447
Scope 1	Mobile Sources	2,016
Scope 1	Refrigeration / AC Equipment	150
Scope 2	Purchased Electricity (Location-Based)	6,988
Total Scope 1 + 2		9,602 MT CO_2-e
Scope 3	Employee Business Travel	32
Scope 3	Waste	110
Total Scope 1, 2, and 3		9,744 MT CO_2-e

The following chart shows the percent of total emissions in 2021 that was contributed by each type of emission quantified in the report:



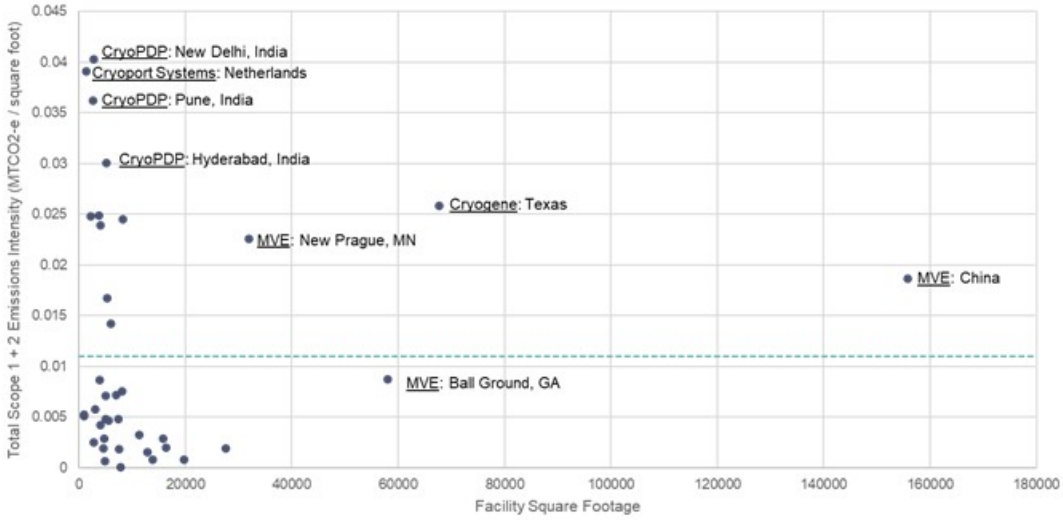
2021 Carbon Footprint Intensities

The following table shows our 2021 carbon footprint intensity in relation to square feet of our facilities, revenue, and employees.

Total Scope 1 + 2 Emissions	9,602 MT CO_2-e
Intensity by Square Footage	
Total Facility Square Footage	555,732 ft^2
Emissions per Square Foot	0.01728 MT CO2-e / ft^2
Intensity by Employee	
Number of Employees	795
Emissions per Employee	12.08 MT CO2-e / employee
Intensity by Revenue	
Total Revenue	$223 million
Emissions per $ million Revenue	43.13 MT CO2-e / $ million

The following chart shows the intensity of 2021 emissions from stationary combustion and purchased electricity by square foot on for each facility. The average facility intensity was 0.0115 MT CO_2–e per square foot, as indicated by the dashed horizontal line within the following chart.

Intensity of GHG From Statutory Combustion and Purchased Electricity by Facility Square Footage



Next Steps

Using the 2021 carbon footprint as a baseline, Cryoport plans to calculate an annual carbon footprint. Conducting an annual carbon footprint not only allows Cryoport to track changes (i.e., increases or reductions in emissions, fuel usage, or energy usage by facility), but will also be helpful in ultimately setting emission reduction targets.

We are also considering focusing on another topic within our materiality matrix (e.g., resource efficiency) to further the company's ESG journey.

Supporting Our People (end of December 31, 2022)

- Total Headcount: 1,024 (Full-Time 960, Part-Time 8, Contingent 56)
- Languages Spoken: 18
- Countries: 17
- Average Years of Service: 5.32 Years

Cryoport's global team of employees are our most valuable resource, from our teams on the front line in our global supply chain and logistics centers, to our manufacturing operations, to our business development personnel, to the engineers who design our products and services, to our quality assurance and regulatory teams that assure the safety, quality, compliance, and integrity of our products.

Our success depends on the health, talent, and dedication of our global team. As we grow our team, we strive to retain, develop, and provide advancement opportunities for our employees. We endeavor to make Cryoport a superior growth workplace with a diverse, inclusive, and equitable environment where all team members have the opportunity to flourish.

Diversity, Equity & Inclusion (DEI)

We are committed to inclusion, equity, and diverse representation for our employees across our Company. Cryoport is an Equal Employment Opportunity employer and currently tracks gender distribution across its operations and management. We maintain clear policies related to anti-harassment, discrimination, and retaliation, and provide an anonymous, third party-managed reporting hotline for employees to report incidents of harassment, discrimination, and policy violations. We provide annual online corporate training programs on harassment, diversity and inclusion, business ethics and code of conduct. In addition, Cryoport's recruiting programs include targeted outreach to a variety of under-represented constituents, including minorities, women, veterans, and disabled populations to help improve recruiting efforts while gaining valuable insights from a diverse set of recruits. Cryoport has partnered with or targeted organizations like Hire Heroes, Career OneStop, recruiting at Historical Black Colleges, Accounting and Financial Women's Alliance, and Women in Technology.

HR departments in each Cryoport business unit manage HR priorities, including team member career development, engagement, and health and wellness. Our Corporate HR department promotes consistency of policies across operating companies and manages executive development and team member benefits.

Cryoport understands that some of the industries in which we operate, including manufacturing , are typically male-dominated. As of December 2022, women represented a total of approximately 31% of all employees, 27% of all managers, 37% of all directors, and 17% of all senior leadership positions (Vice President and above). Cryoport understands that there is work to be done to create a more equitable and representative senior leadership team and continue to push gender diversity throughout its operations.

We are committed to offering competitive compensation that accounts for geography, industry, experience, and performance. Our compensation programs and practices are designed to attract new employees, motivate, and reward performance, drive growth and support retention. Compensation at Cryoport includes base wages and generally includes an incentive opportunity through cash bonus, equity stock options and/or restricted stock units. More than 99% of our employees participate in our incentive programs.

Employee Health & Safety

Safety is a priority in every aspect of our business. Across our companies, we are committed to making our workplaces and communities safer for our employees, customers, and the public. Our corporate philosophy is embedded in our day-to-day work through rigorous policies and continual education.

Cryoport's Employee Health & Safety (EHS) programs have resulted in strong safety performance, as demonstrated by our total injury rate (TIR) and lost time injury rate (LTIR) being significantly lower than the global industry averages. Facilitated by our culture of continuous improvement, we are committed to continue to work toward reducing our TIR and LTIR numbers even further.

To understand and improve our safety performance, we evaluate our operational performance across a variety of indicators—including lost-time-injury rate (LTIR)—on a daily basis. In FY22, our LTIR was 1.23, a decrease of 47.7% compared to FY21. In addition to looking at lagging indicators of safety performance, we frequently evaluate the effectiveness of new metrics, including leading indicators, as we strive to improve our safety performance. Cryoport's operating companies are responsible for implementing policies and procedures aligned with international standards that account for their business and the associated health and safety risks.

We continue to have flexible working arrangements, including telecommuting and part time arrangements, to maintain a safe working environment for our employees throughout the COVID-19 pandemic.

Innovating Responsibility

Cryoport recognizes the role we play in protecting the health and safety of current and future generations through services and solutions that promote sustainability, resilience, and respect for the environment. We strive for a product base that is of the highest quality and with long use phases to minimize impact associated with production of new product, and Cryoport reviews opportunities to eliminate materials of concern and related managed waste streams on a regular cadence.

Product & Service Quality

As a temperature-controlled supply chain provider to the life sciences industry, Cryoport must comply with the safe transportation of regulated hazardous materials. As a result, we have designed and developed several features in its various products to comply with US DOT, IATA, ICAO, and other regulatory and guidance bodies. Additionally, safety warnings are included in our product labeling as well as our manuals. Our products are designed to conform to the following standards (where applicable):

- ISO 13485 (Section 7.3 Design and Development, ISO, QMS)
- ISO 14971 Application of Risk Management, ISO
- Medical Device Directive Medical Devices Directive 93/42/EEC, and Directive 2007/47/EC amending Council Directive 93/42/EEC concerning medical devices
- Low Voltage Directive (LVD) (2014/35/EU)
- Electromagnetic Compatibility Directive (2014/30/EU)
- RoHS 2 (2011/65/EU) (we are actively working on RoHS 3 and REACH)
- Safety Requirements For Electrical Equipment For Measurement, Control, And Laboratory Use - Part 1:
- General Requirements [UL 61010-1:2012 Ed.3+R:29Apr2016]
- Safety Requirements For Electrical Equipment For Measurement, Control, And Laboratory Use – Part 1:
- General Requirements (R2017) [CSA C22.2#61010-1-12:2012 Ed.3+U1; U2]
- IEC 60601-1 - Medical electrical equipment - Part 1: General requirements for basic safety and essential performance
- IEC 61326-1:2012 - Electrical Equipment For Measurement, Control And Laboratory Use - EMC Requirements - Part 1: General Requirements
- ASME SEC. VIII Pressure Vessel Code (Fusion Only)
- EU Pressure Equipment Directive (EU97/23/EC) (Fusion Only)
- FCC 47 CFR Class B Verification (Fusion Only)
- IEC 62304 Medical device software — Software life cycle processes

These standards are woven into our development methodology used to design all new products within the organization. This development process includes a risk management assessment done in accordance with ISO 14971 that identifies hazards and mitigates risks via design improvements, process improvement, and warnings (including labels and safety information shipped with the product).

We pride ourselves on our exceptional operational quality. Our temperature-controlled supply chain solutions focused on cell and gene therapies boast a 95.20% delivery success rate and due to this performance 12,572 additional patients were able to receive therapies over the past 24 months and 1,641 intended parents are potentially able to have successful cycles resulting in the birth of a child on an annual basis because of our CryoStork® solution.

While rare, recalls of product may become necessary. The primary responsibility for recall management lies with our Vice President of Quality Assurance and Regulatory Affairs for manufacturing. The executive staff is involved in decision and implementation processes depending upon the specifics of any recall required. Customer service personnel, sales staff and other resources would then be utilized in reaching all distributors and direct end users. Results of recalls are evaluated daily until the recall is closed. There were no product recalls during 2022.

Product Lifecycle Management

Cryoport creates unique products with long-term use in mind. Cryoport products are primarily constructed of recyclable aluminum or stainless steel, and we approach the extension of product lifecycles through the following four areas:

- Longevity
- Reparability
- Reusability
- Recyclability

We strive for a product base with long use phases to minimize impact associated with production of new product. At our MVE Biological Solutions production facility, we manufacture cryogenic freezer units that utilize 1/587 of the energy used by conventional mechanical freezers used for similar applications. For example, our freezer production displaced annual electricity consumption by 166,255,209 kWh from what would otherwise be consumed from alternative products. This amount of electricity could power 15,513 homes (sized at 2,500 square feet) annually. This reduction in energy consumption from our freezer lines alone equates to 136,733,034 pounds of GHG emissions avoided or the emissions equivalent to 13,364 passenger vehicles driven for one year.

Cryoport regularly reviews opportunities to eliminate the use of materials considered hazardous and related managed waste streams on a regular cadence. Cryoport does not utilize any substances of concern in our products; We do currently utilize minimal quantities of hazardous materials that are not listed substances of concern in our operations, primarily in the form of isopropanol, epoxies, butyl cellosolve, lacquer thinner, paint, hyamine and isopropyl alcohol. These materials and the insignificant quantities of hazardous wastes generated in our production facilities are managed in compliance with all state and federal regulations. Any hazardous waste that is generated is tracked and managed with an overall goal of eliminating hazardous materials where possible. Cryoport strives to have a conflict-free supply chain and is committed to working with its suppliers to increase transparency regarding the origin of minerals contained in its products, including minerals identified as conflict minerals (tin, tungsten, tantalum, and gold), and has adopted a Conflict Minerals Policy, which is available on our website at *www.cryoport.com* on the "Investor Relations: Corporate Governance" page under the heading "Governance Documents."

Governing Ethically

Cryoport recognizes constructive supplier relationships as essential to our ability to meet customer requirements for quality solutions. We expect our business partners to share our commitment to ethics, integrity, compliance, safety, human rights, data security, and environmental protection. By the same token, as a provider accountable to thousands of companies worldwide, we pledge, through our ESG performance, to meet or exceed our clients' requirements for the same.

Business Ethics

We are committed to operating with honesty, truthfulness and transparency in accordance with the highest ethical and corporate governance standards – mutual respect, integrity and trust are our foundation. As an ethical operator, we have developed a robust Code of Conduct and hold ourselves accountable to it in all we do. All employees across our operations are provided with training and reference materials to reinforce this commitment to integrity and ethics in our business. Our policies are clearly defined, published in local languages where applicable, and include guidance on topics including, but not limited to:

- Corruption
- Anti-Trust and Anti-Competitive Behavior
- Insider Dealings
- Gifts
- Bribes (e.g., explicit prohibition of facilitation payments)
- Conflicts of Interest
- Intellectual Property
- Compliance
- Truthful and accurate reporting
- Interactions with Healthcare professionals
- Whistleblower protections (including non-retaliation)

Political Activity and Contributions (e.g., explicit prohibition of contribution of any kind to any candidate or political party without express prior approval of the Board of Directors – this covers both direct contributions and indirection support; no political contributions have been made in recent years).

In addition to our Code of Conduct, our senior leadership team actively oversees the governance of our ethics programs to help ensure that commitment is driven from the top down, and that program owners are accountable for successful program compliance.

Cryoport does not conduct clinical trials, animal testing or use human tissue of any kind in the manufacture or design of our products, and our Code of Conduct governs the ethical behavior of our employees across Cryoport operations. Further, the Company does not conduct lobbying activities.

Supplier Management

Temperature-controlled supply chain support to the life sciences industry is critical to all that Cryoport does; therefore, we take an active approach to managing suppliers and partners to ensure that appropriate compliance, health, safety, labor practices, and ethical standards are employed. Our internal diligence process for third-party vendors including a supplier questionnaire that is required for vendor approval and a regular auditing scheme thereafter for existing suppliers. The questionnaire is intended to verify that programs exist to manage material risk areas associated with the given supplier's operations and particular consideration is paid to bribery or other forms of corrupt activity. No suppliers are approved until this mandatory due diligence is complete and a completed assessment form is on file.

As an example of verification that programs exist to manage material risks for any given supplier, if our transportation suppliers employ or work with a Dangerous Goods Safety Advisor, we confirm the presence of a credentialed role responsible for overseeing activities associated with dangerous goods, including but not limited to, employee training and coaching, reporting, and monitoring of activities associated with the transportation of dangerous goods. The purpose of this inquiry is to gauge the degree of oversight over dangerous goods management by our suppliers to help ensure product and employee welfare.

Our Code of Conduct extends through our suppliers and thus sets an expectation for our suppliers to commit to operating with honesty, truthfulness and transparency in accordance to the highest ethical and corporate governance standards, as Cryoport personifies through our operations. Per our Code of Conduct, Cryoport will not tolerate the use by suppliers of forced labor in any form.

Data Privacy & Security

Cryoport uses an outside Center for Internet Security (CIS) assessment firm to evaluate its data security controls in an effort protect our businesses and secure the information of our employees and customers. The evaluation process utilizes the CIS Critical Security Controls Capability Maturity Model Integration (CMMI) methodology, and is an ongoing initiative used to continuously improve the CMMI rating for the Company.

Our customers rely on Cryoport to securely and reliably deliver temperature-controlled supply chain solutions globally, including providing a secure online portal for order entry, tracking, condition monitoring, and for the retrieval of historic information. Protecting the privacy of our customers and vendors is essential to maintaining their trust, and we take a proactive approach to safeguard all data and ensure a secure environment. With the increasing presence and sophistication of online threats, we must ensure continuous improvement to protect our business and our customers. We regularly review our technology, policies, and practices to maintain compliance with all relevant regulations. We do not sell customers' data to third parties. Additionally, Cryoport employees with a computer are required to complete an annual online training course on information security and data privacy. The course addresses a range of topics related to information security and data privacy, including awareness regarding social engineering and cybercrimes, protecting the workplace, and protecting data.

Code of Ethics

Our Code of Ethical Business Conduct applies to our directors and all employees, including our Chief Executive Officer and Chief Financial Officer and is available on our website at *www.cryoport.com* on the "Investor Relations: Corporate Governance" page under the heading "Governance Documents."

The Cryoport Code of Ethical Business Conduct serves as the foundation of our corporate integrity and compliance program. Our officers, directors, and managers are responsible for promoting the principles within the Code and fostering a culture of ethical conduct. We regularly review and update the Code to ensure it remains relevant and available to our global employees. The Code covers a breadth of topics, including conflicts of interest, equal employment opportunity and anti-harassment, environmental compliance and sustainability, insider trading rules, and how to report violations of Company policies. Our commitment to doing the right thing depends on our employees' being comfortable in reporting any suspected violations of law or unethical conduct, and our leaders' abilities to address suspected violations promptly, with respect. Our global policy against retaliation encourages employees to come forward to report concerns in good faith. When a matter is reported to a manager or Human Resources, the concern is reviewed to determine whether it should be escalated to the Legal department. The legal department also has criteria for further escalation, if necessary, to legal department management. Every new hire is introduced to the Code through training and orientation.

We develop and update these policies when we identify a need for employee clarification, the emergence of new laws or regulations, or other external factors. We routinely update the language in our policies, and how we present information, to ensure our employees understand the risks they face in their jobs, and steps they can take to mitigate those risks and report potential problems.

Our commitment to human rights is an important part of our Code of Ethical Business Conduct. We are committed to protecting and advancing human rights in our operations around the world. We pay fair wages and comply with wage laws in all the countries where we operate. We prohibit the use of child, compulsory, or forced labor, and we share the zero-tolerance policies adopted by the United States and other governments against slavery and human trafficking. We prohibit the trafficking of persons for any purpose and trafficking-related activities, and we expect the same from our suppliers and vendors.

Cryoport Societal and Environmental Impact Statements

Examples of some of our positive societal and environmental impacts for 2022 include the following:

Pathways	Impacts	2022 Outcomes
Cryoport Systems / CRYOPDP	Access for Patients	**13,718** additional patients were able to receive therapies over past 24 months
CryoStork®	Patient Success & Satisfaction	**1,641** Intended Parents able to have successful cycles resulting in the birth of a child
MVE Biological Solutions	Energy Saved	**166,225,209** kWh annual energy reduction, or **136,733,034** pounds of GHG emissions avoided
CRYOGENE	Energy Saved	**1,398,686** pounds of GHG emissions avoided due to renewable energy generation

Our positive impacts for 2022 were based on the following:

Access to Patients. Our calculation of the number of additional patients that were able to receive therapies was based our success rate for shipments, which is higher than the average success rate in the cold chain markets of 80%, pursuant to Rodrigue, J-P (2020), The Geography of Transport Systems, Fifth Edition, New York: Routledge.

Patient Success & Satisfaction. Our calculation of the number of intended parents able to have successful cycles resulting the birth of a child is based on the weighted average chance of a live singleton birth per intended egg retrieval across women of all ages of 27.09% as reported in the 2020 Society for Assisted Reproductive Technology (SART) Clinic Summary Report (CSR).

Energy Saved – MVE Biological Solutions. Our calculation of energy reduction is based on the reduced energy consumption from MVE freezer use compared to the average energy consumed by operation of mechanical freezers, which we assumed to be 31.7 kWh/day based on product specifications from a mechanical freezer manufacturer.

Energy Saved – CRYOGENE. CRYOGENE contracted with an energy provider with carbon-free energy credits (EFEC). At least 35% of the power consumed for CRYOGENE is from emission-free resources. Our calculation of GHG emissions avoided is based on the output mission rates for GHG emissions from the EPA eGRID data (2021) for the Electric Reliability Council of Texas (ERCOT).

Employees

We refer to our employees as our "team." They are critical to our success, and we are in constant communication and training. We believe that we have assembled a strong management and leadership team with the experience and expertise needed to execute our business strategy. As of December 31, 2022, we had 1,024 employees: 960 full-time, 8 part-time, and 56 temporary, of which 480 are located in the Americas, 258 in EMEA and 286 in APAC. This increase of over 177 employees compared to December 31, 2021 is, primarily as a result of the further build out of our global organization, both organically and through acquisitions, to support our expanded solutions offering and the expected growth in the markets we serve. We anticipate hiring additional personnel as required to support our global growth strategy.

Corporate History and Structure

We are a Nevada corporation originally incorporated under the name G.T.5-Limited ("GT5") on May 25, 1990. In connection with a Share Exchange Agreement in March 2005, we changed our name to Cryoport, Inc. and acquired all of the issued and outstanding shares of common stock of Cryoport Systems, Inc., a California corporation. Cryoport Systems, Inc., which was originally formed in 1999 as a California limited liability company, was reorganized into a California corporation on December 11, 2000 and converted into Cryoport Systems, LLC, a California limited liability company, on September 17, 2020, and remains one of our operating companies under Cryoport, Inc. Our principal executive offices are located at 112 Westwood Place, Suite 350, Brentwood, TN 37027. The telephone number of our principal executive office is (949) 470-2300, and our main corporate website is www.cryoport.com. The information on or that can be accessed through our website is not part of this Form 10-K.

Information about our Executive Officers

The following are our executive officers as of the filing date of this Form 10-K:

Jerrell W. Shelton. Mr. Shelton became a member of our board of directors in October 2012 and was appointed President and Chief Executive Officer of the Company in November 2012. He was appointed Chairman of the Board in October 2015. He served on the Board of Directors and standing committees of Solera Holdings, Inc. from April 2007 through November 2011. From June 2004 to May 2006, Mr. Shelton was the Chairman and CEO of Wellness, Inc., a provider of advanced, integrated hospital and clinical environments. Prior to that, he served as Visiting Executive to IBM Research and Head of IBM's WebFountain. From October 1998 to October 1999, Mr. Shelton was Chairman, President and CEO of NDC Holdings II, Inc. Between October 1996 and July 1998, he was President and CEO of Continental Graphics Holdings, Inc. From October 1991 to July 1996, Mr. Shelton served as President and CEO of Thomson Business Information Group. Mr. Shelton has a B.S. in Business Administration from the University of Tennessee and an M.B.A. from Harvard University. Mr. Shelton's extensive leadership, management, strategic planning and financial expertise through his various leadership and directorship roles in public, private and global companies, makes him well-qualified to serve as a member of the board of directors.

Robert S. Stefanovich. Mr. Stefanovich became Chief Financial Officer and Treasurer for the Company in June 2011. In 2019, he was also given the title Senior Vice President. From 2011 to 2019, Mr. Stefanovich served as the Secretary of the Company. From June 15, 2012 to November 4, 2012, Mr. Stefanovich served as the Principal Executive Officer of the Company. From November 2007 through March 2011, Mr. Stefanovich served as Chief Financial Officer of Novalar Pharmaceuticals, Inc., a venture-backed specialty pharmaceutical company. Prior to that, he held several senior positions, including interim Chief Financial Officer of Xcorporeal, Inc., a publicly traded medical device company, Executive Vice President and Chief Financial Officer of Artemis International Solutions Corporation, a publicly traded software company, Chief Financial Officer and Secretary of Aethlon Medical Inc., a publicly traded medical device company and Vice President of Administration at SAIC, a Fortune 500 company. Mr. Stefanovich also served as a member of the Software Advisory Group and an Audit Manager with Price Waterhouse LLP's (now PricewaterhouseCoopers) hi-tech practice in San Jose, California and Frankfurt, Germany. He received his Master of Business Administration and Engineering from University of Darmstadt, Germany.

Mark Sawicki, Ph.D. Dr. Sawicki became President and Chief Executive Officer of Cryoport Systems, LLC, a wholly-owned subsidiary of the Company, and the Senior Vice President and Chief Scientific Officer of the Company in September 2020 and served as the Chief Commercial Officer of Cryoport Systems from January 2015 to August 2020. Dr. Sawicki brings over 20 years of business development and sales management experience, having consistently delivered on corporate revenue and market share goals in the pharmaceutical and biotechnology industries. Dr. Sawicki previously served as the Chief Business Officer at AAIPharma Services Corporation/Cambridge Major Laboratories Inc. (now Alcami Corporation), a contract development, testing, and manufacturing organization for pharma and biotech companies. Additionally, he has served in senior business development roles at CMC Biologics, a provider of biopharmaceutical contract manufacturing services, and Albany Molecular Research Inc. (AMRI), a contract research and manufacturing organization. Dr. Sawicki holds a bachelor's in biochemistry from the State University of New York at Buffalo and a Ph.D. in biochemistry from the State University of New York at Buffalo, School of Medicine and Biomedical Sciences. He also received graduate training at the Hauptman Woodard Medical Research Institute. Dr. Sawicki has authored a dozen scientific publications in drug discovery with a focus on oncology and immunology.

Available Information

Our main corporate website address is www.cryoport.com. The information on or that can be accessed through our website is not part of this Form 10-K. We electronically file with the SEC our Annual Report on Form 10-K, Quarterly Reports on Form 10-Q, Current Reports on Form 8-K and amendments to the reports filed or furnished pursuant to Section 13(a) or 15(d) of the Exchange Act. We make available free of charge on or through our website copies of these reports as soon as reasonably practicable after we electronically file these reports with, or furnish them to, the SEC. The SEC also maintains an internet site that contains reports, proxy and information statements and other information regarding issuers that file electronically with the SEC at www.sec.gov.

ITEM 1A. RISK FACTORS

The following risk factors could materially and adversely affect our business, financial condition and results of operations. These risk factors do not identify all of the risks that we face. Our business, financial condition and results of operations could also be affected by factors that are not presently known to us or that we currently consider to be immaterial.

Risks Related to Our Business

As an increasingly global business, we are exposed to economic, political, and other risks in different countries which could materially reduce our sales, profitability or cash flows, or materially increase our liabilities.

Since we manufacture and sell our products worldwide, our business is subject to risks associated with doing business internationally. Our future results could be harmed by a variety of factors, including:

- changes in foreign currency exchange rates, exchange controls and currency restrictions;
- changes in a specific country's or region's political, social or economic conditions;
- political, economic and social instability, including acts of war, such as the ongoing war between Russia and Ukraine, as well as continued and any new sanctions against Russia, as further described below;
- outbreak of disease or illness, such as COVID-19, in any of the countries in which we sell our products or in which we or our suppliers operate;
- tariffs, other trade protection measures, and import or export licensing requirements;
- potentially negative consequences from changes in U.S. and international tax laws;
- difficulty in staffing and managing geographically widespread operations;
- changes in customer spending due to the increased economic uncertainties and the disruption in the capital markets;
- requirements relating to withholding taxes on remittances and other payments by subsidiaries;
- restrictions on our ability to own or operate subsidiaries, make investments or acquire new businesses in these jurisdictions;
- restrictions on our ability to repatriate dividends from our foreign subsidiaries;
- difficulty in collecting international accounts receivable;
- difficulty in enforcement of contractual obligations under non-U.S. law;
- transportation delays or interruptions; and
- changes in regulatory requirements including as it relates to protection of our intellectual property.

On February 24, 2022, Russia launched significant military actions against Ukraine, and sustained conflict and disruption in the region remains ongoing. Additionally, the U.S. and foreign government bodies in jurisdictions in which we operate have implemented targeted sanctions and export control measures and have announced potential additional sanctions and export control measures, which have and could in the future result in, among other things, severe or complete restrictions on exports to and other commerce and business dealings involving Russia, certain regions of Ukraine, and/or particular entities and individuals. The impact of these government measures, as well as any further retaliatory actions taken by Russia and the U.S. and foreign government bodies, is currently unknown. Potential impacts related to the conflict could include additional unilateral or multilateral export control and sanctions measures, market disruptions, including significant volatility in commodity prices, credit and capital markets, supply chain and logistics disruptions, adverse global economic conditions resulting from escalating geopolitical tensions and the exclusion of Russian financial institutions from the global banking system, further volatility and fluctuations in foreign currency exchange rates and interest rates, inflationary pressures on raw materials and heightened cybersecurity threats, which could adversely impact our business, financial condition or results of operations, in particular, CRYOPDP's business activities in Russia, as well as our other European business operations.

The functional currency for most of our foreign operations is the applicable local currency. As a result, fluctuations in foreign currency exchange rates affect the results of our operations and the value of our foreign assets and liabilities, which in turn may adversely affect results of operations and cash flows and the comparability of period-to-period results of operations. For example, recent fluctuations in foreign currency exchange rates, including the increased strength of the U.S. dollar against the Euro, British Pound, Chinese Yuan, and Indian Rupee has adversely impacted our results of operations and cash flow from our operations in EMEA and APAC. Changes in foreign currency exchange rates may also affect the relative prices at which we and foreign competitors sell products in the same market. Foreign governmental policies and actions regarding currency valuation could result in actions by the United States and other countries to offset the effects of such fluctuations. Given the unpredictability and volatility of foreign currency exchange rates, ongoing or unusual volatility may adversely impact our business and financial conditions.

We depend on the availability of certain component products used in our solutions; delays or increased costs in the procurement of components manufactured by third parties could adversely affect our business operations, financial performance and results of operations, and we may experience customer dissatisfaction and harm to our reputation.

If we fail to procure sufficient components used in our products from our third-party manufacturers, we may be unable to deliver our solutions to our customers on a timely basis, which could lead to customer dissatisfaction and could harm our reputation and ability to compete. We currently acquire various component parts for our solutions from various independent manufacturers, some of which are sole sourced. We would likely experience significant delays or cessation in producing some of these components if a labor strike, natural disaster, public health crisis or other supply disruption were to occur. If we are unable to procure a component from one of our manufacturers, we may be required to enter into arrangements with one or more alternative manufacturing companies, which may cause delays in producing components or result in significant increase in costs. To date, we have not experienced any material delay that has adversely impacted our operations, but this does not mean that we will continue to have timely access to adequate supplies of essential materials and components in the future or that supplies of these materials and components will be available on satisfactory terms when needed. If our vendors for these materials and components are unable to meet our requirements, fail to make shipments in a timely manner, or ship defective materials or components, we could experience a shortage or delay in supply or fail to meet our contractual requirements, which would adversely affect our results of operations and negatively impact our cash flow and profitability. Continued delay in our ability to produce and deliver our products and services could also cause our customers to purchase alternative products and services from our competitors and/or harm our reputation.

Our products and services may contain errors or defects, which could result in damage to our reputation, lost revenues, diverted development resources and increased service costs, litigation and product recalls.

Our products and services must meet stringent requirements and we must develop our products and services solutions quickly to keep pace with the rapidly changing market. Product and services as sophisticated as ours could contain undetected errors or defects, especially when first introduced or when new equipment or versions of our software are released. If our product and services are not free from errors or defects, we may incur an injury to our reputation, lost revenues, diverted development resources, increased customer service and support costs, product recalls and litigation. The costs incurred in correcting any product errors or defects may be substantial and could adversely affect our business, results of operations and financial condition.

Due to the low temperatures at which some of our products are used and the fact that some of our products are relied upon by our customers or end users in their facilities or operations or are manufactured for relatively broad medical, transportation, or consumer use, we face an inherent risk of exposure to claims in the event that the failure, use, or misuse of our products results, or is alleged to result, in death, bodily injury, property or sample damage, or economic loss. In addition, we specialize in the secure storage of biological specimens, materials and samples covering the full range of temperatures from cryogenic through controlled room temperature. Any damage to these specimens, materials and samples may be attributed to a failure of our storage systems or services, which could lead to claims for damages made by customers and could also harm our relationship with customers and damage our reputation in the life sciences industry, resulting in material harm to our business.

Although we currently maintain product liability coverage, which we believe is adequate for product liability claims and for the continued operation of our business, it includes customary exclusions and conditions, may not cover certain specialized applications and generally does not cover warranty claims. Additionally, such insurance may become difficult to obtain or be unobtainable in the future on terms acceptable to us. A successful product liability claim or series of claims against us, including one or more consumer claims purporting to constitute class actions or claims resulting from extraordinary loss events, in excess of or outside our insurance coverage, or a significant warranty claim or series of claims against us, could materially decrease our liquidity, impair our financial condition, and adversely affect our results of operations. See "—Risks Related to Our Business—Our products and services may expose us to liability in excess of our current insurance coverage" for additional information.

In addition, regardless of merit or eventual outcome, product liability claims may result in, among other things, costs of litigation, distraction of management's attention from our primary business, the inability to commercialize our existing or new products, decreased demand for our products or, if cleared or approved, products in development, damage to our business reputation, product recalls or withdrawals from the market, withdrawal of clinical trial participants, substantial monetary awards to patients or other claimants, or loss of revenue.

While we may attempt to manage our product liability exposure by proactively recalling or withdrawing from the market any defective products, any recall or market withdrawal of our products may delay the supply of those products to our customers and may impact our reputation. We can provide no assurance that we will be successful in initiating appropriate market recall or market withdrawal efforts that may be required in the future or that these efforts will have the intended effect of preventing product malfunctions and the accompanying product liability that may result. Additionally, any recall could result in significant costs to us and significant adverse publicity, which could harm our ability to market our products in the future. Such recalls and withdrawals may also be used by our competitors to harm our reputation for safety or be perceived by customers as a safety risk when considering the use of our products. Though it may not be possible to quantify the economic impact of a recall, it could have a material adverse effect on our business, financial condition and results of operations.

Additionally, for some of our products we offer a limited warranty for product returns which are due to defects in quality and workmanship. We attempt to estimate our potential liability for future product returns and establish reserves on our financial statements in amounts that we believe will be sufficient to address our warranty obligations; however, our actual liability for product returns may significantly exceed the amount of our reserves. If we underestimate our potential liability for future product returns, or if unanticipated events result in returns that exceed our historical experience, our financial condition and operating results could be materially and adversely affected.

Our business operations, financial performance and results of operations have been adversely affected and could in the future be materially adversely affected by the COVID-19 pandemic.

COVID-19 has had, and continues to have, a significant impact around the world, prompting governments and businesses to take unprecedented measures in response. Such measures have included restrictions on travel and business operations, temporary closures of businesses, and quarantine and shelter-in-place orders. The COVID-19 pandemic has at times significantly curtailed global economic activity and caused significant volatility and disruption in global financial markets. The COVID-19 pandemic and the measures taken by many countries in response have adversely affected and could in the future materially adversely impact our business operations, financial performance and results of operations. During the course of the pandemic, certain of our facilities have experienced disruptions and similar disruptions could occur in the future.

The extent to which the COVID-19 pandemic may impact our business operations, financial performance and results of operations remains uncertain and will depend on many factors outside our control, including the timing, extent, trajectory and duration of the pandemic, the emergence of new variants, the development, availability, distribution and effectiveness of vaccines and treatments, and the imposition of protective public safety measures. Additional future impacts on us may include material adverse effects on our manufacturing, supply chain and distribution channels, our ability to execute our strategic plans, and our profitability. The potential effects of COVID-19 may also impact and potentially heighten many of our other risk factors discussed in this "Risk Factors" section.

We will have difficulty increasing our revenues if we experience delays, difficulties or unanticipated costs in establishing the sales, marketing and distribution capabilities necessary to successfully commercialize our solutions.

We plan to further enhance our sales, marketing and distribution capabilities in the Americas, EMEA, and APAC. It will be expensive and time-consuming for us to develop and integrate our global marketing and sales network and thus we intend to further broaden our strategic alliances with domestic and international providers of shipping services and other solutions providers to the life sciences industry to incorporate use of our platform of solutions in their service offerings. We may not be able to provide adequate incentive to our sales force or to establish and maintain favorable distribution and marketing collaborations with others to promote our solutions. In addition, any third party with whom we have established a marketing and distribution relationship may not devote sufficient time to the marketing and sales of our solutions, thereby exposing us to potential expenses in exiting such distribution agreements. We, and any of our alliance partners, must also market our services in compliance with federal, state, local and international laws relating to the provision of incentives and inducements. Violation of these laws can result in substantial penalties. Therefore, if we are unable to successfully motivate and expand our marketing and sales force and further develop our sales and marketing capabilities, or if our alliance partners fail to promote our solutions, we will have difficulty increasing our revenues and the revenue may not offset the additional expense of expansion.

