

SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

FORM S-3
REGISTRATION STATEMENT

Under
The Securities Act of 1933

CRYOLIFE, INC.

(Exact Name of Registrant as specified in its charter)

Florida
(State or other jurisdiction of
incorporation or organization)

59-2417093
(I.R.S. Employer
Identification Number)

1655 Roberts Boulevard, NW Kennesaw, Georgia 30144 (770) 419-3355
(Address, including zip code, and telephone number, including area code, of Registrant's principal executive offices)

J. Patrick Mackin, Chairman, President and Chief Executive Officer CryoLife, Inc. 1655 Roberts Boulevard, NW Kennesaw, Georgia 30144 (770) 419-3355
(Name, address, including zip code, and telephone number, including area code, of agent for service)

Copies to:

Jean F. Holloway
General Counsel, Chief Compliance Officer
and Corporate Secretary
CryoLife, Inc.
1655 Roberts Boulevard, NW
Kennesaw, Georgia 30144
Tel: (770) 419-3355

Paul R. Tobias
Vinson & Elkins L.L.P.
2801 Via Fortuna, Suite 100
Austin, Texas 78746
Tel: (512) 542-8400
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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:

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 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, or a smaller reporting company. See the definitions of "large accelerated filer," "accelerated filer" and "smaller reporting company" in Rule 12b-2 of the Exchange Act. (Check one):

- Large accelerated filer Accelerated filer
Non-accelerated filer (Do not check if a smaller reporting company) Smaller reporting company
Emerging growth company

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

CALCULATION OF REGISTRATION FEE

Title of Each Class of Securities to be Registered	Amount to be Registered(1)	Proposed Maximum Offering Price Per Share(2)	Proposed Maximum Aggregate Offering Price(2)	Amount of Registration Fee(3)
Common Stock(4)				
Preferred Stock				
Debt Securities				
Warrants				
Units(5)				

- An indeterminate aggregate initial offering price or number of the securities of each identified class is being registered as may, from time to time, be at indeterminate prices. Separate consideration may or may not be received for securities that are issuable on exercise, conversion or exchange of other securities. In accordance with Rules 456(b) and 457(r), the registrant is deferring payment of all of the registration fee.
- Not applicable pursuant to General Instruction II.D of Form S-3 under the Securities Act.
- In accordance with Rules 456(b) and 457(r) under the Securities Act, the registrant is deferring payment of all of the registration fee. Any registration fees will be paid subsequently on a pay-as-you-go basis in accordance with Rule 457(r).
- In addition to any securities that may be registered hereunder, we are also registering an indeterminate number of shares of common stock as may be issued upon conversion or exercise of the securities issued directly hereunder. No separate consideration will be received for any shares of common stock so issued upon conversion or exercise. The common stock registered hereunder may be sold by us at various times.
- Any securities registered hereunder may be sold separately or as units with other securities registered hereunder. Each unit will be issued under a unit agreement and will represent an interest in two or more securities, which may or may not be separable from one another.

PROSPECTUS

CryoLife, Inc.

Common Stock
Preferred Stock
Debt Securities
Warrants
Units

CryoLife, Inc. (“CryoLife,” “we,” “us” or the “Company”) may from time to time, offer to sell in one or more offerings common stock, preferred stock, debt securities, warrants or units as described in this prospectus. Each time we offer any securities pursuant to this prospectus, we will provide specific information about the offering and the specific terms, amounts and offering prices of the securities being offered in one or more prospectus supplements or free writing prospectuses, which may also add to, update, supplement or clarify information contained in this prospectus. This prospectus may not be used to sell our securities unless accompanied by a prospectus supplement. **We urge you to carefully read this prospectus, any applicable prospectus supplement, any applicable free writing prospectus and any documents we incorporate by reference before you make your investment decision.**

We may offer and sell our securities to or through one or more agents, underwriters, dealers or other third parties or directly to one or more purchasers on a continuous or delayed basis. If we use any agents, underwriters or dealers to sell our securities, we will name them and describe their compensation in a prospectus supplement. The price to the public of our securities and the net proceeds we expect to receive from the sale of such securities will also be set forth in a prospectus supplement.

Our common stock is listed on the New York Stock Exchange under the symbol “CRY.”

Investing in our common stock involves risks. You should consider the risks described under “[Risk Factors](#)” beginning on page 3 of this prospectus, as well as any in an applicable prospectus supplement or free writing prospectus and other information contained or incorporated by reference in this prospectus or any applicable prospectus supplement or free writing prospectus. You should also consider the risks described in the “Risk Factors” sections of our filings with the Securities and Exchange Commission.

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 September 21, 2018

TABLE OF CONTENTS

	Page
ABOUT THIS PROSPECTUS	1
PROSPECTUS SUMMARY	2
RISK FACTORS	3
FORWARD-LOOKING STATEMENTS	4
USE OF PROCEEDS	5
DESCRIPTION OF THE SECURITIES	6
PLAN OF DISTRIBUTION	7
LEGAL MATTERS	9
EXPERTS	9
INFORMATION INCORPORATED BY REFERENCE	9
WHERE YOU CAN FIND MORE INFORMATION	10

No dealer, salesperson or other person is authorized to give any information or to represent anything not contained in this prospectus. You must not rely on any unauthorized information or representations. If you are in a jurisdiction where offers to sell, or solicitations of offers to purchase, the securities offered by this document are unlawful, or if you are a person to whom it is unlawful to direct these types of activities, then the offer presented in this document does not extend to you. The information contained in this document speaks only as of the date of this document, unless the information specifically indicates that another date applies.

ABOUT THIS PROSPECTUS

This prospectus is part of an automatic registration statement that we filed with the Securities and Exchange Commission (the “SEC”) as a “well-known seasoned issuer” as defined in Rule 405 under the Securities Act of 1933, as amended, using a “shelf” registration process. We may sell any combination of the securities described in this prospectus from time to time. The types of securities that we may offer and sell from time to time pursuant to the prospectus are: common stock, preferred stock, debt securities, warrants and units up to an indeterminate total dollar amount.

This prospectus only provides you with a general description of the securities to be offered. Each time we sell securities pursuant to this prospectus, we will describe in a prospectus supplement, which we will deliver with this prospectus, specific information about the offering and the terms of the particular securities offered. In each prospectus supplement we will, among other things, identify type and amount of securities that we will be selling.

We may also authorize one or more free writing prospectuses or prospectus supplements to be provided to you in connection with these offerings. Any related free writing prospectus or prospectus supplement may also add, update or change information contained in this prospectus or in any documents that we have incorporated by reference into this prospectus and, accordingly, to the extent inconsistent, information in this prospectus is superseded by the information in any accompanying prospectus supplement or any related free writing prospectus and any documents.

You should only rely on the information contained or incorporated by reference in this prospectus and any applicable prospectus supplement or any related free writing prospectus that we may authorize to be provided to you. We have not authorized any other person to provide you with different information. If anyone provides you with different or inconsistent information, you should not rely on it. You should not assume that the information in this prospectus or any applicable prospectus supplement or any related free writing prospectus is accurate as of any date other than the date on the cover of the applicable document. Our business, financial condition, results of operations and prospects may have changed since that date.

The registration statement of which this prospectus is a part, including the exhibits to the registration statement, provides additional information about us and the securities. Wherever references are made in this prospectus to information that will be included in a prospectus supplement, to the extent permitted by applicable law, rules or regulations, we may instead include such information or add, update or change the information contained in this prospectus by means of a post-effective amendment to the registration statement of which this prospectus is a part, through filings we make with the SEC that are incorporated by reference into this prospectus or by any other method as may then be permitted under applicable law, rules or regulations.

We urge you to read carefully this prospectus (as supplemented and amended) before deciding whether to purchase any of the shares of our common stock, preferred stock, debt securities, warrants or units being offered.

PROSPECTUS SUMMARY

This summary highlights selected information contained elsewhere in this prospectus. This summary does not contain all the information that you should consider before investing in our common stock. You should read the following summary together with the more detailed information regarding our company, the common stock being registered hereby, and our financial statements and notes thereto incorporated by reference in this prospectus.

