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

FORM S-3
REGISTRATION STATEMENT
UNDER
THE SECURITIES ACT OF 1933

CRYOPORT, INC.

(Exact name of registrant as specified in its charter)

Nevada (State or other jurisdiction of incorporation or organization) 88-0313393 (IRS Employer Identification Number)

17305 Daimler St. Irvine, CA 92614 (949) 470-2300

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

Robert Stefanovich Chief Financial Officer 17305 Daimler Street Irvine, CA 92614 (949) 470-2300

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

With a copy to:
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Approximate date of commencement of proposed sale to the public: From time to time after the effective date of this registration statement.

If the only securities being registered on this form are being offered pursuant to dividend or interest reinvestment plans, please check the following box."

If any of the securities being registered on this form are to be offered on a delayed or continuous basis pursuant to Rule 415 under the Securities Act of 1933, other than securities offered only in connection with dividend or interest reinvestment plans, check the following box. x

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

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

If this form is a registration statement pursuant to General Instruction I.D. or a post-effective amendment thereto that£ shall become effective upon filing with the Commission pursuant to Rule 462(e) under the Securities Act, check the following box.

If this form is a post-effective amendment to a registration statement filed pursuant to General Instruction I.D. filed to register additional securities or additional classes of securities pursuant to Rule 413(b) under the Securities Act, check the following box."

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 "Non-accelerated filer"

Accelerated filer x Smaller reporting company x Emerging growth company "

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

CALCULATION OF REGISTRATION FEE

Title of each class of securities to be registered(1)	Amount to be registered	Proposed maximum offering price per unit(2)	Proposed maximum aggregate offering price	Amount of registration fee(2)
Common Stock, par value \$0.001 per share	1,000,000	\$ 9.25	\$ 9,250,000	\$ 1,121.10
Common Stock, par value \$0.001 per share, issuable upon conversion of				
floating rate convertible notes	1,372,998	\$ 9.25	\$ 12,700,231	\$ 1,539.27
Total	2,372,998		\$ 21,950,231	\$ 2,660.37

- (1) Pursuant to Rule 416 under the Securities Act of 1933, as amended (the "Securities Act"), the common stock being registered hereunder includes such indeterminable number of shares of common stock that may be offered or issued in connection with any stock split, stock dividend, recapitalizations or similar transactions.
- (2) Estimated solely for purpose of calculating the registration fee pursuant to Rule 457(c) under the Securities Act, based on the average high and low prices of the common stock of the registrant as reported on the Nasdaq Capital Market on January 24, 2019.

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

The information in this prospectus is not complete and may be changed. These securities may not be sold until the registration statement filed with the Securities and Exchange Commission is effective. This prospectus is not an offer to sell nor does it seek an offer to buy these securities in any jurisdiction where the offer or sale is not permitted.

SUBJECT TO COMPLETION, DATED JANUARY 28, 2019

PROSPECTUS

2,372,998 Shares



SCIENCE, LOGISTICS, CERTAINTY.

Common Stock

This prospectus relates to up to 2,372,998 shares of our common stock, par value \$0.001 per share, consisting of (i) 1,000,000 shares of common stock and (ii) up to 1,372,998 shares of common stock issuable upon conversion of our floating rate convertible notes, or the Notes, in each case, pursuant to that certain Securities Purchase and Registration Rights Agreement, or the SPA, dated December 14, 2018, by and among us and the selling stockholder named in this prospectus. The shares may be offered for sale from time to time by the selling stockholder.

We will not receive any proceeds from the sale of these shares by the selling stockholder.

The selling stockholder may sell or otherwise dispose of the shares of common stock covered by this prospectus in a number of different ways and at varying prices. We provide more information about how the selling stockholder may sell or otherwise dispose of its shares of common stock in the section entitled "Plan of Distribution."

We have agreed to bear all of the expenses incurred in connection with the registration of these shares. The selling stockholder will pay or assume brokerage commissions and similar charges, if any, incurred for the sale of shares of our common stock.

Our common stock is currently traded on the Nasdaq Capital Market under the symbol "CYRX". As of January 25, 2019, the closing sale price of our common stock was \$9.68 per share.

Investing in our common stock involves significant risks. Prior to making an investment decision, you should carefully review the information under the heading "Risk Factors" beginning on page 5 of this prospectus concerning factors you should consider before investing in our common stock.

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

The date of this prospectus is

, 2019.

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You should rely only on the information we have provided or incorporated by reference into this prospectus, any supplement to this prospectus or in any free writing prospectus filed with the Securities and Exchange Commission, or the SEC. Neither we nor the selling stockholder have authorized anyone to provide you with additional information or information different from that contained in this prospectus filed with the SEC. We take no responsibility for, and can provide no assurance as to the reliability of, any other information that others may give you. The selling stockholder is offering to sell, and seeking offers to buy, our common stock only in jurisdictions where offers and sales are permitted. The information contained in this prospectus is accurate only as of the date of this prospectus, regardless of the time of delivery of this prospectus or any sale of shares of our common stock. Our business, financial condition, results of operations and prospects may have changed since that date.

To the extent there is a conflict between the information contained in this prospectus, on the one hand, and the information contained in any document incorporated by reference filed with the SEC before the date of this prospectus, on the other hand, you should rely on the information in this prospectus. If any statement in a document incorporated by reference is inconsistent with a statement in another document incorporated by reference having a later date, the statement in the document having the later date modifies or supersedes the earlier statement.

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PROSPECTUS SUMMARY

The following summary highlights selected information contained or incorporated by reference elsewhere in this prospectus and does not contain all of the information that you should consider in making your investment decision. Before investing in our common stock, you should carefully read this entire prospectus, including our financial statements and the related notes and other documents incorporated by reference in this prospectus, as well as the information under the caption "Risk Factors' herein and under similar headings in the other documents that are incorporated by reference into this prospectus. Cryoport, Inc. is referred to throughout this prospectus as "Cryoport," "we" or "us."

About Cryoport

We provide fully integrated, temperature-controlled logistics solutions to the life sciences industry through a seamless combination of proprietary packaging, information technology, and specialized temperature-controlled logistics knowhow. Our competencies and capabilities are used to develop solutions that are customized to our client's requirements. Our solutions integrate vital analytics, including chain-of-condition, chain-of-custody, chain of identity, and Chain of Compliance TM information, into a single data stream. We provide advanced, powerful, comprehensive and reliable technology-centric alternatives to traditional temperature-controlled distribution/logistics solutions for the life sciences industry.