We expect to base our equipment and inventory purchasing decisions on our forecasts of customers' demand, and if our forecasts are inaccurate, our operating results could be materially harmed.

As our customer base increases, we expect the need to purchase additional equipment and inventory. Our forecasts will be based on multiple assumptions, each of which may cause our estimates to be inaccurate, affecting our ability to provide products to our customers. When demand for our products increases significantly, we may not be able to meet demand on a timely basis, and we may need to expend a significant amount of time working with our customers to allocate limited supply and maintain positive customer relations, or we may incur additional costs in order to rush the manufacture and delivery of additional products. If we underestimate customers' demand, we may forego revenue opportunities, lose market share and damage our customer relationships. Conversely, if we overestimate customer demand, we may purchase more equipment and inventory than we are able to use or sell at any given time or at all. As a result of our failure to properly estimate demand for our products, we could have excess or obsolete equipment and/or inventory, resulting in a decline in the value of our equipment and/or inventory, which would increase our costs of revenues and reduce our liquidity. Our failure to accurately manage our equipment purchases and inventory relative to demand would adversely affect our operating results.

If we suffer a disruption or loss to our factories, facilities or distribution system due to factors outside of our control, our operations could be seriously harmed.

We rely on our distribution system including third-party shipment and carrier services to transport our shippers containing biological material. These third-party operations could be subject to natural disasters, adverse weather conditions, other business disruptions, and carrier error, which could cause delays in the delivery of our shippers, which in turn could cause serious harm to the biological material being shipped. As a result, any prolonged delay in shipment, whether due to technical difficulties, power failures, break-ins, destruction or damage to carrier facilities as a result of a natural disaster, fire, or any other reason, could result in damage to the contents of the shipper.

Additionally, our factories and facilities may be subject to catastrophic loss due to fire, flood, terrorism, increasing severity or frequency of extreme weather events, or other natural or man-made disasters, as well as disruptions due to a widespread outbreak of an illness or any other public health crisis, such as the COVID-19 pandemic. In particular, certain components of our key products are manufactured in China, which may be more likely than other locations to have disruptions caused by the response to a public health crisis, such as COVID-19. Further, we operate facilities that specialize in the secure storage of biological specimens, materials and samples. If natural disasters or similar events, like hurricanes, fires or explosions or large-scale accidents or power outages, were to occur that prevented us from using all or a significant portion of these facilities, damaged critical infrastructure or our customers'

biological samples, or otherwise disrupted operations at such facilities, this could affect our ability to maintain ongoing operations and cause us to incur significant expenses. Insurance coverage may not be adequate to fully cover losses in any particular case.

For example, in January 2022, a fire occurred at the MVE Biological Solutions manufacturing facility located in New Prague, Minnesota, which manufactures aluminum dewars and is one of MVE Biological Solutions' three global manufacturing facilities. As a consequence of the fire damage, the New Prague manufacturing operations were curtailed on an interim basis until the necessary repairs were completed, which adversely impacted our revenue in the first quarter of 2022. See "Management's Discussion and Analysis of Financial Condition and Results of Operations—MVE Biological Solutions Fire" for additional information.

Our products and services may expose us to liability in excess of our current insurance coverage.

Our platform of products and services involve significant risks of liability, which may substantially exceed the revenues we derive from them. We cannot predict the magnitude of these potential liabilities. We currently maintain general liability insurance and product liability insurance. Claims may be made against us that exceed the limits of these policies.

Our liability policy is an "occurrence" based policy. Thus, our policy is complete when we purchased it and following cancellation of the policy it continues to provide coverage for future claims based on conduct that took place during the policy term. Our insurance coverage, however, may not protect us against all liability because our policies typically have various exceptions to the claims covered and also require us to assume some costs of the claim even though a portion of the claim may be covered. In addition, if we expand into new markets, we may not be aware of the need for, or be able to obtain insurance coverage for such activities or, if insurance is obtained, the dollar amount of any liabilities incurred could exceed our insurance coverage. A partially or completely uninsured claim, if successful and of significant magnitude, could have a material adverse effect on our business, financial condition and results of operations.

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

Our customers may ship potentially harmful biological materials in our dewars. We cannot eliminate the risk of accidental contamination or injury to employees or third parties from the use, storage, handling or disposal of these materials. In the event of contamination or injury, we could be held liable for any resulting damages, and any liability could exceed our resources or any applicable insurance coverage we may have. Additionally, we are subject to, on an ongoing basis, federal, state and local laws and regulations governing the use, storage, handling and disposal of these materials and specified waste products. In the event of an accident, we could be held liable for damages.

We operate in a competitive industry and if we cannot compete effectively, we will lose business.

We expect to continue to experience significant and increasing levels of competition in the future. While there are technological and marketing barriers to entry, we cannot guarantee that these barriers will be sufficient to defend our market share against current and future competitors. Our principal competitive considerations in our market include:

- financial resources to allocate to proper marketing and an appropriate sales effort;
- acceptance of our solutions model;
- acceptance of our solutions including per use fee structures and other charges for services;
- keeping up technologically with ongoing development of enhanced features and benefits;
- the ability to develop and maintain and expand strategic alliances;
- establishing our brand name;
- our ability to deliver our solutions to our customers when requested; and
- our timing of introductions of new solutions and services.

Our future revenue stream depends to a large degree on our ability to bring new solutions and services to market on a timely basis. We generally sell our products in industries that are characterized by increased competition through frequent innovation, rapid technological changes and changing industry standards. Without the timely introduction of new products, services and enhancements, our products and services may become obsolete over time, in which case our revenue and operating results could suffer.

There may also be other companies which are currently developing competitive products and services or which may in the future develop technologies and products that are comparable, superior or less costly than our own. For example, some specialty couriers and packaging manufacturers with greater resources currently provide temperature-controlled packaging solutions and may develop other products or solutions in the future, both of which compete with our products. A competitor that has greater resources than us may be able to develop and expand their networks and product offerings more quickly, devote greater resources to the marketing and sale of their solutions and adopt more aggressive pricing policies. We may not be able to successfully compete with a competitor that has greater resources, which may adversely affect our business.

If we successfully develop products and/or services, but those products and/or services do not achieve and maintain market acceptance, our business will not be profitable.

The degree of acceptance of our platform of existing products and services or any future products or services by our current target markets, and any other markets to which we attempt to sell our products and services, as well as our profitability and growth, will depend on a number of factors including, among others, our shippers' ability to perform and preserve the integrity of the materials shipped, relative convenience and ease of use of our shippers and/or Cryoportal®, reliability and effectiveness of our biostorage services, availability of alternative products or new technologies that make our solutions and services less desirable or competitive, pricing and cost effectiveness, effectiveness of our or our collaborators' sales and marketing strategy and the adoption cycles of our targeted customers.

In addition, even if our products and services achieve market acceptance, we may not be able to maintain that market acceptance over time if new products or services are introduced that are more favorably received than our products and services, are more cost effective, or render our products obsolete. Further, there can be no assurance that future developments in technology will not make our technology non-competitive or obsolete, or significantly reduce our operating margins or the demand for our offerings, or otherwise negatively impact our ability to be profitable.

The integration and operation of acquired businesses may disrupt our business and create additional expenses, and we may not achieve the anticipated benefits of the acquisitions.

Integration of an acquired business involves numerous risks, including assimilation of operations of the acquired business and difficulties in the convergence of systems and processes, the diversion of management's attention from other business concerns, risks of entering markets in which we have had no or only limited direct experience, assumption of unknown or unquantifiable liabilities, difficulties in completing strategic initiatives already underway in the acquired company, and unfamiliarity with partners of the acquired company, each of which could have a material adverse effect on our business, results of operations and financial condition. We cannot assure that these risks or other unforeseen factors will not offset the intended benefits of the acquisitions, in whole or in part.

Additionally, potential acquisition opportunities become available to us from time to time, and we periodically engage in discussions or negotiations relating to potential acquisitions, including acquisitions that may be material in size or scope to our business. Any acquisition may or may not occur and, if an acquisition does occur, it may not be successful in enhancing our business for one or more of the following reasons:

- any business acquired may not be integrated successfully and may not prove profitable;
- the price we pay for any business acquired may overstate the value of that business or otherwise be too high;
- liabilities we take on through the acquisition may prove to be higher than we expected;
- we may fail to achieve acquisition synergies; or
- the focus on the integration of operations of acquired entities may divert management's attention from the day-to-day operation of our businesses.

Acquisitions and strategic investments and alliances may also require us to integrate and collaborate with a different company culture, management team, business model, business infrastructure and sales and distribution methodology, and assimilate and retain geographically dispersed, decentralized operations and personnel. Depending on the size and complexity of an acquisition, our successful integration of the entity depends on a variety of factors, including introducing new products and meeting revenue targets as expected, the retention of key employees and key customers, increased exposure to certain governmental regulations and compliance requirements and increased costs and use of resources. Further, the integration of acquired businesses is likely to result in our systems and internal controls becoming increasingly complex and more difficult to manage. Any difficulties in the assimilation of acquired businesses into our control system could harm our operating results or cause us to fail to meet our financial reporting obligations.

Even if we are able to successfully integrate acquired businesses, we may not be able to realize the revenue and other synergies and growth that we anticipated from the acquisition in the time frame that we expected, and the costs of achieving these benefits may be higher than what we expected. As a result, the acquisition and integration of acquired businesses may not contribute to our earnings as expected and we may not achieve the other anticipated strategic and financial benefits of such transactions.

Risks Related to Our Technology and Intellectual Property

We rely upon certain critical information systems, including our Cryoportal® software platform, for the operation of our business; the failure of any critical information system could adversely impact our reputation and future revenues, and we may be required to increase our spending on data and system security.

We rely upon certain critical information systems, including our Cryoportal® software platform which is used by our customers and business partners to automate the entry of orders, prepare customs documentation and facilitate status and location monitoring of shipped orders while in transit. In addition, the provision of services to our customers and the operation of our networks and systems involve the storage and transmission of significant amounts of proprietary information and sensitive or confidential data, including personal information of customers, employees and others. Our technology infrastructure and critical information systems are subject to damage or interruption from a number of potential sources, including unauthorized intrusions, cyberattacks, software viruses or other malware, natural disasters, power failures, employee error or malfeasances and other events. Despite our best efforts, no cybersecurity or emergency recovery process is failsafe, and if our safeguards fail or our technology infrastructure or critical information systems are compromised, the safety and efficiency of our operations could be materially harmed, our reputation could suffer, and we could face additional costs, liabilities, costly legal challenges.

Cyberattacks, data incidents and breaches in the security of our information systems and networks and of the electronic and confidential information in our possession could materially adversely impact our business, financial condition and results of operations, in addition to our reputation and relationships with our employees, customers, suppliers and business partners.

As part of our normal business activities, we collect and store or have access to certain proprietary confidential, and personal information, including information about our employees, customers, suppliers and business partners, which may be entitled to protection under a number of regulatory regimes. The protection and security of our network systems and our own information, as well as information relating to our employees, customers, suppliers, business partners and others, is vitally important to us. Any failure of us to maintain the security of our network systems and the proprietary, confidential, and personal data in our possession, including via the penetration of our network security and the misappropriation of proprietary, confidential and personal information, could result in costly investigations and remediation, business disruption, damage to our reputation, financial obligations to third parties, fines, penalties, regulatory proceedings and private litigation with potentially large costs, and also result in deterioration in our employees', customers', suppliers' and business partners' confidence in us and other competitive disadvantages, and thus could have a material adverse effect on our business, financial condition and results of operations.

The frequency, intensity, and sophistication of cyberattacks and data security incidents has significantly increased in recent years and is constant. As with many other businesses, we are continually subject to cyberattacks and the risk of data security incidents. Due to the increased risk of these types of attacks and incidents, we have implemented information technology and data security tools, measures, and processes designed to protect our networks systems, services, and the personal, confidential or proprietary information in our possession, and to ensure an effective response to any cyberattack or data security incident. We also have privacy and data security policies in place that are designed to detect, prevent, and/or mitigate cyberattacks and data security incidents. Whether or not these policies, tools, and measures are ultimately successful, the expenditures could have an adverse impact on our financial condition and results of operations, and divert management's attention from pursuing our strategic objectives. As newer technologies evolve, we could be exposed to increased risks from cyberattacks, data security events, and data breaches, including those from human error, negligence or mismanagement or from illegal or fraudulent acts.

Although we take the security of our network systems and information seriously, there can be no assurance that the security measures we employ will effectively prevent unauthorized persons from obtaining unauthorized access to our systems and information due to the evolving nature and intensity of cyberattacks and threats to data security, in light of new and sophisticated tools and methods used by criminals and cyberterrorists to penetrate and compromise systems, including computer viruses, malware, ransomware, phishing, misrepresentation, social engineering and forgery, which make it increasingly challenging to anticipate, harder to detect, and more difficult to adequately mitigate these risks. We do not have cyber security insurance, and we may incur significant costs in the event of a successful cyber incident against us or in responding to and recovering from a cyber incident. Additionally, the cost and operational

consequences of implementing, maintaining and enhancing further data or system protection measures could increase significantly to overcome increasingly intense, complex and sophisticated global cyber threats.

Our success depends, in part, on our ability to obtain patent protection for our solutions, preserve our trade secrets, and operate without infringing the proprietary rights of others.

Our policy is to seek to protect our proprietary position by, among other methods, filing United States patent applications related to our technology, inventions and improvements that are important to the development of our business. Our patents or patent applications may be challenged, invalidated or circumvented in the future or the rights granted may not provide a competitive advantage. We intend to vigorously protect and defend our intellectual property. Costly and time-consuming litigation brought by us may be necessary to enforce our patents and to protect our trade secrets and know-how, or to determine the enforceability, scope and validity of the proprietary rights of others.

We also rely upon trade secrets, technical know-how and continuing technological innovation to develop and maintain our competitive position. We seek to protect these trade secrets, in part, by entering into confidentiality agreements and inventions assignment and work for hire agreements in connection with employment, consulting, or advisory relationships. Despite these efforts, any of these parties may breach the agreements and disclose our proprietary information, including our trade secrets, and we may not be able to obtain adequate remedies for such breaches. Additionally, our competitors may independently develop substantially equivalent proprietary information and techniques or otherwise gain access to our proprietary technology, or we may not be able to meaningfully protect our rights in unpatented proprietary technology.

Our current and potential competitors and other third parties may have or obtain patents or additional proprietary rights that would prevent, limit or interfere with our ability to make, use or sell our solutions either in the United States or internationally. Additionally, we may face assertions of claims by holders of patents alleging that we are infringing upon their patent rights, which claims may be without merit, but may nonetheless result in our incurring substantial costs of defense.

Risks Related to Regulatory and Legal Matters

Complying with certain regulations that apply to shipments using our solutions can limit our activities and increase our cost of operations.

Shipments using our solutions and services are subject to various regulations in the various countries in which we operate. For example, shipments using our solutions may be required to comply with the shipping requirements promulgated by the CDC, the Occupational Safety and Health Organization (“OSHA”), the DOT as well as rules established by the IATA and the ICAO. Additionally, our data logger may be subject to regulation and certification by the FDA, the FCC, and the FAA. We will need to ensure that our solutions and services comply with relevant rules and regulations to make our solutions and services marketable, and in some cases, compliance is difficult to determine. Significant changes in such regulations could require costly changes to our solutions and services or prevent use of our shippers for an extended period of time while we seek to comply with changed regulations. If we are unable to comply with any of these rules or regulations or fail to obtain any required approvals, our ability to market our solutions and services may be adversely affected. In addition, even if we are able to comply with these rules and regulations, compliance can result in increased costs. In either event, our financial results and condition may be adversely affected. We depend on our business partners and unrelated and frequently unknown third-party agents in foreign countries to act on our behalf to complete the importation process and to make delivery of our shippers to the final user. The failure of these third parties to perform their duties could result in damage to the contents of the shipper resulting in customer dissatisfaction or liability to us, even if we are not at fault.

Changes in trade policy, tariff and import/export regulations may have a material adverse effect on our business, financial condition and results of operations.

Our international operations and transactions depend upon favorable trade relations between the United States and the foreign countries in which our customers and suppliers have operations. It may be time consuming and expensive for us to adapt to any changes in U.S. or international social, political, regulatory and economic conditions or in laws and policies governing foreign trade, manufacturing, development and investment in the territories or countries where we currently sell our products or conduct our business. If such changes occur, it could adversely affect our business.

We, along with our customers, are subject to various international governmental regulations. Compliance with or changes in such regulations may cause us to incur significant expenses, and if we fail to maintain satisfactory compliance with certain regulations, we may be forced to recall products and cease their manufacture and distribution, and we could be subject to civil or criminal penalties.

We, along with our customers, are subject to various significant international, federal, state and local regulations, including but not limited to regulations in the areas of health and safety, packaging, product content, employment, labor and immigration, import/export controls, trade restrictions and anti-competition. In addition, as a global organization, we are subject to data privacy and security laws, regulations, and customer-imposed controls in numerous jurisdictions as a result of having access to and processing confidential, personal, sensitive and/or patient health data in the course of our business. The EU's General Data Protection Regulation ("GDPR"), which became effective in May 2018, applies to our activities related to products and services that we offer to EU customers and workers. The GDPR established new requirements regarding the handling of personal data and includes significant penalties for non-compliance (including possible fines of up to 4 percent of total company revenue). Other governmental authorities around the world have passed or are considering similar types of legislative and regulatory proposals concerning data protection. Each of these privacy, security and data protection laws and regulations could impose significant limitations and increase our cost of providing our products and services where we process end user personal data and could harm our results of operations and expose us to significant fines, penalties and other damages.

We must also comply with complex foreign and U.S. laws and regulations, such as the U.S. Foreign Corrupt Practices Act, the U.K. Bribery Act, and other local laws prohibiting corrupt payments to governmental officials, anti-competition regulations and sanctions imposed by the U.S. Office of Foreign Assets Control and other similar laws and regulations. Violations of these laws and regulations could result in fines and penalties, criminal sanctions, restrictions on our business conduct and on our ability to offer our products in one or more countries, and could also materially affect our brand, our ability to attract and retain employees, our international operations, our business and our operating results. Although we have implemented policies and procedures designed to ensure compliance with these laws and regulations, there can be no assurance that our employees, contractors, or agents will not violate our policies.

These regulations are complex, change frequently and have tended to become more stringent over time. We may be required to incur significant expenses to comply with these regulations or to remedy any violations of these regulations. Any failure by us to comply with applicable government regulations could also result in the cessation of our operations or portions of our operations, product recalls or impositions of fines and restrictions on our ability to carry on or expand our operations. In addition, because many of our products are regulated or sold into regulated industries, we must comply with additional regulations in marketing our products. Any significant change in these regulations could reduce demand for our products, force us to modify our products to comply with new regulations or increase our costs of producing these products. If demand for our products is adversely affected or our costs increase, our operating results and business would suffer.

We are subject to regulation by the FDA or certain similar foreign regulatory agencies, and failure to comply with such regulations could harm our reputation, business, financial condition and results of operations.

Certain of our operations are subject to regulation by the FDA or similar foreign regulatory agencies. In addition, we may in the future develop products that are subject to regulation as medical devices by the FDA and similar foreign regulatory agencies. For example, we are aware that China's National Medical Products Administration has had discussions that may require certain of our products to be registered as Class II medical devices. The regulations enforced by the FDA and similar foreign regulatory agencies govern a wide variety of product-related activities, including the research, development, testing, manufacture, quality control, approval, clearance, labeling, packaging, storage, record-keeping, promotion, advertising, distribution, marketing, post-approval monitoring and reporting, pricing, and export and import of pharmaceutical products. If we or any of our customers, suppliers or distributors fail to comply with FDA and other applicable foreign regulatory requirements or are perceived to potentially have failed to comply, we may face, among other things, warning letters; adverse publicity affecting both us and our customers; investigations or notices of non-compliance, fines, injunctions, and civil penalties; import or export restrictions; partial suspensions or total shutdown of production facilities or the imposition of operating restrictions; increased difficulty in obtaining required FDA clearances or approvals or foreign equivalents; seizures or recalls of our products or those of our customers; or the inability to sell our products and services. Any such FDA or other foreign regulatory agency actions could disrupt our business and operations, lead to significant remedial costs and have a material adverse impact on our financial position and results of operations.

Risks Related to Our Financial Condition

Historically, we have incurred significant losses and we may continue to incur losses in the future.

As of December 31, 2022, we had an accumulated deficit of $542.8 million. In order to achieve and sustain revenue growth in the future, we must expand our market presence and revenues from existing and new customers. We may continue to incur losses in the future and may never generate revenues sufficient to become profitable or to sustain profitability. Continuing losses may impair our ability to raise the additional capital required to continue and expand our operations.

Our indebtedness and liabilities could limit the cash flow available for our operations and expose us to risks that could adversely affect our business, financial condition and results of operations.

We have a substantial amount of indebtedness. As of December 31, 2022, we had approximately $482.9 million of indebtedness and other liabilities, including trade payables, on a consolidated basis. We may also incur additional indebtedness to meet future financing needs. Our indebtedness could have significant negative consequences for our security holders and our business, results of operations and financial condition by, among other things:

- increasing our vulnerability to adverse economic and industry conditions;
- limiting our ability to obtain additional financing;
- requiring the dedication of a substantial portion of our cash flow from operations to service our indebtedness, which will reduce the amount of cash available for other purposes;
- limiting our flexibility to plan for, or react to, changes in our business;
- diluting the interests of our existing stockholders as a result of issuing shares of our common stock upon conversion of any convertible indebtedness; and
- placing us at a possible competitive disadvantage with competitors that are less leveraged than us or have better access to capital.

Our business may not generate sufficient funds, and we may otherwise be unable to maintain sufficient cash reserves, to pay amounts due under our indebtedness, including our outstanding convertible senior notes (collectively, the "Convertible Senior Notes") consisting of our 3.00% convertible senior notes due 2025 (the "2025 Convertible Senior Notes") and our 0.75% convertible senior notes due 2026 (the "2026 Convertible Senior Notes"), and our cash needs may increase in the future. In addition, any future indebtedness that we may incur may contain financial and other restrictive covenants that limit our ability to operate our business, raise capital or make payments under our other indebtedness. If we fail to comply with these covenants or to make payments under our indebtedness when due, then we would be in default under that indebtedness, which could, in turn, result in that and our other indebtedness becoming immediately payable in full.

Risks Related to Our Preferred Stock

The issuance of shares of our Series C Preferred Stock reduces the relative voting power of holders of our common stock, dilutes the ownership of such holders, and may adversely affect the market price of our common stock.

In connection with financing our acquisition of MVE Biological Solutions, on October 1, 2020, we completed the sale of 250,000 shares of a newly designated Series C Convertible Preferred Stock, par value $0.001 ("Series C Preferred Stock"), at a price of $1,000 per share, the original purchase price, to funds affiliated with The Blackstone Group Inc., or Blackstone. The holders of our Series C Preferred Stock are entitled to dividends at a rate of 4.0% per annum, paid-in-kind, accruing daily and paid quarterly in arrears and are also entitled to participate in dividends declared or paid on the common stock on an as-converted basis.

Each holder of our Series C Preferred Stock (collectively, the "Series C Preferred Stockholders") has the right, at its option, to convert its Series C Preferred Stock, in whole or in part, into common stock at a conversion price equal to $38.6152 per share subject to certain customary adjustments. After October 1, 2022, subject to certain conditions, we may, at our option, require conversion of all of the outstanding shares of Series C Preferred Stock to common stock if, for at least 20 trading days during the 30 consecutive trading days immediately preceding the date we notify the Series C Preferred Stockholders of the election to convert, the closing price of our Common Stock is at least 150% of the conversion price. On February 5, 2021, the Company received a waiver and conversion notice from Blackstone Freeze Parent L.P. and Blackstone Tactical Opportunities Fund – FD L.P. and converted an aggregate of 50,000 shares of the Series C Preferred Stock, resulting in the issuance of an aggregate of 1,312,860 shares of common stock.

Any subsequent conversion of shares of the Series C Preferred Stock to shares of our common stock would further dilute the ownership interest of existing holders of our common stock, and any sale in the public market of shares of our common stock issuable upon conversion of the Series C Preferred Stock could adversely affect prevailing market prices of our common stock. Additionally, we granted the Series C Preferred Stockholders customary registration rights in respect of their securities. These registration rights facilitate the resale of our common stock issuable upon conversion of such securities into the public market, and any such resale would increase the number of shares of our common stock available for public trading.

The Series C Preferred Stockholders may exercise influence over us, including through their right to nominate for election one member to our board of directors.

The Series C Preferred Stockholders are generally entitled to vote with the holders of the shares of common stock on all matters submitted for a vote of holders of shares of Common Stock (voting together with the holders of shares of common stock as one class) on an as-converted basis, subject to certain NASDAQ voting limitations, if applicable. Additionally, the consent of the holders of a majority of the outstanding shares of Series C Preferred Stock is required for so long as any shares of the Series C Preferred Stock remain outstanding for (i) amendments to the Company's organizational documents that have an adverse effect on the holders of Series C Preferred Stock and (ii) issuances by the Company of securities that are senior to, or equal in priority with, the Series C Preferred Stock, including any shares of the Company's Series A Preferred Stock or Series B Preferred Stock. In addition, for so long as 75% of the Series C Preferred Stock issued in connection with the related securities purchase agreement remains outstanding, the consent of the holders of a majority of the outstanding shares of Series C Preferred Stock will be required for (i) any voluntary dissolution, liquidation, bankruptcy, winding up or deregistration or delisting and (ii) incurrence by Cryoport of any indebtedness unless our ratio of debt to LTM EBITDA (as defined in the Certificate of Designation of the Series C Preferred Stock) would be less than a ratio of 5-to-1 on a pro forma basis giving effect to such incurrence and the use of proceeds therefrom.

Additionally, an affiliate of Blackstone has the right to nominate for election one member to our board of directors for so long as certain parties hold 66.67% of the Series C Preferred Stock issued in the Blackstone financing transaction. If elected, the director designated by Blackstone is entitled to serve on committees of our board of directors, subject to applicable law and NASDAQ rules. Notwithstanding the fact that all directors will be subject to fiduciary duties to us and to applicable law, the interests of the director designated by Blackstone may differ from the interests of our security holders as a whole or of our other directors.

As a result, the Series C Preferred Stockholders have the ability to influence the outcome of certain matters affecting our governance and capitalization. The sponsors of the Series C Preferred Stockholders are in the business of making or advising on investments in companies, including businesses that may directly or indirectly compete with certain portions of our business, and they may have interests that diverge from, or even conflict with, those of our other shareholders. They may also pursue acquisition opportunities that may be complementary to our business, and, as a result, those acquisition opportunities may not be available to us. Our obligations to the Series C Preferred Stockholders could also limit our ability to obtain additional financing or increase our borrowing costs, which could have an adverse effect on our financial condition.

Our Series C Preferred Stock has rights, preferences, and privileges that are not held by, and are preferential to, the rights of holders of our common stock, which could adversely affect our liquidity and financial condition.

The Series C Preferred Stockholders have the right under the Certificate of Designation of the Series C Preferred Stock to receive a liquidation preference entitling them to be paid an amount per share equal to the greater of (i) the original purchase price, plus all accrued and unpaid dividends and (ii) the amount that the holder would have been entitled to receive at such time if the Series C Preferred Stock were converted into common stock. In addition, the Series C Preferred Stockholders are entitled to dividends at a rate of 4.0% per annum, paid-in-kind, accruing daily and paid quarterly in arrears. The Series C Preferred Stockholders are also entitled to participate in dividends declared or paid on the common stock on an as-converted basis.

Risks Related to Ownership of Our Common Stock

Certain of our existing stockholders own and have the right to acquire a substantial number of shares of common stock.

As of February 17, 2023, our directors, executive officers and beneficial owners of 5% or more of our outstanding common stock beneficially owned 33,306,860 shares of common stock assuming their conversion of all outstanding Series C Preferred Stock and their exercise of all outstanding options held by them that are exercisable within 60 days of February 17, 2023, which represented approximately 62.8 % of our outstanding common stock. As such, the concentration of beneficial ownership of our common stock may have the effect of delaying or preventing a change in control of Cryoport and may adversely affect the voting or other rights of other holders of our common stock.

Future sales of shares of our common stock may depress the price of our shares and be dilutive to our existing stockholders.

Future issuances of shares of our common stock or the availability of shares for resale in the open market may decrease the market price per share of our common stock. As of February 17, 2023, there were 48,335,779 shares of our common stock outstanding. Substantially all of these shares of common stock are eligible for trading in the public market. The market price of our common stock may decline if our stockholders sell a large number of shares of our common stock in the public market, or the market perceives that such sales may occur.

As of December 31, 2022, we could also issue up to an additional 8,068,505 shares of our common stock upon exercise of outstanding options and vesting of restricted stock units and 1,726,284 shares of our common stock reserved for future issuance under our stock incentive plans. In addition, we reserved 599,954 shares of our common stock issuable upon conversion of the 2025 Convertible Senior Notes, 3,422,780 shares of our common stock issuable upon conversion of the 2026 Convertible Senior Notes, and 5,664,532 shares of our common stock issuable upon conversion of our Series C Convertible Preferred Stock. The exercise of any options or vesting of restricted stock units, as well as the issuance of our common stock upon conversion of the Convertible Senior Notes, the Series C Convertible Preferred Stock, or in connection with acquisitions and other issuances of our common stock, could have an adverse effect on the market price of the shares of our common stock and dilute our existing stockholders.

To the extent that we raise additional funds through the sale of equity or convertible debt securities, the issuance of such securities will result in dilution to our stockholders. Further, investors purchasing shares or other securities in the future could have rights superior to existing stockholders.

Our stock price has been and will likely continue to be volatile.

The market price of our common stock has been highly volatile and could fluctuate widely in price in response to various factors, many of which are beyond our control, including, but not limited to technological innovations or new solutions and services by us or our competitors, additions or departures of key personnel, sales of our common stock, our ability to execute our business plan, our operating results being below expectations, loss of any strategic relationship, industry developments, economic and other external factors and period-to-period fluctuations in our financial results.

In addition, the securities markets have from time-to-time experienced significant price and volume fluctuations that are unrelated to the operating performance of companies. These market fluctuations may also materially and adversely affect the market price of our common stock.

We have not paid dividends on our common stock in the past and do not expect to pay dividends in the foreseeable future. Any return on investment may be limited to the value of our common stock.

We have never paid cash dividends on our common stock and do not anticipate paying cash dividends in the foreseeable future. Any future determination to pay dividends will be at the discretion of our board of directors, subject to compliance with covenants in current and future agreements governing our indebtedness, and will depend on our results of operations, financial condition, capital requirements, contractual arrangements and other factors that our board of directors deems relevant. If we do not pay dividends, our common stock may be less valuable because a return on your investment will only occur if the price of our common stock appreciates.

Our Articles of Incorporation allows our Board of Directors to issue up to 2,500,000 shares of "blank check" preferred stock.

Our Articles of Incorporation allows our board of directors to issue up to 2,500,000 shares of "blank check" preferred stock, without action by our stockholders. We have designated 800,000 shares as Class A Preferred Stock, 585,000 shares as Class B Preferred Stock and 250,000 shares of Series C Preferred Stock, of which 200,000 shares of Series C Preferred Stock are issued and outstanding at February 17, 2023. See "—Risks Related to Our Preferred Stock" for additional information regarding our outstanding Series C Preferred Stock. Without limiting the foregoing, (i) such shares of preferred stock could have liquidation rights that are senior to the liquidation preference applicable to our common stock and Preferred Stock, (ii) such shares of preferred stock could have voting or conversion rights, which could adversely affect the voting power of the holders of our common stock and preferred stock and (iii) the ownership interest of holders of our common stock will be diluted following the issuance of any such shares of preferred stock. In addition, the issuance of such shares of blank check preferred stock could have the effect of discouraging, delaying or preventing a change of control of our Company.

Provisions in our bylaws and Nevada law might discourage, delay or prevent a change of control of our Company or changes in our management and, as a result, may depress the trading price of our common stock.

Provisions of our bylaws and Nevada law may discourage, delay or prevent a merger, acquisition or other change in control that stockholders may consider favorable, including transactions in which you might otherwise receive a premium for your shares of our common stock. The relevant bylaw provisions may also prevent or frustrate attempts by our stockholders to replace or remove our management. These provisions include advance notice requirements for stockholder proposals and nominations, and the ability of our board of directors to make, alter or repeal our bylaws.

In addition, Section 78.411, et seq. of the Nevada Revised Statutes prohibits a publicly-held Nevada corporation from engaging in a business combination with an interested stockholder (generally defined as a person which together with its affiliates owns, or within the last two years has owned, 10% of our voting stock) for a period of two years after the date of the transaction in which the person became an interested stockholder, unless the business combination is approved in a prescribed manner.

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

General Risk Factors

Our ability to grow and compete in our industry will be hampered if we are unable to retain the continued service of our key professionals or to identify, hire and retain additional qualified professionals.

Our success in implementing our business strategy depends largely on the skills, experience and performance of key members of our executive management team and others in key management positions. The collective efforts of each of these persons working as a team will be critical to us as we continue to develop our technologies, tests and engineering and development and sales programs. As a result of the difficulty in locating qualified new management, the loss or incapacity of existing members of our executive management team could adversely affect our operations. If we were to lose one or more of these key employees, we could experience difficulties in finding qualified successors, competing effectively, developing our technologies and implementing our business strategy. We do not maintain "key person" insurance on any of our employees.

In addition, a critical factor to our business is our ability to attract and retain qualified professionals including key employees and consultants. We are continually at risk of losing current professionals or being unable to hire additional professionals as needed. If we are unable to attract new qualified employees, our ability to grow will be adversely affected. If we are unable to retain current employees or strategic consultants, our financial condition and ability to maintain operations may be adversely affected.

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

The trading market for our common stock relies in part on the research and reports that equity research analysts publish about us and our business. We do not control these analysts. The price of our common stock could decline if one or more equity analyst downgrades our stock or if analysts downgrade our stock or issue other unfavorable commentary or cease publishing reports about us or our business.

ITEM 1B. Unresolved Staff Comments

Not applicable.

ITEM 2. Properties

Our principal executive office is located in Brentwood, Tennessee. We lease or own various corporate, global logistics and supply chain centers, biostorage, manufacturing, and research and development facilities at over 40 sites across the Americas, EMEA and APAC regions.

The following table summarizes our principal facilities and other materially important physical properties as of December 31, 2022:

Location	Ownership	Use
Brentwood, Tennessee	Leased	Principle Executive Office
Irvine, California	Leased	Administrative, Global Supply Chain Center, and Research and Development Center
Morris Plains, New Jersey	Leased	Global Supply Chain Center, Administrative, and Logistics Center
Houston, Texas	Leased	Administrative, Global Supply Chain Center and Biostorage Center
Hoofddorp, the Netherlands	Leased	Global Supply Chain Center
Ball Ground, Georgia	Leased	Administrative, Manufacturing, and Research and Development Center
New Prague, Minnesota	Owned	Manufacturing
Chengdu, China	Owned	Administrative and Manufacturing
Clermont-Ferrand, France	Leased	Administrative and Global Supply Chain Center
Lisbon, Portugal	Leased	Administrative
Tremblay en France, France	Leased	Administrative and Global Logistics Center

We believe that these facilities are adequate, suitable and of sufficient capacity to support our immediate needs.

ITEM 3. Legal Proceedings

In the ordinary course of business, we are at times subject to various legal proceedings and disputes, including product liability claims. We currently are not aware of any such legal proceedings or claim that we believe will have, individually or in the aggregate, a material adverse effect on our business, operating results or cash flows. It is our practice to accrue for open claims based on our historical experience and available insurance coverage.

