BIOLIFE SOLUTIONS INC
Form 10-K
March 09, 2018

UNITED STATES

SECURITIES AND EXCHANGE COMMISSION

Washington, DC 20549

FORM 10-K

(Mark One)

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

For the year ended December 31, 2017

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

For the transition period from to

Commission File Number 001-36362

BioLife Solutions, Inc.

(Exact name of registrant as specified in its charter)

DELAWARE	**94-3076866**
(State or other jurisdiction of incorporation or organization)	*(IRS Employer Identification No.)*

3303 MONTE VILLA PARKWAY, SUITE 310, BOTHELL, WASHINGTON, 98021

(Address of registrant's principal executive offices, Zip Code)

(425) 402-1400

(Telephone number, including area code)

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

COMMON STOCK, $0.001 PAR VALUE

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

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

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

Indicate by check mark whether the registrant has submitted electronically and posted on its corporate website, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T (S232.405 of this chapter) during the preceding 12 months (or for such shorter period that the Registrant was required to submit and post said files). Yes þ No ¨

Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K is not contained herein, and will not be contained, to the best of the registrant's knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or any amendment to this Form 10-K. ¨

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

Large accelerated filer ¨ Accelerated filer ¨ Non-accelerated filer ¨ Smaller reporting company þ

Emerging Growth Company ¨

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

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

As of the registrant's most recently completed second fiscal quarter, the aggregate market value of common equity held by non-affiliates was $15,192,728.

As of February 28, 2018, 14,120,998 shares of the registrant's common stock were outstanding.

DOCUMENTS INCORPORATED BY REFERENCE

The information required by Part III of this Report, to the extent not set forth herein, is incorporated herein by reference from the registrant's definitive proxy statement relating to the Annual Meeting of Shareholders to be held in 2018, which definitive proxy statement shall be filed with the Securities and Exchange Commission within 120 days after the end of the fiscal year to which this Report relates.

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PART I

ITEM 1. BUSINESS

References in this Form 10-K to "BioLife", the "Company," "we," "us" or "our" refer to BioLife Solutions, Inc. The informa in this Annual Report on Form 10-K contains certain forward-looking statements, including statements related to our products, customers, regulatory approvals, markets for our products, future financial and operational performance, capital requirements, intellectual property, suppliers, joint venture partners, controlling shareholders and trends in our business that involve risks and uncertainties. Our actual results may differ materially from the results discussed in the forward-looking statements. Factors that might cause such a difference include those discussed in "Business," "Risk Factors" and "Management's Discussion and Analysis of Financial Condition and Results of Operations," as well as those discussed elsewhere in this Annual Report on Form 10-K.

Except as required by applicable law, including the securities laws of the United States, we undertake no obligation to publicly update or revise any forward-looking statements, whether as a result of new information, future events or otherwise. You are cautioned not to unduly rely on such forward-looking statements when evaluating the information presented in this Report

We were incorporated in Delaware in 1987 under the name Trans Time Medical Products, Inc. In 2002, the Company, then known as Cryomedical Sciences, Inc., and engaged in manufacturing and marketing cryosurgical products, completed a merger with our wholly-owned subsidiary, BioLife Solutions, Inc., which was engaged as a developer and marketer of biopreservation media products for cells and tissues. Following the merger, we changed our name to BioLife Solutions, Inc.

For a summary of recent developments, see "Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations."

Business Overview

We develop, manufacture and market a portfolio of biopreservation tools for cells, tissues, and organs, including proprietary clinical grade cell and tissue hypothermic storage and cryopreservation freeze media.

Our products are used in basic and applied research on, and commercialization of, new biologic based therapies by maintaining the health and function of biologic source material and finished products during manufacturing, distribution, and patient delivery.

Our product offerings include:

·Patented hypothermic storage and cryopreservation freeze media products for cells, tissues, and organs
·Generic blood stem cell freezing and cell thawing media products
·Custom product formulation and custom packaging services
·Contract aseptic manufacturing formulation, fill, and finish services of liquid media products

Our proprietary, clinical grade HypoThermosol ® FRS and CryoStor ® biopreservation media products are marketed to the regenerative medicine, biobanking, drug discovery markets including hospital-based stem cell transplant centers, pharmaceutical companies, cord blood and adult stem cell banks, hair transplant centers, and suppliers of cells to the drug discovery, toxicology testing and diagnostic markets, including private and public cell therapy companies. All of our biopreservation media products are serum-free and protein-free, fully defined, and are manufactured under current Good Manufacturing Practices (cGMP) using United States Pharmacopia (USP)/Multicompendial or the highest available grade components.

Our patented biopreservation media products are formulated to reduce preservation-induced, delayed-onset cell damage and death. Our platform enabling technology provides our customers significant shelf life extension of biologic source material and final cell products, and also greatly improves post-preservation cell and tissue viability and function. We estimate our products have been incorporated in over 275 regenerative medicine applications, including numerous chimeric antigen receptor (CAR) and other T cell receptor (TCR) types.

On December 31, 2016, we restructured our biologistex CCM, LLC joint venture (“biologistex” or “SAVSU”) with Savsu Technologies, LLC (“STLLC”), whereby we contributed certain assets, including our outstanding loan owed by biologistex, and STLLC contributed certain assets, including all cold chain management intellectual property, into SAVSU. The new venture, SAVSU, is in the business of acquiring, developing, maintaining, owning, operating, leasing and selling an integrated platform of a cloud-based information service and precision thermal shipping products. Prior to the restructuring, we owned a 52% ownership interest in biologistex. As a result for consideration given by both parties, we owned a 45% interest in SAVSU, which was subsequently scheduled to be reduced to 25% on December 31, 2018. In addition, we agreed to provide certain sales and marketing services to SAVSU, in exchange for a commission on Company generated revenue. On January 22, 2018, as a result of SAVSU signing a global distribution agreement with World Courier, we amended our agreement with SAVSU to fix our equity position at 35%, prior to any dilution created by financing activities post December 31, 2016, and terminated the sales and marketing services agreement.

See our 2016 10-K “Item 7. Management’s Discussion and Analysis of Financial Condition and Results of Operations” for additional details.

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Products and Services Overview

Biopreservation Media

Stability (shelf life) and functional recovery are crucial aspects of academic research and clinical practice in the biopreservation of biologic-based source material, intermediate derivatives, and isolated/derived/expanded cellular products. Limited stability is especially critical in the regenerative medicine field, where harvested cells and tissues, if not maintained appropriately at normothermic body temperature (98.6ºF/37ºC) or stored in a hypothermic state in an effective preservation medium, will lose viability over time. Chilling (hypothermia) is used to reduce metabolism and delay degradation of harvested cells, tissues, and organs. However, subjecting biologic material to hypothermic environments induces damaging molecular stress and structural changes. Although cooling successfully reduces metabolism (i.e., lowers demand for energy), various levels of cellular damage and death occur when using suboptimal methods. Traditional preservation media range from simple “balanced salt” (electrolyte) formulations to complex mixtures of electrolytes, energy substrates such as sugars, osmotic buffering agents and antibiotics. The limited stability which results from the use of these traditional biopreservation media formulations is a significant shortcoming that our optimized products address with great success.

Our scientific research activities over the last 20+ years enabled a detailed understanding of the molecular basis for the hypothermic and cryogenic (low-temperature induced) damage/destruction of cells through apoptosis and necrosis. This research led directly to the development of our HypoThermosol® FRS and CryoStor® technologies. Our patented preservation media products are specifically formulated to:

·Minimize cell and tissue swelling
·Reduce free radical levels upon formation
·Maintain appropriate low temperature ionic balances
·Provide regenerative, high energy substrates to stimulate recovery upon warming
·Avoid the creation of an acidic state (acidosis)
·Inhibit the onset of apoptosis and necrosis

A key feature of our preservation media products is their “fully-defined” profile. All of our cGMP products are serum-free, protein-free and are formulated and filled using aseptic processing, utilizing USP/Multicompendial grade or highest quality available synthetic components. All of these features benefit prospective customers by facilitating the qualification process required to incorporate our products into their regulatory filings and hence patient delivery processes.

The results of independent testing demonstrate that our biopreservation media products significantly extend shelf-life and improve cell and tissue post-thaw viability and function, which may, in turn, improve clinical and commercial outcomes for existing and new cell and tissue therapy applications. Our products have demonstrated improved biopreservation outcomes for a broad array of cell and tissue types including stem cells isolated from umbilical and peripheral blood, bone marrow, adipose tissue, liver, tendon, and umbilical cord tissue, and also for induced pluripotent stem cells including hepatocytes, endothelial cells, and neuronal cells, hepatocytes isolated from non-transplantable livers, chondrocytes isolated from cartilage, and dermal fibroblasts and muscle cells isolated from tissue biopsies.

Competing biopreservation media products are often formulated with simple isotonic media cocktails, animal serum, potentially a single sugar or human protein. A key differentiator of our proprietary HypoThermosol FRS formulation is the engineered optimization of the key ionic component concentrations for low temperature environments, as opposed to normothermic body temperature around 37°C, as found in culture media or saline-based isotonic formulas. Competing cryopreservation freeze media is often comprised of a single permeating cryoprotectant such as dimethyl sulfoxide (“DMSO”). Our CryoStor formulations incorporate multiple permeating and non-permeating cryoprotectant agents, which allow for multiple mechanisms of protection and reduces the dependence on a single cryoprotectant.

Across a broad spectrum of cell and tissue types, our products have proven more effective in reducing post-preservation and post-thaw necrosis and apoptosis as compared to commercial and home-brew isotonic and extracellular formulations. This results in greatly extended shelf life and improved post-preservation viability.

Biopreservation Media Opportunity

According to Global Market Insights, “Biopreservation Market Size” published in September 2016, the total biopreservation market is expected to be $9.7 billion by 2024, with our current addressable media market expected to be $1.3 billion by 2024. Our current addressable portion of the market is the demand for reagents used to store, ship and freeze source material and manufactured doses of cell-based products and therapies.

Regenerative Medicine

The emerging field of regenerative medicine is unique in its aim to augment, repair, replace or regenerate organs and tissue that have been damaged by disease, injury or even the natural aging process. This rapidly evolving, interdisciplinary field is transforming healthcare by translating fundamental science into a variety of regenerative technologies including biologics, chemical compounds, materials and devices. It differs from other fields of medicine in the array of disciplines it brings together and in its ability to create or harness the body’s innate healing capacity.

We continue to educate the regenerative medicine market about the impact of effective biopreservation on the ability to create commercially viable manufactured products with participation in scientific conferences and industry trade events by exhibiting, presenting scientific and business lectures, and sponsoring industry association events. We are a corporate or affiliate member of the Alliance for Regenerative Medicine, the BEST Collaborative, and the International Society for Cellular Therapy.

We have secured a valuable position as a supplier of critical reagents to several commercial companies and estimate that our biopreservation media products are incorporated in over 275 applications for new cell and tissue-based regenerative medicine products and therapies. A significant number of applications involve CAR-T cells and other types of T cells and mesenchymal stem cells targeting blood cancers, solid tumors and other leading causes of death and disability. We estimate that annual revenue from each application in which our products are used could range from $0.5 million to $2.0 million, if such application is approved and our customer commences large scale commercial manufacturing of the biologic based therapy.

Drug Discovery

Our customers in the drug screening market are pharmaceutical companies that grow and preserve various cell types to measure pharmacologic effects and toxicity of new drug compounds, and also cell suppliers that provide preserved live cells for end-user testing in pharmaceutical companies. Our products specifically address this need by enhancing yield, viability and functionality of previously preserved cells.

Biobanking

The biobanking industry includes public and private cord blood banks, adult stem cell banks, tissue banks, hair transplant centers, cryopreservation of platelets and biorepositories. To continue to generate awareness of the need for effective preservation, we are a sponsor and member of the AABB and the Cord Blood Association. We also provide expertise when needed to the top biobanking enterprises.

Principal Products

HypoThermosol® FRS biopreservation media is a novel, engineered, optimized hypothermic storage and shipping media product. This proprietary, optimized formulation mitigates temperature-induced molecular cell stress responses that occur during chilling and re-warming of biologics, intermediate products, and final cell products intended for research and clinical applications. Serum-free, protein-free HypoThermosol FRS is designed to provide maximum storage and shipping stability for biologics at 2° to 8°C. HypoThermosol FRS is manufactured under cGMP and is tested to USP <71> Sterility and USP <85> Endotoxin standards.

CryoStor® cryopreservation freeze media products have been designed to mitigate temperature-induced molecular cell stress responses during freezing and thawing. CryoStor proprietary freeze media products are intended for

cryopreservation of biologics at subzero temperatures (most often utilized within the range of -80 to -196°C). All CryoStor products are pre-formulated with USP/EP grade DMSO, a permeating cryoprotective agent which helps mitigate damage from the formation of intracellular and extracellular ice. CryoStor is offered in several packages and pre-formulated with DMSO in final concentrations of 2%, 5%, and 10%. CryoStor is manufactured under cGMP and is tested to USP <71> Sterility and USP <85> Endotoxin standards.

BloodStor® freeze media is a series of generic cGMP freeze media products used to cryopreserve stem and other cells isolated from umbilical cord blood, peripheral blood, and bone marrow where the processing methods require addition of high concentration DMSO. BloodStor 55-5 is pre-formulated with 55% (w/v) DMSO USP/EP, 5% (w/v) Dextran-40 USP/EP, and Water for Injection (WFI) quality water. BloodStor 100 contains 100% (w/v) DMSO USP/EP. BloodStor 27 NaCl is pre-formulated with 27% (w/v) DMSO in saline USP-grade components and Water for Injection (WFI) quality water. BloodStor is manufactured under cGMP and tested to USP <71> Sterility and USP <85> Endotoxin standards.

Cell Thawing Media provides Dextran and saline for washing cryopreserved cells and tissues to dilute or remove cryoprotectants. Cell thawing media is pre-formulated with 10% Dextran 40 in 0.9% NaCl and 10% Dextran 40 in 5% Dextrose.

Competition

Biopreservation Media

We believe that in-house formulated biopreservation media, whereby the user purchases raw ingredients and manually mixes the ingredients, satisfies the large majority of the annual worldwide demand. Commercial competitors, in most cases, are supplying isotonic, non-optimized preservation media and include VWR, Sigma-Aldrich, Lonza, Life Technologies, STEMCELL Technologies, and several smaller companies. Several of our competitors also distribute our premium products. These and other companies may have developed or could in the future develop new technologies that compete with our products or even render our products obsolete.

We believe that our products offer significant advantages over in-house formulations including, time saving, improved quality of components, more rigorous quality control release testing, and improved preservation efficacy. We believe that a company's competitive position in the markets we compete in is determined by product function, product quality, speed of delivery, technical support, price, and distribution capabilities. Our customers are diverse and may place varying degrees of importance on the competitive attributes listed above. While it is difficult to rank these attributes for all our customers in the aggregate, we believe we are well positioned to compete in each category. We expect competition to intensify with respect to the areas in which we are involved as the market expands and technical advances are made and become more widely known.

BUSINESS OPERATIONS

Sales and Marketing

We market and sell our products directly using our sales force and through our website at www.biolifesolutions.com. Our products are also marketed and distributed by STEMCELL Technologies, Sigma-Aldrich, and several other regional distributors under non-exclusive agreements. We are committed to becoming and remaining a trusted, critical supplier to our customers. This requires us to employ scientific team members in sales and support roles. Our technical application support team consists of individuals with extensive experience in cell processing, biopreservation, and cryobiology.

In each of the years 2017 and 2016, we derived approximately 12% of our revenue from our relationship with one distributor of our products.

At December 31, 2017, two customers accounted for 41% of gross accounts receivable.

Manufacturing and Distribution

We maintain and operate two independent cGMP clean room production suites for our biopreservation media products. Since December 2009, our quality management system (QMS) has remained certified to ISO 13485:2003. Our QMS is compliant with applicable sections of 21 CFR Part 820 - Quality System Regulation for Good Manufacturing Practice of medical devices, 21 CFR Parts 210 and 211 covering GMP for Aseptic Production, Volume 4, EU Guidelines, Annex 1 for the Manufacture of Sterile Medicinal Products, ISO 13408 for aseptic processing of healthcare products, and ISO 14644, clean rooms and associated controlled environments. We rely on outside

suppliers for all of our manufacturing supplies, parts and components. To date, we have not experienced significant difficulties in obtaining raw materials for the manufacture of our biopreservation media products.