Our Company

Overview

CryoLife, Inc. (“CryoLife,” the “Company,” “we,” or “us”), incorporated in 1984 in Florida, is a leader in the manufacturing, processing, and distribution of medical devices and implantable human tissues used in cardiac and vascular surgical procedures focused on aortic repair. Our medical devices and processed tissues primarily include four product families: BioGlue® Surgical Adhesive (“BioGlue”); On-X mechanical heart valves and surgical products; JOTEC endovascular and surgical products; and cardiac and vascular human tissues including the CryoValve® SG pulmonary heart valve (“CryoValve SGPV”) and the CryoPatch® SG pulmonary cardiac patch (“CryoPatch SG”), both of which are processed using our proprietary SynerGraft® technology. Additional products include CardioGenesis cardiac laser therapy, PerClot® and PhotoFix™.

On December 1, 2017 we acquired JOTEC AG, a Swiss public limited corporation, which we converted to JOTEC GmbH and subsequently merged with our Swiss acquisition entity, Jolly Buyer Acquisition GmbH, and its subsidiaries (“JOTEC”) for \$168.8 million in cash and 2,682,754 shares of CryoLife common stock with an estimated value of \$53.1 million as determined on the date of closing, for a total purchase price of approximately \$221.9 million, including debt and cash acquired on the date of closing. We paid part of the cash portion of the purchase price using available cash on hand and financed the remainder of the cash portion of the purchase price and related expenses and refinanced our then existing approximately \$69.0 million term loan, with a new \$255.0 million senior secured credit facility, consisting of a \$225.0 million institutional term loan B and a \$30.0 million undrawn revolving credit facility.

All references to “CryoLife,” the “Company,” “we,” “us” or “our” in this prospectus mean CryoLife, Inc., a Florida corporation, and all entities owned or controlled by CryoLife, Inc., except where it is made clear that the term means only the parent company.

Our principal executive offices are located at 1655 Roberts Boulevard, NW, Kennesaw, Georgia 30144. Our telephone number is (770) 419-3355 and our website is located at www.cryolife.com. Information contained on our website is not part of this prospectus.

CryoLife, the “CryoLife” logo, and other trademarks or service marks of CryoLife appearing in this prospectus are the property of CryoLife.

RISK FACTORS

Investing in our securities involves risks. You should carefully consider the risks described under “Risk Factors” beginning on page 3 of our Annual Report on Form 10-K for the year ended December 31, 2017, filed with the SEC on March 9, 2018, on page 32 of our Quarterly Report on Form 10-Q for the period ended March 31, 2018, filed with the SEC on May 4, 2018 and on page 32 for our Quarterly Report on Form 10-Q for the period ended June 30, 2018, filed with the SEC on August 7, 2018, which are incorporated by reference herein and which may be updated, supplemented or superseded by the risks and uncertainties described in the reports we subsequently file with the SEC, as well as the other information contained or incorporated by reference in this prospectus or any prospectus supplement hereto before making a decision to invest in our securities.

FORWARD-LOOKING STATEMENTS

This prospectus, any prospectus supplement or free writing prospectus and the information incorporated by reference, including the sections entitled “Prospectus Summary” and “Risk Factors,” contain “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”). Forward-looking statements give our expectations or forecasts of future events as of the date of this prospectus, any prospectus supplement or the information incorporated by reference, as applicable. The forward-looking statements reflect the views of our management regarding expectations and projections current as of the date they are made about future events and are based on information available as of the date they are made. Actual results could differ materially from those contained in the forward-looking statements for a variety of reasons, including, but not limited to, those discussed in our Annual Report on Form 10-K for the year ended December 31, 2017, Part I, Item 1A, “Risk Factors,” Quarterly Report on Form 10-Q for the period ended March 31, 2018, Part II, Item 1A, “Risk Factors,” and Quarterly Report on Form 10-Q for period ended June 30, 2018, Part II, Item 1A, “Risk Factors,” as well as those discussed elsewhere in this prospectus. Other unknown or unpredictable factors also could have a material adverse effect on our business, financial condition and results of operations. Accordingly, readers should not place undue reliance on these forward-looking statements. The use of words such as “could,” “may,” “might,” “will,” “would,” “shall,” “should,” “pro forma,” “potential,” “pending,” “intend,” “believe,” “expect,” “anticipate,” “estimate,” “plan” “future,” “assume,” and other expressions generally identify forward-looking statements. In addition, any statements that refer to expectations, projections or other characterizations of future events or circumstances are forward-looking statements. These forward-looking statements are inherently subject to uncertainties, risks and changes in circumstances that are difficult to predict. Except as required by law or otherwise described in this prospectus, we are not under any obligation and do not intend to publicly update or review any of these forward-looking statements, whether as a result of new information, future events or otherwise, even if experience or future events make it clear that any expected results expressed or implied by those forward-looking statements will not be realized. Please carefully review and consider the various disclosures made in this prospectus and in our other filings with the SEC that attempt to advise interested parties of the risks and factors that may affect our business, prospects and results of operations.

USE OF PROCEEDS

The price to the public of our securities and the net proceeds we expect to receive from the sale of such securities will also be set forth in the applicable prospectus supplement. Unless otherwise specified in the applicable prospectus supplement, any proceeds we receive from the sale of the securities to which the prospectus relates will be used for general corporate purposes. We will have significant discretion in the use of any net proceeds we receive, and may invest the net proceeds temporarily until we use them for their stated purpose.

RATIO OF EARNINGS TO FIXED CHARGES

The following table sets forth our ratio of earnings to fixed charges for the periods indicated. The following table is qualified by the more detailed information appearing in the computation table set forth in Exhibit 12.1 to the registration statement of which this prospectus is part and the historical financial statements, including the notes to those financial statements, incorporated by reference in this prospectus.

	<u>Year ended December 31,</u>					<u>Six months</u>
	<u>2013</u>	<u>2014</u>	<u>2015</u>	<u>2016</u>	<u>2017</u>	<u>ended</u>
						<u>June 30,</u>
Ratio of earnings to fixed charges(1)	20.3	7.5	5.8	5.0	1.5	<u>2018</u>
						N/A(2)

- (1) For purposes of computing the ratio of earnings to fixed charges, earnings consist of our net income (loss) before income tax for the period plus fixed charges. Fixed charges consist of interest expense on debt outstanding, amortization of debt discount and capitalized issue costs and the estimated interest portion of rent expense. We have not included a ratio of earnings to combined fixed charges and preferred stock dividends because we do not have any preferred stock outstanding as of the date of this prospectus.
- (2) Earnings were insufficient to cover fixed charges by \$7.0 million for the six-month period ended June 30, 2018.

DESCRIPTION OF THE SECURITIES

We may issue, from time to time, in one or more offerings, the following securities:

- Shares of common stock of the Company;
- Shares of preferred stock of the Company;
- Debt securities, which may be senior or subordinated, and which may be convertible into our common stock or be non-convertible;
- Warrants to purchase from us shares of our common stock or preferred stock or other securities; and
- Units representing two or more of the foregoing securities.

We will set forth in the applicable prospectus supplement and/or free writing prospectus a description of any common stock, debt securities, warrants or units issued by us that may be offered or sold pursuant to this prospectus. The terms of the offering of securities, the initial offering price and the net proceeds to us will be contained in the prospectus supplement, and other offering material, relating to such offer.

Transfer Agent and Registrar

The Transfer Agent and Registrar for the common stock is American Stock Transfer & Trust Company, LLC. It is located at 6201 15 Avenue, Brooklyn, NY 11219, and its telephone number is (718) 921-8124.

PLAN OF DISTRIBUTION

We may sell our securities from time to time in one or more transactions. Dispositions of the securities described herein may be at fixed prices, prevailing market prices at the time of sale, prices related to the prevailing market price, varying prices determined at the time of sale, or negotiated prices. We also may offer and sell, or agree to deliver, our securities pursuant to, or in connection with, any option agreement or other contractual arrangement. We may issue common stock as a dividend or distribution.

