BIOLIFE SOLUTIONS INC
Form 424B4
March 21, 2014

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Registration Statement No. 333-192880

Registration Statement No. 333-194697

BioLife Solutions, Inc.

A Minimum of 1,395,350 Units
A Maximum of 3,604,651 Units
Each Unit Consisting of
One Share of Common Stock and
One Warrant to Purchase One Share of Common Stock

We are offering for sale up to 3,604,651 units, each unit consisting of one share of common stock, $0.001 par value and one common stock warrant at a public offering price of $4.30 per unit. We are offering the units on minimum/maximum best efforts basis. The warrants will become exercisable and separately transferable from the shares upon the closing of this offering. At any time until seven years following the date of the closing, each whole warrant entitles the holder to purchase one share at an exercise price of $4.75, subject to adjustment. The units will not be certificated. The shares of common stock and the warrants will be immediately separable and issued separately.

Our common stock has been quoted on the OTCQB, under the symbol “BLFS”. We have applied to list our common stock on the Nasdaq Capital Market under the symbol “BLFS”. As of March 19, 2014 the last reported sale price of our common stock was $5.24 per share on the OTCQB. We do not intend to apply for listing of the warrants on any securities exchange or other trading system.

We have retained Ladenburg Thalmann & Co. Inc. to act as our exclusive placement agent in connection with this offering until the expiration date of the offering. We intend to enter into a placement agency agreement with the placement agent, relating to the units offered by this prospectus. The placement agent is not purchasing or selling any of our units pursuant to this prospectus but will use its best efforts to solicit offers to purchase the units being offered. Therefore, we will enter into a purchase agreement directly with investors in connection with this offering and confirmations and definitive prospectuses will be delivered, or otherwise made available, to all purchasers who agree to purchase units, informing the purchasers of the closing date as to such units.

We will not complete this offering unless we sell at least the minimum number of 1,395,350 units, we raise gross proceeds of at least $6,000,005 and our application to list on the NASDAQ Capital Market is approved. We do not currently satisfy the $5 million shareholders’ equity requirement of the Listing Rules of the Nasdaq Capital Market. We will need gross proceeds of at least $6,000,005 in order to satisfy this requirement. Other material contingencies to the approval of our application to list on the NASDAQ Capital Market include our common stock continuing to satisfy the $4 minimum bid price requirement.

If we close on at least the minimum amount, we will pay the placement agent a cash fee equal to: (i) 7% of aggregate gross proceeds of $1.00 up to $5,000,000 to us from the sale of the units; (ii) 8% of aggregate gross proceeds of $5,000,001 up to $10,000,000 to us from the sale of the units; and (iii) 8.5% of the incremental amount of aggregate gross proceeds above $10,000,000 to us from the sale of units. See “Plan of Distribution” beginning on page 46 of this prospectus for more information regarding this arrangement.

Investing in our common stock involves a high degree of risk. You should read this entire prospectus carefully, including the section entitled "Risk Factors" beginning on page 4 of this prospectus.

	Minimum Offering		Maximum Offering	
	Per Unit	Total	Per Unit	Total
Public offering price	$4.30	$6,000,005	$4.30	$15,500,000
Placement agent's fees(1)	$0.31	$430,000	$0.34	$1,217,500
Proceeds to us, before expenses(2)	$3.99	$5,570,005	$3.96	$14,282,500

(1) Our estimate of the per unit placement agent fees are expressed as an average per unit, assuming that we sell either the minimum or the maximum number of units in this offering. We have also agreed to reimburse the placement agent's expenses in an amount not to exceed 1% of the aggregate gross proceeds raised in the offering. See "Plan of Distribution" beginning on page 46 of this prospectus for more information regarding this arrangement.

(2) We estimate the total expenses of this offering, excluding the placement agent fees, will be approximately $649,000. Because this is a best efforts minimum/maximum offering, the actual public offering amount, placement agent fees, and proceeds to us, if any, are not presently determinable and may be substantially less than the total maximum offering set forth above. Once the offering price has been determined, the unit offering price and warrant exercise price will remain fixed for the duration of the offering. See "Plan of Distribution" beginning on page 46 of this prospectus for more information on this offering and the placement agent arrangements.

This offering will terminate on March 31, 2014, unless the offering is fully subscribed before that date or we decide to terminate the offering prior to that date. In either event, the offering may be closed without further notice to you. We expect that delivery of the units being offered pursuant to this prospectus will be made to the purchasers on or about March 25, 2014. Pursuant to an escrow agreement among us, the placement agent and Signature Bank, as escrow agent, all funds received in payment for units sold in this offering must be submitted by subscribers to a non-interest bearing escrow account, and will be held by the escrow agent until the minimum is satisfied and we and the placement agent notify the escrow agent that the offering has closed. The closing will occur, as to all subscriptions duly received and accepted by us, in one closing, and we do not intend to hold multiple closings in the offering. In the event we do not sell a minimum of 1,395,350 units and raise minimum gross proceeds of $6,000,005 by March 31, 2014, escrowed funds will be promptly returned to subscribers without interest or offset. The March 31, 2014 termination date will not be extended.

Neither the Securities and Exchange Commission, or SEC, nor any state securities commission has approved or disapproved of these securities or determined if this prospectus is truthful or complete. Any representation to the contrary is a criminal offense.

Ladenburg Thalmann & Co. Inc.

The date of this prospectus is March 20, 2014

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You should rely only on the information contained in this prospectus that we have authorized for use in connection with this offering. Neither we nor the placement agent has authorized any other person to provide you with additional or different information. If anyone provides you with different or inconsistent information, you should not rely on it. Neither we nor the placement agent is making an offer to sell these securities in any jurisdiction where an offer or sale is not permitted. You should assume that the information in this prospectus is accurate only as of the date on the front cover of this prospectus, regardless of the time of delivery of this prospectus or any sale of our securities. Our business, financial condition, results of operations and prospects may have changed since that date.

Some of the industry and market data contained in this prospectus are based on independent industry publications or other publicly available information, while other information is based on our internal sources. Although we believe that each source is reliable as of its respective date, the information contained in such sources has not been independently verified, and neither we, nor the placement agent can assure you as to the accuracy or completeness of this information.

PROSPECTUS SUMMARY

This summary highlights information contained elsewhere in this prospectus and does not contain all of the information you should consider before buying shares of our securities. You should read the entire prospectus carefully, especially the "Risk Factors" section and our financial statements and the related notes appearing at the end of this prospectus, before deciding to invest in shares of our securities. Unless otherwise noted, all share and per share data in this prospectus (i) gives effect to the 1-for-14 reverse stock split of our common stock effected on January 29, 2014, which converted each block of 14 shares of the common stock issued and outstanding as of the close of business on January 29, 2014 into one share and is subject to adjustments for fractional shares, see "Recent Developments – Reverse Stock Split" below; (ii) gives effect to the issuance of approximately 3,321,405 units to two investors in exchange for the conversion of $10.6 million principal amount of outstanding promissory notes and approximately $3.7 million of interest accrued thereon and an assumed conversion date of March 25, 2014; and (iii) excludes any shares of common stock issuable pursuant to the consulting agreement discussed in "Management's Discussion and Analysis – Contractual Obligations." For more information about our reverse stock split, see "Recent Developments" below. Unless the context provides otherwise, all references to "BioLife," "we," "us," "our," or similar terms, refer to BioLife Solutions, Inc. In this prospectus, all references to "$" or "dollars" mean the U.S. dollar, and unless otherwise indicated all currency amounts in this prospectus are stated in U.S. dollars.

About Our Company

We develop, manufacture and market patented hypothermic storage and cryopreservation solutions for cells and tissue. Our product offerings include:

Patented biopreservation media products for cells, tissues, and organs
Generic formulations of blood stem cell freezing media products
Custom product formulation and custom packaging services
Precision thermal packaging products
Contract aseptic manufacturing formulation, fill, and finish services of liquid media products

We market our proprietary HypoThermosol® FRS and CryoStor®, generic BloodStor®, and SAVSU®'s biopreservation media products and precision thermal packaging products to the biobanking, drug discovery, and regenerative medicine 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. All of our products are serum-free and protein-free, fully defined, and are manufactured under current Good Manufacturing Practices ("cGMP") using United States Pharmacopeia ("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 improved post-preservation cell, tissue, and organ viability and function. We believe that our products have been incorporated into the manufacturing, storage, shipping, freezing, and clinical delivery processes of over 100 hospital approved or clinical trial stage regenerative medicine applications.

The discoveries made by our scientists and consultants relate to how cells, tissues, and organs respond to the stress of hypothermic storage, cryopreservation, and the thawing process. These discoveries enabled the formulation of truly innovative biopreservation media products that protect biologic material from preservation-related cellular injury, much of which is not apparent immediately after return to normothermic body temperature. Our product formulations have demonstrated remarkable reduction in apoptotic (programmed) and necrotic (pathologic) cell death mechanisms

and are enabling the clinical and commercial development of dozens of innovative regenerative medicine products.

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 life sciences tools provider. Following the merger, we changed our name to BioLife Solutions, Inc. We do not have any subsidiaries.

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 internet website www.biolifesolutions.com. The information contained on our website or that can be accessed through our website does not constitute part of this prospectus and is not incorporated in any manner into this prospectus.

Recent Developments

Reverse Stock Split

On January 29, 2014, we effected a 1-for-14 reverse stock split of our common stock. No fractional shares of our common stock will be issued as a result of the reverse stock split. In the event the reverse stock split leaves a stockholder with a fraction of a share, the number of shares due to the stockholder will be rounded up to the nearest whole share. Unless otherwise indicated, all share and per share numbers set forth in this prospectus have been adjusted to give effect to the reverse stock split and are subject to the foregoing adjustments for fractional shares.

Conversion of Promissory Notes in Exchange for Units

On December 16, 2013, we entered into a note conversion agreement with each of Thomas Girschweiler, an affiliate and former director of the Company, and Walter Villiger, an affiliate of the Company. The noteholders hold, as of December 31, 2013, an aggregate of $14.1 million, including $10.6 million principal amount of outstanding promissory notes and approximately $3.5 million of accrued and unpaid interest under secured convertible multi-draw term loan facility agreements entered into with each of the noteholders on January 11, 2008, which we refer to as the facility agreements. Pursuant to the note conversion agreements, the noteholders have agreed to convert on a private placement basis the outstanding indebtedness, including accrued interest thereon through the closing date, into units on substantially similar terms as the offering. In connection with the note conversion, the noteholders will release all security and the facility agreements will be terminated. Such conversion will occur concurrently with the closing of the offering. Cash will be paid in lieu of any fractional units that would otherwise be issuable. On February 11, 2014, Mr. Girschweiler and Mr. Villiger assigned their respective rights and obligations under the promissory notes, the facility agreements and the note conversion agreements to entities wholly-owned and controlled by the noteholders, namely WAVI Holding AG in the case of Mr. Villiger and Taurus4757 GmbH in the case of Mr. Girschweiler.

The Offering

Units:	
Units offered	A minimum of 1,395,350 and a maximum of 3,604,651 units, at $4.30 per unit, on a best efforts basis.
Conditions to Closing	
Minimum/Maximum Best Efforts:	We are offering the units on minimum/maximum best efforts basis. The placement agent must sell the minimum number of units offered, 1,395,350, and we must raise gross proceeds of at least $6,000,005, if any units are sold. The placement agents are required to use only their best efforts to sell the maximum number of securities offered, 3,604,651. Our officers, directors and affiliates will not purchase units in this offering.
Nasdaq Capital Market Listing	It is a condition to the closing of this offering that our application to list our shares on the Nasdaq Capital Market has been approved. The gross proceeds from this offering are intended to satisfy the shareholders' equity requirement of the Listing Rules of the Nasdaq Capital Market. However, Nasdaq has significant discretion over listings and, even if we are successful

	in obtaining approval to list our common stock on the Nasdaq Capital Market and close this offering, Nasdaq may elect subsequent to the closing not to list our common stock or to remove our common stock from listing. See "Risk Factors".
Common Stock:	
Minimum Common stock offered	1,395,350 shares
Common stock outstanding before the minimum offering	5,029,920 shares
Common stock outstanding after the minimum offering (including common stock issued pursuant to the note conversion agreements)	9,746,675 shares
Maximum Common stock offered	3,604,651 shares
Common stock outstanding before the maximum offering	5,029,920 shares
Common stock outstanding after the maximum offering (including common stock issued pursuant to the note conversion agreements)	11,955,976 shares
Quoting	Our common stock is currently quoted on the OTCQB under the symbol "BLFS".
Warrants:	
Exercisability	Each whole warrant is exercisable for one share.
Exercise Price	$4.75
Exercise Period	The warrants become exercisable upon the closing of this offering. The warrants will expire at 11:59 PM, New York Time, on the seventh anniversary of the closing of the offering.
Use of Proceeds:	We intend to use the net proceeds from this offering for general corporate purposes, including working capital.
Risk Factors:	Investing in our common stock involves risks that are described in the "Risk Factors" section beginning on page 4 of this prospectus.
Escrow	
Agent	Signature Bank
Period	In the event we do not sell a minimum of 1,395,350 units and raise gross proceeds of at least $6,000,005 by March 31, 2014, escrowed funds will be promptly returned to subscribers without interest or offset. The March 31, 2014 termination date will not be extended.