Support

We provide product support through a combination of channels including phone, chat, web, social media, and email. These support services are delivered by our customer care and scientific teams. These teams are responsible for providing timely, high-quality technical expertise on all our products.

Product Approval Regulation

None of our products are subject to any specific United States Food and Drug Administration (“FDA”) or other non-US pre-market approval for drugs, devices, or biologics. We are not required to sponsor formal prospective, controlled clinical-trials in order to establish safety and efficacy. However, to support our current and prospective clinical customers, we manufacture and release our products in compliance with cGMP and other relevant quality standards.

To assist customers with their regulatory applications, we maintain Type II Master Files at the FDA for CryoStor®, HypoThermosol® FRS, and our Cell Thawing Media products, which provide the FDA with information regarding our manufacturing facility and process, our quality system, and stability and safety testing that has been performed. Customers engaged in clinical applications may notify the FDA of their intention to use our products in their product development and manufacturing process by requesting a cross-reference to our master files.

There can be no assurance that we will not be required to obtain approval from the FDA or foreign regulatory authorities prior to marketing any of our products in the future.

Principal Offices

Our principal executive offices are located at 3303 Monte Villa Parkway, Suite 310, Bothell, Washington 98021 and the telephone number is (425) 402-1400. Information about us is available on our website http://www.biolifesolutions.com. The information contained on our website or that can be accessed through our website does not constitute part of this annual report and is not incorporated in any manner into this annual report.

Intellectual Property

Currently, we have five issued and unexpired U.S. patents, two issued Australian patents, one issued European patent, one issued Japanese patent, and several pending patent applications. We have also obtained certain trademarks and tradenames for our products to distinguish our genuine products from our competitors' products and we maintain certain details about our processes, products, and strategies as trade secrets. While we believe that the protection of patents and trademarks is important to our business, we also rely on a combination of trade secrets, nondisclosure and confidentiality agreements, scientific expertise and continuing technological innovation to maintain our competitive position. Despite these precautions, it may be possible for unauthorized third parties to copy certain aspects of our products and/or to obtain and use information that we regard as proprietary. The laws of some foreign countries in which we may sell our products do not protect our proprietary rights to the same extent as do the laws of the United States.

Product Development

Currently, we employ a team of three researchers, all of whom hold Ph.D. degrees in molecular biology or related fields who are responsible for bringing new biopreservation products to market. We also conduct collaborative research with several leading academic and commercial entities in our strategic markets.

During 2017, we incurred costs of approximately $1.2 million on research and development activities. During 2016, we incurred costs of approximately $2.7 million on research and development activities, including $0.7 million in cost related to the development of internal use software which were capitalized by our joint venture, biologistex CCM, LLC. The capitalized costs related to biologistex internal use software are no longer included in our consolidated

financial statements on or after December 31, 2016 due to the deconsolidation of biologistex. See Note 1 to the Company's Consolidated Financial Statements in Item 8 for additional information about the biologistex joint venture restructuring on December 31, 2016.

Employees

As of February 28, 2018, we had 40 full time employees. Our employees are not covered by any collective bargaining agreement. We consider relations with our employees to be good.

Available Information

We maintain a website at http://www.biolifesolutions.com. The information contained on or accessible through our website is not part of this Annual Report on Form 10-K. Our Annual Report on Form 10-K, Quarterly Reports on Form 10-Q, Current Reports on Form 8-K and amendments to reports filed or furnished pursuant to Sections 13(a) and 15(d) of the Securities Exchange Act of 1934 (the "Exchange Act"), are available free of charge on our website as soon as reasonably practicable after we electronically file such reports with, or furnish those reports to, the Securities and Exchange Commission (the "SEC"). Any information we filed with the SEC may be accessed and copied at the SEC's Public Reference Room at 100 F Street NE, Washington, DC 20549. Information may be obtained by calling the SEC at 1-800-SEC-0330. The SEC also maintains an Internet site that contains reports, proxy and information statements, and other information regarding issuers that file electronically with the SEC at http://www.sec.gov.

ITEM 1A. RISK FACTORS

Investing in our common stock involves a high degree of risk. You should consider carefully the risks and uncertainties described below, together with all of the other information contained in this annual report, before deciding to invest in our common stock. If any of the following risks materialize, our business, financial condition, results of operation and prospects will likely be materially and adversely affected. In that event, the market price of our common stock could decline and you could lose all or part of your investment.

Risks Related to Our Business

The majority of our net sales come from a relatively small number of customers and a limited number of market sectors; if we lose any of these customers or if there are problems in those market sectors, our net sales and operating results could decline significantly.

In each of the years 2017 and 2016, we derived approximately 12% of our revenue from our relationship with one distributor of our products. No other customer accounted for more than 10% of revenue in 2017 or 2016. Our principal customers may vary from period to period, and our principal customers may not continue to purchase products from us at current levels, or at all. Significant reductions in net sales to any of these customers or our failure to make appropriate choices to the customers we serve, could seriously harm our business. In addition, we focus our sales to customers in only a few market sectors. Each of these sectors is subject to macroeconomic conditions as well as trends and conditions that are sector specific. Shifts in the performance of a sector served by us, as well as the economic, business and/or regulatory conditions that affect the sector, or our failure to choose appropriate sectors can particularly impact us. Any weakness in the market sectors in which our customers are concentrated could affect our business and results of operations.

We have a history of losses and may never achieve or maintain profitability.

We have incurred annual consolidated operating losses since inception and may continue to incur operating losses. For the fiscal years ended December 31, 2017 and December 31, 2016, we had consolidated net losses attributable to BioLife of $2.5 million and $6.9 million, respectively. As of December 31, 2017, our consolidated accumulated deficit was approximately $74.0 million. We may not be able to successfully achieve or sustain profitability. Successful transition to profitable operations is dependent upon achieving a level of revenues adequate to support our cost structure.

We may need additional capital to reach and maintain a sustainable level of positive cash flow and if we raise such additional capital through the issuance of equity or convertible debt securities, your ownership will be diluted, and equity securities issued may have rights, preferences and privileges superior to the shares of common stock.

If we are unable to achieve profitability sufficient to permit us to fund our operations and other planned actions, we may be required to raise additional capital. There can be no assurance that such capital would be available on favorable terms, or at all. If we raise additional capital through the issuance of equity or convertible debt securities, the percentage ownership held by existing stockholders may be reduced, and the market price of our common stock could fall due to an increased number of shares available for sale in the market. Further, our board has the authority to

establish the designation of additional shares of preferred stock that may be convertible into common stock without any action by our stockholders, and to fix the rights, preferences, privileges and restrictions, including voting rights, of such shares. Any such additional shares of preferred stock may have rights, preferences and privileges senior to those of outstanding common stock, and the issuance and conversion of any such preferred stock would further dilute the percentage ownership of our stockholders. Debt financing, if available, may involve restrictive covenants, which may limit our operating flexibility with respect to certain business matters. If we are unable to secure additional capital as circumstances require, we may not be able to fund our planned activities or continue our operations.

There is uncertainty surrounding our continued ability to successfully commercialize our HypoThermosol® FRS and CryoStor® biopreservation media products.

Our growth depends on our continued ability to successfully develop, commercialize and market our HypoThermosol® FRS, CryoStor®, and BloodStor® biopreservation media products. Even in markets that do not require us to obtain regulatory approvals, our products will not be used unless they present an attractive alternative to competitive products and the benefits and cost savings achieved through their use outweigh the cost of our products. If we are unable to develop and sustain a market for our products, this will have a material adverse effect on our results of operations and our ability to continue and grow our business.

The success of our HypoThermosol® FRS and CryoStor® biopreservation media products is dependent, in part, on successful customer regulatory approvals and commercial success of new regenerative medicine products and therapies.

Our HypoThermosol® FRS and CryoStor® biopreservation media products are marketed to biotechnology companies and research institutions engaged in research and development of cell, gene and tissue engineering therapies. The end-products or therapies developed by these biotechnology companies and research institutions are subject to substantial regulatory oversight by the FDA and other regulatory bodies, and many of these therapies are years away from commercialization. Thus demand, if any, for HypoThermosol® FRS and CryoStor® is expected to be limited for several years. Failure of the end-products that use our biopreservation media products to receive regulatory approvals and be successfully commercialized will have an adverse effect in the demand for our products.

We face significant competition.

The life sciences industry is highly competitive. We anticipate that we will continue to face increased competition as existing companies develop new or improved products and as new companies enter the market with new technologies. Many of our competitors are significantly larger than us and have greater financial, technical, research, marketing, sales, distribution and other resources than us. There can be no assurance that our competitors will not succeed in developing or marketing technologies and products that are more effective or commercially attractive than any that are being developed or marketed by us, or that such competitors will not succeed in obtaining regulatory approval, or introducing or commercializing any such products, prior to us. Such developments could have a material adverse

effect on our business, financial condition and results of operations. Also, even if we can compete successfully, there can be no assurance that we could do so in a profitable manner.

We are dependent on outside suppliers for all our manufacturing supplies.

We rely on outside suppliers for all our manufacturing supplies, parts and components. Although we believe we could develop alternative sources of supply for most of these components within a reasonable period of time, there can be no assurance that, in the future, our current or alternative sources will be able to meet all our demands on a timely basis. Unavailability of necessary components could require us to re-engineer our products to accommodate available substitutions, which could increase costs to us and/or have a material adverse effect on manufacturing schedules, products performance and market acceptance. In addition, an uncorrected defect or supplier's variation in a component or raw material, either unknown to us or incompatible with our manufacturing process, could harm our ability to manufacture products. We might not be able to find a sufficient alternative supplier in a reasonable amount of time, or on commercially reasonable terms, if at all. If we fail to obtain a supplier for the components of our products, our operations could be disrupted.

Our investment in SAVSU may be adversely impacted by the failure of SAVSU.

We own a minority equity interest in SAVSU and we have limited control over management decisions. Accordingly, our ability to profit from our equity interest in SAVSU will be largely dependent on the current management of SAVSU. SAVSU faces all the inherent risks associated with the development, marketing and operation of a new product line. In addition, we face the risk that SAVSU will not be able to fulfill product orders based on our sales effort. If SAVSU fails to fulfill its obligations due to strategic business interests, financial condition or otherwise, SAVSU may be required to raise additional capital, which will dilute our ownership, or SAVSU may not be able to continue its operations, in which case we may suffer losses.

Our success will depend on our ability to attract and retain key personnel.

In order to execute our business plan, we must attract, retain and motivate highly qualified managerial, scientific, manufacturing, and sales personnel. If we fail to attract and retain skilled scientific and sales personnel, our sales efforts will be hindered. Our future success depends to a significant degree upon the continued services of key scientific and technical personnel. If we do not attract and retain qualified personnel, we will not be able to achieve our growth objectives.

If we were to be successfully sued related to our products, operations or other activities, we could face substantial liabilities that may exceed our resources.

We may be held liable if any of our products or operations cause injury or death. We are subject to certain litigation described under “Item 3. Legal Proceedings”, and may also face other types of litigation, including those related to alleged breaches of contract or applicable laws or of our duties to third parties. We currently maintain commercial general and umbrella liability policies and a product liability insurance policy. When necessary for our products, we intend to obtain additional product liability insurance. Insurance coverage may be prohibitively expensive, may not fully cover potential liabilities or may not be available in the future. Inability to obtain sufficient insurance coverage at an acceptable cost or otherwise to protect against potential product liability claims could prevent or inhibit the commercialization of our products. If we were to be sued for any injury caused by or associated with our products or operations or in connection with other matters, or if our existing litigation proceeds, the litigation could consume substantial time and attention of our management, and the resulting liability could have a material adverse effect on us.

Regulatory or other difficulties in manufacturing could have an adverse effect upon our expenses and our product revenues.

We currently manufacture all our biopreservation media products. The manufacture of these products is difficult, complex and highly regulated. To support our current and prospective clinical customers, we intend to comply with cGMP in the manufacture of our products. Our ability to adequately and in a timely manner manufacture and supply our biopreservation media products is dependent on the uninterrupted and efficient operation of our facilities and those of third-parties producing supplies upon which we rely in our manufacturing. The manufacture of our products may be impacted by:

- availability or contamination of raw materials and components used in the manufacturing process, particularly those for which we have no other source or supplier;
- the ongoing capacity of our facilities;
- our ability to comply with regulatory requirements, including our ability to comply with cGMP;
- inclement weather and natural disasters;
- changes in forecasts of future demand for product components;
- potential facility contamination by microorganisms or viruses;
- updating of manufacturing specifications; and
- product quality success rates and yields.

If efficient manufacture and supply of our products is interrupted, we may experience delayed shipments or supply constraints. If we are at any time unable to provide an uninterrupted supply of our products to customers, our customers may be unable to supply their end-products incorporating our products to their patients and other customers, which could materially and adversely affect our product sales and results of operations.

We are registered with FDA as a contract manufacturer. Our contract-manufacturing customers may require us to comply with cGMP requirements and may audit our compliance with cGMP standards. If a customer finds us to be out of compliance with cGMP standards, this could have a material adverse effect on our ability to retain and attract contract manufacturing customers.

If we become subject to additional regulatory requirements, the manufacture and sale of our products may be delayed or prevented, or we may become subject to increased expenses.

None of our products are subject to FDA or other regulatory approvals. In particular, we are not required to sponsor formal prospective, controlled clinical-trials to establish safety and efficacy. However, there can be no assurance that we will not be required to obtain approval from the FDA, or foreign regulatory authorities, as applicable, prior to marketing any of our products in the future. Any such requirements could delay or prevent the sale of our products or may subject us to additional expenses.

We may be adversely affected if we violate privacy and security regulations or suffer a data breach.

Federal and state laws protect the confidentiality of certain patient health information, including patient records, and restrict the unauthorized use and disclosure of such information. In particular, the Health Insurance Portability and Accountability Act of 1996 (HIPAA) and its implementing privacy, security, and breach notification regulations (collectively, HIPAA Standards), govern the use and disclosure of protected health information by “covered entities,” which are healthcare providers that submit electronic claims, health plans and healthcare clearinghouses, as well as their “business associates” and their subcontractors. Our employee health benefit plans are considered “covered entities” and, therefore, are subject to the HIPAA Standards.

We may be adversely affected if our internal control over financial reporting fails or is circumvented.

We regularly review and update our internal controls, disclosure controls and procedures, and corporate governance policies. We are required under the Sarbanes-Oxley Act of 2002 to report annually on our internal control over

financial reporting, but as a smaller reporting company we are exempt from the requirement to have our independent accountants attest to our internal control over financial reporting. If it were to be determined that our internal control over financial reporting is not effective, such shortcoming could have an adverse effect on our business and financial results and the price of our common stock could be negatively affected. This reporting requirement could also make it more difficult or more costly for us to obtain certain types of insurance, including director and officer liability insurance, and we may be forced to accept reduced policy limits and coverage or incur substantially higher costs to obtain the same or similar coverage. Any system of internal controls, however well designed and operated, is based in part on certain assumptions and can provide only reasonable, not absolute, assurances that the objectives of the system are met. Any failure or circumvention of the controls and procedures or failure to comply with regulation concerning control and procedures could have a material effect on our business, results of operation and financial condition. Any of these events could result in an adverse reaction in the financial marketplace due to a loss of investor confidence in the reliability of our financial statements, which ultimately could negatively affect the market price of our shares, increase the volatility of our stock price and adversely affect our ability to raise additional funding. The effect of these events could also make it more difficult for us to attract and retain qualified persons to serve on our board and our board committees and as executive officers.

Risks Related to Our Intellectual Property

Expiration of our patents may subject us to increased competition and reduce or eliminate our opportunity to generate product revenue.

The patents for our products have varying expiration dates and, when these patents expire, we may be subject to increased competition and we may not be able to recover our development costs. In some of the larger economic territories, such as the United States and Europe, patent term extension/restoration may be available. We cannot, however, be certain that an extension will be granted or, if granted, what the applicable time or the scope of patent protection afforded during any extended period will be. If we are unable to obtain patent term extension/restoration or some other exclusivity, we could be subject to increased competition and our opportunity to establish or maintain product revenue could be substantially reduced or eliminated. Furthermore, we may not have sufficient time to recover our development costs prior to the expiration of our U.S. and non-U.S. patents.