The securities being offered by this prospectus may be sold by us using any one or more of the following methods:

- sales on the NYSE or any national securities exchange or quotation service on which our common stock may be listed or quoted at the time of sale;
- to or through underwriters, brokers, dealers or other agents;
- 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 resell a portion of the block as principal to facilitate the transaction;
- 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;
- directly to one or more purchasers, including through privately negotiated transactions;
- short sales;
- through the writing or settlement of options or other hedging transactions, whether through an options exchange or otherwise;
- broker-dealers may agree to sell a specified number of such securities at a stipulated price per share;
- a combination of any such methods of sale; and
- any other method permitted by applicable law.

Unless otherwise indicated in the prospectus supplement, any agent will be acting on a best efforts basis for the period of its appointment.

In addition, we may enter into any derivative or hedging transactions with third parties, or sell securities not covered by this prospectus to third parties in privately negotiated transactions. In connection with such a transaction, the third parties may sell securities covered by and pursuant to this prospectus and an applicable prospectus supplement. If so, the third party may use securities borrowed from us to settle such sales and may use securities received from us to close out any related short positions. We may also loan or pledge securities covered by this prospectus and an applicable prospectus supplement to third parties, who may sell the loaned securities or, in an event of default in the case of a pledge, sell the pledged securities pursuant to this prospectus and the applicable prospectus supplement.

We may sell the securities offered by this prospectus at:

- a fixed price or prices, which may be changed;
- market prices prevailing at the time of sale;
- prices related to such prevailing market prices; or
- negotiated prices.

[Table of Contents](#)

In order to comply with the securities laws of some states, if applicable, the securities may be sold in these jurisdictions only through registered or licensed brokers or dealers. Broker-dealers and agents, and their respective affiliates, may be engaged in transactions with, or perform commercial or investment banking or other services for, us or our subsidiaries or affiliates, in the ordinary course of business.

We will identify the specific plan of distribution, including any underwriters, dealers, agents or direct purchasers, and their compensation in a prospectus supplement. To the extent required, the securities to be sold, the respective purchase prices and public offering prices, the names of any agents, dealers or underwriters and any applicable commissions or discounts with respect to a particular offer will be set forth in an accompanying prospectus supplement or, if appropriate, a post-effective amendment to the registration statement that includes this prospectus.

LEGAL MATTERS

In connection with particular offerings of the securities in the future, and if stated in the applicable prospectus supplements, the validity of those securities will be passed upon for CryoLife by Greenberg Traurig, P.A., Miami, Florida and for any underwriters or agents by counsel named in the applicable prospectus supplement.

EXPERTS

The consolidated financial statements of CryoLife, Inc. appearing in CryoLife, Inc.'s Annual Report (Form 10-K) for the year ended December 31, 2017, and the effectiveness of CryoLife, Inc.'s internal control over financial reporting as of December 31, 2017 have been audited by Ernst & Young LLP, independent registered public accounting firm, as set forth in their reports thereon, included therein, and incorporated herein by reference. Such consolidated financial statements are incorporated herein by reference in reliance upon such reports given on the authority of such firm as experts in accounting and auditing.

The audited consolidated financial statements of JOTEC and its subsidiaries included in Exhibit 99.1 of CryoLife's Current Report on Form 8-K/A filed with the SEC on February 16, 2018 have been incorporated by reference in this prospectus in reliance on the report of KPMG AG Wirtschaftsprüfungsgesellschaft, an independent registered public accounting firm, and upon the authority of such firm as experts in accounting.

INFORMATION INCORPORATED BY REFERENCE

THE SEC ALLOWS US TO "INCORPORATE BY REFERENCE" THE INFORMATION WE FILE WITH THEM, WHICH MEANS THAT WE CAN DISCLOSE IMPORTANT INFORMATION TO YOU BY REFERRING YOU TO THOSE DOCUMENTS. YOU SHOULD RELY ONLY ON THE INFORMATION INCORPORATED BY REFERENCE OR PROVIDED IN THIS PROSPECTUS OR ANY PROSPECTUS SUPPLEMENT. WE HAVE NOT AUTHORIZED ANYONE ELSE TO PROVIDE YOU WITH DIFFERENT INFORMATION OR INFORMATION THAT IS IN ADDITION TO THE INFORMATION PROVIDED IN THIS DOCUMENT AND INCORPORATED BY REFERENCE INTO THIS PROSPECTUS. WE TAKE NO RESPONSIBILITY AND CAN PROVIDE NO ASSURANCE AS TO THE RELIABILITY OF ANY OTHER INFORMATION THAT OTHERS MAY GIVE YOU. YOU SHOULD NOT ASSUME THAT THE INFORMATION IN THIS PROSPECTUS OR ANY PROSPECTUS SUPPLEMENT IS ACCURATE AS OF ANY DATE OTHER THAN THE DATE ON THE FRONT PAGE OF THOSE DOCUMENTS.

The information incorporated by reference is considered to be part of this prospectus, and information that we file later with the SEC will automatically update and supersede information included or previously incorporated by reference in this prospectus from the date we file the document containing such information. Any statement so modified or superseded shall not be deemed, except as so modified or superseded, to constitute a part of this prospectus. Except to the extent furnished and not filed with the SEC pursuant to Item 2.02 or Item 7.01 of Form 8-K (or corresponding information furnished under Item 9.01 or included as an exhibit) or as otherwise permitted by the SEC rules, we incorporate by reference the documents listed below and any future filings we may file with the SEC under Sections 13(a), 13(c), 14 or 15(d) of the Exchange Act from the date of this prospectus to the end of the offering of the applicable securities under this prospectus. Any statements contained in a previously filed document incorporated by reference into this prospectus is deemed to be modified or superseded for purposes of this prospectus to the extent that a statement contained in this prospectus, or in a subsequently filed document also incorporated by reference herein, modifies or supersedes that statement.

The documents we incorporate by reference into this prospectus are:

1. Our Annual Report on Form 10-K for the year ended December 31, 2017, filed with the SEC on March 9, 2018;

[Table of Contents](#)

2. Our Quarterly Reports on Forms 10-Q for the period ended March 31, 2018, filed with the SEC on May 4, 2018, and for the period ended June 30, 2018, filed with the SEC on August 7, 2018;

3. Our Current Reports on Form 8-K, but only to the extent that the information set forth therein is “filed” rather than “furnished” under the SEC rules, filed with the SEC on January 31, 2018, February 12, 2018, February 22, 2018, March 14, 2018, May 25, 2018 and June 20, 2018;

4. The audited consolidated financial statements of JOTEC and its subsidiaries included in Exhibit 99.1 and the unaudited condensed consolidated financial statements of JOTEC and its subsidiaries included in Exhibit 99.2 of CryoLife’s Current Report on Form 8-K/A filed with the SEC on February 16, 2018; and

5. The description of our common stock contained in our registration statement on Form 8-A, filed on July 2, 1997, and any amendment or report filed for the purpose of updating such description, including without limitation, our Amendment No. 1 to Form 8-A/A filed on November 3, 2005.

Documents incorporated by reference are available from us, without charge, excluding all exhibits unless specifically incorporated by reference in the documents. You may obtain documents incorporated by reference in this prospectus by writing to us at the following address or by calling us at the telephone number listed below:

CryoLife, Inc.
Attn: Corporate Secretary
1655 Roberts Boulevard, NW
Kennesaw, Georgia 30144
(770) 419-3355

WHERE YOU CAN FIND MORE INFORMATION

We file annual, quarterly and special reports, proxy statements and other information with the SEC. Our SEC filings are available to the public over the internet from the SEC’s website at www.sec.gov, or our website at www.cryolife.com. You also may read and copy any document we file at the SEC’s Public Reference Room located at 100 F Street, N.E., Washington, D.C. 20549. Please call the SEC at 1-800-SEC-0330 for further information on the Public Reference Room. THE CONTENTS OF OUR WEBSITE ARE NOT INCORPORATED BY REFERENCE IN OR OTHERWISE A PART OF THIS PROSPECTUS.