Summary Financial Information

The following tables summarize our financial data for the periods presented. The summary statements of operations data for the years ended December 31, 2013 and 2012, and the balance sheet data as of December 31, 2013 and 2012, have been derived from our audited financial statements, which are included elsewhere in this prospectus. The historical results are not necessarily indicative of the results to be expected for any future periods. You should read this data together with our financial statements and the related notes included elsewhere in this prospectus, as well as "Management's Discussion and Analysis of Financial Condition and Operating Results" beginning on page 20 of this prospectus.

Statements of Operations Data

	Years Ended December 31,	
	2013	2012
Total revenue	$8,949,401	$5,662,990
Total operating expenses	4,048,244	3,234,657
Net loss	(1,084,160)	(1,659,586)
Basic and diluted net loss per share(1)	$(0.22)	$(0.33)
Basic and diluted weighted average shares used to calculate net loss per share(1)	5,007,999	4,977,418

(1) The basic and diluted net loss per share and shares used in loss per share calculation have not been adjusted to reflect the conversion of the outstanding promissory notes.

Balance Sheet Data

	December 31,	
	2013	2012
Cash and cash equivalents	$156,273	$196,478
Total assets	3,353,342	3,169,829
Total liabilities	16,624,863	15,655,852
Total shareholders' equity (deficiency)	(13,271,521)	(12,486,023)

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 prospectus, before deciding to invest in our common stock. If any of the following risks materialize, our business, financial condition, results of operation and future 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.

We derived approximately 49% and 46% of our revenue in the fiscal year ended December 31, 2013 and 2012, respectively, from our relationship with one contract manufacturing customer, which we commenced deliveries to in the second quarter of 2012. 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, the loss of our major contract manufacturing customer, or our failure to make appropriate choices as to the customers we serve could seriously harm our business. In addition, we focus our net 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 operating losses since inception, and may continue to incur operating losses. For the fiscal years ended December 31, 2013 and December 31, 2012, we had net losses of $1,084,160 and $1,659,586, respectively. As of December 31, 2013, our accumulated deficit was approximately $56.9 million. Of this amount, approximately $19 million has accumulated since our merger in 2002. 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.

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 as a result of resales of any shares 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 ability to successfully commercialize our HypoThermosol® FRS, CryoStor® and BloodStor® biopreservation media products, biopreservation thermal packaging products and contract manufacturing services.

Our growth depends, in part, on our continued ability to successfully develop, commercialize and market our HypoThermosol® FRS, CryoStor®, and BloodStor® biopreservation media products, precision thermal packaging products and contract and manufacturing services. 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 the commercial success of new regenerative medicine technologies.

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 United States Food and Drug Administration ("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 are able to compete successfully, there can be no assurance that we could do so in a profitable manner.

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

We rely on outside suppliers for all of 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 of 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 time period, 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 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 or operations, 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. These risks are inherent in the development of life sciences industry products. We currently maintain commercial general and umbrella liability policies with combined limits of $7 million per occurrence and in the aggregate, in addition to a $5 million per claim and annual aggregate product liability insurance policy consistent with industry standards. 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 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 our products ourselves. The manufacture of our 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 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 the 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.

Failure to comply with the covenants and conditions of promissory notes issued by us to the noteholders could result in the acceleration of our outstanding indebtedness, and we may not have sufficient funds available to repay the amounts due.

Pursuant to the note conversion agreement, we have agreed to issue units to each of the noteholders in exchange for the conversion of $10.6 million principal amount of outstanding promissory notes and accrued and unpaid interest. Until the promissory notes are converted, they remain secured by all of our assets. An event of default, including from the failure to observe or comply with any material covenant or condition in the promissory notes or the facility agreements, could, if not cured or waived, result in the acceleration of the outstanding indebtedness and the loss of some or all of our assets. If our operations are insufficiently profitable to permit us to pay such notes when due, and these stockholders are unable or unwilling to provide access to additional funds and/or amend the terms of the facility agreements, we would need to find immediate additional sources of capital. There can be no assurance that such capital would be available on favorable terms, or at all. As such, we may have to cease operations and you could lose your investment.

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.

As an ancillary or excipient reagent used in the production, transportation, and infusion of our customers' regulated clinical products, HypoThermosol® FRS, CryoStor®, and BloodStor® are not currently subject to specific FDA or other non-US pre-market approval for drugs, devices, or biologics. In particular, we are not required to sponsor formal prospective, controlled clinical-trials in order 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 our controls over external financial reporting fail or are 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

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 appropriate or obtainable. 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 of 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.

The patent protection for our products may expire before we are able to maximize their commercial value, which 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 period 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.

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 unenforceability 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 and the Offering

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

Our common stock, traded on the OTCQB, 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.

The actual offering amount, the offering price and the net proceeds to us in this offering may be substantially less than the amounts set forth above.

The minimum units required to be sold as a condition to closing is 1,395,350. In addition, we will not close unless we raise gross proceeds of $6,000,005 in this offering, which is substantially less than the total maximum offering set forth above. The actual public offering amount, offering price and net proceeds to us in this offering are not presently determinable and may be substantially less than the maximum offering amounts.

There is no firm commitment to purchase units, and there can be no assurance we will sell the minimum amount of units.

We are offering the units through the placement agent on a "best efforts" minimum/maximum basis. The placement agent has made no commitment to purchase any units offered hereby. Consequently, there can be no assurance that the offered units will be sold. In the event that the minimum number of units offered hereby is not sold by March 31, 2014, all proceeds received will be refunded in full to subscribers without interest or deduction. Therefore, investors subscribing to purchase the units offered hereby will lose the use of their funds while they are held in escrow.

Because of the structure of the minimum/maximum offering which requires us to sell at least 1,395,350 units and to raise gross proceeds of at least $6,000,005, during the offering period investor funds will be placed in escrow and investors will not have use of their funds during this period.

Pursuant to an escrow agreement among us, the placement agent and Signature Bank, as escrow agent, the funds received in payment for the units sold in this offering will be submitted by subscribers to a non-interest bearing escrow account, and will be held by the escrow agent until we and the placement agent notify the escrow agent that this offering has closed and the net proceeds are to be delivered to us. The closing will occur, as to all subscriptions duly received and accepted by us, in one closing, and we do not intend to hold multiple closings in the offering. If the offering does not close prior to March 31, 2014 or is terminated, the escrow agent will promptly return all funds to all subscribers, without interest or offset. The units will not be certificated. The shares of common stock and the warrants will be immediately separable and issued separately.

A significant percentage of our outstanding common stock is held by two stockholders, who have also provided us with our debt financing facilities, and these stockholders therefore have significant influence on us and our corporate actions.

As of December 31, 2013, two of our existing stockholders, Thomas Girschweiler and Walter Villiger, beneficially owned, collectively, approximately 52.4% of our outstanding shares. In addition, these two stockholders hold, as of December 31, 2013, an aggregate $10.6 million principal amount of outstanding promissory notes and approximately $3.5 million of accrued and unpaid interest under secured convertible multi-draw term loan facility agreements. On December 16, 2013, we entered into note conversion agreements, with each of Mr. Girschweiler and Mr. Villiger. Pursuant to the note conversion agreements, Mr. Girschweiler and Mr. Villiger have agreed to convert on a private placement basis the outstanding indebtedness, including accrued interest thereon, into units pursuant to a private placement on substantially similar terms as the offering. On February 11, 2014, Mr. Girschweiler and Mr. Villiger assigned their respective rights and obligations under the promissory notes, the facility agreements and the note conversion agreements to entities wholly-owned and controlled by the noteholders, namely WAVI Holding AG in the case of Mr. Villiger and Taurus4757 GmbH in the case of Mr. Girschweiler. Following conversion, the beneficial ownership of Messrs. Girschweiler and Villiger will increase from approximately 52.4% to 60.5%, assuming we sell the maximum number of 3,604,651 units, or 70.3%, assuming we sell the minimum number of 1,395,350 units, in each case, on March 25, 2014. Mr. Girschweiler was also a member of our board until March 5, 2014. 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 of 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. For more information regarding our principal stockholders, see "Security Ownership of Certain Beneficial Owners and Management" beginning on page 42 of this prospectus.

We may not be able to obtain approval to list our common stock on the Nasdaq Capital Market, in which case this offering will not be completed. In addition, such listing approval does not guarantee that we will be able to obtain and maintain a listing of our common stock on the Nasdaq Capital Market.

Although we have filed an application to list our common stock on the Nasdaq Capital Market, we do not currently satisfy the $5 million shareholders' equity requirement of the Listing Rules of the Nasdaq Capital Market. We will seek to satisfy this requirement by completing this offering and the conversion of our existing indebtedness into equity securities. No assurance can be provided that we will be able to raise sufficient capital to satisfy Nasdaq's shareholders' equity requirement and convert our existing indebtedness or that, if we do satisfy such requirement, that we will satisfy the other listing requirements of the Nasdaq Capital Market, including a $4 minimum bid price, and obtain approval for listing thereon, in which case this offering will not be completed. In addition, the Nasdaq Capital Market has broad discretionary authority over the initial and continued listing of securities, which it could exercise at any time before or after the closing of this offering. Therefore, even if we are successful in obtaining approval to list our common stock on the Nasdaq Capital Market and close this offering, Nasdaq Capital Market may elect subsequent to the closing not to list our common stock or to remove our common stock from listing.

You will experience immediate and substantial dilution in the book value of the shares you purchase in this offering.

The offering price is substantially higher than the net tangible book value per share of our outstanding common stock. As a result, based on our capitalization as of December 31, 2013 you will incur immediate dilution in the book value of the shares you purchase in the offering. Based upon the issuance and sale of 3,604,651 units on an assumed closing date of March 25, 2014, and the issuance of approximately 3,321,405 units to the noteholders at the closing, you will incur immediate dilution of approximately $3.09 in the net tangible book value per share included in such units if you purchase units in this offering. In addition to this offering, subject to market conditions and other factors, we may pursue additional financings in the future, as we continue to build our business, which may result in further dilution to you.

We are at risk of securities class action litigation.

In the past, securities class action litigation has often been brought against a company following 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.

We will have broad discretion as to the use of the net proceeds from this offering, and we may not use the proceeds effectively.

Our management will have broad discretion as to the application of the net proceeds. Our stockholders may not agree with the manner in which our management chooses to allocate and spend the net proceeds. Moreover, our management may use some of the net proceeds for corporate purposes that may not increase our market value or profitability.

Our use of the offering proceeds may not yield a favorable return on your investment.

We currently intend to use the net proceeds received from the sale of the securities for general corporate purposes, including working capital. Our management has broad discretion over how these proceeds are used and could spend the proceeds in ways with which you may not agree. Pending the use of the proceeds in this offering, we will invest them. However, the proceeds may not be invested in a manner that yields a favorable or any return.

Future sales of our common stock by our existing stockholders may negatively impact the trading price of our common stock.

If a substantial number of our existing stockholders decide to sell shares of their common stock in the public market following the completion of this offering, the price at which our common stock trades could decline. Additionally, the public market's perception that such sales might occur may also depress the price of our common stock. Certain existing stockholders holding approximately 5.8 million shares and options and warrants exercisable within 60 days from December 31, 2013 to purchase 4.7 million shares, after giving effect to the note conversion, will enter into lockup agreements pursuant to which they will agree not to sell shares of our common stock in the public market for a period of 180 days following the completion of this public offering, subject to certain exceptions. There is no public market for the warrants.