US Patent 6,045,990, which provides patent coverage relating to HypoThermosol® FRS, will expire in April 2019, and its foreign patent counterparts will expire in July 2019, reducing the barrier to entry for competition for this product, which may materially affect the pricing of HypoThermosol® FRS and our ability to retain market share. We may file extensions for this patent. We hold various trade secrets and other confidential know-how related to the manufacturing and testing of our products which limit our exposure upon the expiration of US patent 6,045,990.

Our proprietary rights may not adequately protect our technologies and products.

Our commercial success will depend on our ability to obtain patents and/or regulatory exclusivity and maintain adequate protection for our technologies and products in the United States and other countries. We will be able to protect our proprietary rights from unauthorized use by third parties only to the extent that our proprietary technologies and products are covered by valid and enforceable patents or are effectively maintained as trade secrets.

We intend to apply for additional patents covering both our technologies and products, as we deem appropriate. We may, however, fail to apply for patents on important technologies or products in a timely fashion, if at all. Our existing patents and any future patents we obtain may not be sufficiently broad to prevent others from practicing our technologies or from developing competing products and technologies. In addition, the patent positions of life science industry companies are highly uncertain and involve complex legal and factual questions for which important legal principles remain unresolved. As a result, the validity and enforceability of our patents cannot be predicted with certainty. In addition, we cannot guarantee that:

- we were the first to make the inventions covered by each of our issued patents and pending patent applications;
- we were the first to file patent applications for these inventions;
- others will not independently develop similar or alternative technologies or duplicate any of our technologies;
- any of our pending patent applications will result in issued patents;
- any of our patents will be valid or enforceable;
- any patents issued to us will provide us with any competitive advantages, or will not be challenged by third parties; and
- we will develop additional proprietary technologies that are patentable, or the patents of others will not have an adverse effect on our business.

The actual protection afforded by a patent varies on a product-by-product basis, from country to country and depends on many factors, including the type of patent, the scope of its coverage, the availability of regulatory related extensions, the availability of legal remedies in a particular country and the validity and enforceability of the patents. Our ability to maintain and solidify our proprietary position for our products will depend on our success in obtaining effective claims and enforcing those claims once granted. Our issued patents and those that may be issued in the future, or those licensed to us, may be challenged, invalidated, unenforceable or circumvented, and the rights granted under any issued patents may not provide us with proprietary protection or competitive advantages against competitors with similar products. We also rely on trade secrets to protect some of our technology, especially where it is believed that patent protection is inappropriate or unobtainable. However, trade secrets are difficult to maintain. While we use reasonable efforts to protect our trade secrets, our employees, consultants, contractors or scientific and other advisors may unintentionally or willfully disclose our proprietary information to competitors. Enforcement of claims that a third party has illegally obtained and is using trade secrets is expensive, time consuming and uncertain. In addition, non-U.S. courts are sometimes less willing than U.S. courts to protect trade secrets. If our competitors independently develop equivalent knowledge, methods and know-how, we would not be able to assert our trade secrets against them and our business could be harmed.

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

Filing, prosecuting and defending patents on all our products in every jurisdiction would be prohibitively expensive. Competitors may use our technologies in jurisdictions where we have not obtained patent protection to develop their own products. These products may compete with our products and may not be covered by any patent claims or other intellectual property rights.

The laws of some non-U.S. countries do not protect intellectual property rights to the same extent as the laws of the United States, and many companies have encountered significant problems in protecting and defending such rights in foreign jurisdictions. The legal systems of certain countries, particularly certain developing countries, do not favor the enforcement of patents and other intellectual property protection, particularly those relating to biotechnology, which could make it difficult for us to stop the infringement of our patents. Proceedings to enforce our patent rights in foreign jurisdictions could result in substantial cost and divert our efforts and attention from other aspects of our business.

If we fail to protect our intellectual property rights, our competitors may take advantage of our ideas and compete directly against us.

Our success will depend to a significant degree on our ability to secure and protect intellectual property rights and enforce patent and trademark protections relating to our technology. While we believe that the protection of patents and trademarks is important to our business, we also rely on a combination of copyright, trade secret, nondisclosure and confidentiality agreements, know-how and continuing technological innovation to maintain our competitive position. From time to time, litigation may be advisable to protect our intellectual property position. However, these legal means afford only limited protection and may not adequately protect our rights or permit us to gain or keep any competitive advantage. Any litigation in this regard could be costly, and it is possible that we will not have sufficient resources to fully pursue litigation or to protect our intellectual property rights. This could result in the rejection or invalidation of our existing and future patents. Any adverse outcome in litigation relating to the validity of our patents, or any failure to pursue litigation or otherwise to protect our patent position, could materially harm our business and financial condition. In addition, confidentiality agreements with our employees, consultants, customers, and key vendors may not prevent the unauthorized disclosure or use of our technology. It is possible that these agreements will be breached or that they will not be enforceable in every instance, and that we will not have adequate remedies for any such breach. Enforcement of these agreements may be costly and time consuming. Furthermore, the laws of foreign countries may not protect our intellectual property rights to the same extent as the laws of the United States.

We may incur substantial costs as a result of litigation or other proceedings relating to patent and other intellectual property rights and we may be unable to protect our rights to, or use of, our technology.

If we choose to go to court to stop someone else from using the inventions claimed in our patents or our licensed patents, that individual or company has the right to ask the court to rule that these patents are invalid and/or should not be enforced against that third party. These lawsuits are expensive and would consume time and other resources even if we were successful in stopping the infringement of these patents. In addition, there is a risk that the court will decide that these patents are invalid or unenforceable and that we do not have the right to stop the other party from using the inventions. There is also the risk that, even if the validity or enforceability of these patents is upheld, the court will refuse to stop the other party on the grounds that such other party's activities do not infringe our rights.

If we wish to use the technology claimed in issued and unexpired patents owned by others, we will need to obtain a license from the owner, enter into litigation to challenge the validity or enforceability of the patents or incur the risk of litigation in the event that the owner asserts that we infringed its patents. The failure to obtain a license to technology or the failure to challenge an issued patent that we may require to discover, develop or commercialize our products may have a material adverse effect on us.

If a third-party asserts that we infringed its patents or other proprietary rights, we could face a number of risks that could seriously harm our results of operations, financial condition and competitive position, including:

- patent infringement and other intellectual property claims, which would be costly and time consuming to defend, whether or not the claims have merit, and which could delay a product and divert management's attention from our business;
- substantial damages for past infringement, which we may have to pay if a court determines that our product or technologies infringe a competitor's patent or other proprietary rights;
- a court prohibiting us from selling or licensing our technologies unless the third party licenses its patents or other proprietary rights to us on commercially reasonable terms, which it is not required to do; and
- if a license is available from a third party, we may have to pay substantial royalties or lump-sum payments or grant cross licenses to our patents or other proprietary rights to obtain that license.

The biotechnology industry has produced a proliferation of patents, and it is not always clear to industry participants, including us, which patents cover various types of products or methods of use. The coverage of patents is subject to interpretation by the courts, and the interpretation is not always uniform. If we are sued for patent infringement, we would need to demonstrate that our products or methods of use either do not infringe the patent claims of the relevant patent, and/or that the patent claims are invalid, and/or that the patent is unenforceable, and we may not be able to do this. Proving invalidity, in particular, is difficult since it requires a showing of clear and convincing evidence to overcome the presumption of validity enjoyed by issued patents.

U.S. patent laws as well as the laws of some foreign jurisdictions provide for provisional rights in published patent applications beginning on the date of publication, including the right to obtain reasonable royalties, if a patent subsequently issues and certain other conditions are met.

Because some patent applications in the United States may be maintained in secrecy until the patents are issued, because patent applications in the United States and many foreign jurisdictions are typically not published until 18 months after filing, and because publications in the scientific literature often lag behind actual discoveries, we cannot be certain that others have not filed patent applications for technology covered by our issued patents or our pending applications, or that we were the first to invent the technology.

Patent applications filed by third parties that cover technology similar to ours may have priority over our patent applications and could further require us to obtain rights to issued patents covering such technologies. If another party files a U.S. patent application on an invention similar to ours, we may elect to participate in or be drawn into an interference proceeding declared by the U.S. Patent and Trademark Office to determine priority of invention in the United States. The costs of these proceedings could be substantial, and it is possible that such efforts would be unsuccessful, resulting in a loss of our U.S. patent position with respect to such inventions. Some of our competitors may be able to sustain the costs of complex patent litigation more effectively than we can because they have substantially greater resources. In addition, any uncertainties resulting from the initiation and continuation of any litigation could have a material adverse effect on our ability to raise the funds necessary to continue our operations. We cannot predict whether third parties will assert these claims against us, or whether those claims will harm our business. If we are forced to defend against these claims, whether they are with or without any merit and whether they are resolved in favor of or against us, we may face costly litigation and diversion of management’s attention and resources. As a result of these disputes, we may have to develop costly non-infringing technology, or enter into licensing agreements. These agreements, if necessary, may be unavailable on terms acceptable to us, if at all, which could seriously harm our business or financial condition.

Risks Related to our Common Stock and Other Securities

The market for our common stock is limited and our stock price is volatile.

Our common stock, traded on the NASDAQ Capital Market, has historically traded at low average daily volumes, resulting in a limited market for the purchase and sale of our common stock.

The market prices of many publicly traded companies, including emerging companies in the life sciences industry, have been, and can be expected to be, highly volatile. The future market price of our common stock could be significantly impacted by numerous factors, including, but not limited to:

- Future sales of our common stock or other fundraising events;
- Sales of our common stock by existing shareholders;
- Changes in our capital structure, including stock splits or reverse stock splits;
- Announcements of technological innovations for new commercial products by our present or potential competitors;
- Developments concerning proprietary rights;
- Adverse results in our field or with clinical tests of our products in customer applications;
- Adverse litigation;
- Unfavorable legislation or regulatory decisions;
- Public concerns regarding our products;
- Variations in quarterly operating results;
- General trends in the health care industry; and
- Other factors outside of our control.

A significant percentage of our outstanding common stock is held by two stockholders, and these stockholders therefore have significant influence on us and our corporate actions.

As of December 31, 2017, two of our existing stockholders, Taurus4757 GmbH ("Taurus") and WAVI Holdings AG ("WAVI"), beneficially owned, collectively, approximately 57.1% of our outstanding shares. Taurus and WAVI were previously secured lenders to our Company, and the chairman of Taurus, Mr. Girschweiler, is a member of our board. Accordingly, these stockholders have had, and will continue to have, significant influence in determining the outcome of any corporate transaction or other matter submitted to the stockholders for approval, including mergers, consolidations and the sale of all or substantially all our assets, election of directors and other significant corporate actions. In addition, without the consent of these stockholders, we could be prevented from entering into transactions that could be beneficial to us.

We may be at risk of securities class action litigation.

In the past, securities class action litigation has often been brought against a company following an extraordinary corporate action or a decline in the market price of its securities. This risk is especially relevant for us because our stock price and those of other biotechnology and life sciences companies have experienced significant stock price volatility in recent years. If we face such litigation, it could result in substantial costs and a diversion of management's attention and resources, which could harm our business. We do maintain insurance, but the coverage may not be sufficient and may not be available in all instances.

Anti-takeover provisions in our charter documents and under Delaware law could make a third-party acquisition of us difficult.

Our amended and restated certificate of incorporation and amended and restated bylaws contain provisions that may discourage unsolicited takeover proposals that stockholders may consider to be in their best interests. These provisions include the ability of our board to designate the terms of and issue new series of preferred stock without stockholder approval and to amend our bylaws without stockholder approval. Further, as a Delaware corporation, we are subject to Section 203 of the Delaware General Corporation Law, which generally prohibits a Delaware corporation from engaging in any business combination with any interested stockholder for a period of three years following the date that the stockholder became an interested stockholder, unless certain specific requirements are met as set forth in Section 203. Collectively, these provisions could make a third-party acquisition of us difficult or could discourage transactions that otherwise could involve payment of a premium over prevailing market prices for our common stock.

Future sales or the potential for future sales of our securities in the public markets may cause the trading price of our common stock to decline and could impair our ability to raise capital through future equity offerings.

Sales of a substantial number of shares of our common stock or other securities in the public markets, or the perception that these sales may occur, could cause the market price of our common stock or other securities to decline and could materially impair our ability to raise capital through the sale of additional securities. We have a substantial number of warrants exercisable to purchase shares of common stock outstanding. Many of the shares of common stock issuable upon exercise of those warrants will be freely tradable. We have agreed to use our best efforts to keep a registration statement registering the issuance and resale of many such shares effective during the term of the warrants. In addition, we have a significant number of shares of our common stock reserved for issuance pursuant to other outstanding options and rights. If such shares are issued upon exercise of options, warrants or other rights, or if we issue additional securities in a public offering or a private placement, such sales or any resales of such securities could further adversely affect the market price of our common stock. The sale of a large number of shares of our common stock or other securities also might make it more difficult for us to sell equity or equity-related securities in the future at a time and at the prices that we deem appropriate.

We do not anticipate declaring any cash dividends on our common stock.

We have never declared or paid cash dividends on our common stock and do not plan to pay any cash dividends in the near future. Our current policy is to retain all funds and earnings for use in the operation and expansion of our business.

ITEM 1B. UNRESOLVED STAFF COMMENTS

Not applicable.

ITEM 2. PROPERTIES

We lease approximately 30,000 square feet of property being used in current operations in our Bothell, Washington principal location which contains office, manufacturing, storage and laboratory facilities.

We consider the facilities to be in a condition suitable for their current uses. Because of anticipated growth in the business and due to the increasing requirements of customers or regulatory agencies, we may need to acquire additional space or upgrade and enhance existing space prior to the expiry of the lease in 2021. We believe that adequate facilities will be available upon the conclusion of our leases.

All our products and services are manufactured or provided from our Bothell, Washington facility.

Additional information regarding our properties is contained in Note 9 to the Financial Statements included in this Annual Report on Form 10-K.

ITEM 3. LEGAL PROCEEDINGS

We are party to a number of lawsuits that were brought against the Company by former employees in 2007 and have been previously disclosed in our public filings. As of the date of this annual report, we do not believe that these legal proceedings are material to the Company. For more information relating to these lawsuits, reference is made to our annual report on Form 10-K for the year ended December 31, 2016.

ITEM 4. MINE SAFETY DISCLOSURES

Not applicable.

PART II

ITEM 5. MARKET FOR REGISTRANT'S COMMON EQUITY, RELATED STOCKHOLDER MATTERS AND ISSUER PURCHASES OF EQUITY SECURITIES

Price Range of Common Stock

Our common stock is traded on the NASDAQ Capital Market exchange under the ticker symbol "BLFS."

As of March 6, 2018, there were approximately 332 holders of record of our common stock. We have never paid cash dividends on our common stock and do not anticipate that any cash dividends will be paid in the foreseeable future.

The following table sets forth the range of high and low quarterly closing sales prices of our common stock for the periods indicated:

	High	Low
Year ended December 31, 2017		
4th Quarter	$6.90	$4.98
3rd Quarter	5.71	2.62
2nd Quarter	2.40	2.02
1st Quarter	2.27	1.62
Year ended December 31, 2016		
4th Quarter	$1.83	$1.45
3rd Quarter	2.37	1.57
2nd Quarter	1.96	1.47
1st Quarter	2.10	1.57

Equity Compensation Plan Information

The following table sets forth information as of December 31, 2017 relating to all our equity compensation plans:

Plan category	**Number of securities to be issued upon exercise of outstanding options** **(in thousands)**	Weighted Average exercise price of outstanding options	Number of granted restricted stock awards outstanding (in thousands)	Number of securities remaining available for future issuance (in thousands)
Equity compensation plans not approved by security holders (1)	665	$ 1.27	—	—
1998 performance incentive plan	7	$ 0.70	—	—
Second amended and restated 2013 performance incentive plan	2,718	$ 1.92	379	1,003

(1) Represents shares of common stock issuable pursuant to non-plan stock option agreements entered into prior to the adoption of our 2013 Performance Incentive Plan. Prior to the adoption of our 2013 Performance Incentive Plan, we granted certain individuals stock options pursuant to stock option agreements that were not issued under a stockholder-approved plan. Each agreement entitles the holder to purchase from us a fixed number of shares of common stock at a fixed purchase price per share for a fixed period of time, which may not exceed ten (10) years. The

specific terms and conditions of each option, including when the right to exercise the option vests, the number of shares subject to the option, the exercise price per share, the method of exercise, exercisability following termination, disability and death, and adjustments upon stock splits, combinations, mergers, consolidation and like events are specified in each agreement. In the event of a liquidation of the Company, or a merger, reorganization, or consolidation of the Company with any other corporation in which we are not the surviving corporation or we become a wholly-owned subsidiary of another corporation, any unexercised options shall be deemed canceled unless the surviving corporation elects to assume the options or to issue substitute options in place thereof. In the event of the forgoing, the holder will have the right to exercise the option during a ten-day period immediately prior to such liquidation, merger, or consolidation.