UNAUDITED PRO FORMA COMBINED CONDENSED CONSOLIDATED FINANCIAL INFORMATION

The acquisition of JOTEC AG, a Swiss public limited corporation, which we converted to JOTEC GmbH and subsequently merged with our Swiss acquisition entity, Jolly Buyer Acquisition GmbH, and its subsidiaries (“JOTEC”), acquired on December 1, 2017, was a significant acquisition to us under Rule 3-15 and 1-02(w) of Regulation S-X under the Securities Act of 1933, as amended. As a result, we have incorporated by reference in this prospectus the historical financial statements of JOTEC and included the following unaudited pro forma combined condensed statements of operations and related notes, which present the historical condensed combined financial information of CryoLife and JOTEC. These statements of operations and related notes have been prepared for illustration purposes only in order to represent the effect of CryoLife’s acquisition of JOTEC, for approximately \$221.9 million in cash and stock, on the combined statements of operations of the two companies for the year ended December 31, 2017. The unaudited pro forma combined condensed consolidated statements of operations reflect the acquisition of JOTEC as if it had occurred on January 1, 2017 (the first day of the Company’s 2017 fiscal year).

These unaudited pro forma combined condensed consolidated statements of operations are based upon the historical consolidated financial statements of CryoLife which were included in its Annual Report on Form 10-K for the year ended December 31, 2017 and JOTEC financial statements for the eleven months ended November 30, 2017. The acquisition was accounted for as a business combination in accordance with the guidance contained in the Financial Accounting Standards Board’s Accounting Standards Codification Topic 805, *Business Combinations* (“ASC 805”). The unaudited pro forma condensed combined financial information gives effect to the acquisition of JOTEC based on the assumptions and adjustments described in the accompanying notes to the unaudited pro forma combined condensed consolidated statements of operations.

On February 16, 2018, the Company filed a Current Report on Form 8-K/A which included the unaudited pro forma combined condensed consolidated statements of operations for the nine months ended September 30, 2017 and the year ended December 31, 2016, which combined the historical statements of operations of CryoLife and JOTEC adjusted to reflect the pro forma effect as if the acquisition of JOTEC had occurred on January 1, 2016 (the first day of the Company’s 2016 fiscal year). These pro forma results were subsequently revised in footnote disclosures reported in the form 10-K for the year ended December 31, 2017. The following unaudited condensed combined statement of operations updates the previously reported unaudited pro forma condensed combined statements of operations for the year ended December 31, 2017. From December 1, 2017 forward, the results of JOTEC are included in the historical results of the Company.

The accompanying unaudited pro forma combined condensed consolidated financial information and the historical consolidated financial information presented therein should be read in conjunction with the historical consolidated financial statements and notes thereto for CryoLife included in its Annual Report on Form 10-K for the year ended December 31, 2017, the audited consolidated financial statements of JOTEC and its subsidiaries for the year ended December 31, 2016 and December 31, 2015 and the unaudited condensed consolidated financial statements of JOTEC and its subsidiaries for the nine months ended September 30, 2017 and September 30, 2016 included in the Current Report on Form 8-K/A noted above.

The unaudited pro forma combined condensed consolidated statements of operations include pro forma adjustments which reflect transactions and events that (a) are directly attributable to the acquisition, (b) are factually supportable, and (c) are expected to have a continuing impact on consolidated results. The pro forma adjustments are described in the accompanying combined notes to the unaudited pro forma combined condensed consolidated statements of operations.

The unaudited pro forma combined condensed consolidated statements of operations do not reflect future events that may occur after the acquisition. The unaudited pro forma combined condensed consolidated statements of operations is provided for informational purposes only and is not necessarily indicative of the

[Table of Contents](#)

results of operations that would have occurred if the acquisition of JOTEC had occurred on January 1, 2017, nor is it necessarily indicative of the Company's future operating results, and does not give effect to the potential impact of anticipated synergies, operating efficiencies, cost savings or transaction and integration costs that may have resulted or may result from the acquisition.

Our preliminary purchase price allocation was made using our best estimates of fair value, which are dependent upon certain valuation and other analyses that are not yet final. Accordingly, the unaudited pro forma purchase price adjustments related to the acquisition are preliminary and subject to further adjustments as additional information becomes available and as additional analyses are performed during the applicable measurement period under ASC 805 (up to one year from the acquisition date). There can be no assurances that any final valuations will not result in material adjustments to our preliminary estimated purchase price allocation.

CryoLife, Inc. and Subsidiaries
UNAUDITED PRO FORMA COMBINED CONDENSED CONSOLIDATED STATEMENTS OF OPERATIONS
Year Ended December 31, 2017
(In Thousands Except Per Share Amounts)

	For the Twelve Months Ended December 31, 2017 CryoLife	For the Eleven Months Ended November 30, 2017 JOTEC	Pro Forma Adjustments(a)	Pro Forma
Products	\$ 119,631	\$ 46,613	\$ —	\$ 166,244
Preservation services	70,071	—	—	70,071
Total revenues	189,702	46,613	—	236,315
Cost of products	29,798	15,312	3,598(b)	48,708
Cost of preservation services	31,262	—	—	31,262
Total costs	61,060	15,312	3,598	79,970
Gross margin	128,642	31,301	(3,598)	156,345
General, administrative, and marketing	101,211	21,021	1,172(c),(d)	123,403
Research and development	19,461	4,899	—	24,360
Operating expenses	120,672	25,920	1,172	147,764
Operating income (loss)	7,970	5,381	(4,770)	8,581
Interest expense	4,881	3,511	9,975(e)	18,366
Interest income	(212)	(898)	—	(1,110)
Other (income) expense, net	(260)	(3,580)	—	(3,840)
Total other expenses (income)	4,409	(968)	9,975	13,416
Income (loss) before income taxes	3,561	6,348	(14,745)	(4,835)
Income tax (benefit) expense	(143)	1,983	(5,323)(f)	(3,483)
Net Income (loss)	\$ 3,704	\$ 4,365	\$ (9,421)	\$ (1,352)
Income Per Common Share—Basic	\$ 0.11			\$ (0.04)
Income Per Common Share—Diluted	\$ 0.11			\$ (0.04)
Weighted Average Common Shares Outstanding				
Basic	33,008		2,459(g)	35,467
Diluted	34,163		2,459(g)	36,622

CRYOLIFE, INC. AND SUBSIDIARIES
NOTES TO UNAUDITED PRO FORMA COMBINED CONDENSED CONSOLIDATED
STATEMENTS OF OPERATIONS
(in thousands)

Description of Transaction and Basis of Presentation

The unaudited pro forma combined condensed consolidated statements of operations are based upon the historical consolidated financial statements of CryoLife, Inc. and its subsidiaries (“CryoLife” or the “Company,”) which were included in its Annual Report on Form 10-K for the year ended December 31, 2017 and JOTEC AG, a Swiss public limited corporation, which we converted to JOTEC GmbH and subsequently merged with our Swiss acquisition entity, Jolly Buyer Acquisition GmbH, and its subsidiaries (“JOTEC”) financial statements for the eleven months ended November 30, 2017. The unaudited pro forma combined condensed consolidated statements of operations reflect the acquisition of JOTEC as if it had occurred on January 1, 2017 (the first day of the Company’s 2017 fiscal year).

The acquisition was accounted for as a business combination in accordance with the guidance contained in the Financial Accounting Standards Board’s Accounting Standards Codification Topic 805, *Business Combinations* (“ASC 805”). The unaudited pro forma condensed combined financial information gives effect to the acquisition of JOTEC based on the assumptions and adjustments described in the accompanying notes to the unaudited pro forma condensed combined financial information. Accordingly, the unaudited pro forma combined condensed consolidated statements of operations have been adjusted to reflect the impact of the preliminary allocation of the purchase price to the assigned value of identifiable net assets acquired based primarily on the Company’s fair value assessment and the assignment of excess purchase price to goodwill.