There is no active market for trading of the warrants, which will limit the liquidity of the warrants.

There is no established public trading market for the warrants, and we do not expect a market to develop. In addition, we do not intend to apply for listing of the warrants on any securities exchange. Without an active market, the liquidity of the warrants will be limited.

The warrants may not have any value.

The warrants will be exercisable for seven years from the date of the closing of the offering at an initial exercise price per share equal to $4.75. In the event that the price of a share does not exceed the exercise price of the warrants during the period when the warrants are exercisable, the warrants may not have any value.

Holders of the warrants will have no rights as a common stockholder until they acquire our common stock.

Until you acquire shares upon exercise of your warrants, you will have no rights with respect to our common stock. Upon exercise of your warrants, you will be entitled to exercise the rights of a common stockholder only as to matters for which the record date occurs after the exercise date.

An effective registration statement may not be in place when an investor desires to exercise warrants, thus precluding such investor from being able to exercise his, her or its warrants at that time.

No warrant held by an investor will be exercisable and we will not be obligated to issue common stock unless at the time such holder seeks to exercise such warrant, a prospectus relating to the common stock issuable upon exercise of the warrant is current (or an exemption from registration is available) and the common stock has been registered or qualified or deemed to be exempt under the securities laws of the state of residence of the holder of the warrants. Under the terms of the warrant agreement, we have agreed to use our best efforts to meet these conditions and to maintain a current prospectus relating to the common stock issuable upon exercise of the warrants until the expiration of the warrants. However, we cannot assure you that we will be able to do so, and if we do not maintain a current prospectus related to the common stock issuable upon exercise of the warrants (and an exemption from registration is not available), holders will be unable to exercise their warrants and we will not be required to net cash settle any such warrant exercise. If we are unable to issue the shares upon exercise of the warrants by an investor because there is no current prospectus relating to the common stock issuable upon exercise of the warrant (and an exemption from registration is not available) or the common stock has not been registered or qualified or deemed to be exempt under the securities laws of the state of residence of the holder of the warrants, the warrants will not expire until ten days after the date we are first able to issue the shares. Nevertheless, because an investor may not be able to exercise the warrants at the most advantageous time, the warrants held by an investor may have no value, the market for such warrants may be limited and such warrants may expire worthless.

Risks Associated with Our Reverse Stock Split

On January 29, 2014, we effected a 1 for 14 reverse stock split of our common stock. There are risks associated with a reverse stock split.

There are certain risks associated with the reverse stock split, including the following:

- The board has not reduced the number of authorized shares of common stock in the same proportion as the reverse split, and as a result, we have additional authorized shares of common stock that the board could issue in future without stockholder approval, and such additional shares could be issued, among other purposes, in financing transactions or to resist or frustrate a third-party transaction that is favored by a majority of the independent

stockholders. This could have an anti-takeover effect, in that additional shares could be issued, within the limits imposed by applicable law, in one or more transactions that could make a change in control or takeover of us more difficult.

There can be no assurance that the reverse stock split will achieve the benefits that we hope it will achieve.

The reverse stock split may decrease the liquidity of the shares of our common stock.

The liquidity of the shares of our common stock may be affected adversely by the reverse stock split given the reduced number of shares that will be outstanding following the reverse stock split, especially if the market price of our common stock does not increase as a result of the reverse stock split. In addition, the reverse stock split may increase the number of stockholders who own odd lots of our common stock, creating the potential for such stockholders to experience an increase in the cost of selling their shares and greater difficulty effecting such sales.

FORWARD-LOOKING STATEMENTS

This prospectus 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, costs and expenses, interest rates, outcome of contingencies, financial condition, results of operations, liquidity, business strategies, cost savings, objectives of management 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,” “plan,” “inten expressions in this prospectus. We intend that such forward-looking statements be subject to the safe harbors created thereby. Examples of these forward-looking statements include, but are not limited to:

anticipated regulatory filings and requirements;
timing and amount of future contractual payments, product revenue and operating expenses;
market acceptance of our products and the estimated potential size of these markets; and
our anticipated future capital requirements and the terms of any capital financing agreements.

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 prospectus.

You are cautioned not to place undue reliance on these forward-looking statements, which speak only as of the date of this prospectus.

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 prospectus 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.

USE OF PROCEEDS

We estimate that the net proceeds from our sale of units in this offering, after deducting underwriting discounts and estimated offering expenses payable by us, will be approximately $4.9 million if the minimum offering is sold and approximately $13.6 million if the maximum offering is sold. It is a condition to closing of this offering that we receive the minimum gross proceeds of $6,000,005. This amount does not include the proceeds which we may receive in connection with the exercise of the warrants. We cannot predict when or if the warrants will be exercised, and it is possible that the warrants may expire and never be exercised. The principal reasons for this offering are to raise capital for general corporate purposes, including working capital, and to facilitate the listing of our common stock on the Nasdaq Capital Market.

We do not have a specific plan for the use of the net proceeds of this offering; rather we intend to use such net proceeds for general corporate purposes, including working capital.

The following table below sets forth the net proceeds of this offering assuming the sale of 1,395,350 units for gross proceeds of $6,000,005, the minimum number of units required to be sold as a condition to closing, and 50%, 75% and 100% of total gross proceeds of $15,500,000:

	Minimum	50%	75%	100%
Gross proceeds	$6,000,005	7,750,000	11,625,000	15,500,000
Offering Expenses	$649,303	649,303	649,303	649,303
Placement Agent Fees	$430,000	570,000	888,125	1,217,500
Net Proceeds	$4,920,702	6,530,697	10,087,572	13,633,197

We will have broad discretion over the manner in which the net proceeds of the offering will be applied, and we may not use these proceeds in a manner desired by our shareholders. Although we have no present intention of doing so, future events may require us to reallocate the offering proceeds.

PRICE RANGE OF COMMON STOCK

Our common stock is traded on the OTCQB under the ticker symbol “BLFS.” There is currently no public trading market for our warrants.

We effected a 1 for 14 reverse stock split of our common stock on January 29, 2014. The share and per share information in the table below reflects the reverse stock split.

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, 2013		
4th Quarter	$19.60	$7.84
3rd Quarter	12.18	5.04
2nd Quarter	5.74	4.06
1st Quarter	5.88	3.50
Year ended December 31, 2012		
4th Quarter	$6.30	$1.96
3rd Quarter	2.38	0.98
2nd Quarter	1.68	0.98
1st Quarter	1.68	0.56
Year ended December 31, 2011		
4th Quarter	$1.40	$0.28
3rd Quarter	1.26	0.28
2nd Quarter	1.40	0.84
1st Quarter	1.54	0.84

The closing price per share for our common stock on March 19, 2014 as reported by the OTCQB was $5.24.

CAPITALIZATION

The following table sets forth our: (i) cash and cash equivalents; (ii) total assets; (iii) promissory notes payable (iv) components of shareholders' equity (deficiency); (v) total shareholders' equity (deficiency); and (vi) total liabilities and shareholders' equity (deficiency) as of December 31, 2013:

on an actual basis as of December 31, 2013;

on a pro forma as adjusted basis to reflect (i) the sale by us of the minimum amount of 1,395,350 units in this offering on an assumed closing date of March 25, 2014; (ii) the deduction of estimated placement agent fees, commissions and advisory fees and estimated offering expenses payable by us; and (iii) the issuance of 3,321,405 units to the noteholders in exchange for the conversion of $10.6 million principal amount of outstanding promissory notes and accrued and unpaid interest of approximately $3.7 million through the assumed closing date; and

as further adjusted to reflect adjusted basis to reflect (i) the sale by us of the maximum amount of 3,604,651 units in this offering on an assumed closing date of March 25, 2014; (ii) the deduction of estimated placement agent fees, commissions and advisory fees and estimated offering expenses payable by us; and (iii) the issuance of 3,321,405 units to the noteholders in exchange for the conversion of $10.6 million principal amount of outstanding promissory notes and accrued and unpaid interest of approximately $3.7 million through the assumed closing date.

You should read this table together with the section of this prospectus entitled "Management's Discussion and Analysis of Financial Condition and Results of Operation", as well as our financial statements and related notes and the other financial information, appearing elsewhere in this prospectus.

	December 31, 2013		
	Actual	Pro Forma as Adjusted	As Further Adjusted
Cash and cash equivalents	$156,273	$5,076,975	$13,789,470
Total assets	$3,353,342	$8,274,044	$16,986,539
Promissory notes payable, related parties	$10,603,127	$-	$-
Shareholders' equity (deficiency):			
Common stock, $0.001 par value; 150,000,000 shares authorized; 5,029,920 shares issued and outstanding at December 31, 2013	$5,030	$9,746	$11,956
Additional paid-in capital	$43,618,686	$62,816,716	$71,527,002
Accumulated deficit	$(56,895,237)	$(57,072,545)	$(57,072,545)
Total shareholders' equity (deficiency)	$(13,271,521)	$5,753,918	$14,466,413
Total liabilities and shareholders' equity (deficiency)	$3,353,342	$8,274,044	$16,986,539

DILUTION

The difference between the public offering price per share, assuming no value is attributed to the warrants included in the units we are offering by this prospectus, and the pro forma net tangible book value per share after this offering constitutes the dilution to investors in this offering. Such calculation does not reflect any dilution associated with the sale and exercise of warrants. Net tangible book value per share represents the amount of our total tangible assets less total liabilities, divided by the number of shares of common stock outstanding as of December 31, 2013.

Our historical net tangible book value as of December 31, 2013 was $(13.3) million, or approximately $(2.64) per share of common stock, after giving effect to the 1-for-14 reverse stock-split.

The following tables illustrates this per share dilution to new investors, assuming the sale of 1,395,350 units for gross proceeds of $6,000,005, the minimum number of units required to be sold as a condition to closing, and 50%, 75% and 100% of the maximum units being offered hereby, after giving effect to (i) the sale of our units in this offering, (ii) the deduction of estimated placement agent fees and commissions and estimated offering expenses payable by us, and (iii) the issuance of units to the noteholders in exchange for the conversion of $10.6 million principal amount of outstanding promissory notes and interest of approximately $3.7 million through the assumed conversion date, assuming that no value is attributed to the warrants issued in this offering or in the note conversions:

	Minimum	50%	75%	100%
Initial public offering price	$4.30	4.30	4.30	4.30
Pro forma net tangible book value per share as of December 31, 2013 (as adjusted for reverse stock split and note conversions)	$0.10	0.10	0.10	0.10
Increase in pro forma as adjusted net tangible book value per share attributable to this offering per share to existing investors	$0.49	0.63	0.89	1.11
Pro forma as adjusted net tangible book value per share after this offering	$0.59	0.73	0.99	1.21
Dilution per share to new investors	$3.71	3.57	3.31	3.09

The following tables set forth, assuming the sale of 1,395,350 units for gross proceeds of $6,000,005, the minimum number of units required to be sold as a condition to closing, and 50%, 75% and 100% of the maximum amount of units being offered hereby, on the as adjusted basis described above, as of December 31, 2013, the difference between the number of shares purchased from us, the total consideration paid, and the average price per share paid by the existing stockholders and noteholders, collectively, and by investors purchasing shares in this offering, before deducting estimated placement agent fees and commissions and estimated offering expenses.

	Shares Purchased		Minimum Total Consideration		
	Number	Percent	Amount	Percent	Average Price Per Share
Existing stockholders and noteholders, collectively	8,351,325	86 %	$55,080,406	90 %	$6.60
New investors	1,395,350	14 %	6,000,005	10 %	4.30
Total	9,746,675	100 %	$61,080,411	100 %	$6.27

50%

	Shares Purchased		Total Consideration		
	Number	Percent	Amount	Percent	Average Price Per Share
Existing stockholders and noteholders, collectively	8,351,325	82 %	$55,080,406	88 %	$6.60
New investors	1,802,326	18 %	7,750,002	12 %	4.30
Total	10,153,651	100 %	$62,830,408	100 %	$6.19

75%

	Shares Purchased		Total Consideration		
	Number	Percent	Amount	Percent	Average Price Per Share
Existing stockholders and noteholders, collectively	8,351,325	76 %	$55,080,406	83 %	$6.60
New investors	2,703,488	24 %	11,624,998	17 %	4.30
Total	11,054,813	100 %	$66,705,404	100 %	$6.03

100%

	Shares Purchased		Total Consideration		
	Number	Percent	Amount	Percent	Average Price Per Share
Existing stockholders and noteholders, collectively	8,351,325	70 %	$55,080,406	78 %	$6.60
New investors	3,604,651	30 %	15,500,000	22 %	4.30
Total	11,955,976	100 %	$70,580,406	100 %	$5.90

The discussions and tables above are based on shares of common stock outstanding as of December 31, 2013 after giving effect to the 1:14 reverse stock split and the issuance of common stock comprising a portion of the units sold in the offering and in the note conversions. This number excludes 1,935,167 shares subject to warrants and options outstanding as of December 31, 2013 and any warrants comprising a portion of the units sold in this offering or in the note conversions.