Issuer Repurchases of Equity Securities

Not applicable.

ITEM 6. SELECTED FINANCIAL DATA

Not applicable.

ITEM 7. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

Forward-Looking Statements

This Annual Report on Form 10-K contains "forward-looking statements". These forward-looking statements involve a number of risks and uncertainties. We caution readers that any forward-looking statement is not a guarantee of future performance and that actual results could differ materially from those contained in the forward-looking statement. These statements are based on current expectations of future events. Such statements include, but are not limited to, statements about future financial and operating results, plans, objectives, expectations and intentions, revenues, costs and expenses, interest rates, outcome of contingencies, business strategies, regulatory filings and requirements, performance and market acceptance of our products, the estimated potential size of markets, capital requirements, the terms of any capital financing agreements and other statements that are not historical facts. You can find many of these statements by looking for words like "believes," "expects," "anticipates," "estimates," "may," "should," "will," "could," "intend," or similar expressions in this Annual Report on Form 10-K. We intend that such forward-looking statements be subject to the safe harbors created thereby.

These forward-looking statements are based on the current beliefs and expectations of our management and are subject to significant risks and uncertainties. If underlying assumptions prove inaccurate or unknown risks or uncertainties materialize, actual results may differ materially from current expectations and projections. Factors that might cause such a difference include those discussed under “Risk Factors,” as well as those discussed elsewhere in the Annual Report on Form 10-K.

You are cautioned not to place undue reliance on these forward-looking statements, which speak only as of the date of this Annual Report on Form 10-K or, in the case of documents referred to or incorporated by reference, the date of those documents.

All subsequent written or oral forward-looking statements attributable to us or any person acting on our behalf are expressly qualified in their entirety by the cautionary statements contained or referred to in this section. We do not undertake any obligation to release publicly any revisions to these forward-looking statements to reflect events or circumstances after the date of this Annual Report on Form 10-K or to reflect the occurrence of unanticipated events, except as may be required under applicable U.S. securities law. If we do update one or more forward-looking statements, no inference should be drawn that we will make additional updates with respect to those or other forward-looking statements.

Recent Developments

Restructuring Amended and Restated Biologistex Operating Agreement:

On January 22, 2018, the Company and STLLC amended their arrangement with respect to their SAVSU joint venture. As described in more detail below, in exchange for the Company’s agreement to terminate that certain Services Agreement, dated December 31, 2016 (the “Services Agreement”), between the Company and STLLC relating to the provision of services by the Company to SAVSU in exchange initially for cash payments and thereafter for a portion of SAVSU’s future revenues, STLLC agreed to (i) revise a provision of that certain Contribution Agreement, dated December 31, 2016 (the “Contribution Agreement”), between the Company and STLLC eliminating the requirement that the Company transfer a portion of its equity of SAVSU to STLLC on December 31, 2018 and (ii) amend a provision of that certain Amended and Restated Operating Agreement of biologistex, dated December 31, 2016 (the “Operating Agreement”), reflecting the percentage of profits and losses that each of the Company and STLLC will share in of SAVSU.

On January 22, 2018, in consideration of the Company’s agreement to terminate the Services Agreement, the Company and STLLC entered into Amendment No. 1 to Contribution Agreement (the “Contribution Agreement Amendment”)

and Amendment to the Amended and Restated Operating Agreement of biologistex CCM, LLC (the "Operating Agreement Amendment").

Pursuant to the Contribution Agreement Amendment, the parties agreed to amend a provision in the Contribution Agreement that required the Company to transfer to STLLC a portion of its equity stake in SAVSU which would have reduced the Company's ownership in SAVSU from 40% to 25% on December 31, 2018. As a result of the Contribution Agreement Amendment, the Company will now maintain a 35% ownership stake in SAVSU, subject to ordinary dilution.

Pursuant to the Operating Agreement Amendment, the parties agreed to amend the profit sharing provision of the Operating Agreement. As a result of the Operating Agreement Amendment, the Company will receive 35% of the profits and losses of SAVSU, subject to ordinary dilution, moving forward. Prior to the Operating Agreement Amendment, the Company would have been entitled to receive 40% of the profits and losses of SAVSU for the fiscal year ended December 31, 2018 and would have been entitled to receive 25% of the profits and losses beginning January 1, 2019 and continuing thereafter.

Exchange of debt into Series A Preferred Stock

On June 30, 2017, the Company and WAVI agreed to exchange the Company's previously issued promissory note (the "Note") in the name of WAVI in the amount of $4,250,000 including principal and accrued interest thereon through June 1, 2017 for 4,250 shares of the Company's newly designated Series A Preferred Stock (the "Series A Preferred Stock," and the exchange transaction, the "Exchange"). The Exchange was exempt from registration pursuant to Section 3(a)(9) of the Securities Act of 1933, as amended. As a result of the Exchange, the Note has been deemed immediately canceled and the Company no longer has any obligations under the Note. There is no additional consideration payable in connection with the Exchange.

Overview

Management's discussion and analysis provides additional insight into the Company and is provided as a supplement to, and should be read in conjunction with, our audited financial statements and accompanying footnotes thereto.

We strive to be the leading provider of biopreservation tools for cells, tissues, and organs; to facilitate basic and applied research and commercialization of new therapies by maintaining the health and function of biologic source material and finished products during manufacturing, distribution and clinical administration.

Results of Operations

Overview for 2017

In 2017, we reported financial results that were consistent with the continued execution of our long-term plans. We believe we are the market leader for pre-formulated, clinical grade biopreservation media products. Our patented biopreservation media products are formulated to reduce preservation-induced, delayed-onset cell damage and death. Our platform enabling technology provides our customers significant shelf life extension of biologic source material and final cell products, and greatly improved post-preservation cell, and tissue, viability and function. Our products continue to be widely adopted by this segment. We believe that our products have been incorporated in over 275 applications for new cell and tissue-based regenerative medicine products and therapies.

We continue to implement strategies that will increase awareness of the need for improved biopreservation.

Our strategies to achieve this objective include:

Utilize Existing Biopreservation Media Sales, Distribution and Manufacturing Infrastructure. We have developed a direct sales and distribution network for our products which we utilize to expand sales to existing customers and to gain additional customers. We believe that our products have been incorporated into over 275 applications for new cell and tissue-based regenerative medicine products and therapies. A significant number involve CAR-T cells and other types of T cells and mesenchymal stem cells targeting blood cancers, solid tumors and other leading causes of death and disability. In 2017, key customer announcements included:

- Executed supply agreement with Iovance Biotherapeutics. Iovance Biotherapeutics, Inc. is a clinical-stage biotechnology company focused on the development of cancer immunotherapy products for the treatment of various cancers. Iovance's lead product candidate is an adoptive cell therapy using tumor-infiltrating lymphocyte (TIL) technology being investigated for the treatment of patients with metastatic melanoma, recurrent and/or metastatic squamous cell carcinoma of the head and neck and recurrent, metastatic or persistent cervical cancer.

- Executed additional long-term supply agreement with leading T Cell therapy customer.

  - Our customer Kite Pharma, Inc., a wholly-owned subsidiary of Gilead Sciences, has received US FDA approval for Yescarta, the first CAR T-cell therapy for treatment of adult patients with relapsed or refractory large B-Cell lymphoma after two or more lines of systemic therapy. As announced in a July 2016 press release, BioLife executed a long-term agreement to supply its proprietary CryoStor cell freeze media to Kite Pharma. Each manufactured dose of Yescarta is frozen in CryoStor to maintain CAR T-cell viability and enable worldwide distribution.

- Cellular Biomedicine Group, a leading clinical-stage biopharmaceutical firm engaged in the development of immunotherapies for cancer and stem cell therapies for degenerative diseases ("CBMG"), has validated BioLife's proprietary CryoStor freeze media for use in CBMG's planned US Phase I clinical trial of AlloJoin, an off the shelf allogeneic stem cell therapy for knee osteoarthritis.

- Executed a long-term supply agreement with Celyad, a leader in the discovery and development of CAR-T cell therapies. BioLife's CryoStor clinical grade cell freeze media is incorporated into Celyad's manufacturing process for its Natural Killer Receptor based T-Cell (NKR-T) platform.

- Entered into a supply agreement with Adaptimmune Therapeutics plc. Adaptimmune, a leader in T-cell therapy to treat cancer, has multiple trials ongoing in both solid tumors and hematologic cancer types, and in cancers where survival rates for patients can be very limited. Adaptimmune's SPEAR T-cells have shown evidence of tumor reduction in patients as well as a promising risk/benefit profile. BioLife's CryoStor clinical grade cell freeze media is incorporated into Adaptimmune's manufacturing process for its SPEAR T-cells.

Financial Performance Summary for 2017

- We grew our revenue 34% over 2016. This increase was driven by a 54% increase in revenue from the regenerative medicine market. We also drove more sales through our distributors, with an increase of 30% in revenue from distributors in 2017 compared to 2016.

- Gross margin in 2017 was 61%, compared to 58% in 2016. The margin was higher due to a higher average selling price per liter sold and an increase in higher margin product mix, partially offset by an increase of direct overhead and raw materials.

- Our 2017 consolidated operating expenses were $7.8 million compared to $9.6 million in 2016. The decrease in expense is primarily the result of the deconsolidation of biologistex at December 31, 2016.

- Our 2017 consolidated net loss and net loss attributable to BioLife was $2.5 million. This is compared to a consolidated net loss of $8.0 million in 2016, of which $6.9 million was attributable to BioLife. The decrease in the loss is primarily the result of an increase in revenue and margin as well as a decrease in operating expenses related to the restructuring and subsequent deconsolidation of the biologistex joint venture; partially offset by an increase in stock compensation expense and $1.0 million loss from our equity-method investment in SAVSU.

- Our cash and cash equivalents balance was $6.7 million at December 31, 2017 compared to $1.4 million in cash and cash equivalents with an outstanding note payable of $3.0 million at December 31, 2016. We generated $0.6 million of cash from operations in 2017 compared to cash used in operations of $4.3 million in 2016. The increase in cash from operations was a result of increased cash receipts from higher sales and decreased spending on biologistex; partially offset by increases in employee expenses.

Comparison of Annual Results of Operations

Percentage comparisons have been omitted within the following table where they are not considered meaningful.

Revenue and Gross Margin

Our revenue and gross margin for the years ended December 31, 2017 and 2016 were as follows (in thousands):

	Year Ended December 31,		
	2017	2016	% Change
Total Revenue	$11,021	$8,227	34 %
Cost of sales	4,275	3,448	24 %
Gross profit	$6,746	$4,779	41 %
Gross margin %	61.2 %	58.1 %	

Core Product Sales. Our core products are sold through both direct and indirect channels to the customers in the biobanking, drug discovery, and regenerative medicine markets. Sales to our customers in 2017 increased compared to 2016 due to the combination of increased volume of liters sold (6,105 compared to 5,159), and a higher average selling price per liter ($1,805 compared to $1,594). The revenue increase was primarily in sales to our regenerative medicine customers and distributors, which increased 54% and 30%, respectively, in 2017 compared to 2016. Revenue from the regenerative medicine market and our distributors should continue to increase in the next one to five years as some customers receive regulatory and marketing approvals for their clinical cell and tissue-based products.

Cost of Sales. Cost of sales consists of raw materials, labor and overhead expenses. Cost of sales in 2017 increased compared to 2016 due to increased sales volume and higher direct overhead and raw material costs per liter.

Gross Margin. Gross margin as a percentage of revenue increased to 61.2% in 2017 compared to 58.1% in 2016. Gross margin as a percentage of revenue increased in 2017, due to a higher average selling price per liter sold and an increase in higher margin product mix, partially offset by an increase of direct overhead and raw materials.

Revenue Concentration. In each of the years 2017 and 2016, we derived approximately 12% of our revenue from our relationship with one distributor of our products. Revenue from customers located in foreign countries represented 16% and 17% of total revenue during the years ended December 31, 2017 and 2016, respectively. All sales to foreign customers are denominated in United States dollars.

Operating Expenses

Our operating expenses for the years ended December 31, 2017 and 2016 were as follows (in thousands):

	Year Ended December 31,		
	2017	2016	% Change
Operating Expenses:			
Research and development	$1,194	$2,028	(41)%
Sales and marketing	2,086	3,010	(31)%
General and administrative	4,522	4,592	(2)%
Operating Expenses	7,802	9,630	(19)%
% of revenue	71 %	117 %	

Research and Development. Research and development expenses consist primarily of salaries and other personnel-related expenses, consulting and other outside services, laboratory supplies, and other costs. We expense all research and development costs as incurred except for the costs associated with the development of customized internal-use software systems, which were capitalized in 2016. Research and development expenses for 2017 decreased compared to 2016 due primarily to the biologistex restructuring ($902,969), as well as lower product development costs, partially offset by an increase in share-based compensation expense. In 2016, we capitalized $0.7 million in costs associated with the development of our biologistex web application.

Sales and Marketing. Sales and marketing expenses consist primarily of salaries, trade association sponsorships, and other personnel-related expenses, consulting, trade shows and advertising. The decrease in sales and marketing expenses in 2017 compared to 2016 was primarily due to the biologistex restructuring ($1,294,544), partially offset by an increase in share-based compensation expense, tradeshow related expenses and travel costs.

General and Administrative Expenses. General and administrative expenses consist primarily of personnel-related expenses, non-cash stock-based compensation for administrative personnel and members of the board of directors, professional fees, such as accounting and legal, and corporate insurance. The decrease in general and administrative expenses in 2017 compared to 2016 was primarily due to the biologistex restructuring ($214,301), lower investor relations fees, and lower legal fees, partially offset by an increase in share-based compensation expense.

Other Income (Expenses)

Interest Income. We earn interest on our money market account.

Interest Expense. In 2017 and 2016, interest expense was related to our credit facility financing arrangement entered in May 2016 which was subsequently converted to preferred stock in June 2017.

Amortization of Deferred Financing Costs. Amortization of deferred financing costs represented the amortization of the allocated value of the detachable warrants associated with the credit facility financing arrangement entered into in May 2016 which was subsequently converted to preferred stock in June 2017.

Financing Costs and Write off of deferred financing costs. The financing costs in 2017 were due to various SEC filings related to potential stock issuances. The 2016 costs were due to the write off of deferred costs related to Registration Statement on Form S-3 filed with the SEC on January 8, 2016.

Loss on disposal of property and equipment. The loss on asset disposal was the disposal of property and equipment at net book value.

Loss on deconsolidation of biologistex. As a result of our Contribution Agreement with STLLC, BioLife no longer has a controlling financial interest over the biologistex JV, as defined under ASC 810, *Consolidation*, and has deconsolidated biologistex as of December 31, 2016. This resulted in a loss on deconsolidation of $2.8 million, which includes approximately $0.1 million in related restructuring charges. The loss on deconsolidation includes derecognizing the carrying amounts of biologistex's assets and liabilities that were previously consolidated on BioLife's consolidated balance sheet and the impact recorded to the retained interest in biologistex. Subsequent to deconsolidation, BioLife accounts for ownership in SAVSU using the equity method, which has been initially reflected at the fair value of our ownership interest on BioLife's balance sheet as of December 31, 2016. See Note 1 to the Company's Consolidated Financial Statements in Item 8 of this Form 10-K for additional information.

Loss on equity method investment. The non-cash loss in the amount of $1.0 million associated with our proportionate share of the net loss incurred by SAVSU for the period based on our 45% ownership in our investment in SAVSU. As of December 31, 2016, we had no obligation to provide any future funding to SAVSU.