Pro Forma Adjustments

On December 1, 2017 CryoLife completed its acquisition of 100% of the outstanding equity of JOTEC for \$168.8 million in cash and 2,682,754 shares of CryoLife common stock, with an estimated value of \$53.1 million as determined on the date of the closing, for a total purchase price of approximately \$221.9 million.

On February 16, 2018, the Company filed a Current Report on Form 8-K/A which included the unaudited pro forma combined condensed consolidated statements of operations for the nine months ended September 30, 2017 and the year ended December 31, 2016, which combined the historical statements of operations of CryoLife and JOTEC adjusted to reflect the pro forma effect as if the acquisition of JOTEC had occurred on January 1, 2016 (the first day of the Company’s 2016 fiscal year). The following unaudited condensed combined statements of operations update the previously reported unaudited pro forma condensed combined financial information to the twelve months ended December 31, 2017, and is presented as if the acquisition had occurred on January 1, 2017. From December 1, 2017 forward, the results of JOTEC are included in the historical results of the Company, including the Consolidated Balance Sheets of the company reported in Form 10-K for the year ended December 31, 2017.

The historical financial information of JOTEC was prepared in accordance with GAAP and presented in Euros. The historical financial information was translated from Euros to US dollars using an average historical exchange rate of 1.12 EUR/USD for the eleven months ended November 30, 2017.

CRYOLIFE, INC. AND SUBSIDIARIES
NOTES TO UNAUDITED PRO FORMA COMBINED CONDENSED CONSOLIDATED
STATEMENTS OF OPERATIONS

The following pro forma adjustments are included in the unaudited pro forma combined condensed consolidated statements of operations:

- (a) The preliminary purchase consideration of assets acquired as of December 1, 2017, is as follows (in thousands):

	Opening Balance Sheet
Cash and cash equivalents	\$ 4,089
Receivables	13,204
Inventories	17,341
Intangible assets	115,820
Property and Equipment	12,921
Goodwill	110,100
Other assets	3,893
Debt Acquired	(3,770)
Liabilities assumed	(51,729)
Total Purchase Consideration	<u>\$ 221,869</u>

- (b) Increase in costs of goods sold to reflect the fair value adjustment to inventories.
- (c) The effect of additional depreciation expense resulting from the fair value adjustment to property and equipment.
- (d) Net increase in amortization expense for intangible assets acquired.
- (e) Net increase in interest expense of the debt issued to provide financing for the transaction.
- (f) The effect of the pro forma income statement adjustments on income taxes as calculated using an estimated combined U.S. federal, state and international statutory tax rate of 36.8%.
- (g) The change in weighted average common shares outstanding reflecting the impact of the common shares issued as consideration for the transaction.

CRYOLIFE, INC.

**Common Stock
Preferred Stock
Warrants
Debt Securities
Units**

PROSPECTUS

PART II
INFORMATION NOT REQUIRED IN PROSPECTUS

ITEM 14. OTHER EXPENSES OF ISSUANCE AND DISTRIBUTION.

The following table sets forth the estimated costs and expenses payable by the registrant in connection with the registration and distribution of the securities being registered. The following statement of estimated costs and expenses has been used to demonstrate the expense of an offering and does not represent an estimate of the aggregate amount of securities that may be registered or distributed pursuant to this registration statement because such amount is unknown at this time.

	<u>Amount to be Paid*</u>
SEC registration fee	(1)
Printing fees	(1)
Legal fees and expenses	(1)
Accounting fees and expenses	(1)
Total	<u>(1)</u>

- * In accordance with Rules 456(b) and 457(r), CryoLife is deferring payment of the registration fee for the securities offered by this prospectus.
(1) These fees are calculated based on the securities offered and the number of issuances and accordingly cannot be estimated at this time.

ITEM 15. INDEMNIFICATION OF DIRECTORS AND OFFICERS.

As a corporation incorporated in the State of Florida, we are subject to the Florida Business Corporation Act, or the Florida Act. Section 607.0831 of the Florida Act provides that a director is not personally liable for monetary damages to the corporation or any other person for any statement, vote, decision, or failure to act regarding corporate management or policy unless (1) the director breached or failed to perform his or her duties as a director and (2) the director's breach of, or failure to perform, those duties constitutes (a) a violation of the criminal law, unless the director had reasonable cause to believe his or her conduct was lawful or had no reasonable cause to believe his or her conduct was unlawful, (b) a transaction from which the director derived an improper personal benefit, either directly or indirectly, (c) a circumstance under which the liability provisions of Section 607.0834 are applicable, (d) in a proceeding by or in the right of the corporation to procure a judgment in its favor or by or in the right of a shareholder, conscious disregard for the best interest of the corporation, or willful misconduct, or (e) in a proceeding by or in the right of someone other than the corporation or a shareholder, recklessness or an act or omission which was committed in bad faith or with malicious purpose or in a manner exhibiting wanton and willful disregard of human rights, safety, or property. A judgment or other final adjudication against a director in any criminal proceeding for a violation of the criminal law estops that director from contesting the fact that his or her breach, or failure to perform, constitutes a violation of the criminal law; but does not estop the director from establishing that he or she had reasonable cause to believe that his or her conduct was lawful or had no reasonable cause to believe that his or her conduct was unlawful.

Under Section 607.0850(1) of the Florida Act, a corporation has the power to indemnify any person who was or is a party to any proceeding (other than an action by, or in the right of the corporation), by reason of the fact that he or she is or was a director, officer, employee or agent of the corporation or is or was serving at the request of the corporation as a director, officer, employee or agent of another corporation, partnership, joint venture, trust or other enterprise against liability incurred in connection with such proceeding, including any appeal thereof, if he or she acted in good faith and in a manner he or she reasonably believed to be in, or not opposed to, the best interests of the corporation and, with respect to any criminal action or proceeding, had no reasonable cause to believe his or her conduct was unlawful. The termination of any proceeding by judgment,

[Table of Contents](#)

order, settlement or conviction or upon a plea of nolo contendere or its equivalent shall not, of itself, create a presumption that the person did not act in good faith and in a manner which he or she reasonably believed to be in, or not opposed to, the best interests of the corporation or, with respect to any criminal action or proceeding, has reasonable cause to believe that his or her conduct was unlawful.

Under Section 607.0850(2) of the Florida Act, a corporation has the power to indemnify any person, who was or is a party to any proceeding by or in the right of the corporation to procure a judgment in its favor by reason of the fact that the person is or was a director, officer, employee, or agent of the corporation or is or was serving at the request of the corporation as a director, officer, employee, or agent of another corporation, partnership, joint venture, trust, or other enterprise, against expenses and amounts paid in settlement not exceeding, in the judgment of the board of directors, the estimated expense of litigating the proceeding to conclusion, actually and reasonably incurred in connection with the defense or settlement of such proceeding, including any appeal thereof. Such indemnification shall be authorized if such person acted in good faith and in a manner he or she reasonably believed to be in, or not opposed to, the best interests of the corporation, except that no indemnification shall be made under this subsection in respect of any claim, issue, or matter as to which such person shall have been adjudged to be liable unless, and only to the extent that, the court in which such proceeding was brought, or any other court of competent jurisdiction, shall determine upon application that, despite the adjudication of liability but in view of all circumstances of the case, such person is fairly and reasonably entitled to indemnity for such expenses which such court shall deem proper.

In addition, under Section 607.0850(3) of the Florida Act, to the extent that a director, officer, employee or agent of the corporation has been successful on the merits or otherwise in defense of any proceeding referred to in Sections 607.0850(1) or 607.0850(2) described above, or in defense of any claim, issue or matter therein, he or she shall be indemnified against expenses actually and reasonably incurred by him or her in connection therewith.