DIVIDEND POLICY

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. Our future dividend policy will be determined from time to time by our board.

HOLDERS OF OUR COMMON STOCK

As of February 7, 2014, we had 606 registered shareholders of our common stock and 5,029,920 shares of common stock outstanding.

MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND OPERATING RESULTS

Except as otherwise indicated, all information included under this "Management's Discussion and Analysis of Financial Condition and Operating Results" heading reflects the 1-for-14 reverse stock split effective January 29, 2014, but does not reflect the issuance of an estimated 3,321,405 units to the noteholders in exchange for the conversion of $10.6 million principal amount of outstanding promissory notes and the approximate $3.7 million of accrued and unpaid interest thereon through the assumed conversion date of March 25, 2014.

General

You should read the following discussion and analysis of our financial condition and results of operations together with our financial statements, including the related notes, set forth elsewhere in this prospectus. This discussion and analysis contains forward-looking statements that involve risks, uncertainties and assumptions. Our actual results may differ materially from those anticipated in these forward-looking statements as a result of many factors, including, but not limited to, those set forth under "Risk Factors" and elsewhere in this prospectus.

Our financial statements are stated in United States dollars and are prepared in accordance with United States generally accepted accounting principles.

Recent Accounting Pronouncements

There have been no new accounting pronouncements made effective during the year ended December 31, 2013 or not yet effective, that are of significance, or potential significance, to us.

Recent Developments

Reverse Stock Split

On January 29, 2014, we effected a 1-for-14 reverse stock split of our common stock. No fractional shares of our common stock will be issued as a result of the reverse stock split. In the event the reverse stock split leaves a stockholder with a fraction of a share, the number of shares due to the stockholder will be rounded up to the nearest whole share.

Conversion of Promissory Notes in Exchange for Equity Securities

On December 16, 2013, we entered into a note conversion agreement with each of Thomas Girschweiler, an affiliate and former director of the Company, and Walter Villiger, an affiliate of the Company. The noteholders hold, as of December 31, 2013, an aggregate of $14.1 million, including $10.6 million principal amount of outstanding promissory notes and approximately $3.5 million of accrued and unpaid interest under secured convertible multi-draw term loan facility agreements entered into with each of the noteholders on January 11, 2008, which we refer to as the facility agreements. Pursuant to the note conversion agreements, the noteholders have agreed to convert on a private placement basis the outstanding indebtedness, including accrued interest thereon through the closing date, into units on substantially similar terms as the offering. In connection with the note conversion, the noteholders will release all security and the facility agreements will be terminated. Such conversion will occur concurrently with the closing of the offering. Cash will be paid in lieu of any fractional units that would otherwise be issuable. On February 11, 2014, Mr. Girschweiler and Mr. Villiger assigned their respective rights and obligations under the promissory notes, the facility agreements and the note conversion agreements to entities wholly-owned and controlled by the noteholders, namely WAVI Holding AG in the case of Mr. Villiger and Taurus4757 GmbH in the case of Mr. Girschweiler.

Nasdaq Capital Market Application

On December 16, 2013, we filed an application to list our common stock on the Nasdaq Capital Market. We cannot assure you that we will be able to comply with the standards necessary in order to obtain a listing of our common stock on the Nasdaq Capital Market. We will not complete this offering unless our application to list our common stock on the Nasdaq Capital Market is approved.

Our Mission

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 the preservation process.

Our strategies to achieve this objective include:

Utilize Existing Sales, Distribution and Manufacturing Infrastructure.

Extensive network. We have developed a broad direct sales and distribution network for our products which we utilize to expand sales to existing customers and to gain additional customers.

Highly technical sales team. Our sales team is highly trained and are considered thought leaders in the area of biopreservation. We are able to provide highly relevant data and assist our customers with a consultative selling approach.

High degree of customer satisfaction. Our sales, marketing, customer service and technical support and service teams aspire to provide our customers exceptional service and have been highly rated in customer satisfaction surveys.

Highly accessible product. We have the ability to ship product on a same-day or next-day basis. We use this ability to provide convenient service to our customers and to generate additional product revenues.

Contract manufacturing. We utilize excess capacity in our manufacturing operations to perform contract manufacturing in both small and large lot sizes. With our extensive knowledge in cGMP media manufacturing, we are able to assist our customers and optimize their formulation processes to improve the manufactured yield and margin.

Develop innovative new products. We are continuously seeking to utilize the unique nature of our technologies to create customer application-based solutions.

Invest in Regenerative Medicine. We are the leading supplier of pre-formulated, clinical grade biopreservation media products for advancing the field of regenerative medicine. Fragile, live cells from source materials such as blood, tissue, and organs are enabling the development of biologic-based therapies and treatments for the leading causes of death and disability. These cells must be transported from the processing lab to the bedside in a refrigerated or frozen state to preserve viability, quality, and potency. We will continue to invest in adding to our suite of biopreservation product offerings to the commercial cell therapy and tissue engineering companies, hospital based stem cell transplant centers, university-based research labs engaged in this field.

Results of Operations

Summary of 2013 Achievements

Revenue from our core products, CryoStor®, HypoThermosol®, and BloodStor® grew 30% over 2012 as we expanded our market share in the regenerative medicine, biobanking, and drug discovery segments and ended 2013 with over $3.9 million in revenue from core customers. Our products are incorporated in over 100 hospital-approved or clinical trial stage applications in the regenerative medicine market.

We entered into a strategic partnership with SAVSU, wherein BioLife will exclusively market and distribute SAVSU’s proprietary precision thermal packaging products to the stem cells and regenerative medicine markets.

We executed an intellectual property license agreement with Janssen Research & Development, LLC, resulting in $609,167 in revenue.

We announced a strategic relationship with HemaCare Corporation, (OTCPK:HEMA), wherein HemaCare will market BioLife's HypoThermosol® FRS and CryoStor® biopreservation media products and HemaCare's blood derived cells to the research and clinical communities.

We expanded our relationship with STEMCELL Technologies, who recently selected BioLife's CryoStor cGMP freeze media for use in the launch of over 50 new primary cell products (isolated from bone marrow, peripheral blood, umbilical cord blood, and umbilical cord tissue), to be marketed to the research community.

We were named by Seattle Business Magazine as one of the best places to work in Washington State.

We were named to the Deloitte 2013 Fast Technology 500 list of North American innovative, high growth technology companies.

Results of Operations

Comparison of Results of Operations for the Fiscal Years Ended December 31, 2013 and 2012

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

Revenue and Gross Margin

	Year Ended December 31,		
	2013	2012	% Change
Revenue:	('000's)		
Product revenue			
Core product sales	$ 3,924	$ 3,019	30%
Contract manufacturing services	4,416	2,624	68%
Licensing revenue	609	20	2,946%
Total revenue	8,949	5,663	58%
Cost of sales	5,187	3,371	54%
Gross profit	$ 3,762	$ 2,292	64%
Gross margin %	42.0%	40.5%	

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 direct customers in 2013 increased compared to 2012 due to a 9% increase in volume sold and a 20% increase in our average selling price per liter in 2013. Sales to the regenerative medicine segment tend to be uneven due to the pace of product evaluation, adoption, and clinical trials. We continue to gain new customers in this growing field.

Contract Manufacturing Services. To leverage our capacity and the market opportunity for contract manufacturing services, we are manufacturing products for third parties pursuant to contractual arrangements. This contract manufacturing was performed pursuant to our manufacturing services agreement with Organ Recovery Systems, Inc., effective as of December 22, 2011. The manufacturing services agreement has an initial term of three years, but may be terminated by either party with six months prior notice; however, orders are made by our customer on a purchase order by purchase order basis. Accordingly, as a practical matter, our customer may effectively terminate our services at any time. Management believes that our opportunity in the regenerative medicine market will start to become fully realized over the next three to five years as some customers receive regulatory and marketing approvals for their clinical cell and tissue-based products. During the interim period until then, we are utilizing our manufacturing capacity to generate revenue from contract manufacturing customers.

Licensing Revenue. We have entered into license agreements with one customer that provides this customer with limited access to our intellectual property under certain conditions. This customer paid upfront fees for the specific rights and we recognize license revenue ratably over the term of the agreements. During the first quarter of 2013, we negotiated a new intellectual property license agreement that provides one customer with limited access to our intellectual property under certain conditions. This customer paid upfront fees for the specific rights and there are no future performance obligations. The upfront fee of $500,000 was recognized as revenue during 2013 and $109,167 in deferred revenue associated with this customer was recognized as all future performance obligations associated with the previous license agreements were cancelled with the agreement signed in the first quarter of 2013.

Cost of Sales. Cost of sales consists of raw materials, labor and overhead expenses. Cost of sales in 2013 increased compared to 2012 due to the significant increase in sales of both core and contract manufacturing products.

Gross Margin. Gross margin as a percentage of revenue increased in 2013 compared to 2012 due primarily to the increase in core product sales, offset by increased contract manufacturing services, which has a higher cost of sales, compared to core product sales. Gross margin in 2013 also includes the impact of recognition of significant license revenue during the year with no associated costs.

Revenue Concentration. In 2013 and 2012, we derived approximately 49% and 46%, respectively, of our revenue from our relationship with our contract manufacturing customer, which we commenced deliveries to in the second quarter of 2012. Either party may terminate the agreement we have with this contract manufacturing customer for any reason on six months' notice. In addition, in 2013, we derived approximately 14% of our revenue from one other customer, Janssen Research & Development, LLC, which included license revenue and core product revenue. No other customer accounted for more than 10% of revenue in 2013 or 2012. Revenue from customers located in foreign countries represented 9% and 11% of total revenue during the years ended December 31, 2013 and 2012, respectively.

Operating Expenses

Our operating expenses for the years ended December 31, 2013 and 2012 were:

	Year Ended December 31,		
	2013	2012	% Change
	('000's)		
Operating Expenses:			
Research and development	$ 488	$ 464	5%
Sales and marketing	841	619	36%
General and administrative	2,719	2,152	26%
Operating Expenses	4,048	3,235	25%
% of revenue	45%	57%	

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. Research and development expenses increased in 2013 compared to 2012 due primarily to higher spending on consulting and patent related legal expenses, offset by a reduction in personnel related costs.

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 increase in sales and marketing expenses in 2013 compared to 2012 was primarily due to increased personnel costs related to additions to the sales and marketing team. The additional team members were added to continue focus on our sales and marketing of our core products.

General and Administrative Expenses. General and administrative expenses consist primarily of salaries, bonuses and other personnel-related expenses, non-cash stock-based compensation for administrative personnel and non-employee members of the board of directors, professional fees, such as accounting and legal, corporate insurance and facilities costs. General and administrative expenses were higher in 2013 compared to 2012 due to approximately $380,000 in higher corporate costs, including fees for directors, investor relations, shareholder communication and legal fees. General and administrative expenses in 2013 also included higher personnel costs for existing and new team members.

Other Income (Expenses)

Interest Expense. The increase in interest expense in 2013 compared to 2012 was due to a higher average debt balance.

Amortization of Deferred Financing Costs. Amortization of deferred financing costs represents the cost of warrants issued which are being amortized over the life of the debt.

Liquidity

We have been unable to generate sufficient income from operations in order to meet our operating needs and have an accumulated deficit of approximately $57 million at December 31, 2013. Of this amount, approximately $19 million has accumulated since our merger in 2002.

We believe our current cash and cash provided by operations will satisfy our working capital requirements, debt obligations and capital expenditures for the foreseeable future. Our future capital requirements and the adequacy of

our available funds will depend on many factors, including future profitable operations, debt repayment, and competing technological and market developments.

Our working capital factors, such as inventory turnover and days sales outstanding, fluctuate on a quarterly basis and, on an interim basis during the year, may require an influx of short-term working capital. We will continuously assess the most appropriate method of financing the our short and long term operations. While conditions of the credit market at any given time may impact our ability to obtain credit, we believe that it has the ability to raise funding, if needed, through public and private markets.