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

Common Stock

As of February 17, 2023 there were 48,335,779 shares of common stock outstanding and 163 stockholders of record. Because many shares of our common stock are held by brokers and other institutions on behalf of stockholders, we are unable to estimate the total number of stockholders represented by these stockholders of record.

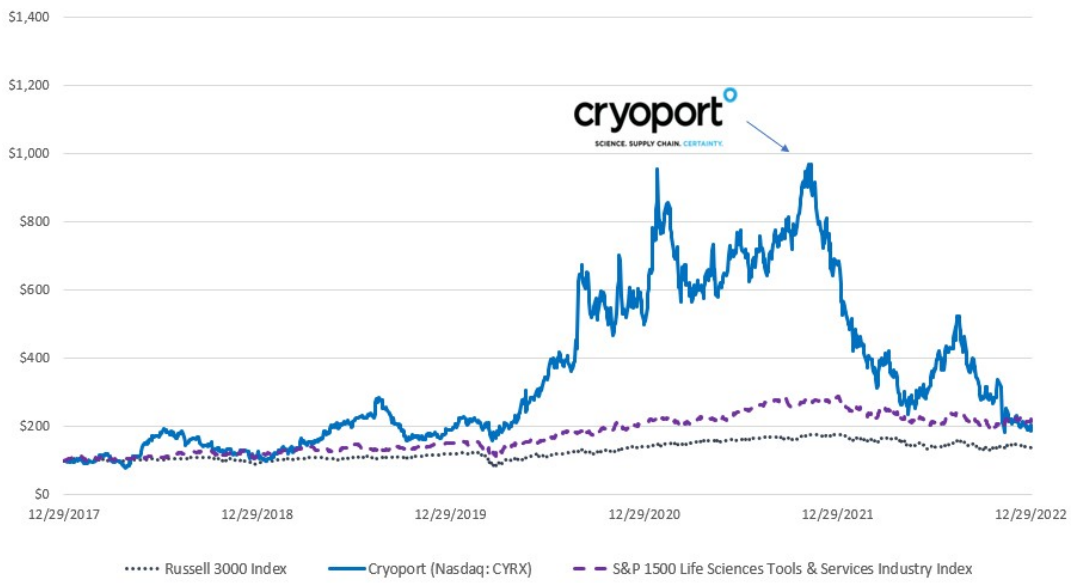
Market Information

The Company's common stock is currently listed on the NASDAQ Capital Market and is traded under the symbol "CYRX."

Stock Performance Graph (1)

The graph below compares Cryoport's cumulative 5-year total shareholder return on common stock with the cumulative total returns of the Russell 3000 Index and S&P 1500 Life Sciences Tools & Services Industry Index. The graph tracks the performance of a $100 investment in our common stock and in each index from December 31, 2017 to December 31, 2022 and assumes that, as to such indices, dividends were reinvested. We have never paid cash dividends on our common stock. The stock price performance on the following graph is not necessarily indicative of future stock price performance.

COMPARISON OF 5 YEAR CUMULATIVE TOTAL RETURN*
Among Cryoport, Inc., the Russell 3000 Index and the S&P 1500 Life Sciences Tools & Services Industry Index



*$100 invested on 12/31/17 in Cryoport common stock or applicable index. Fiscal year ending December 31.

(1) The information contained in the performance graph shall not be deemed to be "soliciting material" or to be "filed" with the SEC, and such information shall not be incorporated by reference into any future filing under the Securities Act or the Exchange Act, except to the extent that Cryoport specifically incorporates it by reference into such filing.

Dividends

No dividends on common stock have been declared or paid by the Company. The Company intends to employ all available funds for the development of its business and, accordingly, does not intend to pay any cash dividends in the foreseeable future. Any future determination to pay dividends will be at the discretion of our board of directors, subject to compliance with covenants in current and future agreements governing our indebtedness, and will depend on our results of operations, financial condition, capital requirements, contractual arrangements and other factors that our board of directors deems relevant.

Recent Sale of Unregistered Securities

On April 14, 2022, in connection with the Company's acquisition of Cell&Co, SAS, the Company issued 15,152 shares of the Company's common stock with a fair value of $0.4 million to certain sellers as partial consideration for such seller's interest in the business pursuant to the exemptions for registration provided by Rule 903 under Regulation S of the Securities Act, on the basis that each recipient was not a U.S. person as defined in Rule 902 of Regulation S.

Issuer Purchases of Equity Securities

Period	Total Number of Shares (or Units) Purchased[1]	Average Price Paid per Share (or Unit)	Total Number of Shares (or Units) Purchased as Part of Publicly Announced Plans or Programs[2]	Maximum Number (or Approximate Dollar Value) of Shares (or Units) that May Yet Be Purchased Under the Plans or Programs
January 1, 2022 through January 31, 2022	—	$ —	—	$ —
February 1, 2022 through February 28, 2022	—	—	—	—
March 1, 2022 through March 31,2022	306,300	27.24	306,300	91,656,900
April 1, 2022 through April 30, 2022	600,000	24.16	600,000	77,159,000
May 1, 2022 through May 31, 2022	435,271	24.08	435,271	66,677,700
June 1, 2022 through June 30, 2022	—	—	—	—
July 1, 2022 through July 31, 2022	—	—	—	—
August 1, 2022 through August 31, 2022	—	—	—	—
September 1, 2022 through September 31, 2022	—	—	—	—
October 1, 2022 through October 31, 2022	—	—	—	—
November 1, 2022 through November 30, 2022	—	—	—	—
December 1, 2022 through December 31, 2022	263,423	$ 17.48	263,423	$ 62,072,000
Total	1,604,994	$ 23.63	1,604,994	

(1) These shares were returned to the status of authorized but unissued shares of common stock.

(2) On March 11, 2022, the Company announced that its board of directors authorized a repurchase program (the "Repurchase Program") through December 31, 2025, authorizing the repurchase of common stock and/or convertible senior notes in the amount of up to $100.0 million from time to time on the open market or otherwise, in such quantities, at such prices, and in such manner as determined by the Company's management at its discretion. The size and timing of any repurchase will depend on a number of factors, including the market price of the Company's common stock, general market and economic conditions, and applicable legal requirements.

ITEM 6. [Reserved]

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

The following discussion and analysis of our financial condition and results of our operations should be read in conjunction with our consolidated financial statements and related notes included elsewhere in this Form 10-K. Our actual results could differ materially from those contained in forward-looking statements due to a number of factors. See "Forward-Looking Statements" in this Form 10-K.

For further discussion and analysis regarding our financial condition and results of operations for the year ended December 31, 2021 as compared to the year ended December 31, 2020, refer to "Part II, Item 7 - Management's Discussion and Analysis of Financial Condition and Results of Operations" in our Annual Report on Form 10-K for the fiscal year ended December 31, 2021 filed with the SEC on February 28, 2022.

General Overview

Cryoport is a global leader in serving the life sciences industry as a provider of integrated temperature-controlled supply chain solutions supporting the biopharma/pharma, animal health, and reproductive medicine markets. Our mission is to support life and health worldwide, and we are continuously developing, implementing, and leveraging our supply chain platform, which is designed to deliver comprehensive, unparalleled, and highly differentiated temperature-controlled logistics, packaging, storage, cryogenic systems, informatics, and related services for life science products, regenerative medicine, cellular therapies, and treatments that require unique, specialized temperature-controlled supply chain management.

See the "Business" section in Part I, Item 1 of this Form 10-K for additional information.

Impact of COVID-19

In late 2019, a novel strain of coronavirus that causes coronavirus disease (COVID-19) was reported to have surfaced in Wuhan, China, which has since spread globally. New variants of COVID-19, such as the Omicron variant and its subvariants, which are significantly more contagious than previous strains, have emerged. The spread of these new strains initially caused many government authorities and businesses to reimplement prior restrictions, or impose new restrictions, in an effort to lessen the spread of COVID-19 and its variants. While many of these restrictions have been lifted, there continues to be significant uncertainty related to the ultimate duration and impact that this global pandemic will have on future results of our operations, including due to future actions that may be taken by government authorities and businesses in response to surges in COVID-19 cases. Further, virus containment efforts as a result of governmental actions or policies or other initiatives have led to the disruption in the global supply chain and as a result, we have experienced difficulties sourcing materials and equipment, have experienced delays in transportation and increased transportation costs and may incur additional direct costs to provide our solutions in the future. See "Risk Factors—Risk Related to Our Business—We depend on the availability of certain component products used in our solutions; delays or increased costs in the procurement of components manufactured by third parties could adversely affect our business operations, financial performance and results of operations, and we may experience customer dissatisfaction and harm to our reputation" in Part I, Item 1A of this Form 10-K for additional information.

We continue to monitor the evolving situation caused by the COVID-19 pandemic, and we may take further actions required by governmental authorities or that we determine are prudent to support the well-being of our employees, customers, suppliers, business partners and others. The degree to which COVID-19 impacts our business operations, financial performance and results of operations will depend on future developments, which are highly uncertain, continuously evolving and cannot be predicted, including, but not limited to, the duration and spread of the COVID-19 outbreak and its variants; its severity; the actions to contain the virus or treat its impact, such as the availability and efficacy of vaccines (particularly with respect to emerging strains of the virus), and the potential hesitancy to utilize them; other protective actions taken to contain the virus or treat its impact, such as restrictions on travel and transportation; general economic factors, such as increased inflation; supply chain constraints; labor supply issues; and how quickly and to what extent normal economic and operating conditions can resume. See "Risk Factors—Risk Related to Our Business—The global pandemic caused by COVID-19 has and may continue to adversely affect our business operations, financial performance and results of operations, the extent of which is uncertain and difficult to predict" in Part I, Item 1A of this Form 10-K for additional information.

MVE Biological Solutions Fire

On January 25, 2022, a fire occurred at the MVE Biological Solutions manufacturing facility located in New Prague, Minnesota ("New Prague fire"). The New Prague facility manufactures aluminum dewars and is one of MVE Biological Solutions' three global manufacturing facilities. There were no injuries reported and damage was limited to a portion of the facility. As a consequence of the fire damage, the New Prague manufacturing operations were curtailed on an interim basis until the necessary repairs were completed. Production was resumed at the facility during the week of February 14, 2022 and ramped up production toward the end of the first quarter of 2022. The Company estimated a revenue impact of approximately $9.4 million, primarily limited to the first quarter of 2022.

The New Prague fire resulted in a loss of inventory, fixed assets, and other contents at the site. We have adequate property damage and business interruption insurance under which we filed a claim with the insurance carrier. As of December 31, 2022, the Company received $12.9 million of insurance proceeds.

For the year ended December 31, 2022, the Company recognized gains of $0.6 million related to the reimbursement of property and equipment and $4.2 million related to business interruption. Proceeds from insurance settlements, except for those directly related to investing activities, were recognized as cash inflows from operating activities. The losses related to such an event are recognized as incurred. Insurance proceeds are recorded to the extent of the losses and then, only if recovery is realized or probable. Any gains in excess of losses are recognized only when the contingencies regarding the recovery are resolved, and the amount is fixed or determinable.

Russian Invasion of Ukraine

On February 24, 2022, Russia launched significant military actions against Ukraine, and sustained conflict and disruption in the region remains ongoing. Additionally, the U.S. and foreign government bodies in jurisdictions in which we operate have implemented targeted sanctions and export control measures and have announced potential additional sanctions and export control measures, which have and could in the future result in, among other things, severe or complete restrictions on exports to and other commerce and business dealings involving Russia, certain regions of Ukraine, and/or particular entities and individuals. The impact of these government measures, as well as any further retaliatory actions taken by Russia and the U.S. and foreign government bodies, is currently unknown. Potential impacts related to the conflict could include additional unilateral or multilateral export control and sanctions measures, market disruptions, including significant volatility in commodity prices, credit and capital markets, supply chain and logistics disruptions, adverse global economic conditions resulting from escalating geopolitical tensions and the exclusion of Russian financial institutions from the global banking system, further volatility and fluctuations in foreign currency exchange rates and interest rates, inflationary pressures on raw materials and heightened cybersecurity threats, which could adversely impact our business, financial condition or results of operations, in particular, CRYOPDP's business activities in Russia and Ukraine, as well as our other European business operations.

Segment Reporting

Operating segments are defined as components of an enterprise about which separate financial information is available that is evaluated regularly by the chief operating decision maker in deciding how to allocate resources and in assessing operating performance. The chief operating decision maker ("CODM") is our Chief Executive Officer. We previously reported results based on two reportable operating segments: Global Logistics Solutions and Global Bioservices. During the fourth quarter of 2020, our CODM changed how he makes operating decisions, assesses the performance of the business and allocates resources in a manner that caused our operating segments to change as a result of the MVE Biological Solutions and CRYOPDP acquisitions. In consideration of the FASB ASC 280, Segment Reporting, we determined that we are not organized around specific products and services, geographic regions or regulatory environments. Accordingly, beginning with the fourth quarter of 2020, we operate in one reportable operating segment.

Impact of Inflation

Inflation generally impacts us by increasing our costs of labor, material, transportation and pricing from third party manufacturers. While the rates of inflation have not had a material impact on our financial statements in the past, we have seen some impact on gross margins during the second half of 2021 and full year 2022. Based on the current economic outlook, inflationary pressures could affect our financial performance in the future if cost increases cannot be offset by net realized annual price increases and productivity gains.

Critical Accounting Policies and Estimates

Our discussion and analysis of our consolidated financial condition and results of operations are based upon our consolidated financial statements, which have been prepared in conformity with accounting principles generally accepted in the U.S., or U.S. GAAP. While our significant accounting policies are more fully described in the notes to our consolidated financial statements, we have identified the policies and estimates below as being critical to our business operations and the understanding of our results of operations. These policies require management's most difficult, subjective or complex judgements, often as a result of the need to make estimates about the effect of matters that are inherently uncertain. The impact of and any associated risks related to these policies on our business operations are discussed throughout "Management's Discussion and Analysis of Financial Condition," including in the "Results of Operations" section, where such policies affect our reported and expected financial results. Although we believe that our estimates,

assumptions, and judgements are reasonable, they are based upon information presently available. Actual results may differ significantly from these estimates under different assumptions, judgments, or conditions.

The SEC defines critical accounting policies as those that are, in management's view, most important to the portrayal of our financial condition and results of operations and most demanding of our judgment. We consider the following policies and estimates to be critical to an understanding of our consolidated financial statements and the uncertainties associated with the complex judgments made by us that could impact our results of operations, financial position and cash flows: Revenue Recognition, Business Combinations, Intangible Assets and Goodwill, Series C Preferred Stock, Stock-based Compensation, Convertible Senior Notes and Income Taxes. See Note 2: *"Summary of Significant Accounting Policies"* of our accompanying consolidated financial statements for a description of our critical accounting policies and estimates.

Revenue Recognition

Revenues are recognized when control is transferred to customers, in an amount that reflects the consideration the Company expects to be entitled to in exchange for those goods and services. Revenue recognition is evaluated through the following five steps: (i) identification of the contract, or contracts, with a customer; (ii) identification of the performance obligations in the contract; (iii) determination of the transaction price; (iv) allocation of the transaction price to the performance obligations in the contract; and (v) recognition of revenue when or as a performance obligation is satisfied.

Performance Obligations

At contract inception, an assessment of the goods and services promised in the contracts with customers is performed and a performance obligation is identified for each distinct promise to transfer to the customer a good or service (or bundle of goods or services). To identify the performance obligations, the Company considers all of the goods or services promised in the contract regardless of whether they are explicitly stated or are implied by customary business practices. Revenue is recognized when our performance obligation has been met. The Company considers control to have transferred upon delivery because the Company has a present right to payment at that time, the Company has transferred use of the asset, and the customer is able to direct the use of, and obtain substantially all of the remaining benefits from, the asset.

For arrangements under which the Company provides biological specimen storage services and logistics support and management to the customer, the Company satisfies its performance obligations as those services are performed whereby the customer simultaneously receives and consumes the benefits of such services under the agreement.

Revenue generated from short-term logistics and engineering consulting services provided to customers is recognized when the Company satisfies the contractually defined performance obligations. When a contract includes multiple performance obligations, the contract price is allocated among the performance obligations based upon the stand-alone selling prices. Approved contract modifications are accounted for as either a separate contract or as part of the existing contract depending on the nature of the modification.

Our performance obligations on our orders and under the terms of agreements with customers are generally satisfied within one year from a given reporting date and, therefore, we omit disclosure of the transaction price allocated to remaining performance obligations on open orders.

Shipping and handling activities related to contracts with customers are accounted for as costs to fulfill our promise to transfer the associated products pursuant to the accounting policy election allowed under Topic 606 and are not considered a separate performance obligation to our customers. Accordingly, the Company records amounts billed for shipping and handling as a component of revenue. Shipping and handling fees and costs are included in cost of revenues in the accompanying condensed consolidated statements of operations.

Revenues are recognized net of any taxes collected from customers, which are subsequently remitted to governmental agencies.

Business Combinations

Amounts paid for acquisitions are allocated to the tangible and intangible assets acquired and liabilities assumed, if any, based on their fair values at the dates of acquisition. This purchase price allocation process requires management to make significant estimates and assumptions with respect to intangible assets. The fair value of identifiable intangible assets is based on detailed valuations that use information and assumptions determined by management. Any excess of purchase price over the fair value of the net tangible and intangible assets acquired is allocated to goodwill. While we use our best estimates and assumptions to accurately value assets acquired and liabilities assumed at the acquisition date as well as any contingent consideration, where applicable, our estimates are inherently uncertain and subject to refinement. As a result, during the measurement period, which may be up to one year from the acquisition date, we record adjustments to the assets acquired and liabilities assumed with the corresponding offset to goodwill. Upon conclusion of the measurement period or final determination of the values of assets acquired or liabilities assumed, whichever comes first, any subsequent adjustments are recorded to our consolidated statements of operations.

We use the income approach to determine the fair value of certain identifiable intangible assets such as customer relationships. This approach determines fair value by estimating after-tax cash flows attributable to these assets over their respective useful lives and then discounting these after-tax cash flows back to a present value. We base our assumptions on estimates of future cash flows, expected growth rates, expected trends in technology, etc. We base the discount rates used to arrive at a present value as of the date of acquisition on the time value of money and certain industry-specific risk factors. We believe the estimated purchased customer relationships, agent networks, software, developed technologies, and trademarks/tradenames so determined represent the fair value at the date of acquisition and do not exceed the amount a third party would pay for the assets.

Intangible Assets and Goodwill

Intangible assets

Intangible assets with a definite life are amortized over their useful lives using the straight-line method, which is the best estimate of the value we are receiving over the useful life of the intangible asset and another systematic method was not deemed more appropriate. The amortization expense is recorded within selling, general and administrative expense in the consolidated statements of operations. Intangible assets and their related useful lives are reviewed at least annually to determine if any adverse conditions exist that would indicate the carrying value of these assets may not be recoverable. More frequent impairment assessments are conducted if certain conditions exist, including a change in the competitive landscape, any internal decisions to pursue new or different technology strategies, a loss of a significant customer, or a significant change in the marketplace, including changes in the prices paid for the Company's products or changes in the size of the market for the Company's products. If impairment indicators are present, the Company determines whether the underlying intangible asset is recoverable through estimated future undiscounted cash flows. If the asset is not found to be recoverable, it is written down to the estimated fair value of the asset based on the sum of the future discounted cash flows expected to result from the use and disposition of the asset. If the estimate of an intangible asset's remaining useful life is changed, the remaining carrying amount of the intangible asset is amortized prospectively over the revised remaining useful life. The Company continues to believe that its definite-lived intangible assets are recoverable at December 31, 2022. The Company has performed a quantitative impairment assessment in the fourth quarter of 2022 and concluded that there has been no impairment of our intangible assets for the periods presented.

Goodwill

We test goodwill for impairment on an annual basis in the fourth quarter or more frequently if management believes indicators of impairment exist. Events that would indicate impairment and trigger an interim impairment assessment include, but are not limited to, current economic and market conditions, including a decline in market capitalization, a significant adverse change in legal factors, business climate or operational performance of the business, and an adverse action or assessment by a regulator. Accounting guidance also permits an optional qualitative assessment for goodwill to determine whether it is more likely than not that the carrying value of a reporting unit exceeds its fair value. If, after this qualitative assessment, we determine that it is not more likely than not that the fair value of a reporting unit is less than its carrying amount, then no further quantitative testing would be necessary. A quantitative assessment is performed if the qualitative assessment results in a more likely than not determination or if a qualitative assessment is not performed. The quantitative assessment considers whether the carrying amount of a reporting unit exceeds its fair value, in which case an impairment charge is recorded to the extent the reporting unit's carrying value exceeds its fair value. As a result of our 2022 quantitative assessment, we concluded that goodwill is not impaired as of December 31, 2022.

Series C Preferred Stock

On the October 1, 2020 issuance date, the effective conversion price per share of the Series C Preferred Stock was less than the fair value of the underlying common stock and, as a result, the Company determined that there was a beneficial conversion feature on that date. Accordingly, the Company recognized the resulting beneficial conversion feature amount of approximately $39.5 million as a deemed dividend, equal to the number of common shares into which the Series C Preferred Stock is convertible multiplied by the difference between the fair value of the common stock and the effective conversion price per share on that date. Because the Series C Preferred Stock does not have a stated conversion date and was immediately convertible at the issuance date, the dividend is reflected as a one-time, non-cash, deemed dividend to the holders of the Series C Preferred Stock on the date of issuance.

Additionally, the Company determined that the nature of the Series C Preferred Stock is more akin to an equity instrument and that the economic characteristics and risks of the embedded conversion options are clearly and closely related to the Series C Preferred Stock. As such, the conversion options were not required to be bifurcated from the host under ASC 815, Derivatives and Hedging.

Since the paid-in-kind dividends are nondiscretionary, the Company measured the beneficial conversion feature in the paid-in-kind dividend on the issuance date of the preferred stock and recorded such amount when the paid-in-kind dividend was accrued. Accordingly, the associated paid-in-kind dividends for the year ended December 31, 2020 generated a beneficial conversion feature amount of $0.3 million. On February 5, 2021, the Company received a waiver and conversion notice from Blackstone Freeze Parent L.P. and Blackstone Tactical Opportunities Fund – FD L.P. and converted an aggregate of 50,000 shares of the Series C Preferred Stock, resulting in the issuance of an aggregate of 1,312,860 shares of common stock. See Note 15: *"Stockholders' Equity"* of our accompanying consolidated financial statements for additional information.

The Company evaluated the Series C Preferred Stock for liability or equity classification under the applicable accounting guidance including ASC 480, *Distinguishing Liabilities from Equity*, and determined that equity treatment was appropriate because the Series C Preferred Stock did not meet the definition of the liability instruments defined thereunder for convertible instruments. Specifically, the convertible preferred shares are not mandatorily redeemable and do not embody an obligation to buy back the shares outside of the Company's control in a manner that could require the transfer of assets. Additionally, the Company determined that the Series C Preferred Stock would be recorded as permanent equity given that they are not redeemable for cash or other assets (i) on a fixed or determinable date, (ii) at the option of the holder, or (iii) upon the occurrence of an event that is not solely within control of the Company.

The Company also evaluated the embedded put and call options within the Series C Preferred Stock in accordance with the accounting guidance for derivatives to determine if bifurcation is required. The Company determined that the economic characteristics and risks of the embedded put and call options are not clearly and closely related to the Series C Preferred Stock. Therefore, the Company assessed the put and call options further and determined they did not meet the definition of a derivative under ASC 815.

Under the same analysis, the Company determined that the economic characteristics and risks of the embedded participating dividend feature are considered clearly and closely related to the equity host. Accordingly, the participating dividend feature is not required to be bifurcated under ASC 815. Also, the Company determined that the value of the contingent dividend feature is minimal and insignificant relative to the other components of the Series C Preferred Stock due to the circumstances surrounding the scenarios under which the provision would be triggered.

Convertible Senior Notes

The Convertible Senior Notes are accounted for in accordance with ASC 470-20, *Debt with Conversion and Other Options* ("ASC 470-20") and ASC 815-40, *Contracts in Entity's Own Equity* ("ASC 815-40"). Under ASC 815-40, to qualify for equity classification (or nonbifurcation, if embedded) the instrument (or embedded feature) must be both (1) indexed to the issuer's stock and (2) meet the requirements of the equity classification guidance. Based upon the Company's analysis, it was determined the Convertible Senior Notes do contain embedded features indexed to its own stock, but do not meet the requirements for bifurcation, and therefore do not need to be separately accounted for as an equity component. Since the embedded conversion feature meets the equity scope exception from derivative accounting, and also since the embedded conversion option does not need to be separately accounted for as an equity component under ASC 470-20, the proceeds received from the issuance of the convertible debt was recorded as a liability on the consolidated balance sheet.

Stock-based Compensation

We use the Black-Scholes option pricing model to calculate the fair value of stock option awards on the grant date. The expected option life assumption is estimated based on the simplified method. Accordingly, the Company has utilized the average of the contractual term of the options and the weighted average vesting period for all options to calculate the expected option term. The risk-free interest rate assumption is based upon observed interest rates appropriate for the expected term of our employee stock options. The expected volatility is based on the average of the historical volatility and the implied volatility of our stock commensurate with the expected life of the stock-based award. We do not anticipate paying dividends on our common stock in the foreseeable future.

We recognize stock-based compensation cost on a straight-line basis over the vesting period. Stock-based compensation expense is recognized only for those awards that ultimately vest.

Income Taxes

Deferred taxes are determined based on the difference between the financial statement and tax basis of assets and liabilities using enacted tax rates in effect in the years in which the differences are expected to reverse. Valuation allowances are provided, if, based upon the weight of available evidence, it is more likely than not that some or all of the deferred tax assets will not be realized. We account for uncertain tax positions using a “more-likely-than-not” threshold for recognizing and resolving uncertain tax positions. The evaluation of uncertain tax positions is based on factors including, but not limited to, changes in tax law, the measurement of tax positions taken or expected to be taken in tax returns, the effective settlement of matters subject to audit, new audit activity and changes in facts or circumstances related to a tax position. We evaluate our tax position on a quarterly basis. We also accrue for potential interest and penalties related to unrecognized tax benefits in income tax expense.

Results of Operations

Results of Operations for Year Ended December 31, 2022 Compared to the Year Ended December 31, 2021

2022 marked a year of significant achievements for our company as we continued the development of our products and services for the future. Cryoport delivered record revenue of $237.3 million for 2022, led by revenue from Cryoport Systems increasing by 24% and driven by the demand for our current comprehensive set of products and services and strong growth in the cell and gene therapy market. We continued to gain market share with Cryoport supporting a total of 654 clinical trials globally at year end 2022 with 79 of these clinical trials in phase 3, an increase from 602 clinical trials from the prior year. Our company continues to lead the way for development of advanced temperature-controlled supply chain solutions designed to support the development of cell and gene therapy and our future growth.

The following table summarizes certain information derived from our consolidated statements of operations (in thousands):

	Year Ended December 31,			
	2022	2021	$ Change	% Change
Service revenues	$ 133,879	$ 119,065	$ 14,814	12.4 %
Product revenues	103,398	103,543	(145)	(0.1)%
Total revenues	237,277	222,608	14,669	6.6 %
Cost of service revenues	(75,187)	(69,297)	(5,890)	8.5 %
Cost of product revenues	(58,217)	(56,734)	(1,483)	2.6 %
Total cost of revenues	(133,404)	(126,031)	(7,373)	5.9 %
Gross margin	103,873	96,577	7,296	7.6 %
Selling, general and administrative expenses	(120,055)	(97,563)	(22,492)	23.1 %
Engineering and development expenses	(15,722)	(16,843)	1,121	(6.7)%
Investment income	8,474	3,253	5,221	160.5 %
Interest expense	(6,142)	(4,689)	(1,453)	31.0 %
Loss on debt extinguishment	—	(251,754)	251,754	100 %
Other expense, net	(5,522)	(2,823)	(2,699)	95.6 %
Benefit from (provision for) income taxes	(2,239)	(1,686)	(553)	32.8 %
Net loss	$ (37,333)	$ (275,528)	$ 238,195	(86.5)%
Paid-in-kind dividend on Series C convertible preferred stock	(8,000)	(8,196)	196	(2.4)%
Net loss attributable to common stockholders	$ (45,333)	$ (283,724)	$ 238,391	(84.0)%

Total revenues by market

	Year Ended December 31,			
	2022	2021	$ Change	% Change
Pharma/Biopharmaceutical	$ 193,879	$ 180,203	$ 13,676	7.6 %
Animal Health	33,465	33,353	112	0.3 %
Human Reproductive Medicine	9,933	9,052	881	9.7 %
Total revenues	$ 237,277	$ 222,608	$ 14,669	6.6 %

Revenues. Revenues increased $14.7 million, or 6.6%, to $237.3 million for year ended December 31, 2022, as compared to $222.6 million for the year ended December 31, 2021. This increase was a result of the continuing robust demand for Cryoport's supply chain systems and services, particularly in the biopharma/pharma and reproductive medicine markets, which was partially offset by the New Prague fire that negatively impacted the first quarter of 2022 by approximately $9.4 million. The New Prague facility manufactures aluminum dewars and is one of MVE Biological Solutions' three global manufacturing facilities. In addition, revenue for the year ended December 31, 2022 was also adversely impacted by approximately 3.4% or $8.1 million as a result of foreign currency fluctuations, as well as other macroeconomic conditions, including, but not limited to, COVID lockdowns in China that temporarily impacted our MVE Biological Solutions manufacturing facility and other parts of our business, the Russia/Ukraine conflict impacting CRYOPDP's shipping volumes and non-cell and gene clinical trial dynamics in EMEA, and a more cautious approach by customers related to capital allocations due to the macroeconomic environment and heightened inflationary concerns.

Service revenues increased by $14.8 million, or 12.4%, from $119.1 million to $133.9 million for the year ended December 31, 2022, as compared to the same period in 2021. This increase was driven by strong customer demand for our supply chain solutions provided by Cryoport Systems, CRYOGENE and CRYOPDP.

Product revenues remained flat at $103.4 million for the year ended December 31, 2022 as compared to $103.5 million for the year ended December 31, 2021, primarily as a result of the New Prague fire that led to approximately $9.4 million in revenue loss during the first quarter of 2022 and curtailed capital expenditure for MVE Biological Solutions' larger cryogenic systems and freezers toward smaller units during the second half of 2022. Product revenues consist primarily of revenue from our portfolio of cryogenic stainless-steel freezers, aluminum dewars and related ancillary equipment used in the storage and transport of life sciences commodities, which includes the rapidly growing Cell and Gene Therapy market through a global network of distributors and direct client relationships.

Revenues by market

Revenues from the biopharma/pharma market increased $13.7 million, or 7.6%, from $180.2 million to $193.9 million for the year ended December 31, 2022, as compared to the same period in 2021. This increase was driven by revenue growth from the support of global clinical trials and commercially launched therapies as well as general demand for our logistics and biostorage services, partially offset by the impact of the New Prague fire during the first quarter of 2022 of approximately $6.7 million. We now support 654 global clinical trials, of which 502 trials are in the Americas, 110 are in EMEA and 42 are in APAC, compared to 602 clinical trials supported as of December 31, 2021 (475 in the Americas, 93 in EMEA and 34 in APAC). As of December 31, 2022, we supported 79 Phase 3 clinical trials, of which 55 are in the Americas, 22 are in EMEA, and 2 are in APAC. This compares to 74 Phase 3 trials (51 in the Americas, 21 in EMEA and 2 in APAC) supported as of December 31, 2021. The activity in the clinical trial space, particularly in the Cell and Gene Therapy market is expected to drive future revenue growth as these clinical trials advance and resulting therapies are commercialized on a global basis.

Our revenues from the animal health market increased $0.1 million, or 0.3%, from $33.4 million to $33.5 million for the year ended December 31, 2022, as compared to the same period in 2021. This was due to increased demand for MVE Biological Solutions' cryogenic dewars, offset by the New Prague fire which impacted the revenue for the animal health market during the first quarter of 2022 by approximately $2.4 million. The New Prague manufacturing facility ramped back up production towards the end of March 2022.

Revenues in the reproductive medicine market increased $0.9 million, or 9.7%, from $9.1 million to $9.9 million for the year ended December 31, 2022, as compared to the same period in 2021. This increase was driven by strong demand for our CryoStork® logistics solution and partially offset by a decrease in demand for MVE Biological Solutions' cryogenic freezer suite.

Gross margin and cost of revenues. Gross margin for the year ended December 31, 2022 was 43.8% of total revenues, as compared to 43.4% of total revenues for the year ended December 31, 2021. Cost of total revenues increased $7.4 million to $133.4 million for the year ended December 31, 2022, as compared to $126.0 million in the same period in 2021.

Gross margin for our service revenues was 43.8% of service revenues, as compared to 41.8% of service revenues for the year ended December 31, 2021. Our cost of revenues is primarily comprised of freight charges, payroll and associated expenses related to our global logistics and supply chain centers, depreciation expenses of our Cryoport Express® Shippers and supplies and consumables used for our solutions.

Gross margin for our product revenues was 43.7% of product revenues, as compared to 45.2% of product revenues for the year ended December 31, 2021. The decrease was a result of increased costs as a result of global supply chain constraints. Product revenues, related cost of revenues and resulting gross margins were primarily driven by our MVE Biological Solutions business. Our cost of product revenues was primarily comprised of materials, direct and indirect labor, inbound freight charges, purchasing and receiving, inspection, and distribution and warehousing of inventory. In addition, shop supplies, facility maintenance costs and depreciation expense for assets used in the manufacturing process were included in cost of product revenues.

Selling, general and administrative expenses. Selling, general and administrative ("SG&A") expenses include the costs associated with selling our products and services and costs required to support our marketing efforts including legal, accounting, patent, shareholder services, amortization of intangible assets and other administrative functions.

For the year ended December 31, 2022, SG&A expenses increased by $22.5 million, or 23.1% as compared to the same period in 2021. This increase is driven by the further build out of our competencies and infrastructure to support the continuing scaling of our business and demand for Cryoport's systems and solutions, such as the two new global supply chain centers in Houston, Texas and Morris Plains, New Jersey for which grand openings were held in June 2022. Wages and associated employee costs increased $10.3 million from $39.2 million in 2021 to $49.5 million in 2022. Stock compensation expense increased $3.6 million, depreciation and amortization increased $3.0 million, primarily due to additional fixed assets purchased or acquired in our recent business acquisitions, facility and other overhead allocations increased $1.9 million, which includes start-up costs related to our expansions in Houston, Texas and Morris Plains, New Jersey. There was also an increase in integration and acquisition costs of $1.6 million, an increase in travel and associated costs of $1.4 million and an increase in trade shows and marketing expenses of $0.7 million as compared to the same period in 2021.

Engineering and development expenses. Engineering and development expenses decreased $1.1 million, or 6.7%, for year ended December 31, 2022, as compared to the same period in 2021. The decrease was primarily due to a reduction of $3.3 million in consulting, prototype and development costs which was partially offset by $0.8 million increase in wages and associated employee costs to add software development and engineering resources, $0.7 million increase in facility and overhead allocations and $0.3 million stock compensation expense. We continually strive to improve and expand the features of our Cryoport Express®, Cryoport ELITE™ Solutions and portfolio of temperature-controlled services and products. Our primary developments are directed towards facilitating the safe, reliable and efficient transport and storage of life science commodities through innovative and technology-based solutions. This includes significantly enhancing our Cryoportal® Logistics Management Platform and related technology solutions as well as developments to expand our Cryoport Express® and shipper fleet, such as the Cryosphere™ shipper, a cryogenic dry-vapor shipper utilizing patent pending technology that passively stabilizes the payload through an internal gravitational sphere, thereby further mitigating transport risks. In addition, engineering and development efforts are also focused on MVE Biological Solutions' portfolio of advanced cryogenic stainless-steel freezers, aluminum dewars and related ancillary equipment used in the storage and transport of life sciences commodities. We supplement our internal engineering and development resources with subject matter experts and consultants to enhance our capabilities and shorten development cycles.