Under Section 607.0850(7) of the Florida Act, the indemnification and advancement of expenses provided pursuant to Section 607.0850 of the Florida Act are not exclusive, and a corporation may make any other or further indemnification or advancement of expenses of any of its directors, officers, employees, or agents, under any bylaw, agreement, vote of shareholders or disinterested directors, or otherwise, both as to action in his or her official capacity and as to action in another capacity while holding such office. However, indemnification or advancement of expenses shall not be made to or on behalf of any director, officer, employee or agent if a judgment or other final adjudication establishes that his or her actions, or omissions to act, were material to the cause of action so adjudicated and constitute: (a) a violation of the criminal law, unless the director, officer, employee or agent had reasonable cause to believe his or her conduct was unlawful; (b) a transaction from which the director, officer, employee or agent derived an improper personal benefit; (c) in the case of a director, a circumstance under which the above liability provisions of Section 607.0834 are applicable; or (d) willful misconduct or a conscious disregard for the best interests of the corporation in a proceeding by or in the right of the corporation to procure a judgment in its favor or in a proceeding by or in the right of a shareholder.

Section 607.0850(12) also provides that a corporation shall have the power to purchase and maintain insurance on behalf of any person who is or was a director, officer, employee or agent of the corporation or is or was serving at the request of the corporation as a director, officer, employee, or agent of another corporation, partnership, joint venture, trust, or other enterprise against any liability asserted against the person and incurred by him or her in any such capacity or arising out of his status as such, whether or not the corporation would have the power to indemnify him against such liability under the provisions of Section 607.0850.

Article VII of our Amended and Restated Articles of Incorporation requires that, if in the judgment of the majority of the entire Board of Directors (excluding from such majority any director under consideration for indemnification), the criteria set forth under Sections 607.0850(1) and (2) of the Florida Act have been met, then we shall indemnify our directors and officers in the manner and to the extent contemplated by Sections 607.0850(1) and (2) of the Florida Act.

[Table of Contents](#)

Our Amended and Restated Bylaws similarly provide that, subject to limited exceptions, we must indemnify any of our directors or officers who is or was a party, or is threatened to be made a party, to any proceeding by reason of the fact that such person is or was a director or officer of us or is or was serving at the request of us as a director, officer, employee or agent of another corporation, partnership, joint venture, trust or other enterprise. Indemnification under our Amended and Restated Bylaws is available only if the person to be indemnified acted in good faith and in a manner such person reasonably believed to be in, or not opposed to, our best interests and, with respect to any criminal action or proceeding, had no reasonable cause to believe such person's conduct was unlawful. Additionally, our Amended and Restated Bylaws provide that expenses (including reasonable attorneys' fees, paralegals' fees and court costs) incurred by a director or officer in defending a proceeding to which indemnification applies shall be paid by us in advance of the final disposition thereof upon receipt by us of: (a) a representation by or on behalf of such director or officer that all actions taken by him or her which form the basis of the proceeding met the applicable standard of conduct set forth in our Amended and Restated Bylaws, as applicable; and (b) an undertaking by or on behalf of such director or officer to repay such amount if he or she is ultimately found not to be entitled to indemnification by us pursuant to our Amended and Restated Bylaws.

Our Amended and Restated Bylaws also state that the rights to indemnification are binding contract rights which are binding on the registrant with respect to any conduct that takes place while the provision remains in place, even if the provision is later amended, and that the rights continue as to a person who has ceased to be an officer or director.

We have purchased insurance to insure (i) our directors and officers against damages from actions and claims incurred in the course of their duties, and (ii) us against expenses incurred in defending lawsuits arising from certain alleged acts of our directors and officers.

We have also entered into indemnification agreements with each of our directors and our Chief Executive Officer, Chief Financial Officer, Chief Accounting Officer and three of our Senior Vice Presidents ("Indemnitees"). Pursuant to such agreements, we have agreed to indemnify the Indemnitees to the fullest extent permitted by the Florida Act. The agreements further provide that unless a determination has been made that an Indemnitee is not entitled to indemnification pursuant to such Indemnitee's agreement, all reasonable expenses incurred by or on behalf of such Indemnitee will be advanced from time to time by us to the Indemnitee within twenty (20) days after our receipt of a written request for an advance of expenses by such Indemnitee, whether prior to or after final disposition of a proceeding. The Indemnitee must agree, at the time of such advance, to repay the amounts advanced if it is ultimately determined that such Indemnitee is not entitled to be indemnified under the terms of the agreement. Any advances made will be unsecured, and no interest will be charged on such advances.

It is the position of the SEC that indemnification of directors and officers for liabilities arising under the Securities Act is against public policy and is unenforceable pursuant to Section 14 of the Securities Act.

ITEM 16. EXHIBITS.

The following exhibits are included herein or incorporated herein by reference:

Exhibit Number	Description
1.1†	Form of Underwriting Agreement—Equity
1.2†	Form of Underwriting Agreement—Debt
2.1*	Securities Purchase Agreement, dated as of October 10, 2017, by and among CryoLife, Inc., CryoLife Germany HoldCo GmbH, Jolly Buyer Acquisition GmbH, JOTEC AG, each of the security holders identified therein, and Lars Sunnanvåder as the representative of such security holders. (Incorporated herein by reference to Exhibit 2.1 to the Registrant's Current Report on Form 8-K filed October 11, 2017)

Table of Contents

<u>Exhibit Number</u>	<u>Description</u>
3.1*	Amended and Restated Articles of Incorporation of CryoLife, Inc. (Incorporated herein by reference to Exhibit 3.1 to the Registrant's Current Report on Form 8-K filed November 23, 2015)
3.2*	Amended and Restated By-Laws of CryoLife, Inc. (Incorporated herein by reference to Exhibit 3.2 to the Registrant's Current Report on Form 8-K filed February 22, 2018)
4.1*	Form of Certificate for our Common Stock. (Incorporated herein by reference to Exhibit 4.2 to the Registrant's Annual Report on Form 10-K for the fiscal year ended December 31, 1997)
4.3†	Form of Indenture for Senior Debt Securities
4.4†	Form of Indenture for Subordinated Debt Securities
4.5†	Form of Note
4.6†	Form of Warrant
4.7†	Form of Warrant Agreement
4.8†	Form of Unit Agreement
4.9†	Form of Certificate of Designation
5.1**	Opinion of Greenberg Traurig, P.A.
12.1**	Statement regarding computation of ratio of earnings to fixed charges
23.1**	Consent of Greenberg Traurig, P.A. (included in Exhibit 5.1)
23.2**	Consent of Ernst & Young LLP
23.3**	Consent of KPMG LLP
24.1**	Power of Attorney (contained in the signature page on page II-7)

* Incorporated by reference herein

** Filed herewith

† To be filed by amendment or as an exhibit to a document to be incorporated by reference herein in connection with an offering of the offered securities.

ITEM 17. UNDERTAKINGS.

(a) The undersigned registrant hereby undertakes:

(1) To file, during any period in which offers or sales are being made of securities registered hereby, 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 Commission pursuant to Rule 424(b) if, in the aggregate, the changes in volume and price represent no more than a 20 percent change in the maximum aggregate offering price set forth in the "Calculation of Registration Fee" table in the effective registration statement; and

[Table of Contents](#)

(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), (a)(1)(ii) and (a)(1)(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 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 herein, 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:

(i) 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

(ii) 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 the effective date.

(5) That, for the purpose of determining liability of the registrant under the Securities Act of 1933 to any purchaser in the initial distribution of the securities, the undersigned registrant undertakes that in a primary offering of securities of the undersigned registrant pursuant to this registration statement, regardless of the underwriting method used to sell the securities to the purchaser, if the securities are offered or sold to such purchaser by means of any of the following communications, the undersigned registrant will be a seller to the purchaser and will be considered to offer and sell such securities to such purchaser:

(i) Any preliminary prospectus or prospectus of the undersigned registrant relating to the offering required to be filed pursuant to Rule 424;

(ii) Any free writing prospectus relating to the offering prepared by or on behalf of the undersigned registrant or used or referred to by the undersigned registrant;

(iii) The portion of any other free writing prospectus relating to the offering containing material information about the undersigned registrant or its securities provided by or on behalf of the undersigned registrant; and

[Table of Contents](#)

(iv) Any other communication that is an offer in the offering made by the undersigned registrant to the purchaser.