Our services are utilized for temperature-controlled shipping, storage and information in the life sciences industry, which includes personalized medicine, immunotherapies, cellular therapies, CAR T-cell therapies, stem cell therapies, cell lines, gene therapies, vaccines, diagnostic materials, semen, eggs, embryos, cord blood, bio-pharmaceuticals, infectious substances, and other commodities that require continuous exposure to certain ranges of precision-controlled temperatures. As part of our services, our technologies provide the ability for us and/or our client, to monitor location and other specified critical variables for each shipment in real time. Information is recorded and archived for each shipment for scientific, quality assurance and regulatory purposes. This information provides an audit trail that can verify the 'in shipment' condition of the life sciences commodity, material, product, vaccine or therapy being shipped. Cryoport's systems and solutions were designed to support high volume FDA approved commercial biologic product distribution in the United States and government approved products in other jurisdictions globally, such as those in the EMEA (Europe, Middle East and Africa) and Asia-Pacific regions. However, Cryoport's solutions can also be applied to support clinical trials, Biologics License Applications (BLA), Investigational New Drug Applications and New Drug Applications (NDA) with the United States Food and Drug Administration (FDA).

One of the most important features of our Cryoport Express[®] Solutions is our sophisticated, cloud-based, logistics management platform, which is branded as the CryoportalTM. The CryoportalTM supports the management of shipments through a single interface, which includes order entry, document preparation, customs documentation, courier management, real-time shipment tracking, issue resolution, and regulatory compliance requirements. In addition, it provides unique and incisive information dashboards and validation documentation for every shipment through data collected by the SmartPak IITM Condition Monitoring System (SmartPak IITM). The CryoportalTM records and retains a fully documented regulatory history of all Cryoport Express[®] Shippers, including chain-of-custody and chain-of-condition, chain of identity, and Chain of ComplianceTM information for each shipment, which is used to ensure the quality, safety, efficacy and controlled conditions to ensure that the stability of shipped biologic commodities are maintained throughout the shipping cycle. At the client's option, recorded information is archived, allowing the client to meet exacting requirements necessary for scientific work and for proof of regulatory compliance during the logistics process.

Our Cryoport Express[®] Solutions include a family of Cryoport Express[®] Shippers including liquid nitrogen dry vapor shippers and C3TM Shippers (Cryoport. Certified. Cool.), which are phase-change shippers. All 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, generally, include a SmartPak IITM Condition Monitoring System. Cryoport Express[®] Shippers meet International Air Transport Association ("IATA") requirements for transport, including Class 6.2 infectious substances. Cryoport Express[®] Shippers are also International Safe Transit Association ("ISTA") "Transit Tested" certified. Cryoport Express[®] dry vapor shippers are validated to maintain stable temperatures of minus 150° Celsius and below for up to ten days in dynamic shipping conditions. We currently feature five types of liquid nitrogen dry vapor Cryoport Express[®] Shippers: the Standard Dry Shipper (holding up to 75 2.0 ml vials), the High Volume Dry Shipper (holding up to 500 2.0 ml vials), the CXVC1 Shipper (holding up to 1,500 2.0 ml vials), the Slide Rite Dry Shipper (holding up to 500 2.0 ml vials) and the CryoMaxTM Shipper (holding up to 36,400 2.0 ml vials). We currently offer one type of phase change Cryoport Express[®] Shippers: the C3TM. Cryoport Express[®] C3TM Shippers are reusable and maintain stable temperatures at 2-8° Celsius for up to 96 hours. All Cryoport Express[®] Shippers are integrated with SmartPak IITM Condition Monitoring Systems for the reasons stated above.

As a part of our Cryoport Express[®] Solutions services, we assist and provide clients with secondary packaging that is placed inside the main chamber of our Cryoport Express[®] Shippers. In addition to vials, canes, straws, goblets, plates, etc., we offer engineering services to assist clients in creating and developing customized packaging that meet their requirements.

Cryoport is the global market leader in providing reliable and comprehensive temperature-controlled logistics solutions for the life sciences industry, with a primary focus on cryogenic logistics. Our advanced technologies and dedicated personnel allow us to continue to expand our services footprint with a growing suite of services, products and competencies for the life sciences industry, which currently include: information technology, packaging, real-time monitoring, analytics, logistics distribution, consulting, laboratory relocation, fleet management, embedded logistics support, validation services (especially for shipping lanes and packaging), etc. A sample of our client facing, value-added competencies addressing client requirements are as follows:

- *Personalized Medicine and Cell-based Immunotherapy Solution," designed for autologous therapies in which our Cryoport Express® Solutions serve as an enabling technology for the safe and efficient transportation of leukapheresis or apheresis blood products as well as the manufactured autologous cellular-based immunotherapies by providing a comprehensive logistics solution for the verified chain of condition, chain of custody, chain of identity, and Chain of ComplainceTM transport from, (a) the collection of the patient's blood or cells in a hospital or point-of-care setting, to (b) a central processing facility where they are manufactured into a personalized medicine, to (c) the safe, cryogenically preserved delivery of these irreplaceable cells to a point-of-care treatment facility. If required, the Cryoport Express® Shipper can then serve as a temporary freezer/repository to allow the efficient distribution of the personalized medicine to the patient when and where the medical provider needs it, without the expense and inconvenience of on-sight, cryopreservation storage equipment.
- ** "Allogeneic Therapy Solution," designed for allogeneic therapies in which our Cryoport Express® Solutions serve as an enabling technology for the safe and efficient transportation of health donor blood products as well as the manufactured allogeneic therapy by providing a comprehensive logistic solutions for the verified chain of condition, chain of custody, chain of identity, and Chain of Compliance TM transport from, (a) the blood collection center, to (b) the manufacturing facility for the allogeneic therapy, to (c) a storage and fulfillment facility, or (d) to a point-of-care treatment facility. Again, if required, the Cryoport Express® Shipper can then serve as a temporary freezer/repository to allow the efficient distribution of the personalized medicine to the patient when and where the medical provider needs it, without the expense and inconvenience of on-sight, cryopreservation storage equipment.
- § "Embedded Solution," which is our total outsource solution. It is our most comprehensive solution and involves our management of the entire cryogenic logistics process for our client using Cryoport technology and Cryoport employees working at the client's location to manage the client's temperature-controlled logistics needs, in total.
- Fleet Management," which is our fleet management support service designed to reduce our clients upfront and recurring costs through optimized utilization of resources and minimization of equipment loss. We offer both complete and partial temperature-controlled outsourced fleet management services, including fleet evaluation and disposition (if required), inventory control, fleet maintenance and ongoing fleet requalification and validation.
- § "Packaging Development," using "Design of Experiment" and "Quality by Design" processes, Cryoport can design, engineer and employ customized packaging and/or accessories to ensure effective distribution of our client's critical commodities using our in-house team of packaging engineering competencies in the cryogenic, 2-8°C and other temperature-controlled ranges to meet or exceed our client's specifications. This capability usually includes integration of our SmartPak IITM Condition Monitoring System and the accommodation of our CryoportalTM Logistics Management Platform into our clients packaging configurations, providing full access to our advanced condition monitoring systems and logistics management support competencies.