Liquidity and Capital Resources

On December 31, 2017, we had $6.7 million in cash and cash equivalents, compared to $1.4 million at December 31, 2016. Based on our current expectations with respect to our revenue, expenses and preferred stock dividend payments, we expect that our current level of cash and cash equivalents will be sufficient to meet our liquidity needs for at least the next twelve months. If our revenues do not grow as expected and if we are not able to manage expenses sufficiently, we may be required to obtain additional equity or debt financing.

We continue to monitor and evaluate opportunities to strengthen our balance sheet and competitive position over the long term. These actions may include acquisitions or other strategic transactions that we believe would generate significant advantages and substantially strengthen our business. The consideration we pay in such transactions may include, among other things, shares of our common stock, other equity or debt securities of our Company or cash. We may elect to seek debt or equity financing in anticipation of, or in connection with, such transactions or to fund or invest in any operations acquired thereby. We may also seek equity or debt financing opportunistically for these purposes if we believe that market conditions are conducive to obtaining such financing.

Net Cash Provided by/Used In Operating Activities

During the year ended December 31, 2017, we generated $605,000 in cash from operations, compared to cash used in operating activities of $4.3 million for the year ended December 31, 2016. Operating cash generated in 2017 was the result of an increase in gross margin due to an increase in liters sold and a higher average selling price per liter. We also decreased operating cash expenses, primarily as a result of the SAVSU restructuring.

Net Cash Provided by/Used In Investing Activities

Net cash used by investing activities was $0.1 million in 2017 and cash provided by investing activities was $0.4 million in 2016. The use of cash in 2017 was used to purchase equipment. Cash provided by investing activities in 2016 was derived from proceeds from the maturity of available-for-sale securities. In addition, during 2016, we used $1.1 million in cash related to the development of the biologistex software system and $0.1 million related to purchases of equipment.

Net Cash Provided by Financing Activities

Net cash provided by financing activities was $4.8 million and $3.2 million in 2017 and 2016, respectively. In 2017, cash provided by financing activities was the result of $1.0 million in proceeds from the last tranche of our Credit Facility Agreement and $4.0 million in proceeds from stock option and warrant exercises, partially offset by payments of preferred dividends, costs associated with potential stock issuances and equipment financing and leasing. In 2016, cash provided by financing activities was the result of borrowings of $3.0 million from our Credit Facility Agreement, $0.3 million from exercises of warrants and stock options and $0.1 million in cash related to costs associated with a potential stock offering, including filing an S-3 registration statement.

Critical Accounting Policies and Significant Judgments and Estimates

Management's discussion and analysis of our financial condition and results of operations is based on our financial statements, which have been prepared in accordance with accounting principles generally accepted in the United States. The preparation of financial statements requires that we make estimates and assumptions that affect the reported amounts of assets and liabilities and the disclosure of contingent assets and liabilities at the date of the financial statements as well as reported revenues and expenses during the reporting periods. On an ongoing basis, we evaluate estimates, including, but not limited to those related to accounts receivable allowances, determination of fair value of share-based compensation, contingencies, income taxes, and expense accruals. We base our estimates on historical experience and on other factors that we believe are reasonable under the circumstances, the results of which form the basis for making judgments about the carrying values of assets and liabilities that are not readily apparent from other sources. Actual results may differ materially from these estimates under different assumptions or conditions.

Share-based Compensation

We account for share-based compensation by estimating the fair value of share-based compensation using the Black-Scholes option pricing model on the date of grant. We utilize assumptions related to stock price volatility, stock option term and forfeiture rates that are based upon both historical factors as well as management's judgment. Non-cash compensation expense is recognized on a straight-line basis over the applicable requisite service period of one to four years, based on the fair value of such share-based awards on the grant date.

Income Taxes

We follow the asset and liability method of accounting for income taxes. Under this method, deferred tax assets and liabilities are determined based on differences between the financial reporting and tax basis of assets and liabilities and on the expected future tax benefits to be derived from net operating loss carryforwards measured using current tax rates. A valuation allowance is established if it is more likely than not that some portion or all the deferred tax assets will not be realized. We have not recorded any liabilities for uncertain tax positions or any related interest and penalties. Our tax returns are open to audit for the years ending December 31, 2013 to 2017.

Equity Method Accounting

We account for our investment in SAVSU using the equity method of accounting. This method states that if the investment provides us the ability to exercise significant influence, but not control, over the investee, we account for the investment under the equity method. Significant influence is generally deemed to exist if the Company's ownership interest in the voting stock of the investee ranges between 20% and 50%, although other factors, such as

representation on the investee's board of directors, are considered in determining whether the equity method of accounting is appropriate. Under the equity method of accounting, the investment is recorded at its initial carrying value in the consolidated balance sheet and is periodically adjusted for capital contributions, dividends received and our share of the investee's earnings or losses together with other-than-temporary impairments which are recorded as a component of other income (expense), net in the consolidated statements of operations.

Off-Balance Sheet Arrangements

As of December 31, 2017, we did not have any off-balance sheet arrangements.

Contractual Obligations

For information regarding our current contingencies and commitments, see note 9 to the consolidated financial statements included in Item 8.

ITEM 7A. QUANTITATIVE AND QUALITATIVE DISCLOSURE ABOUT MARKET RISK

Not applicable.

ITEM 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA

INDEX TO FINANCIAL STATEMENTS

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Board of Directors and Shareholders

BioLife Solutions, Inc.

Opinion on the Financial Statements

We have audited the accompanying consolidated balance sheets of BioLife Solutions, Inc. and Subsidiary ("the Company") as of December 31, 2017 and 2016, the related consolidated statements of operations, comprehensive loss, shareholders' equity, and cash flows for each of the years then ended, and the related notes (collectively referred to as the "financial statements"). In our opinion, the financial statements present fairly, in all material respects, the financial position of the Company as of December 31, 2017 and 2016, and the results of its operations and its cash flows for each of the years then ended, in conformity with accounting principles generally accepted in the United States.

Basis for Opinion

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

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

Our audits included performing procedures to assess the risks of material misstatement of the financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the financial statements. Our audits also

included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the financial statements. We believe that our audits provide a reasonable basis for our opinion.

/S/ PETERSON SULLIVAN LLP

We have served as the Company’s auditor since 2007.

Seattle, Washington

March 9, 2018

BioLife Solutions, Inc.

Consolidated Balance Sheets

	December 31, 2017	December 31, 2016
Assets		
Current assets		
Cash and cash equivalents	$ 6,663,318	$ 1,405,826
Accounts receivable, trade, net of allowance for doubtful accounts of $5,575 and $0 at December 31, 2017 and 2016, respectively	1,021,315	1,193,646
Inventories	1,846,746	1,757,784
Prepaid expenses and other current assets	399,502	270,814
Total current assets	9,930,881	4,628,070
Property and equipment		
Leasehold improvements	1,284,491	1,284,491
Furniture and computer equipment	682,466	650,912
Manufacturing and other equipment	1,148,006	922,220
Subtotal	3,114,963	2,857,623
Less: Accumulated depreciation	(2,008,927)	(1,670,245)
Net property and equipment	1,106,036	1,187,378
Investment in SAVSU	1,070,120	2,075,000
Long-term deposits	36,166	36,166
Total assets	$ 12,143,203	$ 7,926,614
Liabilities and Shareholders' Equity		
Current liabilities		
Accounts payable	$ 690,702	$ 710,719
Accrued expenses and other current liabilities	200,548	116,399
Accrued compensation	491,432	175,829
Deferred rent, current portion	130,216	130,216
Total current liabilities	1,512,898	1,133,163
Promissory note payable to related party, net of discount of $155,996 at December 31, 2016	—	2,844,004
Accrued interest, related party	—	97,857
Deferred rent, long-term	492,207	685,450
Other long-term liabilities	45,512	—
Total liabilities	2,050,617	4,760,474
Commitments and Contingencies (Note 9)		
Shareholders' equity		
Preferred stock, $0.001 par value; 1,000,000 shares authorized, Series A, 4,250 shares designated, and 4,250 and 0 shares issued and outstanding at December 31,	4	—

2017 and 2016, respectively		
Common stock, $0.001 par value; 150,000,000 shares authorized, 14,021,422 and 12,863,824 shares issued and outstanding at December 31, 2017 and 2016, respectively	14,021	12,864
Additional paid-in capital	84,036,444	74,355,645
Accumulated deficit	(73,957,883)	(71,202,369)
Total BioLife Solutions, Inc. shareholders' equity	10,092,586	3,166,140
Total liabilities and shareholders' equity	$ 12,143,203	$ 7,926,614

The accompanying Notes to Consolidated Financial Statements are an integral part of these financial statements

BioLife Solutions, Inc.

Consolidated Statements of Operations

	Years Ended December 31,	
	2017	2016
Product sales	$11,021,821	$8,226,992
Cost of product sales	4,275,348	3,448,294
Gross profit	6,746,473	4,778,698
Operating expenses		
Research and development	1,193,415	2,028,465
Sales and marketing	2,086,426	3,009,537
General and administrative	4,522,479	4,592,235
Total operating expenses	7,802,320	9,630,237
Operating loss	(1,055,847)	(4,851,539)
Other income (expenses)		
Interest income	350	2,420
Interest expense	(190,069)	(100,000)
Loss on deconsolidation of biologistex	—	(2,785,910)
Loss from equity-method investment in SAVSU	(1,004,880)	—
Financing costs and write off of deferred financing costs	(108,664)	(86,736)
Amortization of debt discount	(155,996)	(218,394)
Loss on disposal of property and equipment	—	(1,213)
Total other income (expenses)	(1,459,259)	(3,189,833)
Net Loss	(2,515,106)	(8,041,372)
Net Loss attributable to non-controlling interest	—	1,165,926
Net Loss attributable to BioLife Solutions, Inc.	(2,515,106)	(6,875,446)
Less: Preferred stock dividends	(212,500)	—
Net loss attributable to common stockholders	$(2,727,606)	$(6,875,446)
Basic and diluted net loss per common share attributable to BioLife Solutions, Inc.	$(0.21)	$(0.54)
Basic and diluted weighted average common shares used to calculate net loss per common share	13,263,881	12,642,996

The accompanying Notes to Consolidated Financial Statements are an integral part of these financial statements

BioLife Solutions, Inc.

Consolidated Statements of Comprehensive Loss

	Years Ended December 31,	
	2017	2016
Net Loss	$(2,515,106)	$(8,041,372)
Other comprehensive income		
Unrealized gain on available-for-sale investments	—	451
Total other comprehensive income	—	451
Comprehensive Loss	$(2,515,106)	$(8,040,921)
Comprehensive loss attributable to non-controlling interest	—	1,165,926
Comprehensive Loss attributable to BioLife Solutions, Inc.	$(2,515,106)	$(6,874,995)

The accompanying Notes to Consolidated Financial Statements are an integral part of these financial statements

BioLife Solutions, Inc.

Consolidated Statements of Shareholders' Equity

	BioLife Solutions, Inc. Shareholder's Equity									
	Preferred Stock Shares – Series A	Preferred Stock Amount – Series A	Common Stock Shares	Common Stock Amount	Additional Paid-in Capital	Accumulated Other Comprehensive Loss	Accumulated Deficit	Total BioLife Solutions, Inc. Shareholders' Equity	Non-Controlling Interest Equity	To Sh Eq
Balance, December 31, 2015	—	$—	12,448,391	$12,447	$72,823,398	$(451)	$(64,326,923)	$8,508,471	$1,350,900	$9
Stock-based compensation					776,994			776,994		7
Stock options/warrant exercises			246,164	247	246,033			246,280		2
Stock Issued – on vested RSUs			84,894	86	(86)			—		–
Warrants Issued with Debt - WAVI					374,390			374,390		3
Stock Issued for Services			84,375	84	134,916			135,000		1
Other comprehensive income						451		451		4
Elimination of remaining non-controlling interest equity on deconsolidation									(184,974)	(
Net loss							(6,875,446)	(6,875,446)	(1,165,926)	(
Balance, December 31, 2016			12,863,824	12,864	74,355,645	—	(71,202,369)	3,166,140	—	3
Cumulative-effect adjustment resulting from adoption of ASU 2016-09					27,908		(27,908)	—		–
Vesting of JV related stock-based					22,317			22,317		2

compensation										
Series A preferred stock issued on conversion of related party note and accrued interest on June 30, 2017, net of stock issuance costs of $9,303	4,250	4			4,240,693			4,240,697		4
Stock based compensation					1,270,203			1,270,203		1
Stock option/warrant exercises			1,045,719	1,046	3,977,290			3,978,336		3
Stock issued – on vested RSUs			51,563	51	(51)			—		–
Stock issued for services			60,316	60	142,439			142,499		1
Preferred stock dividends							(212,500)	(212,500)		(
Net loss							(2,515,106)	(2,515,106)		(
Balance, December 31, 2017	4,250	$4	14,021,422	$14,021	$84,036,444	$—	$(73,957,883)	$10,092,586	$—	$1

The accompanying Notes to Consolidated Financial Statements are an integral part of these financial statements

BioLife Solutions, Inc.

Consolidated Statements of Cash Flows

	Years Ended December 31,	
	2017	2016
Cash flows from operating activities		
Net loss	$(2,515,106)	$(8,041,372)
Adjustments to reconcile net loss to net cash provided by/(used in) operating activities		
Depreciation	338,682	368,102
Loss on disposal of property and equipment	—	1,213
Stock-based compensation expense	1,270,203	776,994
Stock issued for services	106,874	135,000
Write off of deferred financing costs	67,664	86,736
Amortization of debt discount	155,996	218,394
Loss on deconsolidation of biologistex	—	2,785,910
Loss from equity-method investment in SAVSU	1,004,880	—
Amortization of deferred rent related to lease incentives	(126,998)	(126,997)
Accretion and amortization on available for sale investments	—	1,792
Change in operating assets and liabilities		
(Increase) Decrease in		
Accounts receivable, trade	172,331	(264,357)
Inventories	(88,962)	(290,838)
Prepaid expenses and other current assets	(180,663)	73,255
Increase (Decrease) in		
Accounts payable	20,580	233,482
Accrued compensation and other current liabilities	293,743	(410,151)
Accrued interest	152,143	97,857
Deferred rent	(66,245)	27,989
Net cash provided by/(used in) operating activities	605,122	(4,326,991)
Cash flows from investing activities		
Sales/maturities of available-for-sale investments	—	1,650,000
Costs associated with internal use software development	—	(1,113,675)
Purchase of property and equipment	(143,767)	(143,533)
Net cash provided by/(used in) investing activities	(143,767)	392,792
Cash flows from financing activities		
Proceeds from note payable to related party	1,000,000	3,000,000
Proceeds from exercise of common stock options and warrants	3,978,336	278,503
Payments on equipment loan	(13,081)	—
Payments on capital lease obligation	(10,901)	—
Payments related to preferred stock issuance	(9,303)	—
Payments of preferred stock dividends	(106,250)	—
Deferred costs paid related to potential stock issuance	(42,664)	(111,736)

Net cash provided by financing activities	4,796,137	3,166,767
Net increase/(decrease) in cash and cash equivalents	5,257,492	(767,432)
Cash and cash equivalents - beginning of year	1,405,826	2,173,258
Cash and cash equivalents - end of year	$6,663,318	$1,405,826
Non-cash investing and financing activities		
Series A preferred stock dividends accrued not yet paid	$106,250	$—
Stock issued for services in prior period included in liabilities at year-end	35,624	—
Preferred stock issued to convert related party note payable and accrued interest	4,250,000	—
Capital lease obligations incurred for purchase of equipment	52,327	—
Purchase of equipment with debt	39,243	—
Debt discount related to warrants	—	374,390
Deferred costs related to potential stock issuances not yet paid	—	26,975
Purchase of property and equipment not yet paid	22,003	—

The accompanying Notes to Consolidated Financial Statements are an integral part of these financial statements

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

1. Organization and Significant Accounting Policies

Business

BioLife Solutions, Inc. (“BioLife,” “us,” “we,” “our,” or the “Company”) is a developer, manufacturer and marketer of proprietary clinical grade cell and tissue hypothermic storage and cryopreservation freeze media. Our proprietary HypoThermosol® and CryoStor® platform of solutions are highly valued in the biobanking, drug discovery, and regenerative medicine markets. Our biopreservation media products are serum-free and protein-free, fully defined, and are formulated to reduce preservation-induced cell damage and death. Our enabling technology provides commercial companies and clinical researchers significant improvement in shelf life and post-preservation viability and function of cells, tissues, and organs. Additionally, for our direct, distributor, and contract customers, we perform custom formulation, fill, and finish services.