(b) The undersigned registrant hereby undertakes that, for purposes of determining any liability under the Securities Act of 1934, each filing of the registrant's annual report pursuant to Section 13(a) or Section 15(c) of the Securities Exchange Act of 1933 (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.

(c) 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 Kennesaw, State of Georgia, on September 21, 2018.

CryoLife, Inc.

By: /s/ D. Ashley Lee
Executive Vice President, Chief Operating
Officer, Chief Financial Officer and Treasurer

POWER OF ATTORNEY

KNOW ALL PERSONS BY THESE PRESENT, that each person whose signature appears below hereby constitutes and appoints J. Patrick Mackin and D. Ashley Lee, and each of them, as his or her true and lawful attorney in fact and agent with full power of substitution, for him or her in any and all capacities, to sign any and all amendments to this Registration Statement on Form S-3, including post-effective amendments to this Registration Statement on Form S-3 and any registration statement for an offering pursuant to this Registration Statement on Form S-3 that is to be effective under Rule 462(b) of the Securities Act of 1933, as amended, and to file the same, with all exhibits thereto and other documents in connection therewith, with the Securities and Exchange Commission, granting unto said attorneys in fact, proxies and agents full power and authority to do and perform each and every act and thing requisite and necessary to be done in connection therewith, as fully for all intents and purposes as each of them might or could do in person, hereby ratifying and confirming all that said attorneys in fact, proxies and agents, or their substitute or substitutes, may lawfully do or cause to be done by virtue hereof. This power of attorney shall be governed by and construed with the laws of the State of Delaware and applicable federal securities laws.

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.

<u>Name</u>	<u>Title</u>	<u>Date</u>
<u>/s/ J. Patrick Mackin</u> J. Patrick Mackin	Chairman of the Board, Chief Executive Officer, President and Director (Principal Executive Officer)	September 21, 2018
<u>/s/ D. Ashley Lee</u> D. Ashley Lee	Executive Vice President, Chief Operating Officer, and Chief Financial Officer (Principal Financial Officer)	September 21, 2018
<u>/s/ Amy D. Horton</u> Amy D. Horton	Vice President, Chief Accounting Officer (Principal Accounting Officer)	September 21, 2018
<u>/s/ Thomas F. Ackerman</u> Thomas F. Ackerman	Director	September 21, 2018
<u>/s/ Daniel J. Bevevino</u> Daniel J. Bevevino	Director	September 21, 2018

[Table of Contents](#)

<u>Name</u>	<u>Title</u>	<u>Date</u>
<u>/s/ Marna P. Borgstrom</u> Marna P. Borgstrom	Director	September 21, 2018
<u>/s/ James W. Bullock</u> James W. Bullock	Director	September 21, 2018
<u>/s/ Jeffrey H. Burbank</u> Jeffrey H. Burbank	Director	September 21, 2018
<u>/s/ Ronald D. McCall</u> Ronald D. McCall	Director	September 21, 2018
<u>/s/ Harvey Morgan</u> Harvey Morgan	Director	September 21, 2018
<u>/s/ Jon W. Salveson</u> Jon W. Salveson	Director	September 21, 2018



September 21, 2018

CryoLife, Inc.
1655 Roberts Boulevard, NW
Kennesaw, Georgia 30144

Re: CryoLife, Inc. Shelf Registration Statement on Form S-3

Ladies and Gentlemen:

We have acted as legal counsel for CryoLife, Inc., a Florida corporation (the "Company"), in connection with the preparation of a Shelf Registration Statement on Form S-3, including the prospectus constituting a part thereof (the "Registration Statement"), being filed by the Company with the Securities and Exchange Commission (the "Commission") under the Securities Act of 1933, as amended (the "Securities Act"), relating to an unspecified number or amount of: (i) shares of common stock, par value \$0.01 per share, of the Company ("Common Stock"); (ii) one or more classes or series of shares of preferred stock, par value \$0.01 per share, of the Company ("Preferred Stock"); (iii) one or more series of debt securities of the Company ("Debt Securities"); (iv) warrants to purchase Common Stock, Preferred Stock, Debt Securities or any combination of those securities ("Warrants"); (v) purchase units consisting of Common Stock, Preferred Stock, Debt Securities, Warrants or any combination of those securities ("Units"); and (viii) the Common Stock, Preferred Stock and Debt Securities that may be issued upon the exercise of the Warrants or in connection with the Units, as applicable. The Common Stock, Preferred Stock, Debt Securities, Warrants and Units are referred to herein collectively as the "Securities." The Securities may be issued and sold or delivered from time to time as set forth in the Registration Statement, any amendment thereto, the prospectus contained therein (the "Prospectus") and supplements to the prospectus (the "Prospectus Supplements") and pursuant to Rule 415 under the Securities Act.

The Debt Securities will be issued pursuant to one or more indentures (each, an "Indenture") by and between the Company and a financial institution identified therein as the trustee (the "Trustee").

The Warrants will be issued under one or more Warrant Agreements (each, a "Warrant Agreement"), each to be between the Company and a counterparty or counterparties identified therein (each, a "Counterparty"). The Units will be issued under a unit agreement (each, a "Unit Agreement"), each to be between the Company and a Counterparty.

In connection with our representation of the Company, and as a basis for the opinions hereinafter set forth, we have examined originals, or copies certified or otherwise identified to our satisfaction, of the following:

- (1) the Registration Statement;
- (2) the Company's Articles of Incorporation, as amended to the date hereof (the "Charter");
- (3) the Company's Bylaws, as amended to the date hereof (the "Bylaws"); and
- (4) such other documents and records and other certificates and instruments and matters of law as we have deemed necessary or appropriate to express the opinions set forth below, in each case subject to the assumptions, limitations and qualifications stated herein.

In rendering the opinions set forth below, we have assumed the genuineness of all signatures, the legal capacity of natural persons, the authenticity of all documents submitted to us as originals, the conformity to original documents of all documents submitted to us as duplicates or certified or conformed copies and the authenticity of the originals of such latter documents. We have also assumed that (i) at the time of execution, authentication, issuance and delivery of the Debt Securities, the applicable Indenture will be the valid and legally binding obligation of the Trustee, (ii) at the time of execution, countersignature, issuance and delivery of any Warrants, each Warrant Agreement will be the valid and legally binding obligation of each Counterparty thereto and (iii) at the time of execution, countersignature, and issuance and delivery of any Units, each Unit Agreement will be the valid and legally binding obligation of each Counterparty thereto.

As to matters of fact material to this opinion, we have relied to the extent we deemed reasonably appropriate upon representations or certificates of officers or directors of the Company, without independently verifying the accuracy of such documents, records and instruments.

In connection with the issuance of the Debt Securities, we have assumed further that (i) at the time of the execution and delivery of an Indenture, such Indenture will have been duly authorized, executed and delivered by the Company, (ii) at the time of execution, authentication, issuance and delivery of the Debt Securities, such Debt Securities will have been duly authorized, executed and delivered by the Company, and (iii) the execution, delivery and performance by the Company of each Indenture and the Debt Securities, as the case may be, will not violate the laws of any jurisdiction (provided that as to the laws of the State of Florida and the federal laws of the United States we make no such assumption).

In connection with the issuance of Warrants, we have assumed further that (i) at the time of execution, countersignature, issuance and delivery of any Warrant Agreement, such Warrant Agreement will have been duly authorized, executed and delivered by the Company, and (ii) the execution, delivery and performance by the Company of such Warrant Agreement will not violate the laws of any jurisdiction (provided that as to the laws of the State of Florida and the federal laws of the United States we make no such assumption).

In connection with the issuance of Units, we have assumed further that (i) at the time of execution, countersignature, issuance and delivery of any Unit Agreement, such Unit Agreement will have been duly authorized, executed and delivered by the Company, and (ii) the execution, delivery and performance by the Company of such Unit Agreement will not violate the laws of any jurisdiction (provided that as to the laws of the State of Florida and the federal laws of the United States we make no such assumption).