- "Consulting Services," giving clients an opportunity to leverage our in-house talent to: design custom logistics plans, perform lane assessment, lane validation, carrier validation; design custom packaging and validation, permitting clinical trial logistics design; commercial launch planning; systems integration; and end user training.
- S "Laboratory Relocation," used for large moves, we use redundant temperature-controlled shippers and environmentally controlled trucks. A long with our logistics partners we ensure the integrity of client materials during all logistics phases, including loading, transport, unloading and placement. Our service includes lane and carrier permitting and validation. Our large sample capacity Cryoport ExpressTM CryoMaxTM Shipper has a holding time of up to 20 days and includes the benefit of our real time SmartPak IITM Condition Monitoring System, which supplies monitoring information to our CryoportalTM Logistic Management Platform, providing Live View information on the client's transport. Employing our 24/7/365 client support team to actively monitoring shipments and mitigate risk ensures safe shipping and relocation of samples.
- "powered by CryoportSM," available to providers of shipping and delivery services who seek to offer a "branded" cryogenic logistics solution as part of their service offerings. "powered by CryoportSM," appears prominently on the offering software interface and packaging. This option for the client to private label its service is available upon committing to certain requirements for private labeling, such as minimum annual shipping volumes.

In addition to these offerings, Cryoport is continuously evaluating expanding and improving its solutions in response to market needs and client demand.

Our Corporate Information

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, on March 15, 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, in exchange for 200,901 shares of our common stock (which represented approximately 81% of the total issued and outstanding shares of common stock following the close of the transaction). Cryoport Systems, Inc., which was originally formed in 1999 as a California limited liability company, and subsequently reorganized into a California corporation on December 11, 2000, remains the operating company under Cryoport, Inc. Our principal executive offices are located at 17305 Daimler Street, Irvine, CA 92614. The telephone number of our principal executive offices is (949) 470-2300, and our main corporate website is www.cryoport.com.

The Company became public by a reverse merger with a shell company in May 2005. Over time the Company has transitioned from being a development company to a fully operational public company, providing cold chain logistics solutions to the life sciences industry globally.

THE OFFERING

Common stock offered by the selling stockholder(1) Up to 2,372,998 shares

Common stock to be outstanding after this offering(2) Approximately 32,772,180 shares

Use of proceeds We will not receive any proceeds from the sale of common stock by the selling stockholder in this

offering. See "Use of Proceeds."

Risk factorsSee "Risk Factors" beginning on page 5 of this prospectus and the other information included in this

prospectus for a discussion of factors you should carefully consider before deciding to invest in our

common stock.

Nasdaq Capital Market symbol Our common stock is traded on the Nasdaq Capital Market under the symbol "CYRX".

(1) See "Selling Stockholder" in this prospectus for additional information.

(2) The number of shares of common stock shown above to be outstanding after this offering is based on 30,399,182 shares outstanding as of January 24, 2019, excluding:

- § 1,974,513 shares of common stock reserved for issuance upon the exercise of outstanding warrants with a weighted average exercise price of \$4.05 per share;
- § 5,833,182 shares of common stock reserved for issuance upon the exercise of outstanding stock options with a weighted average exercise price of \$5.20 per share; and
- § 4,036,654 shares of common stock available for future grant under the Cryoport, Inc. 2018 Omnibus Equity Incentive Plan.

RISK FACTORS

An investment in our common stock involves a high degree of risk. Before making an investment decision, you should consider carefully the risks discussed below, together with the risks under the heading "Risk Factors" in our Annual Report on Form 10-K for the fiscal year ended December 31, 2017, which is incorporated by reference into this prospectus, as well as the other information included or incorporated by reference in this prospectus. Our business, prospects, financial condition, or operating results could be harmed by any of these risks, as well as other risks not currently known to us or that we currently consider immaterial. The trading price of our common stock could decline due to any of these risks, and, as a result, you may lose all or part of your investment. The risks discussed below also include forward-looking statements and our actual results may differ substantially from those discussed in these forward-looking statements. See the section entitled "Forward-Looking Information."

Risks Related to this Offering

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

We cannot predict whether future issuances of shares of our common stock or the availability of shares for resale in the open market will decrease the market price per share of our common stock. As of January 24, 2019, there were 30,399,182 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, including the shares offered by the selling stockholder in this offering, or the market perceives that such sales may occur.

As of January 24, 2019, we could also issue up to an additional 11,844,349 shares of our common stock, including 1,974,513 shares to be issued upon the exercise of outstanding warrants and 9,869,836 shares upon exercise of outstanding options or reserved for future issuance under our stock incentive plans. The exercise of any options or warrants, the issuance of our common stock 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.

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. Investors purchasing shares or other securities in the future could have rights superior to existing stockholders. The price per share at which we sell additional shares of our common stock, or securities convertible or exchangeable into common stock, in future transactions may be higher or lower than the price per share paid by investors in this offering. In addition, if the holders of our outstanding options or warrants exercise such securities, you may incur further dilution.

We may have to pay liquidated damages to the selling stockholder, which would increase our expenses and reduce our cash resources.

Pursuant to the terms of the SPA, subject to certain limited exceptions, if the registration statement of which this prospectus forms a part has not been declared effective within the time periods specified in the SPA or we otherwise fail to maintain the effectiveness of the registration statement (subject to certain allowable grace periods), we will be required to pay the selling stockholder liquidated damages until the applicable event is cured. There can be no assurance that the registration statement of which this prospectus forms a part will be declared effective by the SEC or will remain effective for the time periods necessary to avoid payment of liquidated damages. Any payment of liquidated damages would increase our expenses, reduce our cash resources and may limit our ability to grow our business.

FORWARD-LOOKING INFORMATION

This prospectus, including the documents incorporated by reference into this prospectus, contain forward-looking statements. All statements other than statements of historical fact, including statements regarding our future results of operations and financial position, business strategy and plans and objectives of management for future operations, are forward-looking statements. These statements involve known and unknown risks, uncertainties and other factors that may cause our actual results, performance or achievements to be materially different from any future results, performance or achievements expressed or implied by the forward-looking statements.

In some cases, you can identify forward-looking statements by terms such as "may," "will," "should," "expects," "plans," "anticipates," "could," "intends," "target," "projects," "contemplates," "believes," "estimates," "predicts," "potential," "continue," or the negative of these terms or other similar words. These statements are only predictions. We have based these forward-looking statements largely on our current expectations and projections about future events and financial trends that we believe may affect our business, financial condition and results of operations. We discuss many of the risks in greater detail under the heading "Risk Factors" in this prospectus and in our most recent Annual Report on Form 10-K, which you should review carefully. Also, these forward-looking statements represent our estimates and assumptions only as of the date of this prospectus. Forward-looking statements include, but are not necessarily limited to, those relating to:

- § our intention to introduce new products or services;
- § our expectations about securing strategic relationships with global couriers or large clinical research organizations;
- § our future capital needs;
- § results of our research and development efforts; and
- § approval of our patent applications.