Restructuring of biologistex

On December 31, 2016, we entered into a Contribution Agreement (the “Contribution Agreement”) with Savsu Technologies, LLC, a Delaware limited liability company (“STLLC”) and biologistex CCM, LLC, a Delaware limited liability company (“biologistex” or “SAVSU”). The closing of the transactions contemplated by the Contribution Agreement occurred on December 31, 2016 (the “Closing Date”), simultaneously with the entrance into the Contribution Agreement. biologistex is a joint venture entered into by the Company and STLLC in 2014 for the purpose of acquiring, developing, maintaining, owning, operating, leasing and selling an integrated platform of a cloud-based information service and precision thermal shipping products based on STLLC’s next generation EVO smart container shipment platform. Prior to the Closing Date, biologistex was owned 52% by the Company and 48% by STLLC. Pursuant to the Contribution Agreement, STLLC contributed certain of its patent and trademark rights, personal property and related contracts to biologistex in exchange for the issuance from biologistex to STLLC of an additional 7% membership interest in biologistex, so that upon the closing thereunder, STLLC owned 55% of biologistex and the Company owned 45% of biologistex. Other than liabilities for obligations to be performed pursuant to the contracts which were contributed to biologistex by STLLC, biologistex did not assume any liabilities of STLLC in connection with the Contribution Agreement. In connection with the Contribution Agreement, we (i) contributed to biologistex as a capital contribution outstanding loans owed by biologistex to the Company in the aggregate amount of $6,557,776 and (ii) terminated any requirement which the Company may have had to purchase any additional inventory from STLLC or contribute any inventory to biologistex.

As a result of the Contribution Agreement, we deconsolidated the biologistex joint venture from our balance sheet on December 31, 2016 and began accounting for our investment in SAVSU using the equity method. We recognized a $2.8 million loss on deconsolidation (including approximately $0.1 million in related restructuring charges), which consisted of a $2.2 million gain on derecognizing the assets, liabilities and equity of biologistex from our consolidated financial statements and a $5.0 million loss related to the remeasurement of the retained fair value of our investment in SAVSU. We derived the fair value of our retained investment in SAVSU using level 3 measurements in the fair value hierarchy using a midpoint between a discounted cash flow analysis and a discounted price to revenues multiples. As part of the fair value analysis, we applied a range of discount rates of 30% - 50% to multiple cash flow and terminal value scenarios. An increase in discount rate would result in a decrease in fair value. In addition, we used a range of revenue multiples of 2 times revenue – 6 times revenue, which were applied to a risk adjusted revenue projection. A decrease in revenue multiple would result in a decrease in fair value.

On January 22, 2018, the Company and STLLC amended their arrangement with respect to SAVSU. As described in more detail below, in exchange for the Company's agreement to terminate that certain Services Agreement, dated December 31, 2016 (the "Services Agreement"), between the Company and SAVSU relating to the provision of services by the Company to SAVSU in exchange initially for cash payments and thereafter for a portion of SAVSU's future revenues, STLLC agreed to (i) revise a provision of that the Contribution Agreement, between the Company and STLLC eliminating the requirement that the Company transfer a portion of its equity of SAVSU to STLLC on December 31, 2018 and (ii) amend a provision of that certain Amended and Restated Operating Agreement of biologistex, dated December 31, 2016 (the "Operating Agreement"), reflecting the percentage of profits and losses that each of the Company and STLLC will share in of SAVSU.

On January 22, 2018, in consideration of the Company's agreement to terminate the Services Agreement, the Company and STLLC entered into Amendment No. 1 to Contribution Agreement (the "Contribution Agreement Amendment") and Amendment to the Amended and Restated Operating Agreement of biologistex CCM, LLC (the "Operating Agreement Amendment").

Pursuant to the Contribution Agreement Amendment, the parties agreed to amend a provision in the Contribution Agreement that required the Company to transfer to STLLC a portion of its equity stake in SAVSU which would have reduced the Company's ownership in SAVSU from 40% to 25% on December 31, 2018. As a result of the Contribution Agreement Amendment, the Company will now maintain a 35% ownership stake in SAVSU, subject to ordinary dilution.

Pursuant to the Operating Agreement Amendment, the parties agreed to amend the profit sharing provision of the Operating Agreement. As a result of the Operating Agreement Amendment, the Company will receive 35% of the profits and losses of SAVSU, subject to ordinary dilution, moving forward. Prior to the Operating Agreement Amendment, the Company would have been entitled to receive 40% of the profits and losses of SAVSU for the fiscal year ended December 31, 2018 and would have been entitled to receive 25% of the profits and losses beginning January 1, 2019 and continuing thereafter.

Principles of Consolidation

The consolidated statements of operations, comprehensive loss, shareholders equity, and cash flows for the year ended December 31, 2016 include the accounts of the Company and its previously majority-owned subsidiary, biologistex. All intercompany balances and transactions have been eliminated in consolidation. On December 31, 2016 we deconsolidated biologistex and began to report our ownership interest of biologistex using the equity method of accounting based on the fair value of our ownership interest in biologistex at the time of the transaction.

Use of estimates

The preparation of financial statements in conformity with generally accepted accounting principles requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities at the date of the financial statements and reported amounts of revenue and expenses during the reporting period. Actual results could differ from those estimates.

Net loss per share

Basic net loss per common share is calculated by dividing the net loss attributable to common stockholders by the weighted average number of common shares outstanding during the period, excluding, unvested restricted stock outstanding during the period. Diluted earnings per share is calculated using the weighted average number of common shares outstanding plus dilutive common stock equivalents outstanding during the period. Common stock equivalents are excluded for the years ending December 31, 2017 and 2016 since the effect is anti-dilutive due to the Company’s net losses. Common stock equivalents include unvested restricted stock, stock options and warrants.

Basic weighted average common shares outstanding, and the potentially dilutive securities excluded from loss per share computations because they are antidilutive, are as follows for the years ended December 31, 2017 and 2016:

	2017	2016
Basic and diluted weighted average common stock shares outstanding	13,263,881	12,642,996
Potentially dilutive securities excluded from loss per share computations:		
Common stock options	3,390,009	2,513,861
Common stock purchase warrants	6,688,849	7,603,141
Unvested Restricted Stock	237,926	98,439

Cash and cash equivalents

Cash equivalents consist primarily of interest-bearing money market accounts. We consider all highly liquid debt instruments purchased with an initial maturity of three months or less to be cash equivalents. We maintain cash balances that may exceed federally insured limits. We do not believe that this results in any significant credit risk.

We paid $37,926 and no cash for interest for the years ended December 31, 2017 and 2016, respectively.

Equity Method Investments

Subsequent to the deconsolidation of biologistex on December 31, 2016, we account for our investment in SAVSU using the equity method of accounting. This method states that if the investment provides us the ability to exercise significant influence, but not control, over the investee, we account for the investment under the equity method. Significant influence is generally deemed to exist if the Company's ownership interest in the voting stock of the investee ranges between 20% and 50%, although other factors, such as representation on the investee's board of directors, are considered in determining whether the equity method of accounting is appropriate. Under the equity method of accounting, the investment is recorded at its initial carrying value in the consolidated balance sheet and is periodically adjusted for capital contributions, dividends received and our share of the investee's earnings or losses together with other-than-temporary impairments which are recorded as a component of other income (expense), net in the consolidated statements of operations. For the year ended December 31, 2017, SAVSU's net loss totaled $2.2 million of which our 45% ownership resulted in a $1.0 million loss which was recorded as "Loss from equity-method investment in SAVSU." We did not record any equity method income or loss related to SAVSU for the year ended December 31, 2016. Our retained investment in SAVSU was initially recorded at fair value as of December 31, 2016 and our proportionate share of the net loss as reported by SAVSU for the period accounted for on the equity method in 2016 is included in our consolidated net loss which had no activity as of December 31, 2016.

As of December 31, 2017, SAVSU had current assets and total assets of $0.6 million and $3.3 million, respectively and liabilities of $0.2 million. As of December 31, 2016, SAVSU had current assets and total assets of $0.5 million and $3.2 million, respectively and no material liabilities. The carrying value of our investment in SAVSU is in excess of the underlying equity in net assets of SAVSU as of December 31, 2016, due to the company's investment recorded at fair value while the underlying net assets of SAVSU are recorded at historical cost. The carrying value of our investment in SAVSU is less than the underlying equity in net assets of SAVSU as of December 31, 2017, as STLLC made additional contributions to SAVSU in 2017 as capital contributions and there were no changes in ownership percentages. Net assets of SAVSU include significant unrecorded internally developed intangibles contributed by STLLC at December 31, 2017 and 2016.

Inventories

Inventories represent biopreservation solutions, raw materials used to make biopreservation solutions and are stated at the lower of cost or net realizable value. Cost is determined using the first-in, first-out ("FIFO") method.

Accounts receivable

Accounts receivable are stated at principal amount, do not bear interest, and are generally unsecured. We provide an allowance for doubtful accounts based on an evaluation of customer account balances past due ninety days from the date of invoicing. Accounts considered uncollectible are charged against the established allowance.

Property and equipment

Property and equipment are stated at cost and are depreciated using the straight-line method over estimated useful lives of three to ten years.

Deferred rent

For our operating leases, we recognize rent expense on a straight-line basis over the terms of the leases and, accordingly, we record the difference between cash rent payments and the recognition of rent expense as a deferred rent liability. Landlord-funded leasehold improvements, to the extent the improvements are not landlord property upon lease termination, are also recorded as deferred rent liabilities and are amortized as a reduction of rent expense over the non-cancelable term of the related operating lease.

Revenue recognition

We recognize product revenue, including shipping and handling charges billed to customers, upon shipment of product when title and risk of loss pass to customers. Shipping and handling costs are classified as part of cost of product sales. We may also receive fees from our contract manufacturing customers for validation of the manufacturing process. This typically occurs prior to production for those customers and revenue is recognized upon successful completion of all obligations related to the validation process.

Income taxes

We account for income taxes using an asset and liability method which generally requires recognition of deferred tax assets and liabilities for the expected future tax effects of events that have been included in the financial statements or tax returns. Under this method, deferred tax assets and liabilities are recognized for the future tax effects of differences between tax bases of assets and liabilities, and financial reporting amounts, based upon enacted tax laws and statutory rates applicable to the periods in which the differences are expected to affect taxable income. We evaluate the likelihood of realization of deferred tax assets and provide an allowance where, in management’s opinion, it is more likely than not that the asset will not be realized. We have not recorded any liabilities for uncertain tax positions or any related interest and penalties. Our tax returns are open to audit for years ending December 31, 2014 to 2017.

Advertising

Advertising costs are expensed as incurred and totaled $38,708 and $74,916 for the years ended December 31, 2017 and 2016, respectively.

Fair value of financial instruments

The principal balance of the note payable and related accrued interest approximates their fair value (determined based on level 3 inputs in the fair value hierarchy) because the interest rate of the note payable approximates market interest rates.

Operating segments

As described above, our activities are directed in the life sciences field of biopreservation products and services. As of December 31, 2017, and 2016 this is the Company’s only operating unit and segment.

Concentrations of credit risk and business risk

In each of the years 2017 and 2016, we derived approximately 12% of our revenue from our relationship with one distributor of our products. Revenue from customers located in foreign countries represented 16% and 17% of total revenue during the years ended December 31, 2017 and 2016, respectively. All revenue from foreign customers are denominated in United States dollars. At December 31, 2017, two customers accounted for 41% of gross accounts receivable. At December 31, 2016, three customers accounted for 45% of gross accounts receivable.

Research and development

Research and development costs are expensed as incurred.

Stock Based Compensation

We use the Black-Scholes option pricing model as our method of valuation for stock option awards. Restricted stock unit grants are valued at the fair value of our common stock on the date of grant. Share-based compensation expense is based on the value of the portion of the stock-based award that will vest during the period, adjusted for forfeitures. Our determination of the fair value of stock option awards on the date of grant using an option pricing model is affected by our stock price as well as assumptions regarding a number of highly complex and subjective variables. These variables include, but are not limited to, the expected life of the award, expected stock price volatility over the term of the award and historical and projected exercise behaviors. The estimation of share-based awards that will ultimately vest requires judgment, and to the extent actual or updated results differ from our current estimates, such

amounts will be recorded in the period estimates are revised. Although the fair value of stock option awards is determined in accordance with authoritative guidance, the Black-Scholes option pricing model requires the input of highly subjective assumptions and other reasonable assumptions could provide differing results. Share-based compensation expense is recognized ratably over the applicable requisite service period based on the fair value of such share-based awards on the grant date.

The fair value of options at the date of grant is determined under the Black-Scholes option pricing model. During the years ended December 31, 2017 and 2016, the following weighted-average assumptions were used:

Assumptions	2017		2016	
Risk-free rate	2.12	%	1.51	%
Annual rate of dividends	—		—	
Historical volatility	74	%	75	%
Expected life	5.7 years		7.0 years	

The risk-free interest rate was based on the U.S. Treasury yield curve in effect at the time of grant. We do not anticipate declaring dividends in the foreseeable future. Volatility was based on historical data. We utilize the simplified method in determining option lives. The simplified method is used due to the fact that we have had significant structural changes in our business such that our historical exercise data may not provide a reasonable basis to estimate option lives. Our stock price volatility and option lives involve management's best estimates at the time of such determination, all of which impact the fair value of the option calculated under the Black-Scholes model and, ultimately, the expense that will be recognized over the life of the option.

Management adopted Financial Accounting Standards Board ("FASB") Accounting Standard Update No. 2016-09 on January 1, 2017. Due to the adoption of ASU 2016-09 an accounting policy change was made to account for forfeitures as they occur and not estimated. As a result, we had a cumulative-effect adjustment to accumulated deficit and additional paid in capital of $27,908 resulting from adoption. The estimated forfeiture rate derived from historical employee termination data applied for 2016 was approximately 8.1%.

Recent accounting pronouncements

In August 2016, the FASB issued Accounting Standards Update No. 2016-15, Statement of Cash Flows (Topic 230): Classification of Certain Cash Receipts and Cash Payments (ASU 2016-15). The updated guidance clarifies how companies present and classify certain cash receipts and cash payments in the statement of cash flows. Adoption of ASU 2016-15 is required for fiscal reporting periods beginning after December 15, 2017, including interim reporting periods within those fiscal years with early adoption being permitted. We do not expect the adoption of ASU 2016-15 to have a material impact on our financial statements.

In March 2016, the FASB issued Accounting Standards Update No. 2016-09, Compensation-Stock Compensation (Topic 718): Improvements to Employee Share-Based Payment Accounting (ASU-2016-09). The updated guidance simplifies and changes how companies account for certain aspects of share-based payment awards to employees, including accounting for income taxes, forfeitures, and statutory tax withholding requirements, as well as

classification of certain items in the statement of cash flows. The Company adopted ASU-2016-09 at the beginning of the first quarter of 2017. Due to the adoption of ASU 2016-09 an accounting policy change was made to account for forfeitures as they occur and not estimated. No other material changes resulted from adopting ASU 2016-09. We used the modified retrospective method for this adoption.

In February 2016, the FASB issued Accounting Standards Update No. 2016-02, Leases: Topic 842 (ASU 2016-02) that replaces existing lease guidance. The new standard is intended to provide enhanced transparency and comparability by requiring lessees to record right-of-use assets and corresponding lease liabilities on the balance sheet. Under the new guidance, leases will continue to be classified as either finance or operating, with classification affecting the pattern of expense recognition in the Statements of Operations. Lessor accounting is largely unchanged under ASU 2016-02. Adoption of ASU 2016-02 is required for fiscal reporting periods beginning after December 15, 2018, including interim reporting periods within those fiscal years with early adoption being permitted. The new standard is required to be applied with a modified retrospective approach to each prior reporting period presented with various optional practical expedients. While the Company expects adoption of ASU 2016-02 to lead to a material increase in the assets and liabilities recorded on its Balance Sheet, the Company is still evaluating the overall impact on its financial statements.