Future debt repayment or future acquisitions may be financed by a combination of cash on hand, our positive cash flow generation, a revolving credit facility, or an issuance of new debt or stock.

As of December 31, 2013, we have outstanding $10.6 million principal amount of promissory notes due January 11, 2016, plus accrued and unpaid interest, under the facilities held by our two most significant stockholders, secured by all of our assets. On February 11, 2014, Mr. Girschweiler and Mr. Villiger assigned their respective rights and obligations under the promissory notes, the facility agreements and the note conversion agreements to entities wholly-owned and controlled by the noteholders, namely WAVI Holding AG in the case of Mr. Villiger and Taurus4757 GmbH in the case of Mr. Girschweiler. Pursuant to the note conversion agreements, based on an assumed conversion date of March 25, 2014, we will issue approximately 3,321,405 units to the noteholders in exchange for the conversion of the outstanding promissory notes, including accrued interest thereon through the conversion date. However, prior to the conversion, an event of default, including from the failure to observe or comply with any material covenant or condition in the promissory notes could, if not cured or waived, result in the acceleration of our outstanding indebtedness.

At December 31, 2013, we had cash and cash equivalents of $156,273 compared to cash and cash equivalents of $196,478 at December 31, 2012. At December 31, 2013, we had working capital of $250,118, compared to working capital of $262,421 at December 31, 2012. The decline in our working capital is due primarily to an increase in accounts receivable at the end of 2013, offset by declines in inventory, and increases in accounts payable and accrued compensation related in part to 2013 bonuses.

Net Cash Provided by Operating Activities

During the year ended December 31, 2013, net cash provided by operating activities was $146,007, compared to $854,934 for the year ended December 31, 2012. Cash provided by operating activities included an increase in deferred rent related to tenant improvements which were funded by our landlord, offset by payment to the landlord and amortization of deferred rent, of $52,162 and $861,802 during 2013 and 2012, respectively. Cash provided by operating activities also includes the use of cash to fund net losses and changes in operating assets and liabilities, offset by non-cash compensation related to stock options and depreciation.

Net Cash Used in Investing Activities

Net cash used in investing activities totaled $236,670 during the year ended December 31, 2013, and $1,150,320 during the year ended December 31, 2012. Cash used in investing activities was due primarily to the increase in tenant improvements related to our expanded manufacturing facility and the purchase of equipment.

Net Cash Provided by Financing Activities

Net cash provided by financing activities in 2013 was $50,458 and was the result of proceeds received from warrant and employee stock option exercises. Net cash provided by financing activities was $475,000 in 2012, which was the result of funding from two existing shareholders under the existing facility agreements.

At December 31, 2013, the unused portion of the facility agreements was approximately $900,000.

Off-Balance Sheet Arrangements

As of December 31, 2013, we did not have any off-balance sheet arrangements.

Contractual Obligations

In November of 2012 we signed an amended lease agreement, which expanded the premises leased by us from the landlord to approximately 26,000 rentable square feet. The term of the lease was extended to July 31, 2021. The

amendment includes two (2) options to extend the term of the lease, each option is for an additional period of five (5) 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 increased to approximately $35,000 effective January 1, 2013, and increased to approximately $46,000 effective August 1, 2013. We are required to pay an amount equal to our proportionate share of certain taxes and operating expenses.

On November 15, 2013, we entered into an agreement with a consultant in which we agreed to issue the consultant, as partial compensation for services, $20,000 worth of our common stock per month, distributed quarterly, calculated using our stock price at the end of the quarter. As at February 14, 2014, we had not received an invoice from the consultant and had not issued any shares of our common stock pursuant to this agreement.

Critical Accounting Policies and Significant Judgments and Estimates

The 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 of 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, 2010 to 2013.

BUSINESS

We develop, manufacture and market patented hypothermic storage and cryopreservation solutions for cells and tissue. Our product offerings include:

Patented biopreservation media products for cells, tissues, and organs
Generic formulations of blood stem cell freezing media products
Custom product formulation and custom packaging services
Precision thermal packaging products
Contract aseptic manufacturing formulation, fill, and finish services of liquid media products

Our proprietary HypoThermosol® FRS and CryoStor®, generic BloodStor® biopreservation media products and SAVSU®'s precision thermal packaging products are marketed to the biobanking, drug discovery, and regenerative medicine 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. All of our 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 improved post-preservation cell, tissue, and organ viability and function. We believe that our products have been incorporated into the manufacturing, storage, shipping, freezing, and clinical delivery processes of over 100 hospital approved or clinical trial stage regenerative medicine applications.

The discoveries made by our scientists and consultants relate to how cells, tissues, and organs respond to the stress of hypothermic storage, cryopreservation, and the thawing process. These discoveries enabled the formulation of innovative biopreservation media products that protect biologic material from preservation-related cellular injury, much of which is not apparent immediately after return to normothermic body temperature. Our product formulations have demonstrated notable reduction in apoptotic (programmed) and necrotic (pathologic) cell death mechanisms and are enabling the clinical and commercial development of dozens of innovative regenerative medicine products.

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 life sciences tools provider. Following the merger, we changed our name to BioLife Solutions, Inc. We do not have any subsidiaries.

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 internet website www.biolifesolutions.com. The information contained on our website or that can be accessed through our website does not constitute part of this prospectus and is not incorporated in any manner into this prospectus.

Mission

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 the preservation process.

Technological Overview

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 tissue, if not maintained appropriately at normothermic body temperature (98.6ºF/37ºC), or stored 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 produces mixed results. Although cooling successfully reduces metabolism (i.e., lowers demand for energy), various levels of cellular damage and death occur when using suboptimal methods. To solve this problem, transplant surgeons, for example, flush the donor tissue with an engineered preservation solution designed to provide short-term biopreservation support after removal of the organ from the donor and during transportation. Companies and hospital cell transplantation centers engaged in regenerative medicine product development also maintain the original and derived cellular material in a solution before and after cell manipulation and processing, and during necessary transportation up to the point of infusion/injection into the patient. Traditional support solutions 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 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®, HypoThermosol® FRS and CryoStor® technologies. Our 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 products is their "fully-defined" nature. 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 manufacturing regulatory filings and patient delivery processes.

The results of independent testing demonstrate that our HypoThermosol® FRS and CryoStor® 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.

Our proprietary HypoThermosol® FRS technology is optimized based on low temperature cellular and molecular biology principles. Competing biopreservation media products are often formulated with simple isotonic media cocktails, animal serum, potentially a single sugar or human protein, and in the case of cryopreservation media, a single permeating cryoprotectant such as dimethyl sulfoxide ("DMSO"). A key differentiator of our proprietary formulations 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. Furthermore, our CryoStor® formulations incorporate multiple permeating and non-permeating cryoprotectant agents, which allow for multiple mechanisms of cryogenic protection and reduces the dependence on a single cryoprotectant.

Our research and intellectual property related to the cellular stress response to cold temperature also led to discoveries in the field of cryosurgery. Specifically, through contracted research and completion of the specific aims of two National Institutes of Health ("NIH") Small Business Innovative Research ("SBIR") grants awarded to Cryomedical Sciences, our predecessor, and to BioLife, we determined via in vitro experiments on cancer cells, that the combination of chemotherapy and cryosurgery was more effective than cryosurgery alone. This intellectual property was excluded from the asset sold to Endocare in 2002, and has been the subject of extensive publications.

Products

HypoThermosol®

HypoThermosol® biopreservation media is a novel, engineered, optimized hypothermic storage and shipping media product.

Serum-free, protein-free HypoThermosol® is designed to provide maximum storage and shipping stability for biologics at 2°-8°C.

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.

Similar to our companion freeze media CryoStor®, HypoThermosol® includes components that scavenge free radicals, provide pH buffering, oncotic/osmotic support, energy substrates, and ionic concentrations that balance the intracellular state at low temperatures.

Across a broad spectrum of cell and tissue types, intracellular-like HypoThermosol® has proven more effective in reducing post-preservation 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.

HypoThermosol is manufactured under cGMP and is tested to USP <71> Sterility and USP <85> Endotoxin standards.

HypoThermosol® FRS

Our newer formulation of HypoThermosol®, HypoThermosol® FRS, is the version of HypoThermosol® we are currently selling to our customers. In addition to providing intracellular-like balance to cells and tissues at low temperatures, this solution has been formulated to decrease the free radical accumulation in cells undergoing prolonged hypothermic preservation. Numerous investigators have shown that an increase in free radicals can lead to either necrosis (pathological cell death) or apoptosis (programmed cell death) in clinical conditions. HypoThermosol® FRS is very effective at extending the shelf life and improving the post-preservation viability and function of numerous cell and tissue types.

PrepaStor®

PrepaStor®, formerly branded as HypoThermosol® PURGE is a flush solution specifically designed for use during the transitions from normothermic to mild hypothermic conditions (37°C to 20°C) to rinse culture media and native fluids from tissue and whole organ systems prior to suspension in a preservation solution. PrepaStor® is also used to support the transition from hypothermic to normothermic temperatures following the preservation interval.

CryoStor®

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 -80 to -196°C) and are based upon the novel HypoThermosol® platform. 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.

Across a broad spectrum of cell types, CryoStor® products have proven more effective in reducing post-preservation necrosis and apoptosis as compared to commercial and home-brew isotonic and extracellular formulations without the addition of serum or protein. This enables improved post-thaw cell yield, viability, and recovery.

CryoStor® is manufactured under cGMP and is tested to USP <71> Sterility and USP <85> Endotoxin standards.

CryoStor® is offered in several packages and pre-formulated with DMSO in final concentrations of 2%, 5%, and 10%.

CryoStor® CS2

Pre-formulated with 2% DMSO, in some cell types, CryoStor® CS2 has demonstrated biopreservation efficacy at or above the levels of competing commercial and in-house formulated freeze media, even in the presence of significantly reduced levels of DMSO.

CryoStor® CS5

Pre-formulated with 5% DMSO, CryoStor® CS5 routinely outperforms competing freeze media containing 10% DMSO and is recommended for cryopreservation of most cell types.

CryoStor® CS10

Pre-formulated with 10% DMSO, CryoStor® CS10 has demonstrated remarkable biopreservation efficacy in numerous cell types, including sensitive cells such as hepatocytes. CryoStor® CS10 has demonstrated improved post-thaw cell survival and function in specific cell systems that may be more sensitive to cryopreservation-induced cell damage and death. This variant has also been adopted by customers with cell processing methods that might entail some dilution of the cryopreservation media.

BloodStor®

BloodStor® freeze media is specifically designed for cryopreservation of 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® is manufactured under cGMP and tested to USP <71> Sterility and USP <85> Endotoxin standards.

Precision Thermal Packaging Products

On a worldwide exclusive basis, we distribute a portfolio of precision thermal packaging products to the regenerative medicine and stem cell markets. The products are designed and manufactured by SAVSU Technologies, Inc., a wholly owned subsidiary of Barson Corporation. We believe there is a significant unmet need for improved temperature stability during the transportation and shipping of cells and tissues, which is not currently met by the commercially available thermal shippers. Current commercial alternatives range from Styrofoam and EPS “beer cooler” type containers inside a cardboard box, up to and including vacuum panel insulation cartons. These alternatives suffer from reduced performance due to the form factor design and/or materials used. We believe that the design and superinsulating material used in SAVSU thermal shippers, along with the robustness of the products and reusability, will present a very favorable value proposition to the regenerative medicine and stem cell markets.

PHD™ 2 – 8 C Shipper

The PHD™ line is designed for the shipment of materials, which must be maintained at 2-8˚C and or controlled room temperature (CRT) temperatures and is designed for small volume shipments from single dose to 3 liters in volume. Utilizing our antifreeze technology the PHD™ reduces the risk of freezing of 2-8˚C shipments. We believe the improved insulation performance of the PHD™ will also allow for extended shipping periods and thereby give greater product safety assurance. The packout process is completed in minutes, saving labor time.

CryoQ™ Dry Ice Shipper

The CryoQ™ line is designed for the shipment of small volumes of biomaterials, which need to be shipped at extremely stable deep-frozen temperatures when used with small volumes of dry ice. The CryoQ™ utilizes a Vial Rack system to deliver precision temperature management even after significant sublimation of dry ice has occurred. The Vial Rack system allows for reliable temperature stability even during rigorous shipping conditions. The unique benefit of the Vial Rack and CryoQ design is the ability to maintain uniform temperature around the entire payload volume, providing thermal protection for the biologic payload inside the shipper.