Forward-looking statements are subject to risks and uncertainties, certain of which are beyond our control. Actual results could differ materially from those anticipated as a result of the factors described in "Risk Factors" in this prospectus, and detailed in our other SEC filings incorporated by reference herein, including among others:

- § the effect of regulation by United States and foreign governmental agencies;
- § research and development efforts, including delays in developing, or the failure to develop, our products;
- § the development of competing or more effective products by other parties;
- § uncertainty of market acceptance of our products;
- § errors in business planning attributable to insufficient market size or segmentation data;
- § problems that we may face in manufacturing, marketing and distributing our products;
- § problems that we may encounter in further development of Cryoport Express® Solutions, which includes the cloud-based logistics management software branded as CryoportalTM;
- § our inability to raise additional capital when needed;
- § delays in the issuance of, or the failure to obtain, patents for certain of our products and technologies;
- § problems with important suppliers and strategic business partners; and
- § difficulty or delays in establishing marketing relationships with international couriers.

Because of these risks and uncertainties, the forward-looking events and circumstances discussed in this prospectus might not transpire. Except for our ongoing obligations to disclose material information as required by the federal securities laws, we undertake no obligation to release publicly any revisions to any forward-looking statements to reflect events or circumstances after the date hereof or to reflect the occurrence of unanticipated events. All of the above factors are difficult to predict, contain uncertainties that may materially affect our actual results and may be beyond our control. New factors emerge from time to time, and it is not possible for our management to predict all of such factors or to assess the effect of each factor on our business. You are advised to consult any further disclosures we make on related subjects in the reports we file with the SEC.

This prospectus, including the documents incorporated by reference into this prospectus, also contain estimates and other industry and statistical data developed by independent parties and by us relating to market size, growth, and segmentation of markets. This data involves a number of assumptions and limitations, and you are cautioned not to give undue weight to such estimates. While we believe the data to be reliable, industry and statistical data is subject to variations and cannot be verified due to limits on the availability and reliability of data inputs, the voluntary nature of the data gathering process and other limitations and uncertainties inherent in any statistical survey. We have not independently verified these estimates generated by independent third parties. In addition, projections, assumptions, and estimates of our future performance and the future performance of the industries in which we operate are necessarily subject to a high degree of uncertainty and risk due to a variety of factors, including those described in "Risk Factors" and elsewhere in this prospectus and the documents incorporated by reference into this prospectus. These and other factors could cause results to differ materially from those expressed in the estimates made by the independent parties and by us.

USE OF PROCEEDS

All shares offered in this prospectus are being sold by the selling stockholder. We will not receive any proceeds from the sale of common stock by the selling stockholder in this offering.

SELLING STOCKHOLDER

Unless the context otherwise requires, as used in this prospectus, "selling stockholder" includes the selling stockholder listed below and its pledgees, assignees and successors-in-interest.

We have prepared this prospectus to allow the selling stockholder to sell or otherwise dispose of, from time to time, up to 2,372,998 shares of our common stock, consisting of (i) 1,000,000 shares of common stock (the "Investment Shares") and (ii) up to 1,372,998 shares of common stock (the "Note Shares") issuable upon conversion of our floating rate convertible notes (the "Notes"), in each case, pursuant to that certain Securities Purchase and Registration Rights Agreement (the "SPA"), dated December 14, 2018, by and among us and the selling stockholder. Pursuant to the terms of the SPA, we have agreed to register the Investment Shares and the Note Shares by filing a registration statement with the SEC.

Prior to the maturity, the selling stockholder will have the right to convert all or any portion of the Notes, including any accrued but unpaid interest, into shares of our common stock at a conversion price of \$13.11 per share (the "Conversion Price"), subject to certain adjustments as set forth in the Notes. If, at any time on or prior to December 14, 2021, the volume-weighted average price of our common stock exceeds \$17.48 for 15 consecutive trading days and certain additional conditions are satisfied, the Notes will automatically convert into shares of our common stock at the Conversion Price, subject to certain conditions.

The following table sets forth, as of the date of this prospectus, the name of the selling stockholder, the number of shares of common stock beneficially owned by the selling stockholder prior to this offering, the total number of shares of common stock that the selling stockholder may offer pursuant to this prospectus and the number of shares of common stock that the selling stockholder will beneficially own after this offering. Beneficial ownership is determined in accordance with Section 13(d) of the Securities Exchange Act of 1934, as amended (the "Exchange Act"), and Rule 13d-3 thereunder. Except for the purchases by the selling stockholder of the securities pursuant to the SPA, the selling stockholder does not have, or within the past three years has not had, any material relationship with us or any of our predecessors or affiliates.

The information in the table is supplied by the selling stockholder. We cannot advise you as to whether the selling stockholder will in fact sell any or all of such shares of common stock. In addition, the selling stockholder may have sold, transferred or otherwise disposed of, or may sell, transfer or otherwise dispose of, at any time and from time to time, the shares of our common stock in transactions exempt from the registration requirements of the Securities Act after the date on which it provided the information set forth in the table below.

	Prior to C	Offering		After O	Offering
	Number of	Percentage of		Number of	Percentage of
	Shares	Shares	Number of	Shares	Shares
	Beneficially	Beneficially	Shares	Beneficially	Beneficially
Name	Owned	Owned(1)	Offered(2)	Owned	Owned(1)
Petrichor Opportunities Fund I LP(3)	2,372,998	7.8%	2,372,998		<u>—%</u>

- (1) Based on 30,399,182 shares of our common stock outstanding as of January 24, 2019.
- (2) Consists of the Investment Shares and the Note Shares. Pursuant to the SPA, the amount reflects 120% of the maximum number of Note Shares issuable upon conversion of the Notes.
- (3) Petrichor Opportunities Fund I LP and its general partner, Petrichor Opportunities Fund I GP LLC, have retained Petrichor Healthcare Capital Management LP, to manage the investment program of Petrichor Opportunities Fund I LP. In that capacity, Petrichor Healthcare Capital Management LP exercises investment discretion and voting control over the shares held by Petrichor Opportunities Fund I LP. The address for this beneficial owner is 885 Third Avenue, 24th Floor, New York, New York 10022. By virtue of his control over Petrichor Healthcare Capital Management LP, Tadd S. Wessel may be deemed to share voting and investment power over the shares owned by Petrichor Opportunities Fund I LP and he expressly disclaims beneficial ownership of the shares owned by Petrichor Opportunities Fund I LP.