Investment Income. Investment income increased by $5.2 million, for year ended December 31, 2022, as compared to the prior year as a result of higher average invested cash balances offset by lower interest rates on such invested cash balances.

Interest expense. Interest expense increased by $1.5 million, from $4.7 million to $6.1 million for the year ended December 31, 2022, as compared to the prior year due to interest on the convertible senior notes and amortization of the related debt discount.

Loss on extinguishment of debt. The repurchase of the 2025 Convertible Senior Notes and issuance of the 2026 Convertible Senior Notes were deemed to have substantially different terms based on the present value of the cash flows. Therefore, the repurchase of the 2025 Convertible Senior Notes was accounted for as a debt extinguishment, which includes the write off of related deferred financing costs of $2.6 million.

Other expense, net. The increase in other expense, net for year ended December 31, 2022, as compared to the prior year is primarily due to unrealized losses of $11.5 million on short-term investments and foreign currency fluctuations partially offset by a gain on insurance claim of $4.8 million related to the New Prague fire.

Provision for income taxes. The provision for income taxes increased $0.6 million for the year ended December 31, 2022, as compared to the same period in the prior year, resulting in effective tax rates of negative 6.4% and negative 0.6%, respectively. The increase in tax expense and the decrease in the effective tax rate for the year ended December 31, 2022, as compared to the prior year is due to higher taxable foreign earnings subject to tax at differing rates and a decrease in our domestic losses which resulted in no additional tax benefit. The negative effective tax rate of 6.4% for the year ended December 31, 2022, differed from the U.S. federal statutory rate of 21% primarily due to changes in the valuation allowance that we maintain against our deferred tax assets and the relative mix of income earned by certain foreign subsidiaries being taxed at different rates than the U.S. federal statuary rate.

Paid-in-kind dividend on Series C convertible preferred stock. The paid-in-kind dividend relates to the private placement of Series C Preferred Stock with Blackstone

Non-GAAP Financial Measures

We provide adjusted EBITDA and revenue at constant currency, both non-GAAP financial measures, as supplemental measures to U.S. GAAP measures regarding our operating performance. Non-GAAP financial measures are not calculated in accordance with U.S. GAAP, are not based on any comprehensive set of accounting rules or principles and may be different from non-GAAP financial measures presented by other companies. Non-GAAP financial measures, including adjusted EBITDA and revenue at constant currency, should not be considered as a substitute for, or superior to, measures of financial performance prepared in accordance with U.S. GAAP.

Adjusted EBITDA

Adjusted EBITDA is defined as net loss adjusted for interest expense, income taxes, depreciation and amortization expense, stock-based compensation expense, acquisition and integration costs, investment income, unrealized gain or loss on investments, foreign currency gain or loss and charges or gains resulting from non-recurring events.

Management believes adjusted EBITDA provides a useful measure of our operating results, a meaningful comparison with historical results and with the results of other companies, and insight into our ongoing operating performance. Further, management and our board of directors utilize adjusted EBITDA to gain a better understanding of our comparative operating performance from period-to-period and as a basis for planning and forecasting future periods. Management believes adjusted EBITDA, when read in conjunction with our U.S. GAAP financials, is useful to investors because it provides a basis for meaningful period-to-period comparisons of our ongoing operating results, including results of operations, against investor and analyst financial models, identifying trends in our underlying business and performing related trend analyses, and it provides a better understanding of how management plans and measures our underlying business.

A reconciliation of adjusted EBITDA to net loss, the most directly comparable U.S. GAAP financial measure, is presented below.

Cryoport, Inc. and Subsidiaries
Adjusted EBITDA Reconciliation
(Unaudited, in thousands)

	Three Months Ended December 31,		Year Ended December 31,	
	2022	2021	2022	2021
GAAP net loss	$ (9,436)	$ (260,086)	$ (37,333)	$ (275,528)
Non-GAAP adjustments to net loss:				
Depreciation and amortization expense	6,134	5,302	22,765	20,247
Acquisition and integration costs	621	1,066	2,165	4,406
Investment income	(2,677)	(1,636)	(8,474)	(3,253)
Unrealized (gain)/loss on investments	(1,042)	1,078	11,508	1,386
Gain on insurance claim	—	—	(4,815)	—
Foreign currency (gain)/loss	(1,212)	179	(584)	504
Interest expense, net	1,456	1,128	6,142	4,689
Loss on extinguishment of debt	—	251,754	—	251,754
Stock-based compensation expense	5,333	4,182	20,082	15,345
Income taxes	1,477	(876)	2,239	1,686
Adjusted EBITDA	654	2,091	13,695	21,236

Revenue at Constant Currency

We believe that revenue growth is a key indicator of how our Company is progressing from period to period and we believe that the non-GAAP financial measure “revenue at constant currency” is useful to investors in analyzing the underlying trends in revenue. Under U.S. GAAP, revenues received in local (non-U.S. dollar) currency are translated into U.S. dollars at the average exchange rate for the period presented. As a result, fluctuations in foreign currency exchange rates affect the results of our operations and the value of our foreign assets and liabilities, which in turn may adversely affect results of operations and cash flows and the comparability of period-to-period results of operations. When we use the term “constant currency,” it means that we have translated local currency revenues for the current reporting period into U.S. dollars using the same average foreign currency exchange rates for the conversion of revenues into U.S. dollars that we used to translate local currency revenues for the comparable reporting period of the prior year.

Recent fluctuations in foreign currency exchange rates, including the increased strength of the U.S. dollar against the Euro, British Pound, Chinese Yuan, and Indian Rupee has adversely impacted our results of operations and cash flow from our operations in EMEA and APAC. For the year ended December 31, 2022, our revenues would have been approximately $8.1 million higher in constant currency.

However, we also believe that data on constant currency period-over-period changes have limitations, particularly as the currency effects that are eliminated could constitute a significant element of our revenue and could significantly impact our performance. We therefore limit our use of constant currency period-over-period changes to a measure for the impact of currency fluctuations on the translation of local currency revenue into U.S. dollars. We do not evaluate our results and performance without considering both period-over-period changes in non-GAAP constant currency revenue on the one hand and changes in revenue prepared in accordance with U.S. GAAP on the other. We caution the readers of this report to follow a similar approach by considering revenue on constant currency period-over-period changes only in addition to, and not as a substitute for, or superior to, changes in revenue prepared in accordance with U.S. GAAP.

Cryoport, Inc. and Subsidiaries
Revenues by Market at Constant Currency
(Unaudited, in thousands)

	Year Ended December 31, 2022			
	Biopharma/ Pharma	Animal Health	Reproductive Medicine	Total
As Reported	$ 193,879	$ 33,465	$ 9,933	$ 237,277
Non-GAAP Constant Currency	199,932	35,407	9,994	245,333
FX Impact [$]	$ (6,053)	$ (1,942)	$ (61)	$ (8,056)
FX Impact [%]	(3.1)%	(5.8)%	(0.6)%	(3.4)%

Liquidity and Capital Resources

As of December 31, 2022, the Company had cash and cash equivalents of $36.6 million, short-term investments of $486.7 million and working capital of $563.3 million. We expect to continue to incur significant expenses for the foreseeable future and to incur operating losses in the near term while we make investments in new supply chain initiatives, geographic expansion and technology to support our anticipated growth. Historically, we have financed our operations primarily through sales of equity securities and debt instruments.

The Company's management recognizes that the Company may need to obtain additional capital to fund its operations and potential acquisitions until sustained profitable operations are achieved. Additional funding plans may include obtaining additional capital through equity and/or debt funding sources. No assurance can be given that additional capital, if needed, will be available when required or upon terms acceptable to the Company. The Company's management believes that, based on its current plans and assumptions, the current cash and cash equivalents on hand, short-term investments, together with projected cash flows, will satisfy our operational and capital requirements for at least the next twelve months.

Cash flows Summary

	For the Year Ended December 31,		
	2022	2021	$ Change
	(in thousands)		
Operating activities	$ (1,851)	$ 8,126	$ (9,977)
Investing activities	(59,681)	(469,254)	409,573
Financing activities	(39,174)	564,342	(603,516)
Effect of exchange rate changes on cash and cash equivalents	(1,800)	(986)	(814)
Net increase in cash and cash equivalents	$ (102,506)	$ 102,228	$ (204,734)

Operating activities

For the year ended December 31, 2022, our operating activities used $1.9 million of cash, reflecting the net loss of $37.3 million offset by non-cash expenses of $63.9 million primarily comprised of $22.8 million of depreciation and amortization, $20.1 million of stock-based compensation, $11.4 million of unrealized losses on our equity securities, insurance proceeds of $9.9 million for operations related to the fire at our New Prague, Minnesota manufacturing plant in January 2022, $2.6 million of amortization of debt discount, as well as $0.8 million loss on disposal of property and equipment and $0.7 million of excess and obsolete inventory, which was partially offset by a $4.8 million gain on the insurance settlement. Also contributing to the cash impact of our net operating loss, excluding non-cash items, was an increase in inventory of $14.2 million primarily due to MVE Biological Solutions proactively securing inventory to avoid supply chain delays and cost increases (of which, $2.1 million relates to the disposal of inventory due to the fire), an increase in accounts receivable of $4.1 million, an increase in prepaid expenses and other current assets of $1.6 million, a decrease in accounts payable and other accrued expenses of $6.5 million, and a decrease in accrued compensation of $1.6 million.

Investing activities

Net cash used in investing activities of $59.7 million during the year ended December 31, 2022 was primarily due to the $163.8 million purchase of short-term investments, additional purchases of Cryoport Express® Shippers, Smart Pak II™ Condition Monitoring Systems, freezers and computer equipment for $22.1 million, the acquisitions of Cell&Co, Polar Expres and Cell Matters for $6.6 million and $1.5 million for the capitalization of software development costs for our Cryoportal® Logistics Management Platform. These uses of cash were partially offset by the maturity of short-term investments of $131.9 million and insurance proceeds of $3.0 million for the loss of fixed assets in connection with the fire at our New Prague, Minnesota manufacturing plant.

Financing Activity

Net cash used in financing activities during the year ended December 31, 2022 totaled $39.2 million during the year ended December 31, 2022, primarily as a result $38.0 million used to repurchase 1,604,994 shares of our common stock under the Repurchase program and $3.2 million repayment of note payable which was partially offset by $2.0 million proceeds from the exercise of stock options.

Convertible Senior Notes

2026 Convertible Senior Notes

In November 2021, the Company issued $402.5 million aggregate principal amount of its 0.75% Convertible Senior Notes due 2026. The Company received $390.4 million in net proceeds from the offering, after deducting underwriting discounts and commission of $12.1 million and incurred approximately $0.6 million of third-party offering related costs. The 2026 Convertible Senior Notes bear cash interest at a rate of 0.75% per annum, are payable semi-annually in arrears on June 1 and December 1 of each year, beginning on June 1, 2022, and will mature on December 1, 2026, unless earlier repurchased, redeemed, or converted in accordance with the terms of the 2026 Convertible Senior Notes.

2025 Convertible Senior Notes

In May 2020, the Company issued $115.0 million aggregate principal amount of its 3.00% Convertible Senior Notes due 2025. The Company received $111.3 million in net proceeds from the offering, after deducting underwriting discounts and commission of $12.1 million and incurred approximately $0.3 million in third-party offering related costs. The 2025 Convertible Senior Notes bear cash interest at a rate of 3.00% per annum, are payable semi-annually on June 1 and December 1 of each year, beginning on December 1, 2020, and will mature on June 1, 2025, unless earlier repurchased, redeemed, or converted in accordance with the terms of the 2025 Convertible Senior Notes. On November 9, 2021, the Company entered into separate, privately negotiated note purchase agreements with a limited number of holders of the 2025 Convertible Senior Notes pursuant to which the Company repurchased approximately $100.7 million principal amount of 2025 Convertible Senior Notes for an aggregate cash repurchase price of approximately $351.1 million, which includes accrued and unpaid interest on the repurchased 2025 Convertible Senior Notes.

The Convertible Senior Notes comprise the Company's senior, unsecured obligations and are (i) equal in right of payment with the Company's existing and future senior, unsecured indebtedness; (ii) senior in right of payment to the Company's existing and future indebtedness that is expressly subordinated to the Convertible Senior Notes; (iii) effectively subordinated to the Company's existing and future secured indebtedness, to the extent of the value of the collateral securing that indebtedness; and (iv) structurally subordinated to all existing and future indebtedness and other liabilities, including trade payables, and (to the extent the Company is not a holder thereof) preferred equity, if any, of the Company's subsidiaries. See Note 10: "*Convertible Senior Notes*" of our accompanying consolidated financial statements for additional information.

November 2021 Registered Direct Placement and Stock Purchase Agreements

Concurrent with the issuance of the 2026 Convertible Senior Notes in November 2021, the Company conducted a registered direct placement of 3,072,038 shares of its common stock at a price of $81.10 per share ("Concurrent Placement"). The Company used the net proceeds from the Concurrent Placement, together with a portion of the net proceeds from the issuance of the 2026 Convertible Senior Notes, to repurchase approximately $100.7 million principal amount of the 2025 Convertible Senior Notes as discussed above. The remainder of the net proceeds of approximately $288.4 million, after deducting banker fees, are expected to be used for general corporate purposes. See Note 10: *"Convertible Senior Notes"* of our accompanying consolidated financial statements for additional information.

Blackstone Private Placement

In connection with the MVE Acquisition, on October 1, 2020, the Company completed a private placement with an investment vehicle of funds affiliated with The Blackstone Group Inc., consisting of (i) 250,000 shares of a newly designated 4.0% Series C Convertible Preferred Stock, par value $0.001 per share ("Series C Preferred Stock"), at a price of $1,000 per share, for $250.0 million, and (ii) 675,536 shares of common stock of the Company, par value $0.001 per share for $25.0 million, for an aggregate purchase price of $275.0 million. The net proceeds of this transaction were $263.6 million. The Series C Preferred Stock ranks senior to the shares of the Company's common stock, with respect to dividend rights and rights upon the voluntary or involuntary liquidation, dissolution, or winding up of the affairs of the Company. On February 5, 2021, the Company received a waiver and conversion notice from Blackstone Freeze Parent L.P. and Blackstone Tactical Opportunities Fund – FD L.P. and converted an aggregate of 50,000 shares of Series C Convertible Preferred Stock, resulting in the issuance of an aggregate of 1,312,860 shares of common stock. See Note 15: "*Stockholders' Equity—Blackstone Private Placement*" of our accompanying consolidated financial statements for additional information.

January 2021 Public Offering

On January 25, 2021, the Company completed an underwritten public offering of 4,356,059 shares of its common stock. The shares were issued and sold pursuant to an underwriting agreement dated January 20, 2021, by and among the Company, on the one hand, and Morgan Stanley & Co. LLC, Jefferies LLC, SVB Leerink LLC and UBS Securities LLC, as representatives of certain underwriters at a public offering price per share of $66.00, before deducting underwriting discounts and commissions. The shares include 568,181 shares issued and sold pursuant to the underwriters' exercise in full of their option to purchase additional shares of common stock pursuant to the underwriting agreement. The Company received net proceeds of approximately $269.8 million from the offering after deducting underwriting discounts and commissions and offering expenses paid by the Company.

Repurchase Program

On March 11, 2022, the Company announced that its board of directors authorized a repurchase program (the "Repurchase Program") through December 31, 2025, authorizing the repurchase of common stock and/or convertible senior notes in the amount of up to $100.0 million from time to time on the open market or otherwise, in such quantities, at such prices, and in such manner as determined by the Company's management at its discretion. The size and timing of any repurchase will depend on a number of factors, including the market price of the Company's common stock, general market and economic conditions, and applicable legal requirements. The Company purchased 1,604,994 shares of its common stock under the Repurchase Program during the year ended December 31, 2022, at an average price of $23.63 per share, for an aggregate purchase price of $38.0 million. These shares were returned to the status of authorized but unissued shares of common stock.

Item 7A. Quantitative and Qualitative Disclosures About Market Risk

We are exposed to market risk for the effect of interest rate changes, foreign currency fluctuations, and changes in the market values of our investments.

Interest Rate Risk

Our exposure to market risk for changes in interest rates relates primarily to our investment portfolio and our long-term debt. Our long-term debt is carried at amortized cost and fluctuations in interest rates do not impact our consolidated financial statements. However, the fair value of our debt, which pays interest at a fixed rate, will generally fluctuate with movements of interest rates, increasing when interest rates are declining and declining when interest rates are increasing. We invest our excess cash in high investment grade money market funds and investment grade short to intermediate-term fixed income securities. Fixed income securities may have their fair market value adversely affected due to a rise in interest rates, and we may suffer losses if forced to sell securities that have declined in market value due to changes in interest rates. As of December 31, 2022, the estimated fair value of the Convertible Senior Notes was $302.5 million. For additional information about the Convertible Senior Notes, see Note 10 in our accompanying consolidated financial statements.

Foreign Exchange Risk

We operate in the United States and other foreign countries, which creates exposure to foreign currency exchange fluctuations. Net sales and related expenses generated from our international business are primarily denominated in the functional currencies of the corresponding subsidiaries and primarily include Euros, British Pounds, Chinese Yuan, and Indian Rupee. The results of operations of, and certain of our intercompany balances associated with, our internationally focused business are exposed to foreign exchange rate fluctuations. Upon consolidation, as foreign exchange rates vary, revenues and other operating results may differ materially from expectations and we may record material gain or losses on the remeasurement of intercompany balances. For example, for the three months ended December 31, 2022, revenues from our international business, which accounted for 38% of our consolidated revenues, decreased by $2.8 million in comparison with the same period in the prior year as a result of fluctuations in foreign exchange rates. The impact of fluctuations in foreign exchange rates is derived by applying the average currency rates for the same period of the prior year to the current period revenues.

We have foreign exchange risk related to foreign-denominated cash and cash equivalents. Based on the balance of as of December 31, 2022, of $23.5 million, an assumed 5%, 10%, and 20% adverse change to foreign exchange would result in declines of $1.2 million, $2.4 million and $4.7 million, respectively, reported as accumulated other comprehensive income (loss) and included as a separate component of stockholders' equity.

We have foreign exchange risk related to our long and short-term foreign-denominated intercompany loan balances. Based on the long-term intercompany loan balances as of December 31, 2022, an assumed 5%, 10%, and 20% adverse change to foreign exchange would result in losses of $4.1 million, $8.3 million, and $17.0 million, respectively, recorded to "Accumulated other comprehensive income (loss)". Based on the short-term intercompany loan balances as of December 31, 2022, an assumed 5%, 10%, and 20% adverse change to foreign exchange would result in losses of $1.6 million, $3.4 million, and $7.5 million, respectively, reported as "Other income (expense), net".

Item 8. Financial Statements and Supplementary Data

Our annual consolidated financial statements are included in Part IV, Item 15 of this Form 10-K and are incorporated into this Item 8 by reference.

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

None.

Item 9A. Controls and Procedures

(a) Evaluation of Disclosure Controls and Procedures

The term "disclosure controls and procedures" (as defined in Rule 13a-15(e) and 15d-15(e) under the Exchange Act) refers to the controls and other procedures of a company that are designed to ensure that information required to be disclosed by a company 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 a company in the reports that it files or submits under the Exchange Act is accumulated and communicated to the company's management, including its principal executive and principal financial officers, or persons performing similar functions, as appropriate to allow timely decisions regarding required disclosure. Under the supervision and with the participation of our management, including our Chief Executive Officer and Chief Financial Officer, we have conducted an evaluation of the effectiveness of the design and operation of our disclosure controls and procedures as of December 31, 2022. Based on this evaluation, our Chief Executive Officer and Chief Financial Officer concluded that our disclosure controls and procedures were effective as of December 31, 2022.

(b) Management's Report on Internal Control Over Financial Reporting.

Management's Report on Internal Control Over Financial Reporting which appears on the following page is incorporated herein by reference.

Ernst & Young LLP, an independent registered public accounting firm, has audited the effectiveness of our internal control over financial reporting (as defined in Rule 13a-15(f) and 15d-15(f) under the Exchange Act) as of December 31, 2022, as stated in its attestation report included in Part II, Item 8. "Financial Statements and Supplementary Data" included elsewhere in this Form 10-K.

(c) Changes In Internal Control Over Financial Reporting

During the quarter ended December 31, 2022, there were no changes in our internal control over financial reporting that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

Item 9B. Other Information

None.

Item 9C. Disclosure Regarding Foreign Jurisdictions that Prevent Inspections

Not applicable.

CRYOPORT, INC.
MANAGEMENT'S REPORT ON
INTERNAL CONTROL OVER FINANCIAL REPORTING

The management of the Company is responsible for establishing and maintaining effective internal control over financial reporting and for the assessment of the effectiveness of internal control over financial reporting. The Company's internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of consolidated financial statements for external purposes in accordance with accounting principles generally accepted in the United States of America.

The Company's internal control over financial reporting is supported by written policies and procedures that:

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

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

In connection with the preparation of the Company's annual consolidated financial statements, management of the Company has undertaken an assessment of the effectiveness of the Company's internal control over financial reporting based on criteria established in Internal Control — Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission. Management's assessment included an evaluation of the design of the Company's internal control over financial reporting and testing of the operational effectiveness of the Company's internal control over financial reporting.

Based on this assessment, management has concluded that the Company's internal control over financial reporting was effective as of December 31, 2022.

By: /s/ JERRELL W. SHELTON
Jerrell W. Shelton,
Chief Executive Officer and Director

By: /s/ ROBERT STEFANOVICH
Robert Stefanovich,
Chief Financial Officer

February 28, 2023

PART III

Item 10. Directors, Executive Officers and Corporate Governance

A list of our executive officers and their respective biographical information appears in Part I, Item 1 of this Form 10-K.

We have adopted a corporate code of conduct that applies to our directors and all employees, including our Chief Executive Officer and Chief Financial Officer. We have posted the text of our corporate code of conduct on our website at www.cryoport.com on the "Investor Relations: Corporate Governance" page under the heading "Governance Documents". We intend to satisfy the requirement under Item 5.05 of Form 8-K regarding disclosure of amendments to, or waivers from, provisions of our corporate code of conduct by posting such information on our website.

The other information required under this item is incorporated by reference from our definitive proxy statement related to our 2023 Annual Meeting of Stockholders, or the Proxy Statement, to be filed with the SEC within 120 days of our fiscal year ended December 31, 2022.

Item 11. Executive Compensation

The information required by this item can be found in our Proxy Statement and is incorporated herein by reference.

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

The information required by this item can be found in our Proxy Statement and is incorporated herein by reference.

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

The information required by this item can be found in our Proxy Statement and is incorporated herein by reference.

Item 14. Principal Accountant Fees and Services

The information required by this item can be found in our Proxy Statement and is incorporated herein by reference.

PART IV

Item 15. Exhibits and Financial Statement Schedules

(a)(1) *Consolidated Financial Statements:*

(a)(2) *Financial Statement Schedules:* All financial statement schedules are omitted because they are not applicable or the required information is included in the Consolidated Financial Statements or notes thereto.

(a)(3) *Exhibits.*

Index to Exhibits

Exhibit No.	Description
2.1^	Asset Purchase Agreement, dated May 14, 2019, by and between Cryogene, Inc. and CryoGene Partners. Incorporated by reference to Exhibit 2.1 to the Company's Current Report on Form 8-K dated May 14, 2019.
2.2^	Purchase Agreement, dated as of August 24, 2020, by and between Cryoport, Inc. and Chart Industries, Inc. Incorporated by reference to Exhibit 2.1 of the Company's Current Report on Form 8-K dated August 25, 2020.
3.1	Amended and Restated Articles of Incorporation of the Company, as amended. Incorporated by reference to Exhibit 3.1 to the Company's Quarterly Report on Form 10-Q for the Quarter Ended September 30, 2012.
3.2	Amended and Restated Bylaws of the Company. Incorporated by reference to Exhibit 3.1 of the Company's Current Report on Form 8-K dated February 8, 2016.
3.3	Amended and Restated Certificate of Designation of Class A Preferred Stock. Incorporated by reference to Exhibit 3.1 of the Company's Current Report on Form 8-K dated March 30, 2015.
3.4	Certificate of Designation of Class B Preferred Stock. Incorporated by reference to Exhibit 3.1 of the Company's Current Report on Form 8-K dated February 20, 2015.
3.5	Amendment to Certificate of Designation of Class B Preferred Stock. Incorporated by reference to the Company's Amendment No. 1 to Registration Statement on Form S-1 dated April 17, 2015 and referred to as Exhibit 3.6.
3.6	Certificate of Change filed with the Nevada Secretary of State on May 12, 2015. Incorporated by reference to Exhibit 3.7 of the Company's Annual Report on Form 10-K filed with the SEC on May 19, 2015.
3.7	Amendment to Certificate of Designation of Class A Preferred Stock. Incorporated by reference to the Company's Amendment No. 4 to Registration Statement on Form S-1 dated June 22, 2015 and referred to as Exhibit 3.8.
3.8	Amendment to Certificate of Designation of Class B Preferred Stock. Incorporated by reference to the Company's Amendment No. 4 to Registration Statement on Form S-1 dated June 22, 2015 and referred to as Exhibit 3.9.
3.9	Amendment to Certificate of Designation of Class A Preferred Stock. Incorporated by reference to Exhibit 3.1 of the Company's Current Report on Form 8-K dated September 1, 2015.
3.10	Amendment to Certificate of Designation of Class B Preferred Stock. Incorporated by reference to Exhibit 3.2 of the Company's Current Report on Form 8-K dated September 1, 2015.
3.11	Certificate of Amendment filed with the Nevada Secretary of State on November 23, 2015. Incorporated by reference to Exhibit 3.1 of the Company's Current Report on Form 8-K dated November 23, 2015.
3.12	Certificate of Amendment filed with the Nevada Secretary of State on May 30, 2018. Incorporated by reference to Exhibit 3.12 of the Company's Annual Report on Form 10-K filed with the SEC on March 13, 2019.
3.13	Certificate of Designation of 4.0% Series C Convertible Preferred Stock of the Company. Incorporated by reference to Exhibit 3.1 of the Company's Current Report on Form 8-K dated October 1, 2020.
4.1	Description of the Company's securities. Incorporated by reference to Exhibit 4.1 of the Company's Annual Report on Form 10-K filed with the SEC on March 1, 2021.
4.2	Indenture, dated May 26, 2020, between Cryoport, Inc. and U.S. Bank National Association, as trustee. Incorporated by reference to Exhibit 4.1 of the Company's Current Report on Form 8-K dated May 27, 2020.

Exhibit No.	Description
4.3	Form of certificate representing the 3.00% Convertible Senior Notes due 2025. Incorporated by reference to Exhibit 4.2 of the Company's Current Report on Form 8-K dated May 27, 2020.
4.4	Indenture, dated as of November 12, 2021, between Cryoport, Inc. and U.S. Bank National Association, as trustee. Incorporated by reference to Exhibit 4.1 of the Company's Current Report on Form 8-K dated November 12, 2021.
4.5	Form of certificate representing the 0.75% Convertible Senior Notes due 2026. Incorporated by reference to Exhibit 4.2 of the Company's Current Report on Form 8-K dated November 12, 2021.
10.1*	2011 Stock Incentive Plan (as amended and restated). Incorporated by reference to Exhibit A of the Company's Definitive Proxy Statement on Schedule 14A filed with the SEC on July 30, 2012.
10.2*	Stock Option Agreement dated December 18, 2014 between the Company and Jerrell Shelton. Incorporated by reference to Exhibit 10.42 of the Company's Annual Report on Form 10-K filed with the SEC on May 19, 2015.
10.3*	2015 Omnibus Equity Incentive Plan. Incorporated by reference to Appendix A of the Company's Definitive Proxy Statement on Schedule 14A filed with the SEC on October 1, 2015.
10.4*	Cryoport, Inc. 2018 Omnibus Equity Incentive Plan (as amended by the First Amendment and the Second Amendment, effective April 30, 2021). Incorporated by reference to Exhibit 10.1 of the Company's Current Report on Form 8-K dated May 5, 2021.
10.5*	Form of Stock Option Award Agreement under the 2018 Omnibus Equity Incentive Plan. Incorporated by reference to Exhibit 10.6 of the Company's Annual Report on Form 10-K filed with the SEC on March 1, 2021.
10.6*	Form of Non-Qualified Stock Option Award Agreement under the 2018 Omnibus Equity Incentive Plan. Incorporated by reference to Exhibit 10.7 of the Company's Annual Report on Form 10-K filed with the SEC on March 1, 2021.
10.7*	Form of Restrictive Stock Right Award Agreement under the 2018 Omnibus Equity Incentive Plan. Incorporated by reference to Exhibit 10.8 of the Company's Annual Report on Form 10-K filed with the SEC on March 1, 2021.
10.8*	Annual Management Incentive Plan. Incorporated by reference to Exhibit 10.1 of the Company's Current Report on Form 8-K dated March 28, 2018.
10.9*	Employment Agreement effective as of November 1, 2019 between the Company and Robert S. Stefanovich. Incorporated by reference to Exhibit 10.1 of the Company's Current Report on Form 8-K dated October 28, 2019.
10.10*	Employment Agreement effective as of June 1, 2017 between Cryoport, Inc. and Jerrell W. Shelton. Incorporated by reference to Exhibit 10.1 of the Company's Current Report on Form 8-K dated May 31, 2017.
10.11*	First Amendment to Employment Agreement effective as of November 1, 2019 between the Company and Jerrell W. Shelton. Incorporated by reference to Exhibit 10.2 of the Company's Current Report on Form 8-K dated October 28, 2019.
10.12*	Second Amendment to Employment Agreement dated March 15, 2022 between Cryoport, Inc. and Jerrell W. Shelton. Incorporated by reference to Exhibit 10.2 of the Company's Current Report on Form 8-K dated March 21, 2022.
10.13*	Employment Agreement dated March 15, 2022 between Cryoport, Inc. and Mark Sawicki. Incorporated by reference to Exhibit 10.1 of the Company's Current Report on Form 8-K dated March 21, 2022.
10.14	Registration Rights Agreement, dated May 26, 2020, among Cryoport, Inc., Jefferies LLC and SVB Leerink LLC. Incorporated by reference to Exhibit 10.1 of the Company's Current Report on Form 8-K dated May 27, 2020.

Exhibit No.	Description
10.15	Securities Purchase Agreement, dated August 21, 2020, between Cryoport, Inc. and each of the Sellers identified therein. Incorporated by reference to Exhibit 10.1 of the Company's Current Report on Form 8-K dated August 21, 2020.
10.16^	Securities Purchase Agreement, dated as of August 24, 2020, by and between Cryoport, Inc. and BTO Freeze Parent L.P. Incorporated by reference to Exhibit 10.1 of the Company's Current Report on Form 8-K dated August 25, 2020.
10.17	Registration Rights Agreement, dated as of October 1, 2020, by and among Cryoport, Inc., BTO Freeze Parent L.P. and Blackstone Tactical Opportunities Fund – FD L.P. Incorporated by reference to Exhibit 10.1 of the Company's Current Report on Form 8-K dated October 1, 2020.
10.18	Amendment No. 1 to Securities Purchase Agreement, dated October 1, 2020, by and among Cryoport Inc., Cryoport Netherlands B.V. and the other parties thereto. Incorporated by reference to Exhibit 10.2 of the Company's Current Report on Form 8-K dated October 1, 2020.
21+	Subsidiaries of Registrant.
23.1+	Consent of Ernst & Young LLP, Independent Registered Public Accounting Firm.
31.1+	Certification of Principal Executive Officer, pursuant to Rule 13a-14(a)/15d-14(a) of the Securities Exchange Act of 1934.
31.2+	Certification of Principal Financial Officer, pursuant to Rule 13a-14(a)/15d-14(a) of the Securities Exchange Act of 1934.
32.1+	Certification of Principal Executive Officer, pursuant to Rule 13a-14(b)/15d-14(b) of the Securities Exchange Act of 1934 and 18 U.S.C. Section 1350.
32.2+	Certification of Principal Financial Officer, pursuant to Rule 13a-14(b)/15d-14(b) of the Securities Exchange Act of 1934 and 18 U.S.C. Section 1350.
101.INS+	Inline XBRL Instance Document - the instance document does not appear in the Interactive Data File because its XBRL tags are embedded within the Inline XBRL document.
101.SCH+	Inline XBRL Taxonomy Extension Schema Document.
101.CAL+	Inline XBRL Taxonomy Extension Calculation Linkbase Document.
101.DEF+	Inline XBRL Taxonomy Extension Definition Linkbase Document.
101.LAB+	Inline XBRL Taxonomy Extension Label Linkbase Document.
101.PRE+	Inline XBRL Taxonomy Extension Presentation Linkbase Document.
104	Cover Page Interactive Data File (formatted as Inline XBRL and contained in Exhibit 101).

^ Certain exhibits and schedules have been omitted pursuant to Item 601(b)(2) or Item 601(a)(5) of Regulation S-K. The Company hereby undertakes to furnish copies of such omitted materials supplementally upon request by the SEC.

* Indicates a management contract or compensatory plan or arrangement.

+ Filed or furnished herewith.

Item 16. Form 10-K Summary

None.

SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the registrant has duly caused this Annual Report on Form 10-K to be signed on its behalf by the undersigned, thereunto duly authorized.

Cryoport, Inc.

By: /s/ JERRELL W. SHELTON
Jerrell W. Shelton
Chief Executive Officer and Director

Date: February 28, 2023

Pursuant to the requirements of the Securities Exchange Act of 1934, this Annual Report on Form 10-K has been signed below by the following persons on behalf of the registrant and in the capacities and on the dates indicated:

Signature	Title	Date
/s/ JERRELL W. SHELTON Jerrell W. Shelton	Chief Executive Officer and Director (Principal Executive Officer)	February 28, 2023
/s/ ROBERT S. STEFANOVICH Robert S. Stefanovich	Chief Financial Officer (Principal Financial and Accounting Officer)	February 28, 2023
/s/ RICHARD BERMAN Richard Berman	Director	February 28, 2023
/s/ DANIEL M. HANCOCK Daniel M. Hancock	Director	February 28, 2023
/s/ ROBERT HARIRI, M.D., PH.D. Robert Hariri, M.D., Ph.D.	Director	February 28, 2023
/s/ RAMKUMAR MANDALAM, PH.D. Ramkumar Mandalam, Ph.D.	Director	February 28, 2023
/s/ EDWARD ZECCHINI Edward Zecchini	Director	February 28, 2023
/s/ RAM JAGANNATH Ram Jagannath	Director	February 28, 2023
/s/ LINDA BADDOUR Linda Baddour	Director	February 28, 2023

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Report of Independent Registered Public Accounting Firm

To the Stockholders and the Board of Directors of Cryoport, Inc.

Opinion on the Financial Statements

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

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the Company's internal control over financial reporting as of December 31, 2022, based on criteria established in Internal Control-Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (2013 framework), and our report dated February 28, 2023 expressed an unqualified opinion thereon.

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 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. 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.

Critical Audit Matter

The critical audit matter communicated below is a matter arising from the current period audit of the financial statements that was communicated or required to be communicated to the audit committee and that: (1) relates to accounts or disclosures that are material to the financial statements and (2) involved our especially challenging, subjective or complex judgments. The communication of the critical audit matter does not alter in any way our opinion on the consolidated financial statements, taken as a whole, and we are not, by communicating the critical audit matter below, providing a separate opinion on the critical audit matter or on the accounts or disclosures to which it relates.