We have further assumed that: (i) the Registration Statement and any amendments thereto will be effective under the Securities Act, that no stop orders will have been issued by the Commission with respect to the Registration Statement and that the Registration Statement will comply with all applicable laws at the time the Securities are offered or issued as contemplated by the Registration Statement; (ii) an appropriate Prospectus Supplement, free writing prospectus or term sheet relating to the Securities offered thereby will have been prepared and filed with the Commission in compliance with the Securities Act and will comply with all applicable laws at the time the Securities are offered or issued as contemplated by the Registration Statement; (iii) all Securities will be issued and sold in compliance with the applicable provisions of the Securities Act, the Trust Indenture Act of 1939, as amended, and the securities or blue sky laws of various states and in the manner stated in the Registration Statement and the applicable Prospectus Supplement; (iv) any purchase, underwriting or similar agreement relating to Securities being offered will have been duly authorized, executed and delivered by the Company and the other parties thereto; and (v) in connection with the issuance of any Securities, an adequate number of authorized and unissued shares of Common Stock or Preferred Stock, as applicable, will be available for issuance under the Charter, as then in effect.

Based upon and subject to the foregoing, and subject to the assumptions, limitations and qualifications stated herein, we are of the opinion that:

- (1) With respect to the Common Stock, assuming (i) the taking by the Company's board of directors (the "Board") of all necessary corporate action to authorize and approve the issuance of the Common Stock and (ii) the due issuance and delivery of the Common Stock upon payment therefor in accordance with the applicable definitive purchase, underwriting or similar agreement, or the Prospectus or a Prospectus Supplement approved by the Board, the Common Stock will be validly issued, fully paid and nonassessable.

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- (2) With respect to the Preferred Stock, assuming (i) the taking by the Board of all necessary corporate action to authorize and approve the issuance and terms of the Preferred Stock and the terms of the offering thereof, (ii) the due filing of the applicable articles of amendment with the Florida Department of State, setting forth the terms of such Preferred Stock and (iii) the due issuance and delivery of the Preferred Stock upon payment therefor in accordance with the applicable definitive purchase, underwriting or similar agreement, or the Prospectus or a Prospectus Supplement approved by the Board, the Preferred Stock will be validly issued, fully paid and nonassessable.
 - (3) With respect to the Debt Securities, assuming (i) the taking of all necessary corporate action to approve the issuance and terms of the Debt Securities, the terms of the offering thereof and related matters by the Board and (ii) the due execution, authentication, issuance and delivery of such Debt Securities, upon payment of the consideration therefor provided for in the applicable definitive purchase, underwriting or similar agreement, or the Prospectus or a Prospectus Supplement approved by the Board, and otherwise in accordance with the provisions of the applicable Indenture and such agreement, such Debt Securities will constitute valid and legally binding obligations of the Company, enforceable against the Company in accordance with their respective terms.
 - (4) With respect to the Warrants, assuming (i) the taking of all necessary corporate action by the Board to approve the execution and delivery of each Warrant Agreement and (ii) the due execution, countersignature, issuance and delivery of such Warrant Agreement upon payment of the consideration therefor provided for in the applicable definitive purchase, underwriting or similar agreement, or the Prospectus or a Prospectus Supplement approved by the Board and otherwise in accordance with the provisions of the applicable Warrant Agreement and such agreement, such Warrants will constitute valid and legally binding obligations of the Company enforceable against the Company in accordance with their terms.
 - (5) With respect to the Units, assuming (i) the taking of all necessary corporate action by the Board to approve (x) the execution and delivery of the applicable Unit Agreements and (y) any Securities to be issued separately or as part of any such Units (ii) the due execution, countersignature, issuance and delivery of such Unit Agreements upon payment of the consideration therefor provided for in the applicable definitive purchase, underwriting or similar agreement, or the Prospectus or a Prospectus Supplement approved by the Board and otherwise in accordance with the provisions of the applicable Unit Agreements and such agreement, such Units will constitute valid and legally binding obligations of the Company enforceable against the Company in accordance with their respective terms.

The opinions set forth above are subject to (i) the effects of bankruptcy, insolvency, fraudulent conveyance, reorganization, moratorium and other laws now or hereafter in effect relating to or affecting creditors' rights generally, (ii) the effects of general equitable principles, whether enforcement is considered in a proceeding in equity or law, (iii) an implied covenant of good faith and fair dealing, (iv) the discretion of the court before which any proceeding for enforcement may be brought and (v) the unenforceability under certain circumstances under law or court decisions of provisions providing for the indemnification of or contribution to a party with respect to a liability where such indemnification or contribution is contrary to the public policy.

This opinion letter is limited to the matters stated herein, and no opinions may be implied or inferred beyond the matters expressly stated herein. We assume no obligation to supplement this opinion if any applicable law changes after the date hereof or if we become aware of any fact that might change the opinion expressed herein after the date hereof.

We do not express any opinion herein concerning any law other than the laws of the State of Florida and the federal laws of the United States.

We hereby consent to the filing of this opinion as an exhibit to the Registration Statement and to the use of the name of our firm therein. In giving this consent, we do not admit that we are within the category of persons whose consent is required by Section 7 of the Securities Act.

Very truly yours,

GREENBERG TRAURIG, P.A.

By: /s/ Drew M. Altman, Esq.

Drew M. Altman, Esq.

CryoLife, Inc.

Statement Regarding Computation of Earnings to Fixed Charges

(In thousands, except ratios)

The following table sets forth our ratio of earnings to fixed charges and our ratio of earnings to fixed charges for the years ended December 31, 2013, 2014, 2015, 2016, 2017 and for the six months ended June 30, 2018. As the ratios of earnings to fixed charges and earnings to combined fixed charges indicate less than one-to-one coverage for the six months ended June 30, 2018, we have provided the coverage deficiency amounts for that period. Earnings are the sum of the loss from operations before income taxes, plus fixed charges. Fixed charges are comprised of interest expense on debt outstanding, amortization of debt discount and capitalized issue costs and the estimated interest portion of rent expense.

	Six Months Ended June 30,		Year Ended December 31,			
	2018	2017	2016	2015	2014	2013
Income (Loss) before income taxes	\$ (7,040)	\$ 3,561	\$18,412	\$5,868	\$ 8,703	\$23,292
Add back : Fixed charges	8,819	6,665	4,658	1,255	1,409	1,266
Earnings as defined	1,779	10,226	23,070	7,123	10,112	24,558
Fixed charges:						
Interest expense and other debt related costs	7,759	5,020	3,203	115	393	268
Estimated interest portion of rental expense	1,060	1,645	1,455	1,140	1,016	998
Total fixed charges	\$ 8,819	\$ 6,665	\$ 4,658	\$1,255	\$ 1,409	\$ 1,266
Ratio of earnings to fixed charges	N/A	1.5	5.0	5.8	7.5	20.3
Deficiency of earnings to cover fixed charges	\$ (7,040)	N/A	N/A	N/A	N/A	N/A

Consent of Independent Registered Public Accounting Firm

We consent to the reference to our firm under the caption “Experts” in this Registration Statement (Form S-3) and related Prospectus of CryoLife, Inc. for the registration of common stock, preferred stock, debt securities, warrants and units and to the incorporation by reference therein of our reports dated March 9, 2018, with respect to the consolidated financial statements of CryoLife, Inc., and the effectiveness of internal control over financial reporting of CryoLife, Inc., included in its Annual Report (Form 10-K) for the year ended December 31, 2017, filed with the Securities and Exchange Commission.

/s/ Ernst & Young LLP

Atlanta, Georgia
September 21, 2018

Consent of Independent Registered Public Accounting Firm

The Management Board (“Geschäftsführung”)
Jolly Buyer Acquisition GmbH (formerly Jotec AG):

We consent to the use of our report incorporated by reference herein and to the reference to our firm under the heading “Experts” in the prospectus.

/s/ KPMG AG Wirtschaftsprüfungsgesellschaft

Munich, Germany
September 21, 2018