PLAN OF DISTRIBUTION

The selling stockholder and any of its pledgees, assignees and successors-in-interest may, from time to time, sell any or all of their shares covered hereby on the Nasdaq Capital Market or any other stock exchange, market or trading facility on which the securities are traded or in private transactions. These sales may be at fixed or negotiated prices. The selling stockholder may use any one or more of the following methods when selling shares:

- § ordinary brokerage transactions and transactions in which the broker-dealer solicits purchasers;
- § block trades in which the broker-dealer will attempt to sell the securities as agent but may position and
- § purchases by a broker-dealer as principal and resale by the broker-dealer for its account;
- § an exchange distribution in accordance with the rules of the applicable exchange;
- § privately negotiated transactions;
- § in transactions through broker-dealers that agree with the selling stockholder to sell a specified number of such securities at a stipulated price per security;
- § through the writing or settlement of options or other hedging transactions, whether through an options exchange or otherwise;
- § a combination of any such methods of sale; or
- § any other method permitted pursuant to applicable law.

The selling stockholder may also sell shares under Rule 144 under the Securities Act, if available, rather than under this prospectus.

Broker-dealers engaged by the selling stockholder may arrange for other brokers-dealers to participate in sales. Broker-dealers may receive commissions or discounts from the selling stockholder (or, if any broker-dealer acts as agent for the purchaser of securities, from the purchaser) in amounts to be negotiated.

In connection with the sale of the shares or interests therein, the selling stockholder may enter into hedging transactions with broker-dealers or other financial institutions, which may in turn engage in short sales of the shares in the course of hedging the positions they assume. The selling stockholder may also sell shares short and deliver these shares to close out its short positions, or loan or pledge the shares to broker-dealers that in turn may sell these securities. The selling stockholder may also enter into option or other transactions with broker-dealers or other financial institutions or create one or more derivative securities which require the delivery to such broker-dealer or other financial institution of shares offered by this prospectus, which shares such broker-dealer or other financial institution may resell pursuant to this prospectus (as supplemented or amended to reflect such transaction). Notwithstanding the foregoing, the selling stockholder will not engage in short sales of the shares at any time that the selling stockholder holds any Notes.

The Company is required to pay certain fees and expenses incurred by the Company incident to the registration of the shares. The Company has agreed to indemnify the selling stockholder against certain losses, claims, damages and liabilities, including liabilities under the Securities Act.

The selling stockholder may be deemed to be statutory underwriters under the Securities Act. In addition, any broker-dealers who act in connection with the sale of the shares hereunder may be deemed to be "underwriters" within the meaning of Section 2(11) of the Securities Act, and any commissions received by them and profit on any resale of the shares as principal may be deemed to be underwriting discounts and commissions under the Securities Act. Because the selling stockholder may be deemed to be an "underwriter" within the meaning of the Securities Act, it may be subject to the prospectus delivery requirements of the Securities Act including Rule 172 thereunder.

The selling stockholder has acknowledged that it understands its obligations to comply with the provisions of the Exchange Act and the rules thereunder relating to stock manipulation, particularly Regulation M.

The Company agreed to keep this prospectus effective with respect to shares of common stock offered by the selling stockholder hereunder until the earlier of the selling stockholder's sale of such shares pursuant to this prospectus or until such shares may be sold without restrictions or other limitations pursuant to Rule 144 (or any successor provision) under the Securities Act (including, without limitation, volume restrictions) and without the need for current public information required by Rule 144(c) (1).

We will make copies of this prospectus available to the selling stockholder and have informed the selling stockholder of the need to deliver a copy of this prospectus to each purchaser at or prior to the time of the sale (including by compliance with Rule 172 under the Securities Act).

There can be no assurance that the selling stockholder will sell any or all of the shares of common stock registered pursuant to the registration statement of which this prospectus forms a part.

We are not aware of any plans, arrangements or understandings between the selling stockholder and any underwriter, broker-dealer or agent regarding the sale of shares of common stock by the selling stockholder.

DESCRIPTION OF CAPITAL STOCK

Our authorized capital consists of 100,000,000 shares of common stock, \$0.001 par value per share, of which 30,399,182 shares of common stock were issued and outstanding as of January 24, 2019, and 2,500,000 shares of "blank check" preferred stock, \$0.001 par value per share, of which we have designated 800,000 shares as Class A Preferred Stock and 585,000 shares as Class B Preferred Stock, none of which are currently issued and outstanding. The following description is a summary and is qualified in its entirety by our Amended and Restated Articles of Incorporation, as amended to date, and our Amended and Restated Bylaws, as currently in effect, copies of which are referenced as exhibits herein, and the provisions of the Nevada Revised Statutes.

Common Stock

Subject to the preferential rights of any outstanding preferred stock, each holder of common stock is entitled to receive ratable dividends, if any, as may be declared by our board of directors out of funds legally available for the payment of dividends. As of the date of this prospectus, 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.

Holders of common stock are entitled to one vote for each share held of record. There are no cumulative voting rights in the election of directors. Thus, the holders of more than 50% of the outstanding shares of common stock can elect all of our directors if they choose to do so.

The holders of our common stock have no preemptive, subscription, conversion or redemption rights. Upon our liquidation, dissolution or winding-up, the holders of our common stock are entitled to receive our assets pro rata.

Preferred Stock

Our board of directors is empowered, without further action by stockholders, to issue from time to time one or more series of preferred stock, with such designations, rights, preferences and limitations as the board of directors may determine by resolution. The rights, preferences and limitations of separate series of preferred stock may differ with respect to such matters among such series as may be determined by our board of directors, including, without limitation, the rate of dividends, method and nature of payment of dividends, terms of redemption, amounts payable on liquidation, sinking fund provisions (if any), conversion rights (if any) and voting rights. Certain issuances of preferred stock may have the effect of delaying or preventing a change in control of our company that some stockholders may believe is not in their interest.

Nevada Anti-Takeover Law and Charter and Bylaws Provisions

Nevada Revised Statutes sections 78.378 to 78.3793 provide state regulation over the acquisition of a controlling interest in certain Nevada corporations unless the articles of incorporation or bylaws of the corporation provide that the provisions of these sections do not apply. This statute currently does not apply to our Company because in order to be applicable, we would need to have a specified number of Nevada residents as shareholders, and we would have to do business in Nevada directly or through an affiliate.

In addition, our amended and restated articles of incorporation and amended and restated bylaws contain provisions that may make the acquisition of our company more difficult, including, but not limited to, the following:

- § requiring at least 75% of outstanding voting stock in order to call a special meeting of stockholders;
- § not allowing stockholders to take action by written consent in lieu of a meeting;
- § setting forth specific procedures regarding how our stockholders may present proposals or nominate directors for election at stockholder meetings;
- § requiring advance notice and duration of ownership requirements for stockholder proposals;
- § permitting our board of directors to issue preferred stock without stockholder approval; and
- \S $\;$ limiting the rights of stockholders to amend our bylaws.