Goodwill, Indefinite-Lived Intangible Assets, and Long-Lived Intangible Assets – Quantitative Impairment Assessments

Description of the Matter

At December 31, 2022, the Company's goodwill and indefinite-lived intangible asset balances were $151.1 million and $43.6 million, respectively. As described in Note 2, the Company evaluates goodwill at the reporting unit level for impairment on an annual basis in the fourth quarter, or more frequently if management believes indicators of impairment exist. The Company used a weighting of the income and market approaches to determine the fair value of the reporting units. The Company's long-lived assets, which includes definite-lived intangible assets and other long-lived assets were $239.8 million as of December 31, 2022. As described in Note 2, long-lived assets are reviewed at least annually to determine if events or changes in circumstances indicate that an asset's carrying amount may not be recoverable. If impairment indicators are present, the Company determines whether the underlying long-lived assets are recoverable through estimated future undiscounted cash flows.

Auditing the Company's goodwill, indefinite-lived intangible assets and long-lived assets impairment assessments involved significant auditor judgment due to the significant estimation uncertainty in determining the fair value and undiscounted cash flows of the reporting units. The assumptions with a significant level of subjectivity and/or complexity utilized in the impairment assessments were identified as the 1) revenue growth rate, 2) weighted average cost of capital (WACC), 3) royalty rate and 4) identification of comparable publicly traded companies and estimated valuation multiples.

How We Addressed the Matter in Our Audit

We obtained an understanding, evaluated the design and tested the operating effectiveness of controls over the Company's goodwill, indefinite-lived intangible assets and long-lived assets impairment assessments. This included controls over management's review of the significant assumptions underlying the fair values and undiscounted cash flows described above.

To test the estimated fair value of the reporting units and undiscounted cash flows, our audit procedures included, among others, evaluating the Company's use of the income and market approach as valuation methodologies, involving our valuation specialists to assist in testing the significant assumptions described above and testing the completeness and accuracy of the underlying data supporting the significant assumptions. We evaluated management's ability to accurately forecast by comparing actual results to historical forecasts. We compared the significant assumptions to current industry, market and economic trends, historical results, other guideline companies within the same industry and to other relevant factors. We also performed a sensitivity analysis of the significant assumptions to evaluate the change in fair value and undiscounted cash flows resulting from changes in the assumptions. Lastly, we evaluated the Company's assumptions in light of any contrary evidence.

/s/ Ernst & Young LLP

We have served as the Company's auditor since 2019.

Irvine, California
February 28, 2023

Report of Independent Registered Public Accounting Firm

To the Stockholders and the Board of Directors of Cryoport, Inc.

Opinion on Internal Control Over Financial Reporting

We have audited Cryoport, Inc. and subsidiaries' internal control over financial reporting as of December 31, 2022, based on criteria established in Internal Control—Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (2013 framework) (the COSO criteria). In our opinion, Cryoport, Inc. and subsidiaries' (the Company) maintained, in all material respects, effective internal control over financial reporting as of December 31, 2022, based on the COSO criteria.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the consolidated balance sheets of the Company as of December 31, 2022 and 2021, the related consolidated statements of operations, comprehensive loss, stockholders' equity and cash flows for each of the three years in the period ended December 31, 2022, and the related notes and our report dated February 28, 2023 expressed an unqualified opinion thereon.

Basis for Opinion

The Company's management is responsible for maintaining effective internal control over financial reporting and for its assessment of the effectiveness of internal control over financial reporting included in the accompanying Management's Report on Internal Control over Financial Reporting. Our responsibility is to express an opinion on the Company's internal control over financial reporting based on our audit. We are a public accounting firm registered with the 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 audit in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether effective internal control over financial reporting was maintained in all material respects.

Our audit included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, testing and evaluating the design and operating effectiveness of internal control based on the assessed risk, and performing such other procedures as we considered necessary in the circumstances. We believe that our audit provides a reasonable basis for our opinion.

Definition and Limitations of Internal Control Over Financial Reporting

A company's internal control over financial reporting is a process designed 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. A company's internal control over financial reporting includes those policies and procedures that (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

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

/s/ Ernst & Young LLP
Irvine, California
February 28, 2023

Cryoport, Inc. and Subsidiaries
Consolidated Balance Sheets
(in thousands, except share data)

	December 31, 2022	December 31, 2021
ASSETS		
Current Assets:		
Cash and cash equivalents	$ 36,595	$ 139,101
Short-term investments	486,728	489,698
Accounts receivable, net of allowance for doubtful accounts of $1.3 million and $1.2 million, respectively	43,858	39,412
Inventories	27,678	16,501
Prepaid expenses and other current assets	9,317	8,804
Total current assets	604,176	693,516
Property and equipment, net	63,603	49,029
Operating lease right-of-use assets	26,877	20,675
Intangible assets, net	191,009	201,427
Goodwill	151,117	146,954
Deposits	1,017	950
Deferred tax assets	947	419
Total assets	$ 1,038,746	$ 1,112,970
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current Liabilities:		
Accounts payable and other accrued expenses	$ 28,046	$ 28,583
Accrued compensation and related expenses	8,458	9,912
Deferred revenue	439	547
Current portion of operating lease liabilities	3,720	3,542
Current portion of finance lease liabilities	128	61
Current portion of notes payable	60	—
Total current liabilities	40,851	42,645
Convertible senior notes, net of discount of $10.1 million and $12.7 million, respectively	406,708	404,171
Notes payable, net of discount of $0 million and $0.05 million, respectively	355	1,086
Operating lease liabilities, net of current portion	24,721	18,144
Finance lease liabilities, net of current portion	216	51
Deferred tax liability	4,929	4,018
Other long-term liabilities	451	298
Contingent consideration	4,677	729
Total liabilities	482,908	471,142
Commitments and contingencies		
Stockholders' Equity:		
Preferred stock, $0.001 par value; 2,500,000 shares authorized:		
Class A convertible preferred stock, $0.001 par value; 800,000 shares authorized; none issued and outstanding	—	—
Class B convertible preferred stock, $0.001 par value; 585,000 shares authorized; none issued and outstanding	—	—
Class C convertible preferred stock, $0.001 par value; 250,000 shares authorized; 200,000 issued and outstanding	18,275	10,275
Common stock; $0.001 par value; 100,000,000 shares authorized; 48,334,280 and 49,616,154 issued and outstanding at December 31, 2022 and 2021, respectively	48	50
Additional paid-in capital	1,114,896	1,100,287
Accumulated deficit	(542,832)	(467,541)
Accumulated other comprehensive income (loss)	(34,549)	(1,243)
Total stockholders' equity	555,838	641,828
Total liabilities and stockholders' equity	$ 1,038,746	$ 1,112,970

See accompanying notes to consolidated financial statements.

Cryoport, Inc. and Subsidiaries
Consolidated Statements of Operations
(in thousands, except per share data)

	Years Ended December 31,		
	2022	2021	2020
Service revenues	$ 133,879	$ 119,065	$ 55,299
Product revenues	103,398	103,543	23,397
Total revenues	237,277	222,608	78,696
Cost of service revenues	75,187	69,297	29,521
Cost of product revenues	58,217	56,734	12,841
Total cost of revenues	133,404	126,031	42,362
Gross margin	103,873	96,577	36,334
Operating costs and expenses:			
Selling, general and administrative	120,055	97,563	56,860
Engineering and development	15,722	16,843	9,484
Total operating costs and expenses	135,777	114,406	66,344
Loss from operations	(31,904)	(17,829)	(30,010)
Other income (expense):			
Investment income	8,474	3,253	761
Interest expense	(6,142)	(4,689)	(2,560)
Loss on debt extinguishment	—	(251,754)	—
Other income (expense), net	(5,522)	(2,823)	(929)
Total other expense, net	(3,190)	(256,013)	(2,728)
Loss before provision for income taxes	(35,094)	(273,842)	(32,738)
(Provision for) benefit from income taxes	(2,239)	(1,686)	45
Net loss	$ (37,333)	$ (275,528)	$ (32,693)
Deemed dividend on Series C convertible preferred stock	—	—	(39,492)
Paid-in-kind dividend on Series C convertible preferred stock	(8,000)	(8,196)	(2,844)
Net loss attributable to common stockholders	(45,333)	$ (283,724)	$ (75,029)
Net loss per share attributable to common stockholders– basic and diluted	$ (0.93)	$ (6.18)	$ (1.94)
Weighted average common shares outstanding – basic and diluted	48,987,295	45,927,591	38,582,432

See accompanying notes to consolidated financial statements.

Cryoport, Inc. and Subsidiaries
Consolidated Statements of Comprehensive Loss
(in thousands)

	Years Ended December 31,		
	2022	2021	2020
Net loss	$ (37,333)	$ (275,528)	$ (32,693)
Other comprehensive income (loss), net of tax:			
Net unrealized gain (loss) on available-for-sale debt securities	(23,439)	(3,958)	161
Reclassification of realized gain on available-for-sale debt securities to earnings	(46)	(27)	(3)
Foreign currency translation adjustments	(9,821)	(2,634)	5,263
Other comprehensive income (loss)	(33,306)	(6,619)	5,421
Total comprehensive loss	$ (70,639)	$ (282,147)	$ (27,272)

See accompanying notes to consolidated financial statements.

Cryoport, Inc. and Subsidiaries
Consolidated Statements of Stockholders' Equity
(In thousands, except share data)

	Class A Preferred Stock		Class B Preferred Stock		Class C Preferred Stock		Common Stock		Additional Paid–In Capital	Accumulated Deficit	Accumulated Other Comprehensive Income (Loss)	Total Stockholders' Equity (Deficit)
	Shares	Amount	Shares	Amount	Shares	Amount	Shares	Amount				
Balance at December 31, 2019	—	$ —	—	$ —	—	$ —	37,339,787	$ 37	$ 285,609	$ (159,320)	$ (45)	$ 126,281
Net loss	—	—	—	—	—	—	—	—	—	(32,693)	—	(32,693)
Other comprehensive income, net of taxes	—	—	—	—	—	—	—	—	—	—	5,421	5,421
Stock-based compensation expense	—	—	—	—	—	—	—	—	8,833	—	—	8,833
Issuance of common stock for board of director compensation	—	—	—	—	—	—	2,869	—	83	—	—	83
Issuance of common stock in private placement, net of costs of $914,200	—	—	—	—	—	—	675,536	1	28,159	—	—	28,160
Issuance of Series C convertible preferred stock in private placement, net of costs of $7.7 million	—	—	—	—	250,000	—	—	—	237,225	—	—	237,225
Beneficial conversion feature of the Series C convertible preferred stock	—	—	—	—	—	(39,492)	—	—	39,492	—	—	—
Deemed dividend on the Series C convertible preferred stock	—	—	—	—	—	39,492	—	—	(39,492)	—	—	—
Paid-in-kind preferred stock dividend, including beneficial conversion feature	—	—	—	—	—	2,844	—	—	(2,844)	—	—	—
Proceeds from exercise of stock options and warrants	—	—	—	—	—	—	1,818,866	2	9,386	—	—	9,388
Balance at December 31, 2020	—	$ —	—	$ —	250,000	$ 2,844	39,837,058	$ 40	$ 566,451	$ (192,013)	$ 5,376	$ 382,698
Net loss	—	—	—	—	—	—	—	—	—	(275,528)	—	(275,528)
Other comprehensive loss, net of taxes	—	—	—	—	—	—	—	—	—	—	(6,619)	(6,619)
Stock-based compensation expense	—	—	—	—	—	—	—	—	15,334	—	—	15,334
Issuance of common stock for board of director compensation	—	—	—	—	—	—	229	—	11	—	—	11
Cost of Series C preferred stock conversion	—	—	—	—	—	—	—	—	(1,800)	—	—	(1,800)
Issuance of common stock in public offering, net of costs of $17.7 million	—	—	—	—	—	—	4,356,059	4	269,821	—	—	269,825
Issuance of common stock in direct placement, net	—	—	—	—	—	—	3,072,038	3	248,908	—	—	248,911
Conversion of Series C preferred shares to common stock	—	—	—	—	(50,000)	(765)	1,312,860	1	764	—	—	—
Paid-in-kind preferred stock dividend, including beneficial conversion feature	—	—	—	—	—	8,196	—	—	(8,196)	—	—	—
Proceeds from exercise of stock options	—	—	—	—	—	—	1,037,910	2	8,994	—	—	8,996
Balance at December 31, 2021	—	$ —	—	$ —	200,000	$ 10,275	49,616,154	$ 50	$ 1,100,287	$ (467,541)	$ (1,243)	$ 641,828
Net loss	—	—	—	—	—	—	—	—	—	(37,333)	—	(37,333)
Other comprehensive loss, net of taxes	—	—	—	—	—	—	—	—	—	—	(33,306)	(33,306)
Stock-based compensation expense	—	—	—	—	—	—	—	—	20,082	—	—	20,082
Paid-in-kind preferred stock dividend	—	—	—	—	—	8,000	—	—	(8,000)	—	—	—
Issuance of common stock for Cell&Co acquisition	—	—	—	—	—	—	15,152	—	479	—	—	479
Repurchase of common stock	—	—	—	—	—	—	(1,604,994)	(2)	—	(37,958)	—	(37,960)
Vesting of restricted stock units	—	—	—	—	—	—	101,070	—	—	—	—	—
Proceeds from exercise of stock options	—	—	—	—	—	—	206,898	—	2,048	—	—	2,048
Balance at December 31, 2022	—	$ —	—	$ —	200,000	$ 18,275	48,334,280	$ 48	$ 1,114,896	$ (542,832)	$ (34,549)	$ 555,838

See accompanying notes to consolidated financial statements.

Cryoport, Inc. and Subsidiaries
Consolidated Statements of Cash Flows
(In thousands, except share data)

	Years Ended December 31,		
	2022	2021	2020
Cash Flows From Operating Activities:			
Net loss	$ (37,333)	$ (275,528)	$ (32,693)
Adjustments to reconcile net loss to net cash provided by (used in) operating activities:			
Loss on extinguishment of debt	—	251,754	—
Depreciation and amortization	22,765	20,247	9,869
Amortization of debt discount	2,581	1,236	437
Unrealized (gain) loss on investments in equity securities	11,406	1,386	(845)
Realized loss on investments in equity securities	—	—	1,090
Realized (gain) loss on available-for-sale debt securities	102	81	32
Stock-based compensation expense	20,082	15,345	8,916
Loss on disposal of property and equipment	800	542	384
Excess and obsolete inventory	651	—	—
Gain on insurance settlement	(4,815)	—	—
Insurance proceeds for operations	9,883	—	—
Provision for bad debt	234	26	197
Change in contingent consideration	216	—	—
Changes in operating assets and liabilities, net of effects of acquisition:			
Accounts receivable	(4,137)	(7,270)	(2,617)
Inventories	(14,204)	(5,979)	1,322
Prepaid expenses and other current assets	(1,598)	3,056	(7,520)
Deposits	(60)	211	(152)
Change in operating lease right-of-use assets and lease liabilities	569	562	134
Accounts payable and other accrued expenses	(6,483)	(398)	4,245
Accrued compensation and related expenses	(1,569)	2,522	3,143
Deferred revenue	(530)	102	(309)
Net deferred tax (asset) liability	(411)	231	(499)
Net cash provided by (used in) operating activities	(1,851)	8,126	(14,866)
Cash Flows From Investing Activities:			
Purchases of property and equipment	(22,107)	(23,882)	(8,918)
Insurance proceeds for loss of fixed assets	3,000	—	—
Purchases of short-term investments	(163,788)	(482,707)	(158,736)
Sales/maturities of short-term investments	131,858	44,000	149,233
Patent and trademark costs	(614)	(255)	(200)
Software development costs	(1,476)	(870)	(551)
Cash paid for acquisitions	(6,554)	(5,540)	(363,140)
Net cash used in investing activities	(59,681)	(469,254)	(382,312)
Cash Flows From Financing Activities:			
Proceeds from exercise of stock options and warrants	2,048	8,995	9,388
Repurchase of common stock	(37,960)	—	—
Proceeds from issuance of Series C convertible preferred stock, net of issuance costs	—	248,911	237,225
Proceeds from issuance of common stock, net of issuance costs	—	—	28,160
Proceeds from public offering, net of offering costs	—	269,825	—
Repayment of finance lease liabilities	(82)	(60)	(70)
Repayment of note payable	(3,180)	(3,397)	—
Proceeds from issuance of convertible senior notes	—	40,068	115,000
Payment of deferred financing costs	—	—	(4,118)
Net cash provided by (used in) financing activities	(39,174)	564,342	385,585
Effect of exchange rate changes on cash and cash equivalents	(1,800)	(986)	1,231
Net change in cash and cash equivalents	(102,506)	102,228	(10,362)
Cash and cash equivalents — beginning of year	139,101	36,873	47,235
Cash and cash equivalents — end of year	$ 36,595	$ 139,101	$ 36,873
Supplemental Disclosure of Cash Flow Information:			
Cash paid for interest	$ 3,628	$ 3,297	$ 1,823
Cash paid for income taxes	$ 1,979	$ 1,315	$ 60
Supplemental Disclosure of Non-Cash Investing and Financing Activities:			
Net unrealized gain (loss) on available-for-sale debt securities	$ 23,439	$ 3,958	$ 161
Reclassification of realized gain on available-for-sale debt securities to earnings	$ 46	$ 27	$ 3
Fixed assets included in accounts payable and accrued liabilities	$ 1,003	$ 1,412	$ 499
Purchase of equipment through finance lease obligations	$ —	$ —	$ 205
Paid-in-kind preferred stock dividend, including beneficial conversion feature	$ 8,000	$ 8,196	$ 2,844
Common stock issued for conversion of debt and accrued interest	$ —	$ 765	$ —

See accompanying notes to consolidated financial statements.

Cryoport, Inc. and Subsidiaries
Notes to Consolidated Financial Statements

Note 1. Nature of the Business

Cryoport serves the life sciences industry as a provider of integrated temperature-controlled supply chain solutions supporting the biopharma/pharma, animal health, and reproductive medicine markets. Our mission is to support life and health worldwide and we are continuously developing, implementing, and leveraging our supply chain platform, which is designed to deliver comprehensive, unparalleled, highly differentiated temperature-controlled logistics, packaging, storage, cryogenic systems, informatics, and related services for life science products, regenerative medicine, cellular therapies, and treatments that require unique, specialized cold chain management.

In October 2020, the Company completed both the acquisition of MVE Biological Solutions (the "MVE Acquisition") and the acquisition of CRYOPDP (the "CRYOPDP Acquisition"). In the second quarter of 2021, the Company completed the acquisitions of Critical Transport Solutions Australia (CTSA) in Australia and F-airGate in Belgium to further enhance CRYOPDP's existing global temperature-controlled supply chain capabilities in the APAC (Asia-Pacific) and EMEA (Europe, the Middle East, and Africa) regions. In April 2022, the Company completed the acquisition of Cell&Co BioServices (Cell&Co) in Clermont-Ferrand, France. In July 2022, the Company completed the acquisition of Polar Expres in Madrid, Spain, which provides temperature-controlled logistics solutions dedicated to the life sciences industry, and the acquisition of Cell Matters in Liège, Belgium, which provides cryo-process optimization, cryoprocessing, and cryopreservation solutions to the life sciences industry (See Note 3).

The Company is a Nevada corporation and its common stock is traded on the NASDAQ Capital Market exchange under the ticker symbol "CYRX."

Note 2. Summary of Significant Accounting Policies

Basis of Presentation

The accompanying consolidated financial statements have been prepared in accordance with accounting principles generally accepted in the United States of America ("U.S. GAAP").

Segment Reporting

The Company continually monitors and reviews its segment reporting structure in accordance with authoritative guidance to determine whether any changes have occurred that would impact its reportable operating segments. Operating segments are defined as components of an enterprise about which separate financial information is available that is evaluated regularly by the chief operating decision maker in deciding how to allocate resources and in assessing operating performance. The chief operating decision maker ("CODM") is our Chief Executive Officer. Up until the fourth quarter of 2020, we managed, reported and evaluated our business in the following two reportable operating segments: Global Logistics Solutions and Global Bioservices. During the fourth quarter of 2020, our CODM changed how he makes operating decisions, assesses the performance of the business and allocates resources in a manner that caused our operating segments to change as a result of the MVE and CRYOPDP acquisitions. In consideration of FASB ASC 280, *Segment Reporting*, we determined that we are not organized around specific products and services, geographic regions or regulatory environments. Accordingly, beginning with the fourth quarter of 2020, we realigned our reporting structure, resulting in a single reportable segment. The Company has adjusted its financial statements for historical periods to reflect this change in segment reporting and show its financial results without segments for all periods presented.

Principles of Consolidation

The accompanying consolidated financial statements include the accounts of Cryoport, Inc. and its wholly-owned subsidiaries. All intercompany accounts and transactions have been eliminated.

Cash and Cash Equivalents

Our cash and cash equivalents represent demand deposits, and money market funds which are readily convertible into cash, have maturities of 90 days or less when purchased and are considered highly liquid and easily tradeable.

Short-Term Investments

Our investments in equity securities consist of mutual funds with readily determinable fair values which are carried at fair value with changes in fair value recognized in earnings.

Investments in debt securities are classified as available-for-sale and are carried at fair value, with unrealized gains and losses, net of tax, reported as accumulated other comprehensive income (loss) and included as a separate component of stockholders' equity.

Gains and losses are recognized when realized. When we have determined that an other than temporary decline in fair value has occurred, the amount related to a credit loss is recognized in earnings. Gains and losses are determined using the specific identification method.

Short-term investments are classified as current assets even though maturities may extend beyond one year because they represent investments of cash available for operations.

Use of Estimates

The preparation of the consolidated financial statements in conformity with U.S. GAAP requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the consolidated financial statements and the reported amounts of revenues and expenses during the reporting periods. Actual results could differ from estimated amounts. The Company's significant estimates include the allowance for doubtful accounts, fair value of short-term investments, valuations and purchase price allocations related to business combinations, expected future cash flows including growth rates, discount rates, terminal values and other assumptions and estimates, including valuation multiples utilized in the market approach used in impairment assessments, estimated fair values of intangible assets and goodwill, intangible asset useful lives and amortization methods, inventory excess and obsolescence reserve, contingent consideration liability, equity-based instruments, tax reserves and recoverability of the Company's net deferred tax assets and related valuation allowance.

Although the Company regularly assesses these estimates, actual results could differ materially from these estimates. Changes in estimates are recorded in the period in which they become known. The Company bases its estimates on historical experience and various other assumptions that it believes to be reasonable under the circumstances.

Future events, including the extent and the duration of the COVID-19 related economic impacts, and their effects cannot be predicted with certainty, and, accordingly the Company's accounting estimates require the exercise of judgment.

Fair Value of Financial Instruments

The Company's financial instruments consist of cash and cash equivalents, short-term investments, accounts receivable, accounts payable and accrued expenses, finance lease liabilities, notes payable, and the Company's 0.75% Convertible Senior Notes due in 2026 (the "2026 Convertible Senior Notes") and 3.0% Convertible Senior Notes due in 2025 (the "2025 Convertible Senior Notes" and together with the 2026 Convertible Senior Notes, the "Convertible Senior Notes"). The carrying value for all such instruments, except finance lease liabilities, notes payable and the Convertible Senior Notes, approximates fair value because the interest rate approximates market rates available to us for similar obligations with the same maturities. For additional information related to fair value measurements, including the notes payable and the Convertible Senior Notes, see Notes 5, 10 and 11.

Concentrations of Credit Risk

Financial instruments that potentially subject us to concentrations of credit risk consist primarily of cash, cash equivalents and short-term investments. From time to time, we maintain cash, cash equivalent and short-term investment balances in excess of amounts insured by the Federal Deposit Insurance Corporation ("FDIC") and the Securities Investor Protection Corporation ("SIPC"). Primarily all of our cash, cash equivalents and short-term investments at December 31, 2022 were in excess of amounts insured by the FDIC and SIPC. The Company performs ongoing evaluations of these institutions to limit its concentration risk exposure. We manage such risks in our portfolio by investing in highly liquid, highly rated instruments, and limit investing in long-term maturity instruments.

Our investment policy requires that purchased instruments in marketable securities may only be in highly rated instruments, which are primarily U.S. Treasury bills or treasury-backed securities, and also limits our investment in securities of any single issuer.

Customers

The Company grants credit to customers within the U.S. and international customers and does not require collateral. Revenues from international customers are generally secured by advance payments except for established foreign customers. The Company generally requires advance or credit card payments for initial revenues from new customers. The Company's ability to collect receivables can be affected by economic fluctuations in the geographic areas and industries served by the Company. Reserves for uncollectible amounts are provided based on past experience and a specific analysis of the accounts, which management believes to be sufficient. Accounts receivable at December 31, 2022, and 2021 are net of reserves for doubtful accounts of $1.3 million and $1.2 million, respectively. Although the Company expects to collect amounts due, actual collections may differ from the estimated amounts. The Company maintains reserves for bad debt and such losses, in the aggregate, historically have not exceeded its estimates.

The Company's customers are in the biopharma, pharmaceutical, animal health, reproductive medicine and other life science industries. Consequently, there is a concentration of accounts receivable within these industries, which is subject to normal credit risk. As of December 31, 2022, there was no single customer that owed us more than 10% of net accounts receivable. There was no other single customer that owed us more than 10% of net accounts receivable at December 31, 2021 and 2020.

The Company has revenue from foreign customers primarily in the United Kingdom, France, Germany, China and India. During the years ended December 31, 2022, 2021 and 2020, the Company had revenues from foreign customers of approximately $109.1 million, $102.3 million and $29.1 million, respectively, which constituted approximately 46.0%, 46.0% and 37.0%, respectively, of total revenues. No other single customer generated over 10% of revenues during the years ended December 31, 2022, 2021 and 2020.

Inventories

Inventories are stated at the lower of cost and net realizable value. Cost is determined using the first-in, first-out ("FIFO") method. Inventories are reviewed periodically for slow-moving or obsolete status. The Company writes down the carrying value of its inventories to reflect situations in which the cost of inventories is not expected to be recovered. Once established, write-downs of inventories are considered permanent adjustments to the cost basis of the obsolete or excess inventories. Raw materials and finished goods include material costs less reserves for obsolete or excess inventories. The Company evaluates the current level of inventories considering historical trends and other factors, such as selling prices and costs of completion, disposal and transportation, and based on the evaluation, records adjustments to reflect inventories at net realizable value. These adjustments are estimates, which could vary significantly from actual results if future economic conditions, customer demand, competition or other relevant factors differ from expectations. These estimates require us to make assessments about future demand for the Company's products in order to categorize the status of such inventories items as slow-moving, obsolete or in excess-of-need. These estimates are subject to the ongoing accuracy of the Company's forecasts of market conditions, industry trends, competition and other factors.

Property and Equipment

Property and equipment are stated at cost, less accumulated depreciation. We compute depreciation using the straight-line method over the estimated useful lives of the assets which is generally three to twelve years for computer hardware and software, seven to ten years for freezers, four to ten years for trucks and autos, three to fifteen years for furniture and equipment and over the shorter of the lease term or useful lives of the assets for leasehold improvements. Buildings are depreciated over a useful life ranging from 20 to 45 years. Maintenance and repairs are expensed as incurred.

Betterments, renewals and extraordinary repairs that extend the lives of the assets are capitalized; other repairs and maintenance charges are expensed as incurred. The cost and related accumulated depreciation and amortization applicable to assets retired are removed from the accounts, and the gain or loss on disposition is recognized in the consolidated statements of operations.

Leases

The Company determines if an arrangement is a lease at inception. Operating lease right-of-use ("ROU") assets represent the Company's right to use an underlying asset during the lease term, and operating lease liabilities represent the Company's obligation to make lease payments arising from the lease. Operating leases are included in ROU assets, current operating lease liabilities, and long-term operating lease liabilities on our consolidated balance sheets. Finance leases are included in property and equipment, current finance lease liabilities, and long-term finance lease liabilities on our consolidated balance sheets.

Lease ROU assets and lease liabilities are initially recognized based on the present value of the future minimum lease payments over the lease term at commencement date calculated using our incremental borrowing rate applicable to the lease asset, unless the implicit rate is readily determinable. ROU assets also include any lease payments made at or before lease commencement and exclude any lease incentives received. Our lease terms may include options to extend or terminate the lease when it is reasonably certain that we will exercise that option. Leases with a term of 12 months or less are not recognized on the consolidated balance sheets. The Company's leases do not contain any residual value guarantees. Lease expense for minimum lease payments is recognized on a straight-line basis over the lease term.

The Company accounts for lease and non-lease components as a single lease component for all its leases.

Business Combinations

Total consideration transferred for acquisitions is allocated to the assets acquired and liabilities assumed based on their fair values at the dates of acquisition. This purchase price allocation process requires management to make significant estimates and assumptions primarily with respect to intangible assets. The fair value of identifiable intangible assets is based on detailed valuations that use information and assumptions determined by management. Any excess of purchase price over the fair value of the net tangible and intangible assets acquired is allocated to goodwill. While the Company uses its best estimates and assumptions to accurately value assets acquired and liabilities assumed at the acquisition date as well as any contingent consideration, where applicable, the Company's estimates are inherently uncertain and subject to refinement. As a result, during the measurement period, which may be up to one year from the acquisition date, the Company records adjustments to the assets acquired and liabilities assumed with the corresponding offset to goodwill.

Goodwill

The Company evaluates goodwill on an annual basis in the fourth quarter or more frequently if management believes indicators of impairment exist. Such indicators could include, but are not limited to: (1) a significant adverse change in legal factors or in business climate, (2) unanticipated competition, or (3) an adverse action or assessment by a regulator. The Company compares the fair value of the reporting unit with its carrying amount and then recognizes an impairment charge for the amount by which the carrying amount exceeds the reporting unit's fair value up to the total amount of goodwill allocated to the reporting unit. As a result of our 2022 quantitative assessment, we concluded that goodwill is not impaired as of December 31, 2022.

Management will continue to monitor the reporting units for changes in the business environment that could impact the recoverability in future periods. The recoverability of goodwill is dependent upon the continued growth of revenue and cash flows from the Company's business activities. Examples of events or circumstances that could result in changes to the underlying key assumptions and judgments used in our goodwill impairment tests, and ultimately impact the estimated fair value of the Company's reporting units may include the duration of the COVID-19 global pandemic, its impact on the global economy and in particular, the APAC region; the ongoing war between Russia and Ukraine, as well as new sanctions against Russia, impacting the reporting units' business activities in the EMEA region; adverse macroeconomic conditions; and fluctuations in foreign currency exchange rates impacting the results of operations and the value of foreign assets and liabilities. While historical performance and current expectations have resulted in fair values of our reporting units in excess of carrying values, if our assumptions are not realized, it is possible that an impairment charge may need to be recorded in the future.

Intangible Assets

Intangible assets are comprised of patents, trademarks, software development costs and the intangible assets acquired in the Company's recent acquisitions which include a non-compete agreement, technology, customer relationships, trade name/trademark, agent network, order backlog, developed technology and land use rights. These intangible assets are amortized using the straight-line method over the estimated useful lives (see Note 8). The Company uses the following valuation methodologies to value the significant intangible assets acquired: income approach for customer relationships, replacement cost for agent network and software, and relief from royalty for trade name/trademarks and developed technology. The Company capitalizes costs of obtaining patents and trademarks, which are amortized, using the straight-line method over their estimated useful life of five years once the patent or trademark has been issued.

The Company evaluates the recoverability of identifiable intangible assets whenever events or changes in circumstances indicate that an intangible asset's carrying amount may not be recoverable. Such circumstances could include, but are not limited to: (1) a significant decrease in the market value of an asset, (2) a significant adverse change in the extent or manner in which an asset is used, or (3) an accumulation of costs significantly in excess of the amount originally expected for the acquisition of an asset. The Company measures the carrying amount of the asset against the estimated undiscounted future cash flows associated with it. Should the sum of the expected future net cash flows be less than the carrying value of the asset being evaluated, an impairment loss would be recognized. The impairment loss would be calculated as the amount by which the carrying value of the asset exceeds its fair value. The estimate of fair value is based on various valuation techniques, including the discounted value of estimated future cash flows. The evaluation of asset impairment requires the Company to make assumptions about future cash flows over the life of the asset being evaluated. These assumptions require significant judgment and actual results may differ from assumed and estimated amounts. During the year ended December 31, 2022, due to macroeconomic factors impacting results of operations, the Company performed an impairment analysis of its amortizable intangible assets. The impairment analysis requires a comparison of undiscounted future cash flows expected to be generated over the useful life of an asset to the carrying value of the asset. Based on the impairment analysis performed, the estimated undiscounted cash flows exceeded the carrying amount of the assets and therefore no impairment charge was required.

Other Long-lived Assets

If indicators of impairment exist, we assess the recoverability of the affected long-lived assets by determining whether the carrying value of such assets can be recovered through undiscounted future operating cash flows. If impairment is indicated, we measure the amount of such impairment by comparing the fair value to the carrying value. We believe the future cash flows to be received from the long-lived assets will exceed the assets' carrying value, and accordingly, we have not recognized any impairment losses through December 31, 2022.

Deferred Financing Costs

Deferred financing costs represent costs incurred in connection with the issuance of debt instruments and equity financings. Deferred financing costs related to the issuance of debt are amortized over the term of the financing instrument using the effective interest method and are presented in the consolidated balance sheets as an offset against the related debt. Offering costs from equity financings are netted against the gross proceeds received from the equity financings.

Income Taxes

The Company accounts for income taxes under the provision of Accounting Standards Codification ("ASC") 740, "*Income Taxes"*, or ASC 740. As of December 31, 2022, 2021 and 2020, there were no unrecognized tax benefits included in the accompanying consolidated balance sheets that would, if recognized, impact the effective tax rate.

Deferred tax assets and liabilities are measured using enacted tax rates expected to apply to taxable income in the years in which those temporary differences are expected to be recovered or settled. The effect on deferred tax assets and liabilities of a change in tax rates is recognized in income in the period that includes the enactment date. A valuation allowance is provided for certain deferred tax assets if it is more likely than not that the Company will not realize tax assets through future operations. Based on the weight of available evidence, the Company's management has determined that it is not more likely than not that the U.S. based net deferred tax assets will be realized. Therefore, the Company has recorded a full valuation allowance against its U.S. based net deferred tax assets. With respect to the foreign based deferred tax assets, the Company's management has reviewed these deferred tax assets on a jurisdictional basis. Based on the weight of each jurisdiction's evidence available, the Company's management has made separate determinations for each foreign jurisdiction regarding whether it is more likely than not that a net deferred tax asset within a particular jurisdiction will be realized. The Company has recorded full valuation allowances in jurisdictions where deferred tax assets are not deemed more likely than not to be realized.

The Company has recorded a net deferred tax liability in jurisdictions where taxable temporary differences associated with indefinite-lived intangible assets do not support the realization of deferred tax assets with finite carryforward periods. In addition, the Company has recorded a net deferred tax liability in jurisdictions where taxable temporary differences exceed deductible temporary differences.

The Company's policy is to recognize interest and/or penalties related to income tax matters in income tax expense. The Company has recorded immaterial accruals for interest and/or penalties on its consolidated balance sheets at December 31, 2022, and

2021, and has recorded immaterial amounts of interest and/or penalties in the consolidated statements of operations for the years ended December 31, 2021 and 2020. The Company is subject to taxation in the U.S., in various U.S. state jurisdictions and in various foreign countries. As of December 31, 2022, the Company is no longer subject to U.S. federal examinations for years before 2019 or for California franchise and income tax examinations for years before 2018. However, to the extent allowed by law, the taxing authorities may have the right to examine net operating losses carried forward into a tax year and make adjustments up to the amount of the net operating losses utilized. The Company is not currently under examination in either the U.S. federal or any U.S. state jurisdictions. Our foreign subsidiaries are generally subject to examination for three years following the year in which the tax obligation originated. The years subject to audit may be extended if the entity substantially understates corporate income tax. The Company's subsidiary in India is currently under examination by the Indian tax authorities for the 2012-2013, 2013-2014 and 2015-2016 tax periods. Other than India, the Company does not have any foreign subsidiaries currently under audit by their local taxing authorities.

On August 16, 2022, the United States enacted the Inflation Reduction Act of 2022, which imposes a 1% excise tax on publicly traded US corporations for the fair market value of any stock repurchased during the tax year that exceeds $1.0 million, with certain specific exceptions. The excise tax is effective for transactions occurring in taxable years after December 31, 2022.