In January 2016, the FASB issued Accounting Standards Update No. 2016-01, Recognition and Measurement of Financial Assets and Financial Liabilities: Topic 825 (ASU 2016-01). The updated guidance enhances the reporting model for financial instruments, which includes amendments to address aspects of recognition, measurement, presentation and disclosure. Adoption of ASU 2016-01 is required for fiscal reporting periods beginning after December 15, 2017, including interim reporting periods within those fiscal years. The Company does not expect adoption of ASU 2016-01 to have a material impact on its financial statements.

In November 2015, the FASB issued Accounting Standards Update No. 2015-17, Balance Sheet Classification of Deferred Taxes: Topic 740 (ASU 2015-17). Current GAAP requires the deferred taxes for each jurisdiction to be presented as a net current asset or liability and net noncurrent asset or liability. This requires a jurisdiction-by-jurisdiction analysis based on the classification of the assets and liabilities to which the underlying temporary differences relate, or, in the case of loss or credit carryforwards, based on the period in which the attribute is expected to be realized. Any valuation allowance is then required to be allocated on a pro rata basis, by jurisdiction, between current and noncurrent deferred tax assets. The new guidance requires that all deferred tax assets and liabilities, along with any related valuation allowance, be classified as noncurrent on the balance sheet. As a result, each jurisdiction will now only have one net noncurrent deferred tax asset or liability. The guidance does not change the existing requirement that only permits offsetting within a jurisdiction. The Company adopted ASU-2015-17 at the beginning of the first quarter of 2017 which had no significant impact on the financial statements as the net deferred tax assets are fully reserved.

In July 2015, the FASB issued ASU No. 2015-11, Simplifying the Measurement of Inventory: Topic 330 (ASU 2015-11). Topic 330 previously required an entity to measure inventory at the lower of cost or market. Market could be replacement cost, net realizable value, or net realizable value less an approximately normal profit margin. ASU 2015-11 requires that inventory measured using either the first-in, first-out (FIFO) or average cost method be measured at the lower of cost and net realizable value. Net realizable value is the estimated selling prices in the ordinary course of business, less reasonably predictable costs of completion, disposal, and transportation. The Company adopted ASU-2015-11 at the beginning of the first quarter of 2017 which had no significant impact on the financial statements.

On May 28, 2014, the FASB issued ASU No. 2014-09, Revenue from Contracts with Customers, Topic 606, requiring an entity to recognize the amount of revenue to which it expects to be entitled for the transfer of promised goods or services to customers. The updated standard will replace most existing revenue recognition guidance in U.S. GAAP when it becomes effective and permits the use of either the retrospective or cumulative effect transition method. Early adoption is not permitted. The updated standard becomes effective for us in the first quarter of fiscal 2018. Based on our analysis thus far, we believe the impact of adopting the new guidance will be immaterial to our annual and interim financial statements. The Company will also be required to make additional disclosures under the new guidance. We continue to assess the impact on all areas of our revenue recognition, disclosure requirements, and changes that may be necessary to our internal controls over financial reporting. We will adopt this standard in the first quarter of 2018.

With the exception of the new standards discussed above, there have been no new accounting pronouncements not yet effective that have significance, or potential significance, to our Financial Statements.

2. Accumulated Other Comprehensive Loss

The following table shows the changes in Accumulated Other Comprehensive Loss by component for the years ended December 31, 2017 and 2016:

	2017	2016
Beginning balance	$ —	$(451)
Unrealized Gain on investments, current period	—	451
Ending balance	$ —	$—

3. Fair Value Measurement

In accordance with FASB ASC Topic 820, “Fair Value Measurements and Disclosures,” (“ASC Topic 820”), the Company measures its cash and cash equivalents and short-term investments at fair value on a recurring basis. ASC

Topic 820 clarifies that fair value is an exit price, representing the amount that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants. As such, fair value is a market-based measurement that should be determined based on assumptions that market participants would use in pricing an asset or liability. As a basis for considering such assumptions, ASC Topic 820 establishes a three-tier value fair hierarchy, which prioritizes the inputs used in measuring fair value as follows:

Level 1 – Observable inputs that reflect quoted prices (unadjusted) in active markets for identical assets or liabilities.

Level 2 – Observable inputs other than quoted prices included in Level 1 for similar assets or liabilities, quoted prices in markets that are not active or other inputs that are observable or can be corroborated by observable market data for substantially the full term of the related assets or liabilities.

Level 3 – Unobservable data points for the asset or liability, and include situations where there is little, if any, market activity for the asset or liability.

As of December 31, 2017 and 2016, the Company does not have liabilities that are measured at fair value.

The following tables set forth the Company's assets measured at fair value on a recurring basis as of December 31, 2017 and December 31, 2016, based on the three-tier fair value hierarchy:

As of December 31, 2017	Level 1	Level 2	Total
Bank deposits	$6,610,183	$ —	$6,610,183
Money market funds	53,135	—	53,135
Total Cash and cash equivalents	$6,663,318	$ —	$6,663,318

As of December 31, 2016	Level 1	Level 2	Total
Bank deposits	$1,352,541	$ —	$1,352,541
Money market funds	53,285	—	53,285
Total Cash and cash equivalents	$1,405,826	$ —	$1,405,826

The fair values of bank deposits and money market funds classified as Level 1 were derived from quoted market prices as active markets for these instruments exist. The Company has no Level 2 or Level 3 assets. The Company did not have any transfers between Level 1 and Level 2 of the fair value hierarchy during the years ended December 31, 2017 and 2016.

4. Inventories

Inventories consist of the following at December 31, 2017 and 2016:

	2017	2016
Raw materials	$582,816	$531,053
Work in progress	453,890	370,740
Finished goods	810,040	855,991
Total	$1,846,746	$1,757,784

5. Deferred Rent

Deferred rent consists of the following at December 31, 2017 and 2016:

	2017	2016
Landlord-funded leasehold improvements	$1,124,790	$1,124,790
Less accumulated amortization	(629,525)	(502,527)
Total (current portion $130,216 at December 31, 2017 and 2016)	495,265	622,263
Straight line rent adjustment	127,158	193,403
Total deferred rent	$622,423	$815,666

During the years ended December 31, 2017 and 2016, the Company recorded $126,998 and $126,997, respectively, in deferred rent amortization of landlord funded leasehold improvements.

In addition, during the year ended December 31, 2017, the company recorded a reduction of deferred rent of $66,245, and during the year ended December 31, 2016, the Company recorded an increase of deferred rent of $27,989, which represented the difference between cash rent payments and the recognition of rent expense on a straight-line basis over the terms of the lease.

6. Income Taxes

Income tax benefit reconciled to tax calculated at statutory rates is as follows:

	2017	2016
Federal tax (benefit) on consolidated net loss at statutory rate	$(855,136)	$(2,734,067)
Change in valuation allowance	(3,419,114)	38,090
Add back tax benefit on loss attributable to non-controlling interest in subsidiary	—	396,415
Book loss related to joint venture deconsolidation	—	900,910
Basis limited on joint venture loss	—	429,450
Basis difference related to investment in joint venture	(110,114)	705,500
Return to provision	(1,037,754)	—
Discrete due to joint venture deconsolidation	—	245,854
Federal rate change true-up	5,421,298	—
Other	820	17,848
Benefit for income taxes, net	$—	$—

At December 31, 2017 and 2016, the components of the Company's deferred taxes are as follows:

	2017	2016
Deferred tax assets (liabilities)		
Net operating loss carryforwards	$8,162,123	$11,956,967
Accrued compensation	31,844	35,249
Depreciation	42,688	46,975
Section 263a inventory adjustment	29,171	43,787
Stock-based compensation	688,148	765,928
Outside basis difference in joint venture	(224,725)	(705,500)
Other	28,232	33,189
Total	8,757,481	12,176,595
Less: Valuation allowance	(8,757,481)	(12,176,595)
Net deferred tax asset	$—	$—

On December 22, 2017, "H.R.1", known as the "Tax Cuts and Jobs Act", was signed into law in the United States. Among other items, H.R.1 reduces the federal corporate tax rate to 21% from the existing maximum rate of 35%, effective January 1, 2018. As a result, the Company revalued its net deferred tax asset at the new lower tax rate. The Company has reduced the value of the deferred tax asset before valuation allowance by $5.4 million.

The Company has the following net operating loss tax carryforwards available at December 31, 2017:

Year of Expiration	Net Operating Losses
2018	$1,425,000
2019	1,234,000
2020	2,849,000
2021	4,168,000
2023	1,217,000
2024	646,000
2025	589,000
2026	873,000
2027	2,607,000
2028	2,512,000
2029	2,196,000
2030	1,232,000
2031	1,028,000
2032	437,000
2033	37,000
2034	6,409,000

2035	3,093,000
2036	4,995,000
2037	1,320,000
Total	$ 38,867,000

Based on historical losses and potential future changes in the ownership of the Company, the utilization of such loss and tax credit carryforwards could be substantially limited.

7. Warrants

The following table summarizes warrant activity for the years ended December 31, 2017 and 2016:

	Year Ended December 31, 2017		Year Ended December 31, 2016	
	Shares	Wtd. Avg. Exercise Price	Shares	Wtd. Avg. Exercise Price
Outstanding at beginning of year	7,603,141	$ 4.46	7,195,997	$ 4.60
Granted	—	—	550,000	1.75
Exercised	(914,292)	4.18	(142,856)	0.84
Forfeited/Expired	—	—	—	—
Outstanding and exercisable at end of year	6,688,849	$ 4.50	7,603,141	$ 4.46

On May 12, 2016, we issued 550,000 warrants with an exercise price of $1.75 and an expiration date of May 12, 2021 in connection with the credit facility agreement with WAVI Holdings, AG (“WAVI”). The Company recorded a debt discount related to the value of the warrants in the amount of $374,390. The debt discount amount recorded related to the warrants was determined based on the relative fair value of the note payable and the warrants. The outstanding warrants have expiration dates between March 2021 and May 2021.

8. Stock-Based Compensation

Stock Compensation Plans

Our stock-based compensation programs are long-term retention programs that are intended to attract, retain and provide incentives for talented employees, officers and directors, and to align stockholder and employee interests. We have the following stock-based compensation plans and programs:

During 1998, we adopted the 1998 Stock Option Plan (the “1998 Plan”). An aggregate of 285,714 shares of common stock were reserved for issuance upon the exercise of options granted under the 1998 Plan. In September 2005, the shareholders approved an increase in the number of shares available for issuance to 714,285 shares. The 1998 Plan expired on August 31, 2008. The options are exercisable for up to ten years from the grant date. As of December 31, 2017, there were outstanding options to purchase 7,142 share of Company common stock under the 1998 Plan.

Subsequent to the expiration of the 1998 Plan, the Company issued, outside of the 1998 Plan, non-incentive stock options for an aggregate of 1,243,584 shares of Company common stock. Of this amount, 665,105 remain outstanding at December 31, 2017.

During 2013, we adopted the 2013 Performance Incentive Plan (the “2013 Plan”), which allows us to grant options or restricted stock units to all employees, including executive officers, outside consultants and non-employee directors. An aggregate of 3.1 million shares of common stock were initially reserved for issuance upon the exercise of options granted under the 2013 Plan. In May 2017, the shareholders approved an increase in the number of shares available for issuance to 4.1 million shares. Option vesting periods are generally four years for the 2013 Plan. Options granted under this plan generally expire ten years from the effective date of grant. As of December 31, 2017, there were outstanding options to purchase 2,717,762 shares of Company common stock and 237,926 unvested restricted stock awards outstanding under the 2013 Plan.

Issuance of Shares

When options and warrants are exercised, it is the Company's policy to issue new shares.

Stock Option Activity

Service Vesting-Based Stock Options

The following is a summary of service vesting-based stock option activity under our stock option plans for 2017 and 2016, and the status of service vesting-based stock options outstanding at December 31, 2017 and 2016:

	Year Ended December 31, 2017		Year Ended December 31, 2016	
	Shares	Wtd. Avg. Exercise Price	Shares	Wtd. Avg. Exercise Price
Outstanding at beginning of year	2,513,861	$ 1.78	2,555,263	$ 1.80
Granted	155,000	2.93	739,000	1.80
Exercised	(131,427)	1.17	(103,308)	1.22
Forfeited	(52,932)	3.45	(469,856)	2.15
Expired - vested	(94,490)	1.78	(207,238)	1.50
Outstanding at end of year	2,390,012	$ 1.85	2,513,861	$ 1.78
Stock options exercisable at year end	1,583,585	$ 1.72	1,329,392	$ 1.66

We recognized stock compensation expense of $611,705 and $612,440 related to service vesting-based options during the year ended December 31, 2017 and 2016, respectively. Weighted average fair value of service vesting-based options granted was $1.91 and $1.26 per share for the years ended December 31, 2017 and 2016, respectively.

During the year ended December 31, 2017, service vesting-based options covering 131,427 shares of common stock with a total intrinsic value of $91,817 were exercised. During the year ended December 31, 2016, service vesting-based options covering 103,308 shares of common stock with a total intrinsic value of $51,302 were exercised.

As of December 31, 2017, there was $9,936,441 of aggregate intrinsic value of outstanding service vesting-based stock options, including $6,793,545 of aggregate intrinsic value of exercisable service vesting-based stock options. Intrinsic value is the total pretax intrinsic value for all "in-the-money" options (i.e., the difference between the Company's closing stock price on the last trading day of 2017 and the exercise price, multiplied by the number of

shares) that would have been received by the option holders had all option holders exercised their options as of December 31, 2017. This amount will change based on the fair market value of the Company's stock.

The following table summarizes information about service vesting-based stock options outstanding at December 31, 2017:

Range of Exercise Prices	Number Outstanding at December 31, 2017	Weighted Average Remaining Contractual Life	Weighted Average Exercise Price
$ 0.49-$1.00	17,855	1.17	$ 0.60
$ 1.01-$1.50	645,108	2.75	$ 1.23
$ 1.51-$2.50	1,632,408	7.56	$ 1.93
$ 2.51-$8.60	94,641	7.89	$ 4.94
	2,390,012	6.22	$ 1.85

The weighted average remaining contractual life of exercisable service vesting-based options at December 31, 2017, is 5.6 years. Total unrecognized compensation cost of service vesting-based stock options at December 31, 2017 of $1,174,003 is expected to be recognized over a weighted average period of 2.2 years.

Performance-based Stock Options

The Company's Board of Directors implemented a Management Performance Bonus Plan for 2017. Based on achieving varying levels of specified revenue for the year ending December 31, 2017, up to 1,000,000 options to purchase shares of the Company's common stock may be vested. The options have an exercise price of $1.64, and if revenue levels are met, vest 50% on the release of the Company's audited financial statements for 2017, and 50% one year thereafter. If the minimum performance targets are not achieved, no options will vest. On February 27, 2018, the Company's Board of Directors determined that, subject to the completion of the 2017 audit, the specified revenue target had been achieved. Accordingly, 999,997 options to purchase shares of the Company's common stock will vest as follows: 50% of the options vested on March 8, 2018 and the remaining 50% will vest on March 8, 2019.

We recognized stock compensation expense of $509,005 related to performance-based options during the year ended December 31, 2017. Weighted average fair value of performance-based options granted was $1.02 per share for the year ended December 31, 2017. As of December 31, 2017, there was $4,359,987 of aggregate intrinsic value of outstanding performance-based stock options. The weighted average remaining contractual life of performance-based options at December 31, 2017, is 4.0 years. Total unrecognized compensation cost of performance-based stock options at December 31, 2017 of $509,000 is expected to be recognized over a weighted average period of 1.0 years.

Restricted Stock

The following is a summary of unvested restricted stock activity for 2017 and 2016, and the status of unvested restricted stock outstanding at December 31, 2017 and 2016:

	Year Ended December 31, 2017		Year Ended December 31, 2016	
	Shares	Wtd. Avg. Grant Date Fair Value	Shares	Wtd. Avg. Grant Date Fair Value
Outstanding at beginning of year	98,439	$ 1.90	—	$ —
Granted	207,350	1.76	200,000	1.90
Vested	(51,563)	1.90	(84,894)	1.90
Forfeited	(16,300)	1.76	(16,667)	1.90
Non-vested at end of year	237,926	$ 1.79	98,439	$ 1.90

The aggregate fair value of the awards granted during the years ended December 31, 2017 and 2016 was $364,936 and $380,000, respectively, which represents the market value of BioLife common stock on the date that the restricted stock awards were granted. The aggregate fair value of the restricted stock awards that vested during the years ended December 31, 2017 and 2016 was $154,219 and $156,564, respectively.