Transfer Agent and Registrar

The transfer agent and registrar for the shares of our common stock is Continental Stock Transfer & Trust Company.

National Market Listing

Our common stock is traded on the Nasdaq Capital Market under the symbol "CYRX".

LEGAL MATTERS

The validity of the shares of common stock offered by this prospectus are being passed upon for us by Snell & Wilmer L.L.P., Costa Mesa, California.

EXPERTS

KMJ Corbin & Company LLP, an independent registered public accounting firm, has audited our consolidated financial statements as of December 31, 2017 and 2016, and for the year ended December 31, 2017 and the nine month period ended December 31, 2016, included in our Annual Report on Form 10-K for the year ended December 31, 2017, and the effectiveness of our internal control over financial reporting as of December 31, 2017, as set forth in their reports, which are incorporated by reference in this prospectus. Our consolidated financial statements are incorporated by reference in reliance on KMJ Corbin & Company LLP's report, given on their authority as experts in accounting and auditing.

WHERE YOU CAN FIND MORE INFORMATION

We are subject to the reporting requirements of the Exchange Act and file annual, quarterly and current reports, proxy statements and other information with the SEC. Our SEC filings are also available at the SEC's website at http://www.sec.gov.

This prospectus is part of a registration statement on Form S-3 that we filed with the SEC under the Securities Act and therefore omit certain information contained in the registration statement. We have also filed exhibits and schedules with the registration statement that are excluded from this prospectus, and you should refer to the applicable exhibit or schedule for a complete description of any statement referring to any contract or other document. The registration statement is available at the SEC's website, as provided above.

We also maintain a website at http://www.cryoport.com, through which you can access our SEC filings. The information set forth on our website is not part of this prospectus.

INCORPORATION OF CERTAIN DOCUMENTS BY REFERENCE

The SEC allows us to "incorporate by reference" information into this prospectus. This means that we can disclose important information to you by referring you to another document filed separately with the SEC. The information incorporated by reference is considered to be part of this prospectus, except for any information that is superseded by information that is included directly in this or another document that is incorporated or deemed to be incorporated herein by reference.

This prospectus incorporates by reference the documents listed below and any future filings that we make with the SEC under Section 13(a), 13(c), 14 or 15(d) of the Exchange Act (other than current reports on Form 8-K furnished under Item 2.02 or Item 7.01 and exhibits filed on such form that are related to such items), until all the securities offered under this prospectus are sold.

- § Our Annual Report on Form 10-K for the fiscal year ended December 31, 2017, as filed with the SEC on March 8, 2018;
- § Our Quarterly Reports on Form 10-Q for the quarters ended March 31, 2018, June 30, 2018 and September 30, 2018, filed with the SEC on May 3, 2018, August 9, 2018 and November 8, 2018, respectively;
- § Our Current Reports on Form 8-K filed with the SEC on February 8, 2018, April 3, 2018, May 18, 2018, August 27, 2018, December 17, 2018 and January 7, 2019; and
- § The description of our common stock contained in our Registration Statement on Form 8-A, filed with the SEC on July 22, 2015, and any other amendment or report filed for the purposes of updating such descriptions.

Documents incorporated by reference are available from the SEC as described above or from us without charge, excluding any exhibits to those documents unless the exhibit is specifically incorporated by reference as an exhibit in this document. You can obtain documents incorporated by reference in this document by requesting them in writing or by telephone at the following address:

Cryoport, Inc. 17305 Daimler St. Irvine, CA 92614 Attn: Chief Financial Officer (949) 470-2300

2,372,998 Shares



SCIENCE. LOGISTICS. CERTAINTY.

Common Stock

Prospectus , 2019

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PART II

INFORMATION NOT REQUIRED IN PROSPECTUS

Item 14. Other Expenses of Issuance and Distribution.

The following sets forth the estimated costs and expenses, all of which shall be borne by us, in connection with the offering of the securities pursuant to this registration statement. All the amounts shown are estimates except for the SEC registration fee.

	Amount
SEC registration fee	\$ 2,660.37
Accounting fees and expenses	15,000.00
Legal fees and expenses	25,000.00
Financial printing and miscellaneous expenses	5,000.00
Total	\$ 47,660.37

Item 15. Indemnification of Directors and Officers.

Under the Nevada Revised Statutes and our Amended and Restated Articles of Incorporation, as amended, our directors will have no personal liability to us or our stockholders for monetary damages incurred as the result of the breach or alleged breach by a director of his "duty of care." This provision does not apply to the directors' (i) acts or omissions that involve intentional misconduct or a knowing and culpable violation of law, (ii) acts or omissions that a director believes to be contrary to the best interests of the corporation or its stockholders or that involve the absence of good faith on the part of the director, (iii) approval of any transaction from which a director derives an improper personal benefit, (iv) acts or omissions that show a reckless disregard for the director's duty to the corporation or its stockholders in circumstances in which the director was aware, or should have been aware, in the ordinary course of performing a director's duties, of a risk of serious injury to the corporation or its stockholders, (v) acts or omissions that constituted an unexcused pattern of inattention that amounts to an abdication of the director's duty to the corporation or its stockholders, or (vi) approval of an unlawful dividend, distribution, stock repurchase or redemption. This provision would generally absolve directors of personal liability for negligence in the performance of duties, including gross negligence.

Insofar as indemnification for liabilities arising under the Securities Act may be permitted to directors, officers and controlling persons of the registrant pursuant to the foregoing provisions, or otherwise, the registrant has been advised that in the opinion of the SEC such indemnification is against public policy as expressed in the Securities Act and is, therefore, unenforceable. In the event that a claim for indemnification against such liabilities (other than the payment by the registrant of expenses incurred or paid by a director, officer or controlling person of the registrant in the successful defense of any action, suit or proceeding) is asserted by such director, officer or controlling person in connection with the securities being registered, the registrant will, unless in the opinion of its counsel the matter has been settled by controlling precedent, submit to a court of appropriate jurisdiction the question whether such indemnification by it is against public policy as expressed in the Securities Act and will be governed by the final adjudication of such issue.

Item 16. Exhibits.