On June 29, 2020, the State of California passed Assembly Bill ("AB") 85 which suspends the California net operating loss deduction for the 2020-2022 tax years and the R&D credit usage for the same period (for credit usages in excess of $5 million). These suspensions were considered in the preparation of the December 31, 2021 financial statements. On February 9, 2022, the California governor signed Senate Bill ("SB") 113, which was retroactive to January 1, 2021. SB 113 removed the limitations from AB 85 on net operating loss and tax credit usage for the 2022 tax year. These suspensions were considered in the preparation of the December 31, 2022 and 2021 financial statements.

On March 11, 2021, the United States enacted the American Rescue Plan ("ARP"). The ARP includes provisions extending certain CARES Act provisions, repeals a worldwide interest allocation election, modifies the $1 million executive compensation limitation for years after 2026 and extends the employee retention credit. The Company has evaluated the impact of the ARP and its impact on our financial statements in 2021 and beyond.

The 2017 Tax Cuts and Jobs Act amended the Internal Revenue Code ("Code"), effective for amounts paid or incurred in tax years beginning after December 31, 2021, to eliminate the immediate expensing of research and experimental expenditures ("R&E") and to require taxpayers to charge their R&E Expenditures and software development costs (collectively, "R&E Expenditures") to a capital account. Capitalized costs are required to be amortized over five years (15 years for expenditures attributable to foreign research). Additionally, the R&E credit may only be claimed for costs that are eligible to be treated as R&E expenditures under the Code. This change in the treatment of R&E Expenditures has been considered in the preparation of the December 31, 2022 financial statements.

Revenue Recognition

Revenues are recognized when control is transferred to customers, in an amount that reflects the consideration the Company expects to be entitled to in exchange for those goods and services. Revenue recognition is evaluated through the following five steps: (i) identification of the contract, or contracts, with a customer; (ii) identification of the performance obligations in the contract; (iii) determination of the transaction price; (iv) allocation of the transaction price to the performance obligations in the contract; and (v) recognition of revenue when or as a performance obligation is satisfied.

Performance Obligations

At contract inception, an assessment of the goods and services promised in the contracts with customers is performed and a performance obligation is identified for each distinct promise to transfer to the customer a good or service (or bundle of goods or services). To identify the performance obligations, the Company considers all of the goods or services promised in the contract regardless of whether they are explicitly stated or are implied by customary business practices. Revenue is recognized when our performance obligation has been met. The Company considers control to have transferred upon delivery because the Company has a present right to payment at that time, the Company has transferred use of the asset, and the customer is able to direct the use of, and obtain substantially all of the remaining benefits from, the asset.

For arrangements under which the Company provides biological specimen storage services and logistics support and management to the customer, the Company satisfies its performance obligations as those services are performed whereby the customer simultaneously receives and consumes the benefits of such services under the agreement.

Revenue generated from short-term logistics and engineering consulting services provided to customers is recognized when the Company satisfies the contractually defined performance obligations. When a contract includes multiple performance obligations, the contract price is allocated among the performance obligations based upon the stand-alone selling prices. Approved contract modifications are accounted for as either a separate contract or as part of the existing contract depending on the nature of the modification.

Our performance obligations on our orders and under the terms of agreements with customers are generally satisfied within one year from a given reporting date and, therefore, we omit disclosure of the transaction price allocated to remaining performance obligations on open orders.

Shipping and handling activities related to contracts with customers are accounted for as costs to fulfill our promise to transfer the associated products pursuant to the accounting policy election allowed under Topic 606 and are not considered a separate performance obligation to our customers. Accordingly, the Company records amounts billed for shipping and handling as a component of revenue. Shipping and handling fees and costs are included in cost of revenues in the accompanying consolidated statements of operations.

Revenues are recognized net of any taxes collected from customers, which are subsequently remitted to governmental agencies.

Significant Payment Terms

Pursuant to the Company's contracts with its customers, amounts billed for services or products delivered by the Company are generally due and payable in full within 15 to 60 days from the date of the invoice (except for any amounts disputed by the customer in good faith). Accordingly, the Company determined that its contracts with customers do not include extended payment terms or a significant financing component.

Variable Consideration

When a contract includes variable consideration, the Company evaluates the estimate of the variable consideration to determine whether the estimate needs to be constrained. Variable consideration is estimated at the most likely amount that is expected to be earned. Estimated amounts are included in the transaction price to the extent it is probable that a significant reversal of cumulative revenue recognized will not occur when the uncertainty associated with the variable consideration is resolved. Estimates of variable consideration and determination of whether to include estimated amounts in the transaction price are based largely on an assessment of the anticipated performance and all information (historical, current and forecasted) that is reasonably available. Variable consideration estimates are updated at each reporting date. Revenues are recorded net of variable consideration, such as discounts and allowances.

Warranties

The Company provides product warranties with varying terms and durations for some of its products. The Company estimates product warranty costs and accrues for these costs as products are sold with a charge to cost of sales. Factors considered in estimating warranty costs include historical and projected warranty claims, historical and projected cost-per-claim, and knowledge of specific product issues that are outside of typical experience. Warranty accruals are evaluated and adjusted as necessary based on actual claims experience and changes in future claim and cost estimates.

Product warranty accrued liabilities totaled $0.7 million and $0.5 million at December 31, 2022 and 2021, respectively, and are included in accounts payable and other accrued expenses. Warranty expense was not material for the years ended December 31, 2022,2021 and 2020.

Incremental Direct Costs

Incremental direct costs of obtaining a contract (sales commissions) are expensed when incurred when the amortization period of the asset that would have been recognized is one year or less; otherwise, incremental contract costs are recognized as an asset and amortized over time as promised goods and services are transferred to a customer. Incremental direct costs were not material for the years ended December 31, 2022, 2021 and 2020.

Contract Assets

Typically, we invoice the customer and recognize revenue once we have satisfied our performance obligation. Accordingly, our contract assets comprise accounts receivable, which are recognized when payment is unconditional and only the passage of time is required before payment is due. Generally, we do not have material amounts of other contract assets since revenue is recognized as control of goods is transferred or as services are performed.

Contract Liabilities (Deferred Revenue)

Contract liabilities are recorded when cash payments are received in advance of the Company's performance. Deferred revenue was $0.4 million and $0.5 million at December 31, 2022 and 2021, respectively. During the years ended December 31, 2022, 2021 and 2020, the Company recognized revenues of $1.4 million, $0.3 million and $0.4 million, respectively, from the related contract liabilities outstanding as the services were performed.

Nature of Goods and Services

The Company provides Cryoport Express® Shippers to its customers and charges a fee in exchange for the use of the Cryoport Express® Shipper under long-term master service agreements with customers. The Company's arrangements convey to the customers the right to use the Cryoport Express® Shippers over a period of time. The Company retains title to the Cryoport Express® Shippers and provides its customers the use of the Cryoport Express® Shipper for a specified shipping cycle. At the culmination of the customer's shipping cycle, the Cryoport Express® Shipper is returned to the Company.

The Company recognizes revenue for the use of the Cryoport Express® Shippers at the time of the delivery of the Cryoport Express® Shipper to the end user of the enclosed materials, and at the time that collectability is probable.

The Company also provides vacuum insulated aluminum dewars and cryogenic freezers systems to its customers. Revenue is recognized when the Company satisfies performance obligations by transferring the equipment to a customer, and at the time that collectability is probable.

The Company also provides global temperature-controlled logistics services, support and management. Revenue is recognized for these services as services are rendered and at the time that collectability is probable.

The Company also provides comprehensive and integrated temperature-controlled biostorage solutions to customers in the life sciences industry and charges a fee under long-term master service agreements with customers. These services include (1) biological specimen cryopreservation storage and maintenance, (2) archiving, monitoring, tracking, receipt and delivery of samples, (3) transport of frozen biological specimens to and from customer locations, and (4) management of incoming and outgoing biological specimens. The Company recognizes revenue for its biostorage solutions as services are rendered over time and at the time that collectability is probable.

The Company also provides short-term logistics and engineering consulting services to some customers, with fees tied to the completion of contractually defined services. We recognize revenue from these services over time as the customer simultaneously receives and consumes the benefit of these services as they are performed.

A significant portion of our revenues are covered under long-term agreements. We have determined that individual Statements of Work or Scope of Work ("SOW"), whose terms and conditions taken with a Master Services Agreement ("MSA"), create the Topic 606 contracts which are generally short-term in nature (e.g., 15-day shipping cycle) for the Cryoport Express® solutions and up to 12 months for biostorage solutions. Our agreements (including SOWs) generally do not have multiple performance obligations and, therefore, do not require an allocation of a single price amongst multiple goods or services. Prices under these agreements are generally fixed.

Revenue Disaggregation

The Company views its operations, makes decisions regarding how to allocate resources and manages its business as one reportable segment and one reporting unit. As a result, the financial information disclosed herein represents all of the material financial information related to the Company. When disaggregating revenue, the Company considered all of the economic factors that may affect its revenues. We consider sales disaggregated by end-market to depict how the nature, amount, timing and uncertainty of revenues and cash flows are impacted by changes in economic factors. The following table disaggregates our revenues by major markets for the years ended December 31, 2022, 2021 and 2020 (in thousands):

	December 31,		
	2022	2021	2020
Biopharma/Pharma	$ 193,879	$ 180,203	$ 66,394
Animal Health	33,465	33,353	7,846
Reproductive Medicine	9,933	9,052	4,456
Total Revenues	$ 237,277	$ 222,608	$ 78,696

Given that the Company's revenues are generated in different geographic regions, factors such as regulatory and geopolitical factors within those regions could impact the nature, timing and uncertainty of the Company's revenues and cash flows. Our geographical revenues, by origin, for the years ended December 31, 2022, 2021 and 2020, were as follows (in thousands):

	December 31,		
	2022	2021	2020
Americas	$ 128,209	$ 120,270	$ 49,555
Europe, the Middle East and Africa (EMEA)	42,155	59,334	20,316
Asia Pacific (APAC)	66,913	43,004	8,825
Total revenues	$ 237,277	$ 222,608	$ 78,696

Cost of Service Revenues

Our cost of service revenues is primarily comprised of freight charges, payroll and associated expenses related to our global logistics and supply chain centers, depreciation expenses of our Cryoport Express® Shippers and supplies and consumables used for our solutions.

Cost of Product Revenues

Our cost of product revenues is primarily comprised of materials, direct and indirect labor, inbound freight charges, purchasing and receiving, inspection, and distribution and warehousing of inventory. In addition, shop supplies, facility maintenance costs and depreciation expense for assets used in the manufacturing process are included in cost of product revenues.

Engineering and Development Expenses

Expenditures relating to engineering and development are expensed in the period incurred to engineering and development expense in the consolidated statements of operations.

Acquisition Costs

Acquisition costs consist of legal, accounting, third-party valuations, and other due diligence costs related to our acquisitions.

Stock-Based Compensation

Under our stockholder approved stock-based compensation plan, we have granted incentive stock options, non-qualified stock options and restricted stock units that vest over four years. Incentive and non-qualified stock options expire from seven to ten years from date of grant. The Company accounts for stock-based payments in accordance with stock-based payment accounting guidance which requires all stock-based payments to be recognized based upon their fair values. The fair value of stock options is estimated at the grant date using the Black-Scholes Option Pricing Model ("Black-Scholes") and the portion that is ultimately expected to vest is recognized as compensation cost over the requisite service period. The determination of fair value using Black-Scholes is affected by the Company's stock price as well as assumptions regarding a number of complex and subjective variables, including expected stock price volatility, risk-free interest rate, expected dividends and expected term. The Company accounts for forfeitures of unvested awards as they occur.

The grant date fair value per share for restricted stock units is based upon the closing market price of our common stock on the award grant date.

The Company's stock-based compensation plans are discussed further in Note 16.

Basic and Diluted Net Loss Per Share

We calculate basic and diluted net loss per share using the weighted average number of common shares outstanding during the periods presented. In periods of a net loss position, basic and diluted weighted average common shares are the same. For the diluted earnings per share calculation, we adjust the weighted average number of common shares outstanding to include dilutive stock options, unvested restricted stock units and shares associated with the conversion of the Convertible Senior Notes and convertible preferred stock outstanding during the periods.

The following shows the amounts used in computing net loss per share (in thousands except per share data):

	Years Ended December 31,		
	2022	2021	2020
Net loss	$ (37,333)	$ (275,528)	$ (32,693)
Deemed dividend on Series C convertible preferred stock	—	—	(39,492)
Paid-in-kind dividend on Series C convertible preferred stock	(8,000)	(8,196)	(2,844)
Net loss attributable to common shareholders	$ (45,333)	$ (283,724)	$ (75,029)
Weighted average common shares outstanding - basic and diluted	48,987,295	45,927,591	38,582,432
Net loss per share attributable to common stockholders – basic and diluted	$ (0.93)	$ (6.18)	$ (1.94)

The following table sets forth the number of shares excluded from the computation of diluted loss per share, as their inclusion would have been anti-dilutive:

	Years Ended December 31,		
	2022	2021	2020
Stock options	4,194,554	5,449,952	5,920,886
Restricted stock units	727,984	373,849	—
Series C convertible preferred stock	5,664,532	5,443,505	6,474,135
Convertible Senior Notes	4,022,734	4,022,734	4,810,002
	14,609,804	15,290,040	17,205,023

Foreign Currency Transactions

Management has determined that the functional currency of its subsidiaries is the local currency. The Company translates the assets and liabilities of its foreign subsidiaries into U.S. dollars at exchange rates in effect at the end of the reporting period. Income and expenses are translated at an average exchange rate for the period and the resulting translation gain (loss) adjustments are accumulated as a separate component of stockholders' equity. The translation gain (loss) adjustment totaled ($9.8) million, ($2.6) million and $5.2 million for the years ended December 31, 2022, 2021 and 2020, respectively. Foreign currency gains and losses from transactions denominated in other than respective local currencies are included in earnings.

Off-Balance Sheet Arrangements

We do not currently have any off-balance sheet arrangements.

Reclassification

Prior year amounts in sales and marketing expense have been reclassified to selling, general and administrative expense to conform to the current period presentation, which reflects how the Company tracks operating costs. These reclassifications had no effect on the previously reported net loss.

Recently Adopted Accounting Pronouncements

In July 2021, the Financial Accounting Standards Board ("FASB") issued ASU 2021-05, "Leases (Topic 842): Lessors—Certain Leases with Variable Lease Payments." Under this ASU, lessors should classify and account for a lease with variable lease payments that do not depend on a reference index or a rate as an operating lease if both of the following criteria are met: (1) the lease would have been classified as a sales-type lease or a direct financing lease in accordance with the classification criteria in Topic 842 and (2) the lessor would have otherwise recognized a day-one loss. ASU 2021-05 is effective for fiscal years beginning after December 15, 2021 and interim periods within those fiscal years for all public business entities. We adopted this standard in the first quarter of fiscal 2022, which did not have a material impact on the Company's consolidated financial statements or disclosures.

In May 2021, the FASB issued ASU 2021-04, "Earnings Per Share (Topic 260), Debt — Modifications and Extinguishments (Subtopic 470-50), Compensation — Stock Compensation (Topic 718), and Derivatives and Hedging — Contracts in Entity's Own Equity (Subtopic 815-40): Issuer's Accounting for Certain Modifications or Exchanges of Freestanding Equity-Classified Written Call Options (a consensus of the Emerging Issues Task Force)." ASU 2021-04 requires issuers to account for modifications or exchanges of freestanding equity-classified written call options that remain equity classified after the modification or exchange based on the economic substance of the modification or exchange. Under the guidance, an issuer determines the accounting for the modification or exchange based on whether the transaction was done to issue equity, to issue or modify debt, or for other reasons. ASU 2021-04 is applied prospectively and is effective for fiscal years beginning after December 15, 2021, and interim periods within those fiscal years. We adopted this standard in the first quarter of fiscal 2022, which did not have a material impact on the Company's consolidated financial statements or disclosures.

Accounting Guidance Issued but Not Adopted at December 31, 2022

In September 2022, the FASB issued ASU 2022-04, "Liabilities—Supplier Finance Programs (Subtopic 405-50): Disclosure of Supplier Finance Program Obligations," which is intended to enhance the transparency surrounding the use of supplier finance programs in connection with the purchase of goods and services. Supplier finance programs may also be referred to as reverse factoring, payables finance, or structured payables arrangements. The amendments in ASU 2022-04 require a buyer that uses supplier finance programs to disclose sufficient qualitative and quantitative information about the program to allow a user of financial statements to understand the program's nature, activity during the period, changes from period to period, and potential magnitude. ASU 2022-04 is effective for all entities for fiscal years beginning after December 15, 2022, on a retrospective basis, including interim periods with those fiscal years, except for the requirement to disclose roll-forward information, which is effective prospectively for fiscal years beginning after December 15, 2023. We plan to adopt ASU 2022-04 on January 1, 2023. We have evaluated the effect that this guidance will have on our consolidated financial statements and determined it will not have a material impact because currently the Company does not have supplier finance programs that are within the scope of this accounting guidance.

In June 2022, the FASB issued ASU 2022-03, "Fair Value Measurement (Topic 820): Fair Value Measurement of Equity Securities Subject to Contractual Sale Restrictions," which amends the guidance in Topic 820, *Fair Value Measurement*, to clarify that a contractual restriction on the sale of an equity security is not considered part of the unit of account of the equity security and, therefore, is not considered in measuring fair value. The amendments also clarify that an entity cannot, as a separate unit of account, recognize and measure a contractual sale restriction. In addition, the ASU introduces new disclosure requirements for equity securities subject to contractual sale restrictions that are measured at fair value. ASU 2022-03 is effective for fiscal years beginning after December 15, 2023, including interim periods within those fiscal years for public business entities. We are currently evaluating the impact of this standard on our consolidated financial statements.

In March 2022, the FASB issued ASU 2022-02, "Financial Instruments—Credit Losses (Topic 326): Troubled Debt Restructurings and Vintage Disclosures," which addresses and amends areas identified by the FASB as part of its post-implementation review of the accounting standard that introduced the current expected credit losses ("CECL") model. The amendments eliminate the accounting guidance for troubled debt restructurings by creditors that have adopted the CECL model and enhance the disclosure requirements for loan refinancings and restructurings made with borrowers experiencing financial difficulty. In addition, the amendments require disclosure of current-period gross write offs for financing receivables and net investment in leases by year of origination in the vintage disclosures. For entities, such as Cryoport, that have *not* yet adopted the CECL accounting model in ASU 2016-13, the effective date for the amendments in ASU 2022-02 is the same as the effective date in ASU 2016-13 (i.e., fiscal years beginning after December 15, 2022, including interim periods within those fiscal years). We plan to adopt ASU 2022-02 on January 1, 2023. We have evaluated the effect that this guidance will have on our consolidated financial statements and determined it will not have a material impact.

In October 2021, the FASB issued ASU 2021-08, "Business Combinations (Topic 805): Accounting for Contract Assets and Contract Liabilities from Contracts with Customers." ASU 2021-08 requires contract assets and contract liabilities acquired in a business combination to be recognized and measured in accordance with Topic 606, Revenue from Contracts with Customers, on the acquisition date as if the acquirer had entered into the original contract at the same date and on the same terms as the acquiree. ASU 2021-08 is effective for fiscal years beginning after December 15, 2022, including interim periods within those fiscal years for public business entities. We plan to adopt ASU 2021-08 on January 1, 2023. We have evaluated the effect that this guidance will have on our consolidated financial statements and determined it will not have a material impact.

In June 2016, the FASB issued ASU 2016-13, "Measurement of Credit Losses on Financial Instruments." This ASU replaces the incurred loss impairment methodology in current U.S. GAAP with a methodology that reflects expected credit losses and requires consideration of a broader range of reasonable and supportable information for credit loss estimates on certain types of financial instruments, including trade receivables. In addition, new disclosures are required. The ASU, as subsequently amended, is effective for the Company for fiscal years beginning after December 15, 2022, as the Company was a smaller reporting company as of November 15, 2019, the determination date. We plan to adopt ASU 2016-13 on January 1, 2023 and have evaluated the effect that this guidance will have on our consolidated financial statements. Based on the composition of the Company's accounts receivable, investment portfolio, and other financial assets, including current market conditions and historical credit loss activity, the adoption of this standard is not expected to have a material impact on the Company's consolidated financial statements.

Note 3. Acquisitions

2022 Acquisitions

In April 2022, we completed the acquisition of Cell&Co BioServices in Clermont-Ferrand, France with additional operations in Pont-du-Château, France to further enhance our existing global temperature-controlled supply chain capabilities. Cell&Co BioServices is a bioservices business providing biorepository, kitting, and logistics services to the life sciences industry. The purchase consideration was €5.7 million ($6.2 million), comprised of upfront consideration of €3.2 million ($3.5 million) in cash, 15,152 shares of the Company's common stock with a fair value of $0.4 million, and an earn-out provision with a fair value of €2.0 million ($2.2 million) based on achieving annual EBITDA targets through 2025, as defined in the share purchase agreement. Of the purchase consideration, $2.7 million was allocated to goodwill and $3.4 million to identifiable intangible assets. The valuation of the intangible assets, contingent consideration liability and opening balance sheet are preliminary estimates subject to change as we complete our procedures. The acquired goodwill and intangible assets are not deductible for tax purposes.

In July 2022, the Company completed the acquisition of Polar Expres based in Madrid, Spain, which provides temperature-controlled logistics solutions dedicated to the life sciences industry. Polar Expres operates logistics centers in Madrid and Barcelona supporting the rapidly growing life science market. This acquisition further expands CRYOPDP's footprint which enhances our existing global temperature-controlled supply chain capabilities and provides us with additional growth opportunities in the EMEA region. The purchase consideration was €2.8 million ($2.8 million), comprised of cash consideration of €1.4 million ($1.4 million) and an earn-out provision with a fair value of €1.4 million ($1.4 million) based on achieving 2024 and 2026 EBITDA targets as defined in the share purchase agreement. Of the purchase consideration, $1.7 million was allocated to goodwill and $1.0 million to identifiable intangible assets. The valuation of the intangible assets, contingent consideration liability and opening balance sheet are preliminary estimates subject to change as we complete our procedures. The acquired goodwill and intangible assets are not deductible for tax purposes.

In July 2022, the Company also completed the acquisition of Cell Matters based in Liège, Belgium, which provides cryo-process optimization, cryoprocessing, and cryopreservation solutions to the life sciences industry. The purchase consideration was €3.9 million ($4.0 million). The purchase consideration, including the reimbursement of financial indebtedness at the closing date, in the amount of €4.7 million ($4.7 million) in aggregate was allocated to goodwill. The value of this acquisition is assigned to Cell Matters' assembled workforce which has significant expertise in cryo-process optimization and cryopreservation. This expertise is tied to Cryoport Systems' new initiative to establish standardized, integrated apheresis collection, processing, biostorage, and distribution solutions for cellular therapies branded as IntegriCell™ to provide consistent, high-quality cellular starting material for use in the manufacture of life-saving cellular therapies. Through December 31, 2022, the Company recorded a measurement period adjustment of $0.1 million comprised of a refund from the sellers following payments made from Cell Matters to the sellers between the locked box date and the closing date, in accordance with the locked box mechanism as defined in the share purchase agreement. The valuation of the opening balance sheet is a preliminary estimate subject to change as we complete our procedures. The acquired goodwill is not deductible for tax purposes.

2021 Acquisitions

In the second quarter of 2021, we completed the acquisitions of Critical Transport Solutions Australia (CTSA) in Australia and F-airGate in Belgium to further enhance our existing global temperature-controlled supply chain capabilities in the APAC and EMEA regions. The combined purchase consideration was $6.8 million, of which $2.7 million was allocated to goodwill and $2.8 million to identifiable intangible assets. The combined purchase consideration also included a contingent consideration liability of $0.7 million. The acquisitions include earnout provisions subject to achieving future EBITDA targets through 2025 and certain employment requirements, as defined in the share purchase agreements. The goodwill amount represents synergies related to our existing logistics management services. Through June 30, 2022, the Company recorded combined measurement period adjustments of $0.8 million, mainly comprised of deferred tax adjustments. The acquired goodwill and intangible assets are not deductible for tax purposes.

2020 Acquisitions

CRYOPDP Acquisition

On October 1, 2020, the Company completed its acquisition of CRYOPDP for a cash consideration of €48.3 million (approximately $57.0 million),subject to customary closing working capital and other adjustments. This acquisition was funded with existing cash on hand. CRYOPDP, based in France, is a leading global provider of innovative temperature-controlled logistics solutions to the clinical research, pharmaceutical and cell and gene therapy markets. CRYOPDP conducts its business activities in the Americas, EMEA and APAC. As a result of the CRYOPDP Acquisition, the Company has extended its solutions to include broader temperature-controlled logistics and specialty courier services and has significantly expanded its global network through CRYOPDP's 22 facilities in 12 countries.

The CRYOPDP Acquisition was accounted for under the acquisition method of accounting in accordance with FASB ASC Topic 805, "Business Combinations," and, therefore, the total purchase price was allocated to the identifiable tangible and intangible assets acquired and the liabilities assumed based on their respective fair values on the acquisition date. Fair values were determined by management based in part on an independent valuation performed by a third-party valuation specialist and required the use of significant assumptions and estimates. Critical estimates included, but were not limited to, future expected cash flows, including projected revenues and expenses, and the applicable discount rates. These estimates were based on assumptions that the Company believes to be reasonable; however, actual results may differ from these estimates.

The following table summarizes the allocation of the purchase price as of the acquisition date (in thousands):

Total purchase consideration paid	$ 56,971
Purchase price allocation:	
Cash and cash equivalents	8,346
Accounts receivable	10,603
Inventories	644
Prepaid and other current assets	2,905
Property and equipment	2,863
Operating lease right-of-use assets	1,856
Intangible assets	28,235
Other long-term assets	569
Accounts payable and other accrued expenses	(11,110)
Accrued compensation and related expenses	(1,194)
Deferred revenue	(370)
Note payable	(4,690)
Operating lease liabilities	(1,856)
Deferred tax liability	(5,311)
Other long-term liabilities	(64)
Total identifiable net assets	31,426
Goodwill	25,545
	$ 56,971

The following table summarizes the estimated fair values of CRYOPDP's identifiable intangible assets at the date of acquisition and their estimated useful lives and amortization expense based on their respective useful lives (in thousands):

	Estimated Fair Value	Estimated Useful Life	Amortization Method	Annual Amortization Expense
Software	$ 3,578	7	Straight-line	$ 511
Customer relationships	5,871	11.5	Straight-line	511
Agent network	8,219	4	Straight-line	2,055
Trade name/trademarks	10,567	Indefinite	—	—
Total	$ 28,235			$ 3,077

Goodwill is calculated as the excess of the purchase price over the fair value of net assets acquired and represents the future economic benefits arising from other assets acquired that could not be individually identified and separately recognized. Among the factors that contributed to a purchase price in excess of the fair value of the net tangible and intangible assets acquired were the acquisition of an assembled workforce, the expected synergies, and other benefits that we believe will result from combining the operations of CRYOPDP with our operations. The goodwill recognized of $25.5 million is not deductible for income tax purposes.

Acquisition-related transaction costs (included in selling, general and administrative expenses) totaled approximately $1.4 million.

The final purchase price for the CRYOPDP Acquisition was $56.7 million after receiving a $0.3 million net working capital settlement from the sellers during the year ended December 31, 2021. As of October 1, 2020, the Company recorded net assets acquired of $57.0 million, including goodwill of $25.5 million. Through September 30, 2021, the Company recorded measurement period adjustments of $1.2 million, mainly comprised of $0.8 million deferred tax adjustments and $0.3 million fair value on the note payable, resulting in adjusted goodwill of $24.3 million and adjusted net assets acquired of $56.7 million.

MVE Acquisition

On October 1, 2020, the Company completed its acquisition of Chart Industries, Inc.'s MVE cryobiological storage business for a cash consideration of $317.5 million, subject to customary closing working capital and other adjustments. The Company financed

a portion of the closing cash payment of the MVE Acquisition with the net proceeds of the Blackstone Private Placement, as further discussed in Note 15. MVE is a global leader in manufactured vacuum insulated products and cryogenic freezer systems for the life sciences industry. MVE has manufacturing and distribution operations in the Americas, EMEA and APAC. As a result of the MVE Acquisition, the Company has extended its integrated logistics solutions to provide a broad range of cryogenic dewars and freezers to the life sciences industry.

The MVE Acquisition was accounted for under the acquisition method of accounting in accordance with FASB ASC Topic 805, "Business Combinations," and, therefore, the total purchase price was allocated to the identifiable tangible and intangible assets acquired and the liabilities assumed based on their respective fair values on the acquisition date. Fair values were determined by management based in part on an independent valuation performed by a third-party valuation specialist and required the use of significant assumptions and estimates. Critical estimates included, but were not limited to, future expected cash flows, including projected revenues and expenses, and the applicable discount rates. These estimates were based on assumptions that the Company believes to be reasonable; however, actual results may differ from these estimates.

The following table summarizes the allocation of the purchase price as of the acquisition date (in thousands):

Total purchase consideration paid	$	317,470
Purchase price allocation:		
Cash and cash equivalents		2,955
Accounts receivable		10,645
Inventories		10,627
Other current assets		256
Property and equipment		9,050
Operating lease right-of-use assets		2,154
Intangible assets		184,991
Other non-current assets		358
Accounts payable and other accrued expenses		(6,036)
Accrued compensation and related expenses		(1,139)
Operating lease liabilities		(2,160)
Deferred tax liabilities		(393)
Other long-term liabilities		(64)
Total identifiable net assets		211,244
Goodwill		106,226
	$	317,470

The following table summarizes the estimated fair values of MVE's identifiable intangible assets and their estimated useful lives and amortization expense based on their respective useful lives (in thousands):

	Estimated Fair Value	Estimated Useful Life	Amortization Method	Annual Amortization Expense
Order backlog	2,600	0.125	Straight-line	$ —
Customer relationships	118,600	14.5	Straight-line	8,179
Developed technology	28,700	12	Straight-line	2,392
Land use rights	2,291	38	Straight-line	63
Trade name/trademarks	32,800	Indefinite	—	—
Total	$ 184,991			$ 10,634

Goodwill is calculated as the excess of the purchase price over the fair value of net assets acquired and represents the future economic benefits arising from other assets acquired that could not be individually identified and separately recognized. Among the factors that contributed to a purchase price in excess of the fair value of the net tangible and intangible assets acquired were the acquisition of an assembled workforce, the expected synergies, and other benefits that we believe will result from combining the operations of MVE with our operations. Of the $106.2 million goodwill recognized, approximately $62.3 million is deductible for income tax purposes.

Acquisition-related transaction costs (included in selling, general and administrative expenses) totaled approximately $8.8 million.

The final purchase price for the MVE Acquisition was $318.0 million after paying a $0.5 million net working capital settlement to the sellers during the year ended December 31, 2021. As of October 1, 2020, the Company recorded net assets acquired of $317.5 million, including goodwill of $106.2 million. Through September 30, 2021, the Company recorded a measurement period adjustment of $0.5 million relating to the final working capital settlement paid to the sellers, resulting in adjusted goodwill of $106.7 million and adjusted net assets acquired of $318.0 million.

Note 4. Cash, Cash Equivalents and Short-term Investments

Cash, cash equivalents and short-term investments consisted of the following as of December 31, 2022 and 2021 (in thousands):

	Carrying Value	
	2022	2021
Cash	$ 34,752	$ 27,788
Cash equivalents:		
Money market mutual funds	1,843	111,313
Total cash and cash equivalents	36,595	139,101
Short-term investments:		
U.S. Treasury notes and bills	190,718	223,896
Mutual funds	99,777	110,006
Corporate debt securities	196,233	155,796
Total short-term investments	486,728	489,698
Cash, cash equivalents and short-term investments	$ 523,323	$ 628,799

Available-for-sale debt securities

The amortized cost, gross unrealized gains, gross unrealized losses and fair value of available-for-sale debt securities by type of security at December 31, 2022 were as follows (in thousands):

	Amortized Cost	Unrealized Gains	Unrealized Losses	Fair Value
U.S. Treasury notes	$ 199,626	$ 5	$ (8,913)	$ 190,718
Corporate debt securities	210,764	1,243	(15,774)	196,233
Total available-for-sale investments	$ 410,390	$ 1,248	$ (24,687)	$ 386,951

The following table summarizes the fair value of available-for-sale debt securities based on stated contractual maturities as of December 31, 2022:

	Amortized Cost	Fair Value
Due within one year	$ 129,568	$ 126,776
Due after one year through five years	280,822	260,175
Due after five years through ten years	—	—
Total	$ 410,390	$ 386,951

The amortized cost, gross unrealized gains, gross unrealized losses and fair value of available-for-sale debt securities by type of security at December 31, 2021 were as follows (in thousands):

	Amortized Cost	Unrealized Gains	Unrealized Losses	Fair Value
U.S. Treasury notes	$ 226,020	$ 12	(2,136)	$ 223,896
Corporate debt securities	157,527	—	(1,731)	155,796
Total available-for-sale investments	$ 383,547	$ 12	$ (3,867)	$ 379,692

The following table summarizes the fair value of available-for-sale debt securities based on stated contractual maturities as of December 31, 2021 (in thousands):

	Amortized Cost	Fair Value
Due within one year	$ 39,081	$ 39,035
Due after one year through five years	328,776	325,047
Due after five years through ten years	15,690	15,610
Total	$ 383,547	$ 379,692

The primary objective of our investment portfolio is to enhance overall returns in an efficient manner while maintaining safety of principal, prudent levels of liquidity and acceptable levels of risk. Our investment policy limits interest-bearing security investments to certain types of debt and money market instruments issued by institutions with primarily investment-grade credit ratings, and it places restrictions on maturities and concentration by asset class and issuer.

We review our available-for-sale investments for other-than-temporary declines in fair value below our cost basis each quarter and whenever events or changes in circumstances indicate that the cost basis of an asset may not be recoverable. The evaluation is based on a number of factors, including the length of time and the extent to which the fair value has been below our cost basis, as well as adverse conditions related specifically to the security such as any changes to the credit rating of the security and the intent to sell or whether we will more likely than not be required to sell the security before recovery of its amortized cost basis. Our assessment of whether a security is other-than-temporarily impaired could change in the future based on new developments or changes in assumptions related to that particular security.

The following table shows the Company's gross unrealized losses and fair value of available-for-sale debt securities, aggregated by investment category and length of time that individual securities have been in a continuous unrealized loss position at December 31, 2022:

	Less than 12 Months		12 Months or More		Total	
	Fair Value	Unrealized Losses	Fair Value	Unrealized Losses	Fair Value	Unrealized Losses
U.S. Treasury notes	$ 19,466	$ (297)	$ 171,252	$ (8,616)	$ 190,718	$ (8,913)
Corporate debt securities	61,492	(2,218)	134,740	(13,556)	196,233	(15,774)
Total	$ 80,958	$ (2,515)	$ 305,992	$ (22,172)	$ 386,951	$ (24,687)

For U.S. Treasury notes, the unrealized losses were caused by interest rate increases. The contractual terms of those investments do not permit the issuer to settle the securities at a price less than the amortized cost of the investment. Because the Company does not intend to sell the investments and it is not more likely than not that the Company will be required to sell the investments before recovery of their amortized cost bases, which may be maturity, the Company does not consider the U.S. Treasury notes to be other-than-temporarily impaired at December 31, 2022. For corporate debt securities, the unrealized losses were primarily caused by interest rate increases. The Company does not intend to sell these debt securities that are in an unrealized loss position, and it is not more likely than not that the Company will be required to sell these debt securities before recovery of their amortized cost bases, which may be at maturity. Based on the credit quality of the debt securities, and the Company's estimates of future cash flows to be collected from those securities, the Company believes the unrealized losses are not credit losses. Accordingly, the Company does not consider the corporate debt securities to be other-than-temporarily impaired at December 31, 2022.