Market Opportunity

Recent advances in cord blood banking, adult stem cell banking, cell therapy, and tissue engineering have highlighted the significant and unmet need to maintain the stability and shelf life of biologics in the development and commercialization of new regenerative medicine products and therapies. Scarce and fragile source cells or tissues are extracted from a patient, transported to a cell processing and culture laboratory, and then transported back to the clinic for patient infusion or injection. Because this entire process can take months and may involve transportation over long distances, maintenance of cellular viability is of paramount importance.

The recently published Visiongain Translational Regenerative Medicine market research report forecasts that the regenerative medicine market comprised of cell and gene therapies and tissue-engineered products will grow to more than $23 billion by 2024. BioLife's 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.

The December 2013 iMarc report forecasts the market for cold chain shippers and instruments growing to $5 billion by 2018.

Our target markets include:

Regenerative Medicine

Our proprietary HypoThermosol® FRS and CryoStor® biopreservation media products are used by customers to store, transport, and freeze biologic source material and cell-or tissue-based final products. Our scientific discoveries related to preservation-induced cell stress enabled the development and commercialization of a new class of patented biopreservation media formulations that have demonstrated broad and significant ability to extend shelf life/stability and improve post-preservation viability and function of numerous biologics. A number of regenerative medicine products may be non-frozen with shelf life less than 24 hours. This limited shelf life would constrain clinical distribution and create manufacturing limitations for the products. Our products specifically address this need by extending shelf life.

This market is comprised of nearly 700 commercial companies and numerous other hospital-based transplant centers developing and delivering cellular therapies such as stem cells isolated from bone marrow, peripheral and umbilical cord blood as well as engineered tissue-based products.

MedMarket Diligence, LLC, estimates that the current worldwide market for regenerative medicine products and services is growing at 20 percent annually. We expect pre-formulated biopreservation media products such as our HypoThermosol® FRS and CryoStor® to continue to displace “home-brew” cocktails due to increased regulatory and quality oversight, creating demand for high quality clinical grade preservation reagents that will grow at greater than the overall end market rate. We estimate that “home-brew” in-house formulated storage and freeze media comprise 80 percent of the market.

We have shipped our proprietary biopreservation media products to over 250 regenerative medicine customers. We estimate that our products are now incorporated in over 100 regenerative medicine cell or tissue-based applications in hospital approved or clinical trial stages of development.

While this market is still in an early stage, we have secured a valuable position as a supplier of critical reagents to several commercial companies. Short-term revenue can be highly variable as customer therapies navigate the regulatory approval process, but we estimate that annual revenue from a typical regenerative medicine customer could reach $1 million per year within three to five years following their product approval. Our position as the leading provider of optimized clinical grade hypothermic storage and cryopreservation freeze media has also led to increased recognition of our scientific expertise.

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.

To leverage our scientific discoveries and presence in this market, we continue to develop a proprietary disposable labware product that may address a significant workflow bottleneck in the drug screening market - insufficient supply of preserved cells required in high-throughput screening of new drug compounds. We have pending patent applications in the U.S., Australia, Canada, and Europe to protect our intellectual property rights for our inventions which may for the first time enable bulk freezing of cells in multiwell tissue culture plates.

Biobanking

Our customers in this segment include public and private cord blood banks, adult stem cell banks, tissue banks, hair transplant centers, and biorepositories. Since the product launch in the third quarter of 2009, we continue to realize increased sales of our BloodStor® 55-5, a GMP version of the traditional “home-brew” cord blood stem cell freeze media. Sales of CryoStor® and HypoThermosol® FRS in this segment also continue to increase as we displace home-brew preservation media due to the quality and performance profile of our proprietary products. In the hair restoration segment, over sixty different physicians and centers now use HypoThermosol® FRS as an improved ex vivo holding solution for grafts during the procedure. We estimate that HypoThermosol® FRS is used in approximately 2% of the total worldwide procedures and have increased our marketing activities to capture additional share of this growing opportunity.

Sales and Marketing

Our sales and marketing strategy supports our objective of building equity in BioLife Solutions as the brand that manufactures and delivers the best-in-class cGMP, serum-free, protein-free, biopreservation media products for cells, tissues, and organs. We provide premiere offerings to life science researchers and professionals applying biology in their work, such as commercial cell therapy and tissue engineering companies, hospital based stem cell transplant centers, university-based research labs, umbilical cord blood banks, adult stem cell banks, tissue banks, biorepositories, hair transplantation centers, pharmaceutical companies, cell suppliers, and toxicity testing labs.

We are committed to being a partner of choice for our customers, which requires us to employ scientific personnel for our sales and service roles. Our sales team consists primarily of technical sales specialists, who are responsible for total customer account management. These individuals have an extensive background in biology or other scientific fields of study. Having a thorough understanding of biological techniques and the research process allows our team to act as advisors to our customers. If our customers have questions about their products, orders or other support areas, they have full access by phone or online, to our technical and customer service professionals.

We participate in numerous 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 AABB, the Alliance for Regenerative Medicine, the BEST Collaborative, and the International Society for Cellular Therapy. In addition to our direct sales activities, our products are marketed and distributed by STEMCELL Technologies, Sigma-Aldrich, and several other regional distributors under non-exclusive agreements.

Manufacturing

We maintain and operate two independent cGMP clean room production suites. Since December 2009, our quality and manufacturing systems became certified to ISO 13485:2003. The systems are organized according to 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.

Governmental Regulation

Our proprietary products are not subject to any specific 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® and HypoThermosol® FRS, 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 who wish to notify the FDA of their intention to use our products in their product development and manufacturing process may request 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.

Intellectual Property

Currently, we have four issued U.S. patents, two pending U.S. patent applications, one issued European patent, one issued Japanese patent, and several pending patent applications in foreign jurisdictions.

In addition to our corporate logo and name, we have registered the following marks:

HYPOTHERMOSOL
GELSTOR
POWERING THE PRESERVATION SCIENCES
BIOPRESERVATION TODAY
BLOODSTOR
CRYOSTOR
PREPASTOR
PRESERVATION CHAIN

We have applied for trademark protection in the following marks:

KATA
CELLENERGY
GRAFTSTOR

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.

Research and Development

Currently, we employ a small team of researchers, some of whom hold Ph.D. degrees in molecular biology or related fields, who also engage in customer support and marketing activities. Also, we conduct collaborative research with several leading academic and commercial entities in our strategic markets.

During 2013 and 2012, we spent approximately $487,800 and $463,600, respectively, on research and development activities.

Our Scientific Advisory Board is comprised of leaders in the fields of regenerative medicine, biopreservation, quality systems, and regulatory compliance. These members advise us on our product development, quality systems, and overall marketing strategies.

Competition

The markets for our products are competitive and are characterized by the application of advanced technologies. Our competition comes from a wide array of competitors with a high degree of technical proficiency, ranging from in-house formulated biopreservation media, whereby the user purchases raw ingredients and manually mixes the ingredients, to larger manufacturers such as Life Technologies Corp. (formally Invitrogen), and distributors including STEMCELL Technologies, Sigma-Aldrich, VWR, Fisher, and smaller specialized companies, offering a broad array of biotechnology products and services that have significantly more financial, operational, sales and marketing and other resources than we do. 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. It is our belief 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.

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 technical advances are made and become more widely known.

Employees

As of February 28, 2014, we had 23 employees, all of whom were full time. Our employees are not covered by any collective bargaining agreement. We consider relations with our employees to be good.

PROPERTIES

We lease approximately 26,000 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 of our products and services are manufactured or provided from our Bothell, Washington facility.

LEGAL PROCEEDINGS

On February 7, 2007, Kristi Snyder, a former employee of the Company filed a complaint in the New York State Supreme Court, County of Broome, against us alleging a breach of an employment agreement and seeking damages of up to $300,000 plus attorneys' fees. This case currently is in discovery. We are vigorously defending our position.

On April 6, 2007, we were served with a complaint filed by John G. Baust, our former Chief Executive Officer and President, and thereafter, until January 8, 2007, the Chairman, Sr. Vice President and Chief Scientific Officer, in the New York State Supreme Court, County of Tioga, against us seeking, among other things, damages under his employment agreement to be determined upon trial of the action plus attorneys' fees, a declaratory judgment that he did not breach his fiduciary duties to the Company, and that his covenant not to compete is void as against public policy or unenforceable as a matter of law, and to enjoin us from commencing an action against him in Delaware courts seeking damages for breaches of his fiduciary obligations to us. The parties have engaged in extensive motion practice. By decision of December 18, 2009, Justice Tait rejected Plaintiff Baust's efforts to obtain partial summary judgment. This case currently is in discovery. We are vigorously defending our position.

On June 15, 2007, we filed a lawsuit in the State of New York Supreme Court, County of Tioga against Cell Preservation Services, Inc. ("CPSI") and Coraegis Bioinnovations, Inc. ("Coraegis"), both of which are owned and/or controlled by John M. Baust, a former employee of the Company and the son of John G. Baust, both of whose employment with us was terminated on January 8, 2007.

On March 15, 2004, we had entered into a Research Agreement with CPSI, pursuant to which CPSI took over the processing of our existing SBIR grants, on our behalf and was to apply for additional SBIR grants and, in each case, was to perform the research with respect to such grants. In connection therewith, we granted to CPSI a limited license to use our technology ("BioLife's Technology"), including our proprietary cryopreservation solutions (collectively, "Intellectual Property"), solely for the purpose of conducting the research pertaining to the SBIR grants, and CPSI agreed to keep confidential all of our confidential information disclosed to CPSI ("Confidential Information"). On January 8, 2007, we informed CPSI that the Research Agreement would not be extended and would terminate in accordance with its terms on March 15, 2007.

The lawsuit states various causes of action, including, (1) repeated violations of the Research Agreement by CPSI by improperly using BioLife's Technology, Intellectual Property and Confidential Information for its own purposes, (2) the unlawful misappropriation by CPSI and Coraegis of our trade secrets, (3) unfair competition on the part of CPSI and Coraegis through their unlawful misappropriation and misuse of BioLife's Technology, Intellectual Property and Confidential Information, and (4) the conversion of BioLife's Technology, Intellectual Property and Confidential Information by CPSI and Coraegis to their own use without our permission.

The lawsuit seeks, among other things, (1) to enjoin CPSI from continuing to violate the Research Agreement, (2) damages as a result of CPSI's breaches of the Research Agreement, (3) to enjoin CPSI and Coraegis from any further use of the Company's trade secrets, (4) damages (including punitive damages) as a result of CPSI's and Coraegis' misappropriation of the Company's trade secrets, (5) to enjoin CPSI and Coraegis from any further use of BioLife's Technology, Intellectual Property and Confidential Information, (6) damages (including punitive damages) as a result of CPSI's and Coraegis' unfair competition against the Company, and (7) damages (including punitive damages) as a result of CPSI's and Coraegis' conversion of BioLife's Technology, Intellectual Property and Confidential Information to their own use. On September 30, 2008, Justice Jeffrey Tait issued a Letter Decision and Order which provides for a multi-phase process for discovery concerning contested discovery disclosures. By letter dated January 14, 2009, Justice Tait ordered that CPSI deliver by February13, 2009 certain confidential documents to chambers for an in camera review. The parties are awaiting Justice Tait's review of these confidential documents in order to move forward with discovery. The parties have also engaged in extensive motion practice. By decision of December 18, 2009, Justice Tait denied the attempt of the Defendants to dismiss Plaintiff's complaint. This case currently is in discovery.

The Company is vigorously pursuing its position.

On December 4, 2007, John M. Baust, the son of John G. Baust, filed a complaint in the New York State Supreme Court, County of Tioga, against the Company and Michael Rice, our Chief Executive Officer and former chairman of the board, alleging, among other things, a breach of an employment agreement and defamation of character and seeking damages against us in excess of $300,000 plus attorney's fees. This case currently is in discovery. We are vigorously defending our position.