Exhibit Number	Description
<u>4.1</u>	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.
4.2	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.
4.3	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.
<u>4.4</u>	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.
<u>4.5</u>	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.
<u>4.6</u>	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.
<u>4.7</u>	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.
4.8	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.
<u>4.9</u>	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.
4.10	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.
<u>4.11</u>	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.
4.12	Cryoport, Inc. Stock Certificate Specimen. Incorporated by reference to Cryoport's Registration Statement on Form 10-SB/A4 filed with the SEC on October 20, 2005.
<u>4.13</u>	Form of Convertible Note. Incorporated by reference to Exhibit 4.1 of the Company's Current Report on Form 8-K dated December 17, 2018.
<u>4.14</u>	Securities Purchase and Registration Rights Agreement, dated as of December 14, 2018, by and between Cryoport, Inc. and Petrichor Opportunities Fund I LP. Incorporated by reference to Exhibit 10.1 of the Company's Current Report on Form 8-K dated December 17, 2018.
<u>5.1</u>	Opinion of Snell & Wilmer L.L.P.
<u>23.1</u>	Consent of KMJ Corbin & Company LLP, Independent Registered Public Accounting Firm.
23.2	Consent of Snell & Wilmer L.L.P. (included in Exhibit 5.1).
<u>24.1</u>	Power of Attorney (included as part of the signature page to this registration statement).

Item 17. Undertakings.

The undersigned registrant hereby undertakes:

- (1) To file, during any period in which offers or sales are being made, a post-effective amendment to this registration statement:
 - (i) To include any prospectus required by Section 10(a)(3) of the Securities Act of 1933;
 - (ii) To reflect in the prospectus any facts or events arising after the effective date of the registration statement (or the most recent post-effective amendment thereof) which, individually or in the aggregate, represent a fundamental change in the information set forth in the registration statement. Notwithstanding the foregoing, any increase or decrease in volume of securities offered (if the total dollar value of securities offered would not exceed that which was registered) and any deviation from the low or high end of the estimated maximum offering range may be reflected in the form of prospectus filed with the Securities and Exchange Commission pursuant to Rule 424(b) if, in the aggregate, the changes in volume and price represent no more than 20 percent change in the maximum aggregate offering price set forth in the "Calculation of Registration Fee" table in the effective registration statement; and
 - (iii) To include any material information with respect to the plan of distribution not previously disclosed in the registration statement or any material change to such information in the registration statement;

Provided, however, that paragraphs (a)(1)(i), (ii) and (iii) do not apply if the information required to be included in a post-effective amendment by those paragraphs is contained in reports filed with or furnished to the Securities and Exchange Commission by the registrant pursuant to Section 13 or Section 15(d) of the Securities Exchange Act of 1934 that are incorporated by reference in the registration statement, or is contained in a form of prospectus filed pursuant to Rule 424(b) that is part of the registration statement.

- (2) That, for the purpose of determining any liability under the Securities Act of 1933, each such post-effective amendment shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial *bona fide* offering thereof.
- (3) To remove from registration by means of a post-effective amendment any of the securities being registered which remain unsold at the termination of the offering.
 - (4) That, for the purpose of determining liability under the Securities Act of 1933 to any purchaser:
 - (A) Each prospectus filed by the registrant pursuant to Rule 424(b)(3) shall be deemed to be part of the registration statement as of the date the filed prospectus was deemed part of and included in the registration statement; and
 - (B) Each prospectus required to be filed pursuant to Rule 424(b)(2), (b)(5) or (b)(7) as part of a registration statement in reliance on Rule 430B relating to an offering made pursuant to Rule 415(a)(1)(i), (vii) or (x) for the purpose of providing the information required by Section 10(a) of the Securities Act of 1933 shall be deemed to be part of and included in the registration statement as of the earlier of the date such form of prospectus is first used after effectiveness or the date of the first contract of sale of securities in the offering described in the prospectus. As provided in Rule 430B, for liability purposes of the issuer and any person that is at that date an underwriter, such date shall be deemed to be a new effective date of the registration statement relating to the securities in the registration statement to which that prospectus relates, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof. Provided, however, that no statement made in a registration statement or prospectus that is part of the registration statement or made in a document incorporated or deemed incorporated by reference into the registration statement or prospectus that is part of the registration statement will, as to a purchaser with a time of contract of sale prior to such effective date, supersede or modify any statement that was made in the registration statement or prospectus that was part of the registration statement or made in any such document immediately prior to such effective date.

- (5) The undersigned registrant hereby undertakes that, for purposes of determining any liability under the Securities Act of 1933, each filing of the registrant's annual report pursuant to Section 13(a) or Section 15(d) of the Securities Exchange Act of 1934 (and, where applicable, each filing of an employee benefit plan's annual report pursuant to Section 15(d) of the Securities Exchange Act of 1934) that is incorporated by reference in the registration statement shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.
- Insofar as indemnification for liabilities arising under the Securities Act of 1933 may be permitted to directors, officers and controlling persons of the registrant pursuant to the foregoing provisions, or otherwise, the registrant has been advised that in the opinion of the Securities and Exchange Commission such indemnification is against public policy as expressed in the Securities Act of 1933 and is, therefore, unenforceable. In the event that a claim for indemnification against such liabilities (other than the payment by the registrant of expenses incurred or paid by a director, officer or controlling person of the registrant in the successful defense of any action, suit or proceeding) is asserted by such director, officer or controlling person in connection with the securities being registered, the registrant will, unless in the opinion of its counsel the matter has been settled by controlling precedent, submit to a court of appropriate jurisdiction the question whether such indemnification by it is against public policy as expressed in the Securities Act of 1933 and will be governed by the final adjudication of such issue.

SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, as amended, the registrant certifies that it has reasonable grounds to believe that it meets all of the requirements for filing on Form S-3 and has duly caused this registration statement to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of Irvine, State of California, on January 28, 2019.

CRYOPORT, INC.

ky: /s/ Robert Stefanovich
Robert Stefanovich
Chief Financial Officer

POWER OF ATTORNEY

The officers and directors of Cryoport, Inc. whose signatures appear below, hereby constitute and appoint Jerrell W. Shelton and Robert Stefanovich, and each of them severally, their true and lawful attorney-in-fact and agent, with full power of substitution, with power to act alone, to sign and execute on behalf of the undersigned any and all amendments to this Registration Statement on Form S-3, including post-effective amendments and any Registration Statement filed pursuant to Rule 462(b) under the Securities Act of 1933, as amended, and each of the undersigned does hereby ratify and confirm all that said attorney-in-fact and agent, or his substitutes, shall do or cause to be done by virtue hereof.

Pursuant to the requirements of the Securities Act of 1933, as amended, this Registration Statement on Form S-3 has been signed by the following persons in the capacities and on the dates indicated.