During the years ended December 31, 2022, 2021 and 2020, we had realized losses of $0.1 million, $0.08 million and $0.03 million on available-for-sale investments, respectively.

Equity Investments

We held investments in equity securities with readily determinable fair values of $99.8 million and $110.0 million at December 31, 2022 and 2021, respectively. These investments consist of mutual funds that invest primarily in tax free municipal bonds and treasury inflation protected securities.

Unrealized gains (losses) during 2022, 2021 and 2020 related to equity securities held at December 31, 2022, 2021 and 2020 are as follows (in thousands):

	2022	2021	2020
Net losses recognized during the year on equity securities	$ (11,406)	$ (1,386)	$ (245)
Less: net losses recognized during the year on equity securities sold during the year	—	—	(1,090)
Unrealized gains (losses) recognized during the year on equity securities still held at December 31, 2022, 2021 and 2020	$ (11,406)	$ (1,386)	$ 845

Note 5. Fair Value Measurements

We measure fair value based on the prices that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. Fair value measurements are based on a three-tier hierarchy that prioritizes the inputs used to measure fair value. These tiers include the following:

Level 1: Quoted prices (unadjusted) in active markets for identical assets or liabilities that are accessible at the measurement date. The fair value hierarchy gives the highest priority to Level 1 inputs.

Level 2: Observable prices that are based on inputs not quoted on active markets but corroborated by market data. These inputs include quoted prices for similar assets or liabilities; quoted market prices in markets that are not active; or other inputs that are observable or can be corroborated by observable market data for substantially the full term of the assets or liabilities.

Level 3: Unobservable inputs are used when little or no market data is available. The fair value hierarchy gives the lowest priority to Level 3 inputs.

In determining fair value, we utilize valuation techniques that maximize the use of observable inputs and minimize the use of unobservable inputs to the extent possible, as well as consider counterparty credit risk in the assessment of fair value.

We did not elect the fair value option, as allowed, to account for financial assets and liabilities that were not previously carried at fair value. Therefore, material financial assets and liabilities that are not carried at fair value, such as trade accounts receivable and payable, are reported at their historical carrying values.

The carrying values of our assets that are required to be measured at fair value on a recurring basis as of December 31, 2022 and 2021 approximate fair value because of our ability to immediately convert these instruments into cash with minimal expected change in value which are classified in the table below in one of the three categories of the fair value hierarchy described above (in thousands):

	Fair Value Measurements			
	Level 1	Level 2	Level 3	Total
December 31, 2022				
Assets:				
Money market mutual fund	$ 1,843	$ —	$ —	$ 1,843
Mutual funds	99,777	—	—	99,777
U.S. Treasury notes	190,718	—	—	190,718
Corporate debt securities	196,233	—	—	196,233
	$ 488,571	$ —	$ —	$ 488,571
Liabilities:				
Convertible Senior Notes	$ —	$ 406,708	$ —	$ 406,708
Contingent consideration	—	—	4,677	4,677
	$ —	$ 406,708	$ 4,677	$ 411,385

	Fair Value Measurements			
	Level 1	Level 2	Level 3	Total
December 31, 2021				
Assets:				
Money market mutual fund	$ 111,313	$ —	$ —	$ 111,313
Mutual funds	110,006	—	—	110,006
U.S. Treasury notes	223,896	—	—	223,896
Corporate debt securities	155,796	—	—	155,796
	$ 601,011	$ —	$ —	$ 601,011
Liabilities:				
Convertible Senior Notes	$ —	$ 404,171	$ —	$ 404,171
Contingent consideration	—	—	729	729
	$ —	$ 404,171	$ 729	$ 404,900

Our equity securities and available-for-sale debt securities, including U.S. treasury notes are valued using inputs observable in active markets for identical securities and are therefore classified as Level 1 within the fair value hierarchy.

We did not have any financial liabilities measured at fair value on a recurring basis as of December 31, 2022.

We carry the Convertible Senior Notes (see Note 10) at face value less the unamortized discount and issuance costs on our consolidated balance sheets and present fair value for disclosure purposes only. We estimate the fair value of the Convertible Senior Notes using the net present value of the payments, discounted at an interest rate that is consistent with market and risk-adjusted interest rates, which is a Level 2 input.

The following table presents the estimated fair values and the carrying values (in thousands):

	December 31, 2022		December 31, 2021	
	Carrying Value	Fair Value	Carrying Value	Fair Value
2026 Convertible Senior Notes	$ 392,621	$ 290,132	$ 390,523	$ 331,783
2025 Convertible Senior Notes	$ 14,087	$ 12,373	$ 13,648	$ 13,628

Under the terms of the CTSA acquisition, contingent consideration may be payable in cash based on the achievement of a certain EBITDA target for 2024, with no maximum limit as to the contingent consideration achievable. Under the terms of the F-airGate, Cell&Co, and Polar Expres acquisitions, contingent consideration may be payable in cash based on the achievement of certain future revenue and/or EBITDA targets during each annual period following the acquisition dates for a total of four years, up to a maximum of $6.1 million (undiscounted). The fair value of the contingent consideration was measured at the end of each reporting period using Level 3 inputs. The fair value of the contingent consideration for the F-airGate and Polar Expres acquisitions was determined using a

probability-weighted discounted cash flow model. The fair value of the contingent consideration for the CTSA and Cell&Co acquisitions was valued based on unobservable inputs using a Monte Carlo simulation. These inputs included the estimated amount and timing of projected future revenue, a discount rate, a risk-free rate, asset volatility and revenue volatility. Significant increases (decreases) in any of those inputs in isolation would result in a significantly higher (lower) fair value measurement. The contingent consideration was determined to have an aggregate fair value of $4.7 million and $0.7 million which is reflected as contingent consideration liability in the accompanying consolidated balance sheets as of December 31, 2022 and 2021, respectively. Certain assumptions used in estimating the fair value of the contingent consideration are uncertain by nature. Actual results may differ materially from estimates.

The losses recognized in earnings and the change in net assets related to the contingent consideration at December 31, 2022 were as follows (in thousands):

	Fair Value December 31, 2021	Losses recognized in earnings	Foreign Currency Adjustment	Fair Value December 31, 2022
2021 Acquisitions	$ 729	$ 216	$ (43)	$ 902
2022 Acquisitions	—	103	—	3,775
	$ 729	$ 319	$ (43)	$ 4,677

The losses recognized in earnings have been reported in operating expenses in the consolidated statement of operations for the year ended December 31, 2022.

Note 6. Inventories

Inventories consist of the following (in thousands):

	December 31, 2022	December 31, 2021
Raw materials	$ 18,287	$ 11,846
Work-in-process	895	670
Finished goods	8,496	3,985
	$ 27,678	$ 16,501

Note 7. Property and Equipment

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

	December 31, 2022	December 31, 2021
Cryogenic shippers and data loggers	$ 11,373	$ 9,343
Freezers	7,320	5,341
Furniture and fixtures	3,760	2,204
Computers and software	2,824	2,384
Machinery and equipment	16,492	12,405
Trucks and autos	853	497
Leasehold improvements	27,083	21,657
Buildings	4,473	5,808
Land	813	806
Fixed assets in process	15,947	8,583
	90,938	69,028
Less accumulated depreciation and amortization	(27,335)	(19,999)
	$ 63,603	$ 49,029

Total depreciation and amortization expense related to property and equipment amounted to $7.7 million, $5.8 million and $3.2 million for the years ended December 31, 2022, 2021 and 2020, respectively.

The Company leases equipment under finance leases, with a total cost of $0.5 million and $0.3 million for the years ended December 31, 2022 and 2021, respectively, and accumulated amortization of $0.2 million and $0.1 million as of December 31, 2022 and 2021, respectively.

Geographic information

Certain geographic information with respect to property and equipment was as follows (in millions):

	December 31,	
	2022	2021
United States	$ 51,660	$ 40,535
Rest of world [1]	11,943	8,494
Total property and equipment, net	$ 63,603	$ 49,029

(1) No individual country exceeded 10% of our total property and equipment for any period presented.

Note 8. Goodwill and Intangible Assets

Goodwill

The following table represents the changes in the carrying value of goodwill for the years ended December 31, 2022 and 2021 (in thousands):

	December 31, 2022	December 31, 2021
Balance at beginning of year	$ 146,954	$ 145,282
Foreign currency adjustment	(5,391)	(419)
Goodwill related to MVE acquisition	—	483
Goodwill related to CRYOPDP acquisition	—	(828)
Goodwill related to CTSA and F-airGate acquisitions	6	2,436
Goodwill related to Cell&Co acquisition	2,785	—
Goodwill related to Polar Expres acquisition	1,828	—
Goodwill related to Cell Matters acquisition	4,935	—
Balance at end of year	$ 151,117	$ 146,954

Intangible Assets

The following table presents our intangible assets as of December 31, 2022 (in thousands):

	Gross Amount	Accumulated Amortization	Net Carrying Amount	Weighted Average Amortization Period (years)
Non-compete agreement	$ 390	$ 280	$ 110	1
Technology	36,592	8,056	28,536	9
Customer relationships	131,716	21,254	110,462	12
Trade name/trademark	820	158	662	13
Agent network	11,667	6,199	5,468	2
Order backlog	2,600	2,600	—	—
Land use rights	2,378	257	2,121	35
Patents and trademarks	45,181	1,531	43,650	—
Total	$ 231,344	$ 40,335	$ 191,009	

The following table presents our intangible assets as of December 31, 2021 (in thousands):

	Gross Amount	Accumulated Amortization	Net Carrying Amount	Weighted Average Amortization Period (years)
Non-compete agreement	$ 390	$ 201	$ 189	2
Technology	35,116	4,790	30,326	10
Customer relationships	128,593	11,725	116,868	13
Trade name/trademark	510	112	398	12
Agent network	10,686	3,047	7,639	3
Order backlog	2,600	2,600	—	—
Land use rights	2,378	7	2,371	36
Patents and trademarks	44,566	930	43,636	—
Total	$ 224,839	$ 23,412	$ 201,427	

Amortization expense for intangible assets for the years ended December 31, 2022, 2021 and 2020 was $15.1 million, $14.4 million and $6.6 million, respectively.

Expected future amortization of intangible assets as of December 31, 2022 is as follows (in thousands):

Years Ending December 31,	Amount
2023	15,269
2024	14,663
2025	12,739
2026	12,486
2027	12,261
Thereafter	78,027
	$ 145,445

Note 9. Accrued Compensation and Related Expenses

Accrued compensation and related expenses consist of the following (in thousands):

	December 31, 2022	December 31, 2021
Accrued salaries and wages	$ 6,007	$ 8,003
Accrued paid time off	2,451	1,909
	$ 8,458	$ 9,912

Note 10. Convertible Senior Notes

Convertible Senior Notes payable consisted of the following at December 31, 2022 and 2021 (in thousands):

	December 31,	
	2022	2021
Principal amount of 2025 Convertible Senior Notes	$ 14,344	$ 14,344
Principal amount of 2026 Convertible Senior Notes	402,500	402,500
Less: unamortized debt issuance costs	(10,136)	(12,673)
Net carrying value of Convertible Senior Notes payable	$ 406,708	$ 404,171

Interest expense incurred in connection with the Convertible Senior Notes consisted of the following for the years ended December 31, 2022, 2021 and 2020 (in thousands):

	December 31,		
	2022	2021	2020
Coupon interest	$ 3,496	$ 1,005	$ 2,108
Amortization of debt issuance costs	2,537	3,419	437
Total interest expense on Convertible Senior Notes	$ 6,033	$ 4,424	$ 2,545

The Company's 2025 Convertible Senior Notes and 2026 Convertible Senior Notes payable of $14.3 million and $402.5 million are due and payable in 2025 and 2026, respectively.

2026 Convertible Senior Notes

On November 12, 2021, the Company issued $402.5 million aggregate principal amount of 0.75% Convertible Senior Notes due in 2026, which includes the initial purchasers' exercise in full of their option to purchase an additional $52.5 million principal amount of the 2026 Convertible Senior Notes, in a private placement exempt from registration under the Securities Act of 1933, as amended (the "Securities Act"). The 2026 Convertible Senior Notes are governed by an indenture (the "2026 Indenture") dated November 12, 2021 between the Company, as issuer, and U.S. Bank National Association, as trustee (the "Trustee"). The Company received $390.4 million from the offering, net of underwriting discounts and commissions of $12.1 million, and incurred approximately $0.6 million in third-party offering related costs. The 2026 Convertible Senior Notes bear cash interest at a rate of 0.75%, payable semi-annually on June 1 and December 1 of each year, beginning on June 1, 2022 and will mature on December 1, 2026, unless earlier repurchased, redeemed, or converted in accordance with the terms of the 2026 Convertible Senior Notes. At December 31, 2022, accrued interest of $0.3 million is included in accounts payable and accrued liabilities in the accompanying consolidated financial statements. The 2026 Convertible Senior Notes comprise the Company's senior, unsecured obligations and are (i) equal in right of payment with the Company's existing and future senior, unsecured indebtedness; (ii) senior in right of payment to the Company's existing and future indebtedness that is expressly subordinated to the 2026 Convertible Senior Notes; (iii) effectively subordinated to the Company's existing and future secured indebtedness, to the extent of the value of the collateral securing that indebtedness; and (iv) structurally subordinated to all existing and future indebtedness and other liabilities, including trade payables, and (to the extent the Company is not a holder thereof) preferred equity, if any, of the Company's subsidiaries.

Noteholders may convert their 2026 Convertible Senior Notes at their option into shares of the Company's common stock in the following circumstances: (1) before the close of business on the business day immediately before September 1, 2026, noteholders have the right to convert their 2026 Convertible Senior Notes only upon the occurrence of certain events (e.g., if sale price per share of the Company's common stock exceeds 130% of the conversion price for a number of trading days; upon the occurrence of certain corporate events or distributions on the Company's common stock; if the Company calls the 2026 Convertible Senior Notes for redemption); and (2) from and after September 1, 2026, noteholders may convert their 2026 Convertible Senior Notes at any time at their election until the close of business on the second scheduled trading day immediately before the maturity date. The Company will settle conversions by paying or delivering, as applicable, cash, shares of its common stock or a combination of cash and shares of its common stock, at the Company's election. The 2026 Convertible Senior Notes are initially convertible into approximately 3,422,780 shares of the Company's common stock based on the initial conversion rate of 8.5038 shares of the Company's common stock per $1,000 principal amount of the 2026 Convertible Senior Notes, which represents an initial conversion price of approximately $117.59 per share of the Company's common stock. The conversion rate and conversion price are subject to customary adjustments upon the occurrence of certain events. Also, if certain corporate events that constitute a "Make-Whole Fundamental Change" (as defined in the 2026 Indenture) occur, then the conversion rate will, in certain circumstances, be increased for a specified period of time and is determined by reference to a make-whole table set forth in the 2026 Indenture. However, in no event will the conversion rate be increased to an amount that exceeds 12.3304 shares of the Company's common stock per $1,000 principal amount of 2026 Convertible Senior Notes. In addition, the holders of the 2026 Convertible Senior Notes may require the Company to repurchase the 2026 Convertible Senior Notes at a cash repurchase price equal to the principal amount of the 2026 Convertible Senior Notes plus accrued and unpaid interest following the occurrence of a "Fundamental Change" (as described in the 2026 Indenture).

The 2026 Convertible Senior Notes will be redeemable, in whole or in part (subject to certain limitations described below), at the Company's option at any time, and from time to time, on or after December 6, 2024 and on or before the 41st scheduled trading day immediately before the maturity date, at a cash redemption price equal to the principal amount of the 2026 Convertible Senior Notes to be redeemed, plus accrued and unpaid interest, if any, to, but excluding, the redemption date, but only if certain liquidity conditions are

satisfied and the last reported sale price per share of the Company's common stock exceeds 130% of the conversion price on (1) each of at least 20 trading days, whether or not consecutive, during the 30 consecutive trading days ending on, and including, the trading day immediately before the date the Company sends the related redemption notice; and (2) the trading day immediately before the date the Company sends such notice. However, the Company may not redeem less than all of the outstanding 2026 Convertible Senior Notes unless at least $100.0 million aggregate principal amount of 2026 Convertible Senior Notes are outstanding and not called for redemption as of the time the Company sends the related redemption notice. In addition, calling any 2026 Convertible Senior Notes for redemption will constitute a Make-Whole Fundamental Change with respect to the 2026 Convertible Senior Notes, in which case the conversion rate applicable to the conversion of that 2026 Convertible Senior Notes will be increased in certain circumstances if it is converted during the related redemption conversion period.

The 2026 Convertible Senior Notes contain customary terms and events of default. If an event of default involving bankruptcy, insolvency, or reorganization events with respect to the Company (and not solely with respect to a significant subsidiary of the Company) occurs, then the principal amount of, and all accrued and unpaid interest on, the 2026 Convertible Senior Notes then outstanding will immediately become due and payable without any further action or notice by any person. If any other event of default (as defined in the 2026 Indenture) occurs and is continuing, then, the Trustee, by notice to the Company, or holders of at least 25% of the aggregate principal amount of the 2026 Convertible Senior Notes then outstanding, by notice to the Company and the Trustee, may declare the principal amount of, and all accrued and unpaid interest on, all of the 2026 Convertible Senior Notes then outstanding to become due and payable immediately. However, notwithstanding the foregoing, the Company may elect, at its option, that the sole remedy for an event of default relating to certain failures by the Company to comply with certain reporting covenants in the 2026 Indenture consists exclusively of the right of the noteholders to receive special interest on the 2026 Convertible Senior Notes for up to 180 days at a specified rate per annum not exceeding 0.50% on the principal amount of the 2026 Convertible Senior Notes. There were no events of default at December 31, 2022.

The 2026 Convertible Senior Notes are accounted for in accordance with ASC 470-20, *Debt with Conversion and Other Options* ("ASC 470-20") and ASC 815-40, *Contracts in Entity's Own Equity* ("ASC 815-40"). Under ASC 815-40, to qualify for equity classification (or nonbifurcation, if embedded) the instrument (or embedded feature) must be both (1) indexed to the issuer's stock and (2) meet the requirements of the equity classification guidance. Based upon the Company's analysis, it was determined the 2026 Convertible Senior Notes do contain embedded features indexed to its own stock, but do not meet the requirements for bifurcation and recognition as derivatives, and therefore do not need to be separately recognized. Accordingly, the proceeds received from the issuance of the 2026 Convertible Senior Notes were recorded as a single liability measured at amortized cost on the consolidated balance sheet.

The Company incurred approximately $12.6 million of debt issuance costs relating to the issuance of the 2026 Convertible Senior Notes, which were recorded as a reduction to the 2026 Convertible Senior Notes on the consolidated balance sheet. The debt issuance costs are being amortized and recognized as additional interest expense over the expected life of the 2026 Convertible Senior Notes using the effective interest rate method. We determined the expected life of the debt is equal to the five-year term of the 2026 Convertible Senior Notes. The effective interest rate on the 2026 Convertible Senior Notes is 1.39%.

2025 Convertible Senior Notes

In May 2020, the Company issued $115.0 million aggregate principal amount of 3.00% Convertible Senior Notes due in 2025, which includes the initial purchasers' exercise in full of their option to purchase an additional $15.0 million principal amount of the 2025 Convertible Senior Notes, in a private placement exempt from registration under the Securities Act. The 2025 Convertible Senior Notes are governed by an indenture (the "2025 Indenture") dated May 26, 2020 between the Company, as issuer, and U.S. Bank National Association, as trustee. The Company received $111.3 million from the offering, net of underwriting discounts and commissions of $3.7 million, and incurred approximately $0.3 million in third-party offering related costs. The 2025 Convertible Senior Notes bear cash interest at a rate of 3.00%, payable semi-annually on June 1 and December 1 of each year, beginning on December 1, 2020 and will mature on June 1, 2025, unless earlier repurchased, redeemed, or converted in accordance with the terms of the 2025 Convertible Senior Notes. At December 31, 2022, accrued interest of $0 million is included in accounts payable and accrued liabilities in the accompanying consolidated financial statements. The 2025 Convertible Senior Notes comprise the Company's senior, unsecured obligations and are (i) equal in right of payment with the Company's existing and future senior, unsecured indebtedness; (ii) senior in right of payment to the Company's existing and future indebtedness that is expressly subordinated to the 2025 Convertible Senior Notes; (iii) effectively subordinated to the Company's existing and future secured indebtedness, to the extent of the value of the collateral securing that indebtedness; and (iv) structurally subordinated to all existing and future indebtedness and other liabilities, including trade payables, and (to the extent the Company is not a holder thereof) preferred equity, if any, of the Company's subsidiaries.

At any time before the close of business on the scheduled trading day immediately before the maturity date, holders of the 2025 Convertible Senior Notes may convert their 2025 Convertible Senior Notes at their option into shares of the Company's common stock. The 2025 Convertible Senior Notes were initially convertible into approximately 4,810,002 shares of the Company's common stock based on the initial conversion rate of 41.8261 shares of the Company's common stock per $1,000 principal amount of the 2025 Convertible Senior Notes, which represents an initial conversion price of approximately $23.91 per share of the Company's common stock. The conversion rate and conversion price are subject to customary adjustments upon the occurrence of certain events. Also, if certain corporate events that constitute a "Make-Whole Fundamental Change" (as defined in the 2025 Indenture) occur, then the conversion rate will, in certain circumstances, be increased for a specified period of time and is determined by reference to a make-whole table set forth in the 2025 Indenture. However, in no event will the conversion rate be increased to an amount that exceeds 48.10 shares of the Company's common stock per $1,000 principal amount of 2025 Convertible Senior Notes. In addition, the holders of the 2025 Convertible Senior Notes may require the Company to repurchase the 2025 Convertible Senior Notes at par value plus accrued and unpaid interest following the occurrence of a "Fundamental Change" (as described in the 2025 Indenture).

On or after June 5, 2023, we may redeem the 2025 Convertible Senior Notes at our option, in whole and not in part, at a cash redemption price equal to the principal amount of the 2025 Convertible Senior Notes to be redeemed, plus accrued and unpaid interest, if any, if:

(1) The last reported sale price per share of the Company's common stock exceeds 130% of the conversion price on (i) each of at least 20 trading days, whether or not consecutive, during the 30 consecutive trading days ending on, and including, the trading day immediately before the date the Company send the related redemption notice; and (ii) the trading day immediately before the date the Company sends such notice; and

(2) A registration statement covering the resale of the shares of the Company's common stock issuable upon conversion of the 2025 Convertible Senior Notes is effective and available for use and is expected to remain effective and available during the redemption period as of the date the redemption notice is sent.

The 2025 Convertible Senior Notes contain customary terms and events of default. If an event of default arising out of certain events of bankruptcy, insolvency, or reorganization involving the Company or a significant subsidiary (as set forth in the 2025 Indenture) occurs with respect to the Company, the principal amount of the 2025 Convertible Senior Notes and accrued and unpaid interest, if any, will automatically become immediately due and payable. If any other event of default (as defined in the 2025 Indenture) occurs and is continuing, either the Trustee or the holders of at least 25% in aggregate principal amount of the outstanding 2025 Convertible Senior Notes may declare the principal amount of the 2025 Convertible Senior Notes to be due and payable immediately by notice to the Company. There were no events of default at December 31, 2022.

The 2025 Convertible Senior Notes are accounted for in accordance with ASC 470-20, *Debt with Conversion and Other Options* ("ASC 470-20") and ASC 815-40, *Contracts in Entity's Own Equity* ("ASC 815-40"). Under ASC 815-40, to qualify for equity classification (or nonbifurcation, if embedded) the instrument (or embedded feature) must be both (1) indexed to the issuer's stock and (2) meet the requirements of the equity classification guidance. Based upon the Company's analysis, it was determined the 2025 Convertible Senior Notes do contain embedded features indexed to its own stock, but do not meet the requirements for bifurcation and recognition as derivatives, and therefore do not need to be separately recognized. Accordingly, the proceeds received from the issuance of the 2025 Convertible Senior Notes were recorded as a single liability measured at amortized cost on the consolidated balance sheet.

The Company incurred approximately $4.1 million of debt issuance costs relating to the issuance of the 2025 Convertible Senior Notes, which were recorded as a reduction to the 2025 Convertible Senior Notes on the consolidated balance sheet. The debt issuance costs are being amortized and recognized as additional interest expense over the expected life of the 2025 Convertible Senior Notes using the effective interest rate method. We determined the expected life of the debt is equal to the five-year term of the 2025 Convertible Senior Notes. The effective interest rate on the 2025 Convertible Senior Notes is 3.74%.

On November 9, 2021, the Company entered into separate, privately negotiated note purchase agreements with a limited number of holders of its 2025 Convertible Senior Notes pursuant to which the Company repurchased approximately $100.7 million principal amount of 2025 Convertible Senior Notes for an aggregate cash repurchase price of approximately $351.1 million, which includes accrued and unpaid interest on the repurchased 2025 Convertible Senior Notes. The Company used net proceeds from a registered direct placement of its common stock to holders of its 2025 Convertible Senior Notes, together with a portion of the net proceeds from the issuance of the 2026 Convertible Senior Notes, to repurchase the $100.7 million principal amount of 2025 Convertible Senior Notes (see Note 15). This transaction involved contemporaneous exchanges of cash between the Company and the same limited

number of holders of the 2025 Convertible Senior Notes participating in the issuance of the 2026 Convertible Senior Notes. Accordingly, we evaluated the transaction for modification or extinguishment accounting depending on whether the exchange is determined to have substantially different terms. The repurchase of the 2025 Convertible Senior Notes and issuance of the 2026 Convertible Senior Notes were deemed to have substantially different terms based on the present value of the cash flows. Therefore, the repurchase of the 2025 Convertible Senior Notes was accounted for as a debt extinguishment. The Company recorded $251.8 million as loss on extinguishment of debt on its consolidated statement of operations for the year ended December 31, 2021, which includes the write off of related deferred financing costs of $2.6 million. After giving effect to the repurchase, the total remaining principal amount outstanding under the 2025 Convertible Senior Notes as of December 31, 2022 was $14.3 million.

In connection with the issuance of the 2025 Convertible Senior Notes, the Company entered into a registration rights agreement (the "Registration Rights Agreement") to use its best efforts to file a registration statement for the resale of the 2025 Convertible Senior Notes and the shares of the Company's common stock issuable upon conversion of the 2025 Convertible Senior Notes, to cause the registration statement to become effective by January 31, 2021, and to keep the registration statement continuously effective for a specified period of time. In December 2020, the Company filed an automatic shelf registration statement to register the resale of the 2025 Convertible Senior Notes and the shares of the Company's common stock issuable upon conversion of the 2025 Convertible Senior Notes. If the Company fails to satisfy certain of its obligations under the Registration Rights Agreement (a "Registration Default"), it will be required to pay additional interest on the 2025 Convertible Senior Notes. Such additional interest will accrue at a rate per annum equal to 0.25% of the principal amount thereof for the first 90 days beginning on, and including the date on which such Registration Default occurs and, thereafter, at a rate per annum equal to 0.50% of the principal amount thereof. However, in no event will such additional interest, together with any special interest that accrues pursuant to the 2025 Indenture accrue on any day on a note at a combined rate per annum that exceeds 0.50%. Additionally, if a Registration Default exists on the maturity date for the 2025 Convertible Senior Notes, then, in addition to any additional interest otherwise payable, the Company will be required to make a cash payment to each noteholder in an amount equal to 3% of the principal amount of 2025 Convertible Senior Notes outstanding and held by such holder as of the close of business on the business day immediately before the maturity date. As of December 31, 2022, the Company has not accrued any fees or expenses associated with the Registration Rights Agreement as no Registration Default exists and, therefore, it is not probable that a payment would be required.

Note 11. Notes Payable

Notes payable consisted of the following at December 31, 2022 and 2021 (in thousands):

	December 31,	
	2022	2021
Principal amount of CRYOPDP note payable	$ —	$ 1,133
Principal amount of Cell&Co notes payable	415	—
Less: discount on CRYOPDP note payable	—	(47)
Total notes payable	415	1,086
Less: current portion of notes payable	(60)	—
Notes payable – long term	$ 355	$ 1,086

Interest expense incurred in connection with the notes payable consisted of the following for the years ended December 31, 2022 and 2021 (in thousands):

	Year Ended December 31,	
	2022	2021
Interest expense	$ 14	$ —
Amortization of debt discount	44	231
Total interest expense on notes payable	$ 58	$ 231

CRYOPDP Note

In connection with the acquisition of CRYOPDP, the Company assumed an interest free unsecured note payable of €4.0 million ($4.5 million) repayable in two installments. The first installment of €3.0 million ($3.4 million) was paid in December 2021 and the

second installment of €1.0 million ($1.1 million) was paid in December 2022. A fair market value discount of €0.2 million ($0.3 million) was recorded and was amortized to interest expense using the effective interest method over the term of the note.

Cell&Co Notes

In connection with the acquisition of Cell&Co, the Company assumed two notes payable totaling €0.4 million ($0.4 million) bearing interest rates of 0.6% and 1.06%, respectively, payable quarterly, maturing in July 2027 and September 2030, respectively.

Future note payments as of December 31, 2022 were as follows (in thousands):

Years Ending December 31,	Amount
2023	$ 60
2024	61
2025	61
2026	62
2027	59
Thereafter	112
Total note maturities	415

Note 12. Leases

The Company has operating leases for corporate offices and certain equipment. These leases have remaining lease terms of one year to approximately twenty years, some of which include options to extend the leases for multiple renewal periods of five years to ten each. Under the terms of the facilities leases, the Company is required to pay its proportionate share of property taxes, insurance and normal maintenance costs.

In October 2022, Cryoport Systems entered into a lease agreement commencing in 2024, for an administrative, global supply chain center and research and development center in Santa Ana, California, in the aggregate rental amount of $27.7 million spanning 10 years. This lease is not included in the balance sheet right of use asset and lease liability as it commences in 2024.

The components of lease cost were as follows (in thousands):

	Year Ended December 31,		
	2022	2021	2020
Operating lease cost	$ 5,505	$ 4,556	$ 1,835
Finance lease cost:			
Amortization of right-of-use assets	79	61	56
Interest on finance lease liabilities	12	8	10
	91	69	66
Total lease cost	$ 5,596	$ 4,625	$ 1,901

Other information related to leases was as follows (in thousands):

Supplemental Cash Flows Information	Year Ended December 31, 2022	2021	2020
Cash paid for amounts included in the measurement of lease liabilities:			
Operating cash flows from operating leases	$ 4,733	$ 3,993	$ 1,680
Operating cash flows from finance leases	$ 82	$ 65	$ 77
Financing cash flows from finance leases	$ 70	$ 58	$ 67
Right-of-use assets obtained in exchange for lease liabilities (in thousands):			
Operating leases	$ 12,384	$ 10,175	$ 10,708
Finance leases	$ 259	$ —	$ 230

	December 31, 2022	2021
Weighted-Average Remaining Lease Term		
Operating leases	12.4 years	5.6 years
Finance leases	3.4 years	2.1 years
Weighted-Average Discount Rate		
Operating leases	9.5 %	5.1 %
Finance leases	7.8 %	5.3 %

Future minimum lease payments under non-cancellable leases that have commenced as of December 31, 2022 were as follows (in thousands):

Years Ending December 31	Operating Leases	Finance Leases
2023	$ 5,762	$ 152
2024	5,493	91
2025	4,352	85
2026	3,918	56
2027	3,345	8
Thereafter	26,813	—
Total future minimum lease payments	49,683	392
Less imputed interest	(21,242)	(48)
Total	$ 28,441	$ 344

Reported as of December 31, 2022	Operating Leases	Finance Leases
Current lease liabilities	$ 3,720	$ 128
Noncurrent lease liabilities	24,721	216
Total	$ 28,441	$ 344

Note 13. Employee Benefit Plans

401(k) Plan

The Company provides a 401(k) Plan to provide retirement and incidental benefits for our eligible U.S. based employees. Employees may contribute up to 100% of their eligible compensation, limited to a maximum annual dollar amount set periodically by the Internal Revenue Service. The Company matches employee contributions dollar for dollar up to a maximum of 4% per year per person. All matching contributions vest immediately. During the years ended December 31, 2022, 2021 and 2020, we recognized expense of $1.2 million, $0.8 million and $0.3 million, respectively, related to matching contributions.

Non-U.S. Employee Benefit Plans

Eligible employees outside the U.S. generally receive retirement benefits under various defined benefit plans and defined contribution plans based upon factors such as years of service and employee compensation levels. Eligibility is generally determined in accordance with local statutory requirements. The employee benefit plan costs and liabilities regarding the defined benefit plans are determined by actuarial valuations.

Employees of the Company who are in India participate in an employee benefit plan (the "Gratuity Plan"), which is required by local law and provides a lump sum payment to vested employees upon retirement, death, incapacitation, or termination of employment based on the respective employee's salary and the tenure of employment. The benefit costs and liabilities regarding the Gratuity Plan are determined by actuarial valuations. The Company makes annual contributions to the employees' gratuity fund established with Life Insurance Corporation of India, which calculates the annual contribution required to be made by the Company and manages the Gratuity Plan, including any required payouts. The Gratuity Plan is partially funded. The obligation under the Gratuity Plan is not significant at December 31, 2022.

Benefit costs associated with the non-U.S. employee benefit plans totaled $0.7 million, $0.8 million and $0.1 million for the years ended December 31, 2022, 2021 and 2020, respectively. Total benefit obligation associated with the non-U.S. employee benefit plans totaled $0.2 million and $0.3 million at December 31, 2022 and 2021, respectively.

Note 14. Commitments and Contingencies

MVE Biological Solutions Fire

On January 25, 2022, a fire occurred at the MVE Biological Solutions manufacturing facility ("New Prague fire") located in New Prague, Minnesota. The New Prague facility manufactures aluminum dewars and is one of MVE Biological Solutions' three global manufacturing facilities. There were no injuries reported and damage was limited to a portion of the facility. As a consequence of the fire damage, the New Prague manufacturing operations were curtailed on an interim basis until the necessary repairs were completed. Production was resumed at the facility during the week of February 14, 2022 and ramped up production toward the end of the first quarter of 2022. The Company estimated that the revenue impact of the New Prague fire was approximately $9.4 million and was primarily limited to the first quarter.

The New Prague fire resulted in a loss of inventory, fixed assets, and other contents at the site. We have adequate property damage and business interruption insurance under which we filed a claim with the insurance carrier. As of December 31, 2022, the Company received $12.9 million of insurance proceeds.

For the year ended December 31, 2022, the Company recognized gains of $0.6 million related to the reimbursement of property and equipment and $4.2 million related to business interruption. Proceeds from insurance settlements, except for those directly related to investing activities, were recognized as cash inflows from operating activities. The losses related to such an event are recognized as incurred. Insurance proceeds are recorded to the extent of the losses and then, only if recovery is realized or probable. Any gains in excess of losses are recognized only when the contingencies regarding the recovery are resolved, and the amount is fixed or determinable.

Facility and Equipment Leases

We lease various principal facilities which include corporate, global logistics and supply chain centers, biostorage, manufacturing, and research and development facilities under operating leases in the United States, including in Tennessee, California, New Jersey, Texas, and Georgia, and internationally in the Netherlands, Portugal, and France. These lease agreements contain certain scheduled annual rent increases which are accounted for on a straight-line basis. In addition, we lease certain equipment which expires through February 2025 (See Note 12).

Employment Agreements

We have entered into employment agreements with certain of our officers under which payment and benefits would become payable in the event of termination by us for any reason other than cause, or upon a change in control of our Company, or by the employee for good reason.

Litigation

The Company may become a party to product litigation in the normal course of business. The Company accrues for open claims based on its historical experience and available insurance coverage. We record a loss contingency when it is probable that a liability has been incurred and the amount of the loss can be reasonably estimated. We also disclose material contingencies when we believe a loss is not probable but reasonably possible. Accounting for contingencies requires us to use judgment related to both the likelihood of a loss and the estimate of the amount or range of loss. The outcomes of our legal proceedings are inherently unpredictable, subject to significant uncertainties, and could be material to our financial condition, results of operations, and cash flows for a particular period.