DIRECTORS AND EXECUTIVE OFFICERS

The following table and text set forth the names and ages of our directors and executive officers as of March 5, 2014. The board is comprised of only one class. All of the directors will serve until the next annual meeting of shareholders, and until their successors are elected and qualified, or until their earlier death, retirement, resignation or removal. There are no family relationships among directors and executive officers. Also provided herein are brief descriptions of the business experience of each director and executive officer during the past five years (based on information supplied by them) and an indication of directorships held by each director in other public companies subject to the reporting requirements under the Federal securities laws. During the past ten years, none of our directors or executive officers has been involved in any legal proceedings that are material to an evaluation of the ability or integrity of such person.

Name	Age	Position and Offices With the Company
Joe Annicchiarico	38	Vice President, Manufacturing
Aby J. Mathew, Ph.D.	42	Chief Technology Officer and Senior Vice President
Michael Rice	51	Chief Executive Officer, President, and Director
Daphne Taylor	47	Secretary, Chief Financial Officer and Vice President, Finance and Administration
Raymond Cohen	54	Chairman of the Board
Andrew Hinson	50	Director
Joseph Schick	52	Director
Rick Stewart	61	Director

Joe Annicchiarico has served as Vice President, Manufacturing since September 2012 and as Director of Manufacturing from December 2011 through August 2012. Prior to joining the Company, Mr. Annicchiarico served in various roles at Mediquest Therapeudics, Inc., from May 2005 through September 2011, including Scientist, Formulation Manager, and most recently, as Director of Manufacturing and Clinical Supplies. From January 2004 through September 2005, Mr. Annicchiarico worked in specialty chemical sales at Drummond American and prior to that, he spent four years as a formulation development Chemist.

Dr. Aby J. Mathew, Ph.D., has been Senior Vice President and Chief Technology Officer since February 2011. From January 2007 through February 2011, Dr. Mathew served as Senior Scientist, Director of Strategic Relations, and Senior Director of Strategic Relations. From June 2003 through January 2007, Dr. Mathew served as Director of Manufacturing. From September 2000 through June 2003, Dr. Mathew served as Clinical Accounts Manager and Director of Hypothermic Preservation for Cryomedical Sciences/BioLife Solutions. Dr. Mathew has been working on low temperature biopreservation since 1994, and his studies contributed to the development of our current commercial HypoThermosol® and CryoStor® product platforms and intellectual property foundation. Beginning in 1994 to 2000, Dr. Mathew performed research at the State University of New York at Binghamton (now Binghamton University) related to research grants (including as a consultant) co-supervised by the Vice President of Research and Development of Cryomedical Sciences, Inc., the former parent of BioLife Solutions.

Michael Rice has been President and Chief Executive Officer and a director of the Company since August 2006, and chairman of the board from August 2007 to November 2013. Mr. Rice has more than 20 years of leadership and entrepreneurial experience in the medical and high tech industries. He was most recently the senior business development manager for medical and wireless products at AMI Semiconductor, from October 2004 to August 2006. From October 2000 to October to August 2006, Mr. Rice also served as the director of marketing and business development at Cardiac Science, Inc., a manufacturer of automated external defibrillators. Prior to that, from May 1998 to October 2000, he was the Vice President, Sales and Marketing for TEGRIS Corporation, a privately held network services provider. Mr. Rice also spent 12 years, from May 1986 to May 1998 at Physio Control Corporation

in several sales and marketing management roles prior to its acquisition by Medtronic Inc. The board has determined that Mr. Rice should serve as a director because it values management's insight.

Daphne Taylor has been Vice President, Finance & Administration, and Chief Financial Officer since August 2011, and Secretary since January 30, 2013 and from March 2011 through July 2011 she served as Corporate Controller. Prior to joining the Company, Ms. Taylor served as Vice President, Corporate Controller and Chief Accounting Officer of Cardiac Science Corporation from November 2005 through January 2009. From April 2002 through November 2005, she held various positions, including Vice President and Corporate Controller for LookSmart, Inc.

Raymond W. Cohen joined the board in May 2006, and has served as chairman of the board since November 2013. Mr. Cohen is an Accredited Public Company Director and currently serves as the Chairman of Lombard Medical Technologies a UK-based public company manufacturing and marketing endovascular stent graphs, and as Chairman of JenaValve Technology, a Munich-based venture-capital backed manufacturer and marketer of transcatheter aortic valve systems and as a member of the board of directors and the audit committee of Spectrum Pharmaceuticals, a oncology drug manufacturer based in Irvine, CA. Previously, from 2010, Mr. Cohen served as the Chief Executive Officer and member of the board of directors of Vessix Vascular, Inc., a developer of a novel RF balloon catheter technology for treatment of hypertension that was acquired by Boston Scientific Corp. in November 2013. Previously, from 1997 to 2006, Mr. Cohen served as Chairman and Chief Executive Officer of publicly-traded Cardiac Science, Inc., which in 2004 was ranked as the 4th fastest growing technology company in North America on Deloitte & Touche's Fast 500 listing. Mr. Cohen has also currently serves as the Chairman of the board of directors of Syncroness, Inc., a private engineering and product development firm since 2006. In 2008, Mr. Cohen was named by AeA as the Private Company Life Science CEO of the Year. Mr. Cohen was named Entrepreneur of the Year in 2002 by the Orange County Business Journal and was a finalist for Ernst & Young's Entrepreneur of the Year in the medical company category in 2004. Mr. Cohen holds a B.S. in Business Management from Binghamton University. The board has determined that Mr. Cohen should serve as a director because of his extensive experience with public companies.

Andrew Hinson joined the board in February 2007. He is currently the Vice President of Clinical and Regulatory Affairs for LoneStar Heart, Inc., a global developer of medical devices, small molecule, and cellular-based therapies for cardiovascular disease. Mr. Hinson joined CardioPolymers, now a wholly-owned subsidiary of LoneStar Heart, in November 2004. From 2001 to 2004, Mr. Hinson served as the Senior Director of research and clinical development at AnGes MG, Inc. (TSE: 4563) a biotechnology firm engaged in the development and commercialization of novel gene and cell therapies for the treatment of cardiovascular disease. Prior to that Mr. Hinson had a long career with Procter & Gamble Pharmaceutical (NYSE:PG) holding multiple technical and management positions in research, clinical development and medical affairs. Mr. Hinson has diverse experience in the cell and gene therapy markets and extensive experience with regulatory affairs and clinical development of new therapies for cardiac, neurologic, and gastrointestinal diseases. The board has determined that Mr. Hinson should serve as a director because of his experience and knowledge of companies in the biotechnology space.

Joseph Schick joined the board in November 2013. He is currently Chief Financial Officer of Corbis, a global digital media company, since May 2013. Prior to his position at Corbis, from March 2009 through July 2013, Mr. Schick was Chief Financial Officer at Talyst, a pharmacy automation hardware and software company. Mr. Schick served as Chief Financial Officer at Vertafore from October 2006 through January 2009, an enterprise software company for the insurance industry. Mr. Schick was also in various roles at travel company Expedia (NASDAQ: EXPE), including Senior Vice President of Finance. Mr. Schick has significant experience with SEC reporting, strategic planning, and mergers and acquisitions. Mr. Schick started his career with Arthur Andersen and is a CPA who received his B.S. in Accounting from the University of Illinois. The board has determined that Mr. Schick should serve as a director because of his financial expertise.

Rick Stewart joined the board in February 2013. Mr. Stewart has served as President and Chief Executive Officer, and a member of the board of directors of Cardiac Dimensions since 2001. From 1998 to 2001 he was President and Chief Executive Officer of Tegris Corporation, a leading IT infrastructure and enterprise applications provider for vertical markets. Prior to that Mr. Stewart had a long career within Eli Lilly in its Medical Device and Diagnostics Unit, holding multiple executive positions in general and technical management, sales, marketing and business development. Mr. Stewart was a member of the senior team that led a buyout of the Physio-Control subsidiary from Eli-Lilly in 1994 which shortly thereafter was taken public. He received an MBA from the University of Washington. The board has determined that Mr. Stewart should serve as a director because his experience in the medical device field and executive acumen.

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CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS

Each of the transactions described below was reviewed and approved or ratified by the audit committee of the board. It is anticipated that any future transactions between us and our officers, directors, principal stockholders and affiliates will be on terms no less favorable to us than could be obtained from unaffiliated third parties and that such transactions will be reviewed and approved by our Audit Committee and a majority of the independent and disinterested members of the board.

Legal Fees

Howard S. Breslow, a director of the Company until February 4, 2013, is a member of Breslow & Walker, LLP, and served as general counsel to the Company. As of December 31, 2013, Mr. Breslow owned 3,829 of our shares of common stock and held rights to purchase an aggregate of 78,570 additional shares pursuant to stock options and warrants issued to him and/or affiliates. We incurred approximately $18,636 in legal fees during the year ended December 31, 2012 for services provided by Breslow & Walker, LLP. As of December 31, 2013, we had no amount due to Breslow & Walker, LLP.

Facility Agreements

On January 11, 2008, we entered into the facility agreements with each of Thomas Girschweiler, an affiliate and former director of the Company, and Walter Villiger, an affiliate of the Company, pursuant to which each noteholder extended to the Company a secured convertible multi-draw term loan facility of $2,500,000, which facility (a) incorporated (i) a refinancing of then existing indebtedness of the Company to the Investor, and accrued interest thereon, in the aggregate amount of $1,431,563.30, (ii) a then current advance of $300,000, and (iii) a commitment to advance to us, from time to time, additional amounts up to a maximum of $768,436.70, (b) bears interest at the rate of 7% per annum on the principal balance outstanding from time to time, (c) is evidenced by a secured convertible multi-draw term loan, which was due and payable, together with accrued interest thereon, the earlier of (i) January 11, 2010, or (ii) a certain events of default, and (d) is secured by all of our assets.

In May and July 2008, we received $1,000,000 in total from the noteholders pursuant to the facility agreements. On October 20, 2008, the amounts available under each of the facility agreements was increased by $2,000,000 to $4,500,000 (an aggregate of $9,000,000), and, on October 24, 2008, we received $600,000 in total from the noteholders pursuant to the amended facility agreements. In 2009, we received an additional $2,825,000 in total from the noteholders pursuant to the amended facility agreements. In December 2009, the noteholders extended the repayment date to January 11, 2011. On November 16, 2010, the amount available under each of the facility agreements was increased by $250,000 to $4,750,000 (an aggregate of $9,500,000) and the noteholders granted an extension of the repayment date to January 11, 2013. In 2010, we received $1,145,000 in total from the noteholders pursuant to the amended facility agreements. In 2011, we received $1,095,000 in total from the noteholders pursuant to the amended facility agreements. In August 2011 we entered into an amendment to each of the facility agreements pursuant to which the amount of each facility agreement was increased to $5,250,000. The multi-draw term loan notes previously delivered to each of the noteholders also was amended to reflect the changes to the facility agreements. In consideration of such amendments, we issued to each of the noteholders a five-year warrant to purchase 1,000,000 shares of our common stock at a price of $0.063 per share, which share amount and price was adjusted to 71,429 and $0.88, to reflect the reverse stock split effective January 29, 2014. On May 30, 2012, the amounts available under each of the facility agreements were increased to $5,750,000 (an aggregate of $11,500,000) and the noteholders granted an extension of the repayment date to January 11, 2016. The multi-draw term loan notes previously delivered to each of the noteholders also was amended to reflect the changes to the facility agreements. In consideration of such amendments, we issued to each of the noteholders a five-year warrant to purchase 1,000,000 shares, at a price of $0.08 per share, which share amount and price was adjusted to 71,429 and $1.12 respectively, to reflect the reverse stock

split effective January 29, 2014.

On December 16, 2013, we entered into note conversion agreements with the noteholders. Pursuant to the note conversion agreements, we will issue units pursuant to a private placement on substantially similar terms as the offering to each of the noteholders in exchange for the conversion of the $10.6 million principal amount outstanding under the promissory notes and accrued and unpaid interest of approximately $3.7 million through the assumed conversion date. In connection with the note conversions, the noteholders will release all security interests and the facility agreements will be terminated such conversions will occur concurrently with the conversion.

On February 11, 2014, Mr. Girschweiler transferred to Taurus4757 GmbH, an entity wholly-owned by Mr. Girschweiler, and Mr. Villiger transferred to WAVI Holding AG, an entity wholly-owned by Mr. Villiger, pursuant to an assignment and amendment agreement between the Company and each respective noteholder and transferee, all of their rights and obligations under the noteholder's respective note, the facility agreement and respective note conversion agreement (collectively, we refer to these documents as the note documents. The noteholders have advised us that the transfers were effected for tax structuring purposes. The assignment and amendment agreements did not change the noteholders' beneficial ownership of the notes and the other note documents, nor did they affect the terms of conversion set forth in the note conversion agreements.