Signature	Title	Date
/s/ Jerrell W. Shelton Jerrell W. Shelton	Chairman, President and Chief Executive Officer (Principal Executive Officer)	January 28, 2019
/s/ Robert S. Stefanovich Robert S. Stefanovich	Chief Financial Officer, Treasurer and Corporate Secretary (Principal Financial Officer and Principal Accounting Officer)	January 28, 2019
/s/ Richard J. Berman Richard J. Berman	Director	January 28, 2019
/s/ Robert Hariri Robert Hariri, M.D., Ph.D.	Director	January 28, 2019
/s/ Ramkumar Mandalam Ramkumar Mandalam, Ph.D.	Director	January 28, 2019
/s/ Edward J. Zecchini Edward J. Zecchini	Director	January 28, 2019
/s/ Dan Hancock Dan Hancock	Director	January 28, 2019

[Snell & Wilmer L.L.P. Letterhead]

January 28, 2019

Cryoport, Inc. 17305 Daimler Street Irvine, CA 92614

Ladies and Gentlemen:

We have acted as counsel to Cryoport, Inc., a Nevada corporation (the "Company"), in connection with the Company's preparation and filing with the Securities and Exchange Commission (the "Commission") of a Registration Statement on Form S-3 (the "Registration Statement") under the Securities Act of 1933, as amended (the "Securities Act"). The Registration Statement relates to the proposed resale by the selling stockholder named in the prospectus made part of the Registration Statement (the "Selling Stockholder") of up to 2,372,998 shares of the Company's common stock, par value \$0.001 per share ("Common Stock"), comprised of (i) 1,000,000 shares of Common Stock (the "Investor Shares") and (ii) up to 1,372,998 shares of Common Stock (the "Note Shares," and together with the Investor Shares, the "Shares") issuable upon conversion of the Company's outstanding floating rate convertible notes (the "Notes").

This opinion is being furnished in accordance with the requirements of Item 601(b)(5) of Regulation S-K under the Securities Act in connection with the filing of the Registration Statement.

In rendering this opinion, we have examined such matters of fact as we have deemed necessary in order to render the opinion set forth herein, which included examination of the following:

- A. the Company's Amended and Restated Articles of Incorporation, as amended to date, as certified by the Secretary of State of the State of Nevada on January 28, 2019;
- B. the Company's Amended and Restated Bylaws, as certified to us as of the date hereof by an officer of the Company as being complete and in full force and effect as of the date hereof;

Cryoport, Inc. January 28, 2019 Page 2

- C. the Registration Statement, together with the exhibits filed as part thereof or incorporated therein by reference;
- D. the prospectus included in the Registration Statement;
- E. an executed copy of the Securities Purchase and Registration Rights Agreement, dated December 14, 2018, by and among the Company and the Selling Stockholder, relating to the sale of the Investment Shares and the Notes;
- F. the executed copies of the Notes;
- G. the action by written consent of the Company's board of directors provided to us by the Company relating to the adoption, approval, authorization and/or ratification of (i) the Registration Statement; (ii) the SPA and the Notes; (iii) the issuance and sale of the Investment Shares; (iv) the issuance of the Notes and the Note Shares, and other actions with regard thereto;
- H. the Officer's Certificate of Robert Stefanovich, Chief Financial Officer, Treasurer, and Corporate Secretary of the Company (the "Officer's Certificate"); and
- a Certificate of Good Standing issued by the Secretary of State of the State of Nevada dated January 25, 2019, stating that the Company is in good standing and has a legal corporate existence under the laws of the State of Nevada; and
- J. such other documents we deemed necessary in order to issue the opinions below.

In our examination, we have assumed the legal capacity of all natural persons, the genuineness of all signatures, the authenticity of all documents submitted to us as originals, the conformity to original documents of all documents submitted to us as facsimile, electronic, certified or photostatic copies, and the authenticity of the originals of such copies. In making our examination of documents executed or to be executed, we have assumed that the parties thereto, other than the Company, had or will have the power, corporate or other, to enter into and perform all obligations thereunder and have also assumed the due authorization by all requisite action, corporate or other, and the execution and delivery by such parties of such documents and the validity and binding effect thereof on such parties. As to any facts material to the opinions expressed herein that we did not independently establish or verify, we have relied upon statements and representations of officers and other representatives of the Company and others and of public officials.

We are admitted to practice law in the State of California, and we render this opinion only with respect to, and express no opinion herein concerning the application or effect of the laws of any jurisdiction other than the Nevada Revised Statutes, the laws of the State of California, and the federal laws of the United States of America.

In connection with our opinions expressed below, we have assumed that, at or prior to the time of the issuance, and the delivery of any Shares, the Registration Statement will not have been modified or rescinded.

Cryoport, Inc. January 28, 2019 Page 3

In accordance with Section 95 of the American Law Institute's Restatement (Third) of the Law Governing Lawyers (2000), this opinion letter is to be interpreted in accordance with customary practices of lawyers rendering opinions to third parties in connection with the filing of a registration statement with the Commission of the type described herein.

Based upon and subject to the assumptions, qualifications and limitations set forth in this letter, we are of the opinion that:

- 1. The Company is a corporation validly existing, in good standing, under the laws of the State of Nevada.
- 2. The Investment Shares are validly issued, fully paid and non-assessable.
- 3. The Note Shares have been duly authorized and reserved for issuance by the Company and, when issued and delivered by the Company upon conversion of the Notes pursuant to the terms therein, will be validly issued, fully paid and nonassessable.

We consent to the use of this opinion as Exhibit 5.1 to the Registration Statement and further consent to all references to us under the heading "Legal Matters" in the Prospectus. In giving such consent, we do not admit that we come within the category of persons whose consent is required under Section 7 of the Securities Act, or the rules or regulations of the Commission thereunder. In rendering the opinions set forth above, we are opining only as to the specific legal issues expressly set forth therein, and no opinion shall be inferred as to any other matter or matters.

This opinion is intended solely for use in connection with the issuance and sale of the Shares subject to the Registration Statement and is not to be relied upon for any other purpose. This opinion is rendered as of the date first written above and based solely on our understanding of facts in existence as of such date after the aforementioned examination, and we express no opinion as to the effect of subsequent events or changes in law occurring or becoming effective after the date hereof. We assume no obligation to update this opinion or otherwise advise you with respect to any facts or circumstances or changes in law that may hereafter occur or come to our attention (even though the change may affect the legal conclusions stated in this opinion letter).

Very truly yours,
/s/ Snell & Wilmer L.L.P.

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We consent to the incorporation by reference in this Registration Statement on Form S-3 of Cryoport, Inc. of our reports dated March 8, 2018, relating to the consolidated financial statements of Cryoport, Inc. and subsidiaries, and the effectiveness of internal control over financial reporting of Cryoport, Inc. and subsidiaries, appearing in the Annual Report on Form 10-K of Cryoport, Inc. for the year ended December 31, 2017.

We also consent to the reference to us under the heading "Experts" in the prospectus, which is part of such registration statement.

/s/ KMJ Corbin & Company LLP

Costa Mesa, California January 28, 2019