Indemnities and Guarantees

The Company has made certain indemnities and guarantees, under which it may be required to make payments to a guaranteed or indemnified party, in relation to certain actions or transactions. The guarantees and indemnities do not provide for any limitation of the maximum potential future payments the Company could be obligated to make. Historically, the Company has not been obligated nor incurred any payments for these obligations and, therefore, no liabilities have been recorded for these indemnities and guarantees in the accompanying consolidated balance sheets.

The Company indemnifies its directors, officers, employees and agents, as permitted under the laws of the States of California and Nevada. In connection with its facility and equipment leases, the Company has indemnified its lessors for certain claims arising from the use of the facilities and equipment. The duration of the guarantees and indemnities varies and is generally tied to the life of the agreements.

Note 15. Stockholders' Equity

Authorized Stock

The Company has 100,000,000 authorized shares of common stock with a par value of $0.001 per share, and 2,500,000 undesignated or "blank check" preferred stock, with a par value of $0.001, of which, 800,000 shares have been designated as Class A Convertible Preferred Stock, 585,000 shares have been designated as Class B Convertible Preferred Stock and 250,000 shares have been designated as 4.0% Series C Convertible Preferred Stock.

Common Stock Issuances For Services

During the year ended December 31, 2021, 229 shares of common stock with a fair value of $11,500 were issued to one member of the board of directors as compensation for services.

During the year ended December 31, 2020, 2,869 shares of common stock with a fair value of $82,700 were issued to two members of the board of directors as compensation for services.

Repurchase Program

In March 2022, the Company's Board of Directors authorized a repurchase program (the "Repurchase Program") through December 31, 2025, authorizing the repurchase of common stock and/or convertible senior notes in the amount of up to $100.0 million from time to time, on the open market or otherwise, in such quantities, at such prices, and in such manner as determined by the Company's management at its discretion. The size and timing of any repurchase depends on a number of factors, including the market price of the Company's common stock, general market and economic conditions, and applicable legal requirements. The Company purchased 1,604,994 shares of its common stock under the Repurchase Program during the year ended December 31, 2022, at an average price of $23.63 per share, for an aggregate purchase price of $37.9 million. These shares were returned to the status of authorized but unissued shares of common stock. All share repurchases were made using cash resources and are reported in the period based on the settlement date of the applicable repurchase.

November 2021 Registered Direct Placement and Stock Purchase Agreements

Concurrent with the issuance of the 2026 Convertible Senior Notes in November 2021, the Company conducted a registered direct placement of 3,072,038 shares of its common stock at $81.10 per share ("Concurrent Placement"). The Company received net

proceeds of approximately $248.9 million, net of offering expenses. The Company used the net proceeds from the Concurrent Placement, together with a portion of the net proceeds from the issuance of the 2026 Convertible Senior Notes, to repurchase approximately $100.7 million principal amount of the 2025 Convertible Senior Notes in separate, privately negotiated repurchase transactions with a limited number of holders of the 2025 Convertible Senior Notes, for a cash repurchase price of approximately $351.1 million. The remainder of the net proceeds of approximately $288.4 million, after deducting banker fees, are expected to be used for general corporate purposes (See Note 10).

January 2021 Public Offering

On January 25, 2021, the Company completed an underwritten public offering of 4,356,059 shares of its common stock. The shares were issued and sold pursuant to an underwriting agreement dated January 20, 2021, by and among the Company, on the one hand, and Morgan Stanley & Co. LLC, Jefferies LLC, SVB Leerink LLC and UBS Securities LLC, as representatives of certain underwriters, at a public offering price per share of $66.00, before deducting underwriting discounts and commissions. The shares include 568,181 shares issued and sold pursuant to the underwriters' exercise in full of their option to purchase additional shares of common stock pursuant to the underwriting agreement. The Company received net proceeds of approximately $269.8 million from the offering after deducting underwriting discounts and commissions and offering expenses paid by the Company.

Blackstone Private Placement

In connection with the MVE Acquisition, on October 1, 2020 (the "Closing Date"), the Company completed a private placement with an investment vehicle of funds affiliated with The Blackstone Group Inc. (collectively, "Blackstone"), consisting of (i) 250,000 shares of a newly designated 4.0% Series C Convertible Preferred Stock, par value $0.001 per share ("Series C Preferred Stock"), at a price of $1,000 per share, for $250.0 million, and (ii) 675,536 shares of common stock of the Company, par value $0.001 per share, for $25.0 million, for an aggregate purchase price of $275.0 million. The Company paid Blackstone $1.0 million as reimbursement for transactional expenses incurred in connection with the private placement at the Closing Date. Also, the Company incurred direct and incremental expenses of approximately $8.6 million, including financial advisory fees, closing costs, legal expenses and other offering-related expenses. The Company allocated the net proceeds of $265.4 million on a relative fair value basis to the Series C Preferred Stock and the common stock, resulting in allocated proceeds of $28.2 million and $237.2 million, respectively.

The Series C Preferred Stock ranks senior to the shares of the Company's common stock, with respect to dividend rights and rights upon the voluntary or involuntary liquidation, dissolution, or winding up of the affairs of the Company (a "Liquidation"). The Series C Preferred Stock has the following rights, preferences and privileges:

Dividend Rights. Holders of the Series C Preferred Stock (the "Holders") are entitled to dividends at the rate of 4.0% per annum, paid-in-kind, accruing daily and paid quarterly in arrears when and if declared by the Board of Directors. The Holders are also entitled to participate in dividends declared or paid on the common stock on an as-converted basis. The Company and Holders do not have the option to pay dividends in kind, in cash, or in other form. Paid in-kind dividends for the years ended December 31, 2022 and 2021 were $8.0 million and $8.2 million, respectively.

Liquidation Preference. Upon a Liquidation, each share of Series C Preferred Stock is entitled to receive an amount per share equal to the greater of (i) $1,000 per share, plus all accrued and unpaid dividends and (ii) the amount that the Holders of the Series C Preferred Stock would have been entitled to receive at such time if the Series C Preferred Stock were converted into common stock (the "Liquidation Preference").

Conversion Features. The Series C Preferred Stock is convertible at the option of the Holders at any time into shares of common stock at a conversion price of $38.6152 per share and a conversion rate of 25.90 shares of common stock per share of Series C Preferred Stock. At the Closing Date, the maximum number of shares of Common Stock that could be required to be issued if converted was 6,474,135 shares. The conversion price is subject to certain customary adjustments in the event of certain adjustments to the Company's common stock, including stock dividends, splits, combinations, tender offers, and exchange offers.

After the second anniversary of the Closing Date, subject to certain conditions, the Company may at its option require conversion of all of the outstanding shares of the Series C Preferred Stock to common stock if, for at least 20 trading days during the 30 consecutive trading days immediately preceding the date the Company notifies the Holders of the election to convert, the closing price of the Common Stock is at least 150% of the conversion price.

On the October 1, 2020 issuance date, the effective conversion price per share was less than the fair value of the underlying common stock and, as a result, the Company determined that there was a beneficial conversion feature on that date. Accordingly, the Company recognized the resulting beneficial conversion feature amount of $39.5 million as a deemed dividend, equal to the number of common shares into which the Series C Preferred Stock is convertible multiplied by the difference between the fair value of the common stock and the effective conversion price per share on that date. Because the Series C Preferred Stock does not have a stated conversion date and was immediately convertible at the issuance date, the dividend is reflected as a one-time, non-cash, deemed dividend to the Holders of the Series C Preferred Stock on the date of issuance.

Additionally, the Company determined that the nature of the Series C Preferred Stock is more akin to an equity instrument and that the economic characteristics and risks of the embedded conversion options are clearly and closely related to the Series C Preferred Stock. As such, the conversion options were not required to be bifurcated from the host under ASC 815, *Derivatives and Hedging*.

Since the paid-in-kind dividends are nondiscretionary, the Company measures the beneficial conversion feature of the paid-in-kind dividends on the issuance date of the preferred stock and records such amount when the paid-in-kind dividends are accrued. Accordingly, the associated paid-in-kind dividends for the year ended December 31, 2020, generated a beneficial conversion feature amount of $0.3 million. On February 5, 2021, the Company received a waiver and conversion notice from Blackstone Freeze Parent L.P. and Blackstone Tactical Opportunities Fund – FD L.P. and converted an aggregate of 50,000 shares of the Series C Preferred Stock (see "Blackstone Conversion" below for additional information).

Redemption Rights. The Company may redeem the Series C Preferred Stock for cash, as follows:

(1) At any time beginning five years after the Closing Date (but prior to six years after the Closing Date), all of the Series C Preferred Stock at a price equal to 105% of the purchase price paid plus any accrued and unpaid dividends.

(2) At any time beginning six years after the Closing Date, all of the Series C Preferred Stock at a price equal to 100% of the purchase price paid plus any accrued and unpaid dividends.

Upon a "Fundamental Change" (involving a change of control or de-listing of the Company as further described in the Certificate of Designation), each Holder has the right to require the Company to redeem all or any part of the Holder's Series C Preferred Stock for an amount equal to the Liquidation Preference plus any accrued and unpaid dividends. If the Company does not have sufficient funds legally available to pay the repurchase price, then the Company is required to (a) pay the maximum amount of the repurchase price that can be paid out of funds legally available for payment, and (b) purchase any shares of the Series C Preferred Stock not purchased because of the foregoing limitations at the repurchase price as soon as practicable after the Company is able to make such purchase out of assets legally available for the purchase of such shares. If the Company fails to pay the repurchase price in full when due, then the Company will pay dividends on such shares not repurchased at a rate of 5.5% per annum until such shares are repurchased, payable quarterly in arrears.

The Company evaluated the Series C Preferred Stock for liability or equity classification under the applicable accounting guidance including ASC 480, *Distinguishing Liabilities from Equity*, and determined that equity treatment was appropriate because the Series C Preferred Stock did not meet the definition of the liability instruments defined thereunder for convertible instruments. Specifically, the convertible preferred shares are not mandatorily redeemable and do not embody an obligation to buy back the shares outside of the Company's control in a manner that could require the transfer of assets. Additionally, the Company determined that the Series C Preferred Stock would be recorded as permanent equity given that they are not redeemable for cash or other assets (i) on a fixed or determinable date, (ii) at the option of the holder, or (iii) upon the occurrence of an event that is not solely within control of the Company.

The Company also evaluated the embedded put and call options within the Series C Preferred Stock in accordance with the accounting guidance for derivatives to determine if bifurcation is required. The Company determined that the economic characteristics and risks of the embedded put and call options are not clearly and closely related to the Series C Preferred Stock. Therefore, the Company assessed the put and call options further and determined they did not meet the definition of a derivative under ASC 815.

Under the same analysis, the Company determined that the economic characteristics and risks of the embedded participating dividend feature are considered clearly and closely related to the equity host. Accordingly, the participating dividend feature is not required to be bifurcated under ASC 815. Also, the Company determined that the value of the contingent dividend feature is minimal

and insignificant relative to the other components of the Series C Preferred Stock due to the circumstances surrounding the scenarios under which the provision would be triggered.

Voting Rights. Holders of the Series C Preferred Stock are generally entitled to vote with the holders of the shares of common stock on an as-converted basis, subject to certain Nasdaq voting limitations, if applicable. Also, the consent of the Holders of a majority of the outstanding shares of the Series C Preferred Stock is required with respect to (i) amendments to the Company's organizational documents that have an adverse effect on the Holders of the Series C Preferred Stock, and (ii) issuances by the Company of securities that are senior to, or equal in priority with, the Series C Preferred Stock. Holders of the Series C Preferred Stock have the right to nominate for election one member to the board of directors of the Company for so long as they hold 66.67% of the Series C Preferred Stock issued to them at the Closing Date.

Registration Rights. Holders of the Series C Preferred Stock have certain customary registration rights with respect to the Series C Preferred Stock and the shares of common stock into which they are converted, pursuant to the terms of a registration rights agreement. The Company is required to file within 90 days of the Closing Date and use its commercially reasonable efforts to cause to go effective as promptly as practicable, a registration statement covering the sale or distribution of common stock issued or issuable upon conversion of the Series C Preferred Stock. In December 2020, the Company filed an automatic shelf registration statement to register the resale of the common stock issued or issuable upon conversion of the Series C Preferred Stock.

Blackstone Conversion

On February 5, 2021, the Company received a waiver and conversion notice from Blackstone Freeze Parent L.P. and Blackstone Tactical Opportunities Fund – FD L.P. to convert an aggregate of 50,000 shares of the Company's Series C Preferred Stock. Pursuant to the terms of the waiver and conversion notice, the Company also agreed to waive its right under the certificate of designations of the Series C Preferred Stock to redeem up to 50,000 shares of the Series C Preferred Stock prior to the 180-day anniversary of October 1, 2020, the issue date of the Series C Preferred Stock. The forgoing conversion, effective as of February 5, 2021, resulted in the issuance of an aggregate of 1,312,860 shares of common stock and $1.8 million in expenses.

Common Stock Reserved for Future Issuance

As of December 31, 2022, approximately 17.8 million shares of common stock were issuable upon vesting, conversion or exercise, as applicable, of stock options, restricted stock units, the Convertible Senior Notes and the Series C Preferred Stock, as follows:

Exercise of stock options	7,340,521
Vesting of restricted stock units	727,984
Conversion of Series C Preferred stock	5,664,532
Conversion of 2026 Convertible Senior Notes	3,422,780
Conversion of 2025 Convertible Senior Notes	599,954
Total shares of common stock reserved for future issuances	17,755,771

Note 16. Stock-Based Compensation

We typically issue warrants to purchase shares of our common stock to investors as part of a financing transaction or in connection with services rendered by placement agents and consultants. A summary of warrant activity is as follows:

	Number of Shares	Weighted-Average Exercise Price/Share	Weighted-Average Remaining Contractual Term (Years)	Aggregate Intrinsic Value
Outstanding — December 31, 2019	1,001,028	3.83		
Issued	—	—		
Exercised	(963,149)	3.80		
Expired	(37,879)	4.58		
Outstanding — December 31, 2020	—	$ —	—	$ —
Vested (exercisable) — December 31, 2020	—	$ —	—	$ —

During the year ended December 31, 2020, the Company issued 963,149 shares of common stock in connection with the exercise of warrants for proceeds of $3.7 million. There were no warrants issued in 2021 and 2022.

The total intrinsic value of warrants exercised during the year ended December 31, 2020 was $17.6 million.

Stock Options

We have five stock incentive plans: the 2002 Stock Incentive Plan (the "2002 Plan"), the 2009 Stock Incentive Plan (the "2009 Plan"), the 2011 Stock Incentive Plan (the "2011 Plan"), the 2015 Omnibus Equity Incentive Plan (the "2015 Plan"), and the 2018 Omnibus Equity Incentive Plan (the "2018 Plan") (collectively, the "Plans"). The 2002 Plan, the 2009 Plan, the 2011 Plan and the 2015 Plan (the "Prior Plans") have been superseded by the 2018 Plan. In May 2018, the stockholders approved the 2018 Plan for issuances up to an aggregate of 3,730,179 shares plus 1,269,821 shares that were authorized but unissued under the Prior Plans as of the effective date of the 2018 Plan and in April 2021, the stockholders approved an increase of 2,850,000 shares authorized under the 2018 Plan. The Prior Plans will remain in effect until all awards granted under such Prior Plans have been exercised, forfeited, cancelled, or have otherwise expired or terminated in accordance with the terms of such awards, but no awards will be made pursuant to the Prior Plans after the effectiveness of the 2018 Plan. As of December 31, 2022, the Company had 1,726,284 shares available for future awards under the 2018 Plan.

During the years ended December 31, 2022, 2021 and 2020, we granted stock options at exercise prices equal to or greater than the quoted market price of our common stock on the grant date. The fair value of each option grant was estimated on the date of grant using Black-Scholes with the following assumptions:

	December 31,		
	2022	2021	2020
Expected life (years)	3.8 – 5.2	3.5 - 6.1	5.3 - 6.3
Risk-free interest rate	2.1% - 3.7 %	0.47% - 1.18 %	0.31% - 1.70 %
Volatility	67.5% – 78.6 %	64.4% – 80.8 %	69.8% - 82.7 %
Dividend yield	0%	0%	0%

The expected option life assumption is estimated based on the simplified method as the Company's history is not indicative of future expected lives. Accordingly, the Company has utilized the average of the contractual term of the options and the weighted average vesting period for all options to calculate the expected option term. The risk-free interest rate assumption is based upon observed interest rates appropriate for the expected term of our employee stock options. The expected volatility is based on the average of the historical volatility and the implied volatility of our stock commensurate with the expected life of the stock-based award. We do not anticipate paying dividends on the common stock in the foreseeable future.

We recognize stock-based compensation cost on a straight-line basis over the vesting period. Stock-based compensation expense is recognized only for those awards that ultimately vest. Forfeitures are recorded when recognized.

Total stock-based compensation expense related to our share-based payment awards is comprised of the following (in thousands):

	Year Ended December 31,		
	2022	2021	2020
Cost of revenues	$ 1,459	$ 1,620	$ 371
Selling, general and administrative	16,808	12,425	7,862
Engineering and development	1,815	1,300	683
	$ 20,082	$ 15,345	$ 8,916

A summary of stock option activity is as follows:

	Number of Shares	Weighted-Average Exercise Price/Share	Weighted-Average Remaining Contractual Term (Years)	Aggregate Intrinsic Value (1)
Outstanding — December 31, 2019	6,679,581	$ 7.14		
Granted (weighted-average fair value of $13.21 per share)	1,789,000	20.46		
Exercised	(855,717)	6.73		
Forfeited	(56,475)	13.39		
Expired	(2,084)	19.56		
Outstanding — December 31, 2020	7,554,305	10.29		
Granted (weighted-average fair value of $32.79 per share)	541,353	56.61		
Exercised	(1,037,910)	8.66		
Forfeited	(29,807)	40.56		
Outstanding — December 31, 2021	7,027,941	13.97		
Granted (weighted-average fair value of $17.17 per share)	589,287	30.12		
Exercised	(206,898)	9.90		
Forfeited	(69,809)	43.42		
Outstanding — December 31, 2022	7,340,521	$ 15.10	4.9	$ 48,557,300
Vested (exercisable) — December 31, 2022	6,054,897	$ 11.54	4.6	$ 48,307,700
Expected to vest after December 31, 2022 (unexercisable)	1,285,624	$ 31.85	6.6	$ 249,500

(1) Aggregate intrinsic value represents the difference between the exercise price of the option and the closing market price of the common stock on December 31, 2022, which was $17.35 per share.

The following table summarizes information with respect to stock options outstanding and exercisable at December 31, 2022:

Exercise Price	Number Outstanding	Weighted-Average Remaining Contractual Life (Years)	Weighted-Average Exercise Price	Number Exercisable	Weighted-Average Exercise Price
$1.87 – 3.07	658,184	3.1	$ 2.33	658,184	$ 2.33
$3.19 – 3.44	730,680	2.8	$ 3.31	730,680	$ 3.31
$4.80 – 4.92	576,783	2.4	$ 4.80	576,783	$ 4.80
$5.00 – 7.67	675,615	2.6	$ 5.02	675,615	$ 5.02
$7.80 – 8.65	741,637	4.2	$ 8.35	741,637	$ 8.35
$9.29 – 12.79	931,959	6.1	$ 11.99	931,959	$ 11.99
$13.37 – 16.95	1,402,560	7.1	$ 16.52	994,973	$ 16.43
$17.36 – 36.68	1,004,671	6.7	$ 26.26	456,745	$ 22.65
$41.14 – 72.07	618,432	5.9	$ 54.66	288,321	$ 54.52
	7,340,521			6,054,897	

As of December 31, 2022, there was unrecognized compensation expense of $23.2 million related to unvested stock options, which we expect to recognize over a weighted average period of 2.2 years.

The total intrinsic value of options exercised during the years ended December 31, 2022, 2021 and 2020 was $5.2 million, $57.5 million and $24.1 million, respectively.

Restricted stock units

A summary of our restricted stock unit activity is as follows:

	Number of Restricted Stock Units	Weighted Average Fair Value per Share
Outstanding — December 31, 2020	—	$ —
Granted	392,940	55.51
Forfeited	(19,091)	55.23
Share issuance	—	—
Outstanding – December 31, 2021	373,849	$ 55.53
Granted	526,821	30.26
Share issuance	(101,070)	55.43
Forfeited	(71,616)	44.40
Outstanding – December 31, 2022	727,984	$ 38.32

For the years ended December 31, 2022 and 2021, we recorded stock-based compensation expense on our issued restricted stock units of $7.8 million and $4.2 million, respectively. As of December 31, 2022, there was unrecognized compensation expense of $21.6 million related to unvested restricted stock units, which we expect to recognize over a weighted average period of 2.8 years.

Note 17. Income Taxes

Loss before provision for income taxes was attributed to the following jurisdictions for the years ended December 31, 2022, 2021 and 2020 (in thousands):

	Years Ended December 31,		
	2022	2021	2020
United States	$ (34,854)	$ (273,531)	$ (32,873)
Foreign	(240)	(311)	135
	$ (35,094)	$ (273,842)	$ (32,738)

The provision for income taxes consists of the following for the years ended December 31, 2022, 2021 and 2020 (in thousands):

	Years Ended December 31,		
	2022	2021	2020
Current:			
Federal	$ —	$ —	$ 11
State	70	112	110
Foreign	2,634	1,783	361
Total current expense	2,704	1,895	482
Deferred:			
Federal	(7,712)	(11,646)	(8,245)
State	(191)	(1,564)	(832)
Foreign	(1,545)	(1,126)	(738)
Change in valuation allowance	8,983	14,127	9,288
Total deferred expense	(465)	(209)	(527)
Total provision for (benefit from) income taxes	$ 2,239	$ 1,686	$ (45)

Significant components of the Company's deferred tax assets and liabilities as of December 31, 2022 and 2021 are shown below (in thousands):

	December 31,	
	2022	2021
Deferred tax assets:		
Net operating loss carryforward	$ 40,927	$ 37,022
Expenses recognized for granting of options and warrants	4,847	4,152
Interest expense	4,081	3,208
Unrealized losses	9,365	1,011
Capitalized research & experimentation	2,724	—
R&D tax credit	2,046	—
Accrued expenses and reserves	860	1,929
Lease liability	4,712	3,471
Total deferred tax assets	69,562	50,793
Valuation allowance	(61,700)	(45,885)
	$ 7,862	$ 4,908
Deferred tax liabilities:		
Goodwill	$ (2,779)	$ (1,650)
Right-of-use assets	(4,382)	(3,268)
Intangibles	(3,906)	(2,938)
Unremitted foreign earnings	(777)	(651)
Total deferred tax liability	(11,844)	(8,507)
Net deferred tax liability	$ (3,982)	$ (3,599)

Our net deferred tax liability as presented in our consolidated balance sheet consists of the following items (in thousands):

	December 31,	
	2022	2021
Deferred tax assets	$ 947	$ 419
Deferred tax liabilities	(4,929)	(4,018)
Net deferred tax liability	$ (3,982)	$ (3,599)

The Company has recorded a net deferred tax liability in jurisdictions where taxable temporary differences from indefinite-lived intangible assets do not support the realization of deferred tax assets which have finite carryover periods. In addition, the Company has recorded a net deferred tax liability in jurisdictions where taxable temporary differences exceed deductible temporary.

The provision for (benefit from) income taxes differs from that computed using the federal statutory rate applied to loss before provision for income taxes as follows (in thousands):

	December 31,		
	2022	2021	2020
Computed tax benefit at federal statutory rate	$ (7,370)	$ (57,507)	$ (6,875)
State tax, net of federal benefit	296	(1,222)	(1,077)
Non-deductible loss on debt extinguishment	—	50,817	—
Stock compensation	1,881	(7,543)	(2,683)
Deemed foreign dividend income	—	198	—
R&D tax credit	(590)	—	—
Permanent differences and other	352	813	(375)
Transaction cost	160	—	528
Executive compensation	83	1,894	609
Rate changes	(113)	105	408
Contingencies	(1,443)	8	112
Valuation allowance	8,983	14,123	9,308
	$ 2,239	$ 1,686	$ (45)

At December 31, 2022, the Company has federal and state net operating loss carryforwards of approximately $149.6 million and $100.2 million, respectively. The federal net operating loss carryforwards begin to expire in 2022, unless previously utilized, and the state net operating loss carryforwards will begin to expire in 2028, unless previously utilized. Included in the federal net operating loss carryforward total is $91.9 million generated after 2017 that can be carried over indefinitely and may be used to offset up to 80% of federal taxable income. At December 31, 2022, the Company has foreign net operating loss carryforwards of approximately $20.2 million, which begin to expire in 2023. At December 31, 2022, the Company has federal and California research and development tax credits of approximately $3.1 million and $2.0 million, respectively. The federal research tax credit begins to expire in 2026 unless previously utilized and the California research tax credit has no expiration date.

Utilization of the net operating loss (“NOL”) and research and development (“R&D”) carryforwards might be subject to a substantial annual limitation due to ownership change limitations that may have occurred or that could occur in the future, as required by Section 382 of the Internal Revenue Code of 1986, as amended (the “Code”), as well as similar state and foreign provisions. These ownership changes may limit the amount of NOL and R&D credit carryforwards that can be utilized annually to offset future taxable income and tax, respectively. In general, an “ownership change” as defined by Section 382 of the Code results from a transaction or series of transactions over a three-year period resulting in an ownership change of more than 50 percentage points of the outstanding stock of a company by certain stockholders or public groups. Since the Company’s formation, the Company has raised capital through the issuance of capital stock on several occasions which, combined with the purchasing stockholders’ subsequent disposition of those shares, may have resulted in such an ownership change, or could result in an ownership change in the future upon subsequent capital stock transactions.

The Company has not completed a study to assess whether an ownership change or changes has occurred. If the Company has experienced an ownership change, utilization of the NOL or R&D credit carryforwards would be subject to an annual limitation under Section 382 of the Code, which is determined by first multiplying the value of the Company’s stock at the time of the ownership change by the applicable long-term tax-exempt rate. Any limitation may result in expiration of a portion of the NOL or R&D credit carryforwards before utilization. Further, until a study is completed and any limitation is known, no amounts are being considered as an uncertain tax position or disclosed as an unrecognized tax benefit. Due to the existence of the valuation allowance, future changes in the Company’s unrecognized tax benefits will not impact its effective tax rate. Any carryforwards that will expire prior to utilization as a result of such limitations will be removed from deferred tax assets with a corresponding reduction of the valuation allowance.

The 2017 tax reform act amended the Internal Revenue Code (“Code”), effective for amounts paid or incurred in tax years beginning after December 31, 2021, to eliminate the immediate expensing of research and experimental expenditures (“R&E”) and to require taxpayers to charge their R&E expenditures and software development costs (collectively, R&E expenditures) to a capital account. Capitalized costs are required to be amortized over five years (15 years for expenditures attributable to foreign research). Additionally, the R&E credit may only be claimed for costs that are eligible to be treated as R&E expenditures under the Code. At December 31, 2022, the Company has charged a total of $13.1 million of R&E expenditures and software development costs to a capital account and has recorded amortization of $1.3 million on such costs to date.

A reconciliation of the beginning and ending amounts of unrecognized tax positions are as follows (in thousands):

	December 31,		
	2022	2021	2020
Unrecognized tax positions, beginning of period	$ 4,932	$ 1,272	$ 963
Gross increase – current period tax positions	214	2,220	358
Gross decrease – prior period tax positions	(1,672)	—	(113)
Gross increase – prior period tax positions	—	1,440	64
Expiration of statute of limitations	—	—	—
Unrecognized tax positions, end of period	$ 3,474	$ 4,932	$ 1,272

If recognized, none of the unrecognized tax positions would impact the Company's income tax benefit or effective tax rate as long as the Company's deferred tax assets remain subject to a full valuation allowance. The Company does not expect any significant increases or decreases to the Company's unrecognized tax positions within the next 12 months.

We recognize interest accrued related to unrecognized tax benefits ("UTBs") and penalties as income tax expense. We accrued an immaterial amount of interest expense during 2021 in our statement of operations, and as of December 31, 2022, have an immaterial accrual for interest in our consolidated balance sheet.

Due to the NOL carryforwards, the U.S. federal and state returns remain open to examination by the Internal Revenue Service and state taxing jurisdictions for all years beginning with the year ended March 31, 2002. Our foreign subsidiaries are generally subject to examination three years following the year on which the tax obligation originated. The years subject to audit may be extended if the entity substantially understates corporate income tax. The Company's subsidiary in India is currently under examination by the Office of the Commissioner of Income Tax in India for the 2012-2013, 2013-2014 and 2015-2016 tax periods. Other than India, the Company does not have any foreign subsidiaries currently under audit by their local tax authorities**.**

Note 18. Quarterly Financial Data (Unaudited)

A summary of quarterly financial data is as follows (in thousands):

	Quarter Ended			
	March 31	June 30	September 30	December 31
Year ended December 31, 2022				
Total revenues	$ 52,302	$ 64,153	$ 60,464	$ 60,358
Gross margin	$ 22,341	$ 28,838	$ 26,417	$ 26,277
Loss from operations	$ (7,819)	$ (5,247)	$ (7,803)	$ (11,035)
Net loss attributable to common stockholders	$ (15,404)	$ (11,177)	$ (7,316)	$ (11,436)
Net loss per share attributable to common stockholders - basic and diluted	$ (0.31)	$ (0.23)	$ (0.15)	$ (0.24)
Year ended December 31, 2021				
Total revenues	$ 53,284	$ 56,191	$ 56,693	$ 56,440
Gross margin	$ 24,550	$ 25,402	$ 23,513	$ 23,113
Loss from operations	$ (1,142)	$ (3,748)	$ (4,576)	$ (8,362)
Net loss attributable to common stockholders	$ (5,723)	$ (7,389)	$ (8,526)	$ (262,086)
Net loss per share attributable to common stockholders - basic and diluted	$ (0.13)	$ (0.16)	$ (0.18)	$ (5.46)
Year ended December 31, 2020				
Total revenues	$ 9,774	$ 9,389	$ 11,172	$ 48,361
Gross margin	$ 5,258	$ 5,127	$ 6,055	$ 19,894
Loss from operations	$ (3,586)	$ (5,845)	$ (10,732)	$ (9,847)
Net loss attributable to common stockholders	$ (3,943)	$ (5,803)	$ (11,418)	$ (53,866)
Net loss per share attributable to common stockholders - basic and diluted	$ (0.11)	$ (0.15)	$ (0.29)	$ (1.32)

Earnings per basic and diluted shares are computed independently for each of the quarters presented based on basic and diluted shares outstanding per quarter and, therefore, may not sum to the totals for the periods shown.

EXHIBIT 21

SUBSIDIARIES OF CRYOPORT, INC.

AND JURISDICTION OF INCORPORATION OR ORGANIZATION

Cryogene, Inc.	Texas
Cryoport Systems, LLC	California
MVE Biological Solutions US, LLC	Delaware
Cryoport Netherlands BV	The Netherlands
Cryoport France, SAS	France
Cryoport Japan GK	Japan
Cryoport UK Limited	United Kingdom
Cell&Co, SAS	France
Cell Matters SA	Belgium
MVE Biological Solutions Australia Pty Limited	Australia
MVE Biological Solutions Germany GmbH	Germany
MVE Biological Solutions (Chengdu) Co., Ltd.	China
Advanced Therapy Logistics and Solutions	France
Cryo International SA	France
Cryo Express SA	France
Cryo Express SP. ZO.O.	Poland
Cryo Express GmbH	Germany
Cryo Express Pty. Ltd.	Australia
SPL Services Limited	United Kingdom
CryoPDP Global Services, Unipessoal LDA	Portugal
I.C.S. Dry-Ice Express B.V.	The Netherlands
PDP Courier Services Limited	United Kingdom
PDP Courier Services (USA), Inc.	Delaware
PDP Couriers (Singapore) PTE. LTD	Singapore
PDP Couriers Korea Co., Ltd.	South Korea
PDP Life Science Logistics India Private Limited	India
Courier Polar Expres, S.L.	Spain
Critical Transport Solutions Australia Pty Ltd.	Australia
2GTR	Belgium
CRYOPDP KK	Japan
CRYOPDP GK	Japan
CRYOPDP Ireland Limited	Ireland

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-3 No. 333-230237, 333-229395, and 333-251354) of Cryoport, Inc.;

(2) Registration Statement (Form S-8 No. 333-225387 and 333-257368) pertaining to the 2018 Omnibus Equity Incentive Plan;

(3) Registration Statement (Form S-8 No. 333-208381) pertaining to the 2015 Omnibus Equity Incentive Plan;

(4) Registration Statement (Form S-8 No. 333-177168, 333-184543, and 333-197437) pertaining to the 2011 Stock Incentive Plan;

of our reports dated February 28, 2023, with respect to the consolidated financial statements of Cryoport, Inc. and the effectiveness of internal control over financial reporting of Cryoport, Inc. included in this Annual Report (Form 10-K) of Cryoport, Inc. for the year ended December 31, 2022.

/s/ Ernst & Young LLP

Irvine, California
February 28, 2023

Guidance:

EXHIBIT 31.1

CERTIFICATION OF PRINCIPAL EXECUTIVE OFFICER

I, Jerrell W. Shelton, certify that:

1. I have reviewed this Annual Report on Form 10-K of Cryoport, Inc.;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) 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 based on such evaluation; and

   d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):

   a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

   b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: February 28, 2023

/s/ JERRELL W. SHELTON
JERRELL W. SHELTON
Chief Executive Officer and Director
(Principal Executive Officer)

EXHIBIT 31.2

CERTIFICATION OF PRINCIPAL FINANCIAL OFFICER

I, Robert S. Stefanovich, certify that:

1. I have reviewed this Annual Report on Form 10-K of Cryoport, Inc.;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) 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 based on such evaluation; and

    d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):

    a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

    b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: February 28, 2023

/s/ ROBERT S. STEFANOVICH
Robert S. Stefanovich
Chief Financial Officer
(Principal Financial Officer)

EXHIBIT 32.1

CERTIFICATION OF PRINCIPAL EXECUTIVE OFFICER

Pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, the undersigned officer of Cryoport, Inc. (the "Company"), hereby certifies, to such officer's knowledge, that:

(i) the accompanying Annual Report on Form 10-K of the Company for the year ended December 31, 2022 (the "Report") fully complies with the requirements of Section 13(a) or Section 15(d), as applicable, of the Securities Exchange Act of 1934, as amended; and

(ii) the information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

Date: February 28, 2023

/s/ JERRELL W. SHELTON
Jerrell W. Shelton
Chief Executive Officer and Director

This certification accompanies this Report pursuant to Rule 13a-14(b) or Rule 15d-14(b) under the Securities Exchange Act of 1934, as amended, and 18 U.S.C. Section 1350 and shall not be deemed filed by the Company for purposes of Section 18 of the Securities Exchange Act of 1934, as amended.

EXHIBIT 32.2

CERTIFICATION OF PRINCIPAL FINANCIAL OFFICER

Pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, the undersigned officer of Cryoport, Inc. (the "Company"), hereby certifies, to such officer's knowledge, that:

(i) the accompanying Annual Report on Form 10-K of the Company for the year ended December 31, 2022 (the "Report") fully complies with the requirements of Section 13(a) or Section 15(d), as applicable, of the Securities Exchange Act of 1934, as amended; and

(ii) the information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

Date: February 28, 2023

/s/ ROBERT S. STEFANOVICH
Robert S. Stefanovich
Chief Financial Officer

This certification accompanies this Report pursuant to Rule 13a-14(b) or Rule 15d-14(b) under the Securities Exchange Act of 1934, as amended, and 18 U.S.C. Section 1350 and shall not be deemed filed by the Company for purposes of Section 18 of the Securities Exchange Act of 1934, as amended.