We recognized stock compensation expense of $149,494 and $164,554 related to restricted stock awards during the years ended December 31, 2017 and 2016, respectively. As of December 31, 2017, there was $344,279 in unrecognized compensation costs related to restricted stock awards. We expect to recognize those costs over 2.6 years.

We recorded total stock compensation expense for the years ended December 31, 2017 and 2016, as follows:

	Year Ended December 31,	
	2017	2016
Research and development costs	$236,972	$151,849
Sales and marketing costs	230,461	176,878
General and administrative costs	638,346	426,035
Cost of product sales	164,424	2,794
Joint venture restructuring charges	—	19,438

Total	$1,270,203	$776,994

9. Commitments and Contingencies

Leases

We lease approximately 30,000 square feet in our Bothell, Washington headquarters. The term of our lease continues until July 31, 2021 with two options to extend the term of the lease, each of which is for an additional period of five years, with the first extension term commencing, if at all, on August 1, 2021, and the second extension term commencing, if at all, immediately following the expiration of the first extension term. In accordance with the amended lease agreement, our monthly base rent is approximately $58,000 at December 31, 2017, with scheduled annual increases each August and again in October for the most recent amendment. We are also required to pay an amount equal to the Company's proportionate share of certain taxes and operating expenses.

The following is a schedule of future minimum lease payments required under the facility leases as of December 31, 2017:

Year Ending December 31	
2018	$704,000
2019	718,000
2020	733,000
2021	433,000
Total	$2,588,000

Rental expense for this facility lease for the years ended December 31, 2017 and 2016 totaled $755,387 and $832,110, respectively. These amounts include the Company's proportionate share of property taxes and other operating expenses as defined by the lease.

Employment agreements

We have employment agreements with our Chief Executive Officer, Chief Financial Officer, Chief Technology Officer, Vice President of Operations, Vice President of Marketing, and Vice President of Sales. None of these employment agreements is for a definitive period, but rather each will continue indefinitely until terminated in accordance with its terms. The agreements provide for a base annual salary, payable in monthly (or shorter) installments. In addition, the agreement with the Chief Executive Officer provides for incentive bonuses at the discretion of the Board of Directors. Under certain conditions and for certain of these officers, we may be required to pay additional amounts upon terminating the officer or upon the officer resigning for good reason.

Litigation

From time to time, the Company is subject to various legal proceedings that arise in the ordinary course of business, none of which are currently material to the Company's business.

10. Preferred Stock

On June 30, 2017, we modified our existing credit facility with WAVI, a principal stockholder of the Company. Pursuant to the modification, WAVI agreed to exchange its existing credit facility, including $4.25 million of principal and accrued interest outstanding as of June 1, 2017, for 4,250 shares of the Company's Series A Preferred Stock, which has a fixed, aggregate stated value of $4.25 million. The preferred shares issued to WAVI are not convertible into any other form of equity and can only be redeemed at the stated value of $4.25 million at times and in amounts solely determined by the Company. The preferred shares also carry an annual cash dividend of 10% of the outstanding stated value, calculated and payable in arrears on a quarterly basis. The preferred shares have a liquidation preference of $4.25 million over the common shareholders. No additional consideration was provided to WAVI for entering into this agreement. The exchange resulted in no gain or loss on the transaction. As of December 31, 2017, we accrued a dividend of $106,250 on the preferred stock which is included in accrued expenses and other current liabilities in the consolidated balance sheet at December 31, 2017. The dividend was paid subsequent to year end on January 2, 2018.

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ITEM 9. CHANGES IN AND DISAGREEMENTS WITH ACCOUNTANTS ON ACCOUNTING AND FINANCIAL DISCLOSURE

None.

ITEM 9A. CONTROLS AND PROCEDURES

Disclosure Controls and Procedures

We maintain disclosure controls and procedures that are designed to ensure that material information required to be disclosed in our periodic reports filed under the Exchange Act is recorded, processed, summarized, and reported within the time periods specified in the SEC's rules and forms and to ensure that such information is accumulated and communicated to our management, including our chief executive officer and chief financial officer as appropriate, to allow timely decisions regarding required disclosure. During the year ended December 31, 2017 we carried out an evaluation, under the supervision and with the participation of our management, including the chief executive officer and chief financial officer, as required by the rules and regulations under the Exchange Act, of the effectiveness of the design and operation of our disclosure controls and procedures, as defined in Rule 13a-15(e) under the Exchange Act. Based on this evaluation, our chief executive officer and chief financial officer concluded that, as of December 31, 2017, our disclosure controls and procedures were effective.

Management's Report on Internal Control over Financial Reporting

Our management is responsible for establishing and maintaining adequate internal control over financial reporting as defined in Rules 13a-15(f) under the Exchange Act. Our internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of the financial reporting and the preparation of financial statements for external purposes in accordance with U.S. generally accepted accounting principles. This process includes those policies and procedures that (i) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of our assets; (ii) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures are being made only in accordance with authorizations of our management and directors; and (iii) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use or disposition of our assets that could have a material effect on our financial statements.

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

Our management, including our chief executive officer and chief financial officer, conducted an evaluation of the design effectiveness of our internal control over financial reporting based on the framework in "Internal Control — Integrated Framework (2013)" issued by the Committee of Sponsoring Organizations of the Treadway Commission, as of December 31, 2017. Based on our assessment, we conclude that as of December 31, 2017 our internal control over financial reporting was effective.

This annual report does not include an attestation report of our independent registered public accounting firm regarding internal control over financial reporting. Management's report was not subject to attestation by our independent registered public accounting firm pursuant to rules of the SEC that permit us to provide only management's report in this annual report.

Changes in Internal Control over Financial Reporting

There were no changes that materially affected, or are reasonably likely to materially affect, our internal control over financial reporting during the three months ended December 31, 2017.

Limitations on Controls

Management does not expect that our disclosure controls and procedures or our internal control over financial reporting will prevent or detect all error and fraud. Any control system, no matter how well designed and operated, is based upon certain assumptions and can provide only reasonable, not absolute, assurance that our objectives will be met. Further, no evaluation of controls can provide absolute assurance that misstatements due to error or fraud will not occur or that all control issues and instances of fraud, if any, have been detected.

ITEM 9B. OTHER INFORMATION

None.

PART III

Certain information required by Part III is omitted from this Form 10-K in that we will file a definitive proxy statement pursuant to Regulation 14A with respect to our 2018 Annual Meeting (the "Proxy Statement") no later than 120 days after the end of the fiscal year covered by this Form 10-K, and certain information included therein is incorporated herein by reference. Only those sections of the Proxy Statement which specifically address the items set forth herein are incorporated by reference. In addition, we have adopted a code of ethics which can be reviewed and printed from our website www.biolifesolutions.com.

ITEM 10. DIRECTORS, EXECUTIVE OFFICERS, AND CORPORATE GOVERNANCE

The information required by this Item is incorporated herein by reference to the Proxy Statement.

ITEM 11. EXECUTIVE COMPENSATION

The information required by this Item is incorporated herein by reference to the Proxy Statement.

ITEM 12. SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT AND RELATED STOCKHOLDER MATTERS

The information required by this Item is incorporated herein by reference to the Proxy Statement.

ITEM 13. CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS AND DIRECTOR INDEPENDENCE

The information required by this Item is incorporated herein by reference to the Proxy Statement.

ITEM 14. PRINCIPAL ACCOUNTANT FEES AND SERVICES

The information required by this Item is incorporated herein by reference to the Proxy Statement.

PART IV

ITEM 15. EXHIBITS AND FINANCIAL STATEMENT SCHEDULES

(a) The following documents are filed as part of this Annual Report on Form 10-K:

(1) Financial Statements (Included Under Item 8): The Index to the Financial Statements is included on page 28 of this Annual Report on Form 10-K and is incorporated herein by reference.

(2) Financial Statement Schedules:

None.

(b) Exhibits

Reference is made to the Index of Exhibits beginning on page 67, which is incorporated herein by reference.

(c) Excluded financial statements:

None.

ITEM 16. FORM 10-K Summary

The Company has elected not to include a summary pursuant to this Item 16.

SIGNATURES

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

Date: March 9, 2018 BIOLIFE SOLUTIONS, INC.

/s/ Michael Rice
Michael Rice
Chief Executive Officer and President
(principal executive officer) and Director

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

Date: March 9, 2018 /s/ Michael Rice
Michael Rice
Chief Executive Officer and President
(principal executive officer) and Director

Date: March 9, 2018 /s/ Roderick de greef
Roderick de Greef
Chief Financial Officer (principal financial
officer and principal accounting officer)

Date: March 9, 2018 /s/ Raymond Cohen
Raymond Cohen
Chairman of the Board of Directors

Date: March 9, 2018 /s/ Thomas Girschweiler
Thomas Girschweiler
Director

Date: March 9, 2018 /s/ Andrew Hinson
Andrew Hinson
Director

Date: March 9, 2018 /s/ Joseph Schick
Joseph Schick
Director

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Index of Exhibits

See Exhibit Index below for exhibits filed as part of this Annual Report on Form 10-K.

Exhibit Number	Document
3.1	Amended and Restated Certificate of Incorporation of BioLife Solutions, Inc. (included as Exhibit 4.1 to the Registration Statement on Form S-8 filed on June 24, 2013)
3.2	Certificate of Amendment to the Amended and Restated Certificate of Incorporation of BioLife Solutions, Inc. (included as Exhibit 3.1 to the Current Report on Form 8-K filed on January 30, 2014)
3.3	Amended and Restated Bylaws of BioLife Solutions, Inc., effective April 25, 2013 (included as Exhibit A to the Registrant's Definitive Information Statement on Schedule 14C filed March 27, 2013)
3.4	Certificate of Designations, Preferences, and Rights of Series A Preferred Stock (included as Exhibit 3.1 to the current report on Form 8-K filed on July 6, 2017)
10.1**	1998 Stock Option Plan, as amended through September 28, 2005 (included as Exhibit 4.3 to the Registration Statement on Form S-8 filed on June 24, 2013)
10.2**	Amended and Restated 2013 Performance Incentive Plan (included as Appendix A to the Registrant's Definitive Proxy Statement filed on March 24, 2015)
10.3**	BioLife Solutions, Inc. Form of Non-Plan Stock Option Agreement (included as Exhibit 4.4 to the Registration Statement on Form S-8 filed on June 24, 2013)
10.4	Lease Agreement dated August 1, 2007 for facility space 3303 Monte Villa Parkway, Bothell, WA 98021 (included as Exhibit 10.27 and Exhibit 10.29 to the Annual Report on Form 10-KSB for the fiscal year ended December 31, 2007 filed April 1, 2008)
10.5	First Amendment to the Lease, dated November 4, 2008, between the Company and Monte Villa Farms, LLC (included as Exhibit 10.16 to the Annual Report on Form 10-K for the fiscal year ended December 31, 2008 filed March 31, 2009)
10.6	Second Amendment to the Lease, dated March 2, 2012, between the Company and Monte Villa Farms, LLC (included as Exhibit 10.30 to the Quarterly Report on Form 10-Q for the quarterly period ended March 31, 2012 filed May 14, 2012)
10.7	Third Amendment to the Lease, dated June 15, 2012, between the Company and Monte Villa Farms, LLC (included as Exhibit 10.37 to the Annual Report on Form 10-K for the fiscal year ended December 31, 2012 filed March 29, 2013)
10.8	Fourth Amendment to the Lease, dated November 26, 2012, between the Company and Monte Villa Farms, LLC (included as Exhibit 10.41 to the Annual Report on Form 10-K for the fiscal year ended December 31, 2012 filed March 29, 2013)
10.9	Fifth Amendment to Lease, dated August 19, 2014, by and between the Company and Monte Villa Farms LLC (included as Exhibit 10.1 Quarterly Report on Form 10-Q for the quarterly period ended September 30, 2014 filed on November 6, 2014)
10.10	Form of Warrant issued to purchasers in the March 25, 2014 public offering (incorporated by reference to Exhibit 4.1 to the Company's report on Form 8-K filed March 20, 2014)
10.11**	Employment Agreement dated December 13, 2017 between the Company and Michael Rice (filed herewith)
10.12**	

Employment Agreement dated December 13, 2017 between the Company and Aby Mathew (filed herewith)

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10.13**	Employment Agreement dated December 13, 2017 between the Company and Todd Berard (filed herewith)
10.14	Board of Directors Services Agreement entered into May 4, 2015 by and between the Company and Raymond Cohen (included as Exhibit 10.1 to the Current Report on Form 8-K filed on May 5, 2015)
10.15	Board of Directors Services Agreement entered into May 4, 2015 by and between the Company and Thomas Girschweiler (included as Exhibit 10.2 to the Current Report on Form 8-K filed on May 5, 2015)
10.16	Board of Directors Services Agreement entered into May 4, 2015 by and between the Company and Other Non-Employee Directors (included as Exhibit 10.3 to the Current Report on Form 8-K filed on May 5, 2015)
10.17	Employment Agreement effective December 13, 2017 between the Company and Karen Foster (filed herewith)
10.18	Employment Agreement dated December 13, 2017 between the Company and Roderick de Greef (filed herewith)
10.19	Form of Restricted Stock Purchase Agreement pursuant to the Amended & Restated 2013 Performance Incentive Plan (included as Exhibit 10.4 to the Quarterly Report on Form 10-Q for the quarter ended March 31, 2016 filed on May 16, 2016)
10.20	Form of Stock Option Agreement pursuant to the Amended & Restated 2013 Performance Incentive Plan (included as Exhibit 10.5 to the Quarterly Report on Form 10-Q for the quarter ended March 31, 2016 filed on May 16, 2016)
10.21	Common Stock Purchase Warrant issued to WAVI Holding AG (included as Exhibit 10.7 to the Quarterly Report on Form 10-Q for the quarter ended March 31, 2016 filed on May 16, 2016)
10.22	Amended and Restated Promissory Note made by the Company in favor of WAVI Holding AG (included as Exhibit 10.1 to the Current Report on Form 8-K filed on January 12, 2017)
10.23	Employment Agreement dated December 13, 2017 between the Company and James Mathers (filed herewith)
10.24	Contribution Agreement dated December 31, 2016 by and between the Company, Savsu Technologies, LLC and biologistex CCM, LLC (included as Exhibit 10.31 to the Annual Report on Form 10-K for the year ended December 31, 2016 filed on March 15, 2017)
10.25	Amended and Restated biologistex CCM, LLC Limited Liability Company Agreement dated December 31, 2016 (included as Exhibit 10.32 to the Annual Report on Form 10-K for the year ended December 31, 2016 filed on March 15, 2017)
10.26	Services Agreement dated December 31, 2016 by and between the Company and biologistex CCM, LLC (included as Exhibit 10.33 to the Annual Report on Form 10-K for the year ended December 31, 2016 filed on March 15, 2017)
10.27	Amendment No. 1 to Contribution Agreement dated January 22, 2018 by and between the Company, Savsu Technologies, LLC and biologistex CCM, LLC (filed herewith)
10.28	Amendment No. 1 to Contribution Agreement dated January 22, 2018 by and between the Company, Savsu Technologies, LLC and biologistex CCM, LLC (filed herewith)
23.1	Consent of Peterson Sullivan LLP (filed herewith)
31.1	Certification pursuant to Section 302 of the Sarbanes-Oxley Act of 2002 (filed herewith)
31.2	Certification pursuant to Section 302 of the Sarbanes-Oxley Act of 2002 (filed herewith)
32.1	Certification pursuant to Section 906 of the Sarbanes-Oxley Act of 2002 (filed herewith)
32.2	Certification pursuant to Section 906 of the Sarbanes-Oxley Act of 2002 (filed herewith)
101.INS	XBRL Instance Document (filed herewith)
101.SCH	XBRL Taxonomy Extension Schema (filed herewith)
101.CAL	XBRL Taxonomy Extension Calculation Linkbase (filed herewith)
101.DEF	XBRL Taxonomy Extension Definition Linkbase (filed herewith)
101.LAB	XBRL Taxonomy Extension Label Linkbase (filed herewith)

101.PRE XBRL Taxonomy Extension Presentation Linkbase (filed herewith)

* Confidential treatment has been granted with respect to certain portions of this exhibit pursuant to an order granted by the SEC.

** Management contract or compensatory plan or arrangement.