DIRECTOR COMPENSATION

During the year ended December 31, 2013, non-employee directors were compensated with an annual retainer fee of $25,000. Beginning in December 2013, the Board Chairman was compensated an additional $10,000 per month. Committee chairpersons and members were compensated with additional annual retainers as follows:

	Annual Retainer
Audit and Finance Committee Chairman	$5,000
Audit and Finance Committee Member	$5,000
Compensation Committee Chairman	$5,000
Compensation Committee Member	$2,500
Nominating and Governance Committee Chairman	$2,000
Nominating and Governance Committee Member	$1,000

Each new member of the Company's Board of Directors received options to purchase 8,928 options to purchase stock. A total of $180,458 in cash director compensation and $193,948 in compensation related to equity awards was recorded during the year ended December 31, 2013. The following table sets forth information regarding compensation earned by our non-employee directors for the year ended December 31, 2013. Mr. Breslow is not included in this table as he resigned from the Board on January 29, 2013 and did not earn any compensation during 2013.

Name	Annual Retainer ($)	Board and Committee Chair and Committee Membership Fees ($)	Total Cash Fees Earned ($)	Restricted Stock Unit Awards ($) (1)(4)	Option Awards ($) (1)(4)	Total ($)
Raymond Cohen	25,000	23,500	48,500	—	—	48,500
Roderick deGreef (2)	20,833	11,250	32,083	—	—	32,083
Thomas Girschweiler(3)	25,000	7,500	32,500	—	—	32,500
Andrew Hinson	25,000	5,500	30,500	—	—	30,500
Joseph Schick	4,375	—	4,375	—	64,402 (4)	68,777
Rick Stewart	25,000	7,500	32,500	50,000 (3)	79,546 (4)	162,046

(1) See Note 1 to Notes to Financial Statements for the years ended December 31, 2013 and 2012 for a description on the valuation methodology of restricted stock and stock option awards.

(2) Mr. deGreef ceased to be a director on November 5, 2013.

(3) Mr. Girschweiler ceased to be a director on March 5, 2014.

(4) The following table provides additional information about non-employee director equity awards, including the restricted stock and stock option awards made to non-employee directors during 2013 and the number of stock options and shares of restricted stock held by each non-employee director on December 31, 2013, which have been converted to reflect the reverse stock split:

Name	Restricted Stock Units Granted		Stock Options Granted		Restricted Shares Units Outstanding	Stock Options Outstanding
Raymond Cohen	—		—		—	96,428
Roderick deGreef	—		—		—	111,389
Thomas Girschweiler	—		—		—	60,714
Andrew Hinson	—		—		—	60,714
Joseph Schick	—		8,928	(b)	—	8,928
Rick Stewart	4,762	(a)	8,928	(c)	—	8,928

(a) Amount is a result of restricted stock granted on 9/10/2013, which vested upon grant.

(b) Amount is a result of options to purchase shares at $10.50 per share granted to director on September 10, 2013, which options vest on September 10, 2014.

(c) Amount is a result of options to purchase shares at $8.51 per share granted to director on December 17, 2013, which options vest on December 17, 2014.

EXECUTIVE COMPENSATION

Summary Compensation Table

The following Summary Compensation Table sets forth certain information regarding the compensation, for services rendered in all capacities to us during 2013 and 2012, of our current principal executive officer and our two other most highly compensated executive officers at the end of 2013 (together, the "named executive officers"). Our compensation committee and board of directors are evaluating the base salaries of our named executive officers, and may increase the base salaries of our named executive officers by up to 15% for calendar 2014.

Name and Principal Positions (a)	Year (b)	Salary ($) (c)	Bonus ($) (d)	Stock Awards ($) (e)	Option Awards ($) (f)(1)	All Other Compensation ($) (i)	Total ($) (j)
Michael Rice	2013	300,000	150,000	—	—	—	450,000
President, Chief Executive Officer and Director (8/06 – present)	2012	285,002	150,000	—	—	24,143 (4)	459,145
Daphne Taylor	2013	194,400	19,440	—	—	—	213,840
Chief Financial Officer (3/11 – present)	2012	160,000	18,000	—	19,762 (2)	—	197,762
Aby J. Mathew	2013	218,000	21,800	—	—	—	239,800
Chief Technology Officer (9/00 – present)	2012	177,833	20,000	—	19,762 (3)	—	217,595

(1) See Note 1 to Notes to Financial Statements for the years ended December 31, 2013 and 2012 for a description on the valuation methodology of stock option awards

(2) Amount is a result of options to purchase 17,857 shares at $1.40 per share granted to officer on February 15, 2012, which options vested to the extent of 1/4 of the underlying shares on February 15, 2013 and, thereafter, vest in monthly increments of 372 shares.

(3) Amount is a result of options to purchase 17,857 shares at $1.40 per share granted to officer on February 15, 2012, which options vested to the extent of 1/4 of the underlying shares on February 15, 2013 and, thereafter, will vest in monthly increments of 372 shares.

(4) Amount represents accrued vacation paid in cash.

Outstanding Equity Awards at Fiscal Year-End 2013

The following table sets forth information concerning the outstanding equity awards as of December 31, 2013 granted to the named executive officers.

	OPTION AWARDS				
Name (a)	Number of Securities Underlying Unexercised Options (#) Exercisable (b)	Number of Securities Underlying Unexercised Options (#) Unexercisable (c)	Equity Incentive Plan Awards: Number of Securities Underlying Unexercised Unearned Options (#) (d)	Option Exercise Price ($) (e)	Option Expiration Date (f)
Michael Rice	107,142	—	—	0.98	8/7/2016(1)
Michael Rice	71,428	—	—	1.12	2/7/2017(2)
Michael Rice	54,642	—	—	1.26	2/2/2019(3)
Michael Rice	63,797	21,265	—	1.40	2/5/2020(4)
Michael Rice	28,571	—	—	1.12	2/25/2021(5)
Michael Rice	160,567	—	—	1.12	2/25/2021(6)
Daphne Taylor	8,928	8,928	—	1.40	3/1/2021(7)
Daphne Taylor	20,833	14,881	—	0.88	8/17/2021(8)
Daphne Taylor	8,184	9,672	—	1.40	2/15/2022(9)
Aby J. Mathew	2,142	—	—	1.12	9/28/2015(10)
Aby J. Mathew	7,142	—	—	0.98	10/12/2016(11)
Aby J. Mathew	35,714	—	—	1.12	2/7/2017(12)
Aby J. Mathew	24,285	—	—	1.40	8/7/2017(13)
Aby J. Mathew	7,142	—	—	0.70	2/11/2018(14)
Aby J. Mathew	7,142	—	—	0.56	11/5/2018(15)
Aby J. Mathew	28,474	9,491	—	1.40	2/5/2020(16)
Aby J. Mathew	27,725	27,725	—	1.12	2/11/2021(17)
Aby J. Mathew	8,184	9,672	—	1.40	2/15/2022(18)

(1) This award vested 1/3 of the total underlying shares on each of August 7, 2007, 2008 and 2009.
(2) This award vested 1/3 of the total underlying shares on each of February 7, 2008, 2009 and 2010.
(3) This award vested 1/4 of the total underlying shares on February 2, 2010 and, thereafter, in equal monthly increments.
(4) This award vests 1/3 of the total underlying shares on each of February 5, 2012, 2013 and 2014.
(5) This award vested on the date of grant.
(6) This award vested at the end of the fourth quarter of 2012, when the Company achieved cash flow break even.
(7) This award vests 1/4 of the total underlying shares on each of March 1, 2012, 2013, 2014 and 2015.
(8) This award vested 8,928 shares on August 17, 2012 and, thereafter, vests in equal monthly increments.
(9) This award vested 4,464 shares on February 15, 2013 and, thereafter, vests in equal monthly increments.
(10) This award vested 1/4 of the total underlying shares on each of September 28, 2006, 2007, 2008 and 2009.
(11) This award vested 1/4 of the total underlying shares on each of October 12, 2007, 2008, 2009 and 2010.

(12) This award vested 1/4 of the total underlying shares on each of February 7, 2008, 2009, 2010 and 2011.
(13) This award vested 1/4 of the total underlying shares on each of August 7, 2008, 2009, 2010 and 2011.
(14) This award vested 1/4 of the total underlying shares on each of February 11, 2009, 2010, 2011 and 2012.
(15) This award vested 1/4 of the total underlying shares on each of November 5, 2009, 2010, 2011 and 2012.
(16) This award vests 1/4 of the total underlying shares on each of February 5, 2011, 2012, 2013 and 2014.
(17) This award vests 1/4 of the total underlying shares on each of February 11, 2012, 2013, 2014 and 2015.
(18) This award vested 4,464 shares on February 15, 2013 and, thereafter, in equal monthly increments.

Securities Authorized for Issuance Under Equity Compensation Plans at December 31, 2013

The following table sets forth information as of December 31, 2013 relating to all of our equity compensation plans:

Plan category	Number of securities to be issued upon exercise of outstanding options and warrants (in thousands)	Weighted Average exercise price of outstanding options and warrants	Number of securities remaining available for future issuance (in thousands)
Equity compensation plans approved by security holders	437	$ 1.52	136
Equity compensation plans not approved by security holders	980	$ 1.30	—
Total	1,417	$ 1.36	136

Employment Agreements

We have an employment agreement with Michael Rice, our President and Chief Executive Officer, which automatically renews for successive one year periods in the event either party does not send the other a “termination notice” not less than 90 days prior to the expiration of the initial term or any subsequent term. The agreement provided for a salary of $200,000 per year and an incentive bonus based on certain quarterly milestones, to be determined by the board. Mr. Rice also received a ten-year incentive stock option to purchase 107,142 shares of common stock at $.98 per share (the fair market value on the date of grant), which vested to the extent of 1/3 of the underlying shares on each of the first three anniversary dates of the date of grant. We amended this employment agreement on February 7, 2007 to provide that if Mr. Rice’s employment is terminated without “Cause” or he resigns for “Good Reason,” he will be entitled to the continued payment of salary and bonuses and the reimbursement of medical insurance premiums for 24 months following the date of termination and, in the case of a change of control event, accelerated vesting of any remaining unvested stock options. On February 11, 2008, Mr. Rice's salary was increased to $300,000 per annum, retroactive to January 1, 2008, and beginning with the year 2008, his quarterly bonus plan was supplanted by annual reviews of the board of directors or Compensation Committee. Beginning on August 1, 2009, Mr. Rice's salary was decreased 10% in conjunction with our 10% across the board pay cuts. On July 1, 2012, Mr. Rice's salary was increased to $300,000 per annum.

We have an employment agreement with Dr. Aby J. Mathew, Ph.D., our Senior Vice President and Chief Technology Officer, which automatically renews for successive one year periods in the event either party does not send the other a “termination notice” not less than 90 days prior to the expiration of the initial term or any subsequent term. The agreement provides for a salary of $200,000 per year and an incentive bonus based on certain quarterly milestones of up to 10% of Dr. Mathew’s base salary. If Dr. Mathew’s employment is terminated without “Cause” (other than by reason of death or disability) or if he resigns for “Good Reason,” he will be entitled to the continued payment of salary and bonuses and the reimbursement of medical insurance premiums for 12 months following the date of termination and, in the case of a change of control event, accelerated vesting of any remaining unvested stock options. On January 30, 2013, Dr. Mathew’s salary was increased to $218,000 per annum, retroactive to January 1, 2013.

We have an employment agreement with Daphne Taylor, our Chief Financial Officer, which automatically renews for successive one year periods in the event either party does not send the other a “termination notice” not less than 90 days prior to the expiration of the initial term or any subsequent term. The agreement provides for a salary of $150,000 per

year and an incentive bonus based on certain quarterly milestones of up to 10% of Ms. Taylor's base salary. If Ms. Taylor's employment is terminated without "Cause" (other than by reason of death or disability) or if she resigns for "Good Reason," she will be entitled to the continued payment of salary and bonuses and the reimbursement of medical insurance premiums for 6 months following the date of termination and, in the case of a change of control event, accelerated vesting of any remaining unvested stock options. On August 10, 2012, Ms. Taylor's salary was increased to $180,000 per annum, effective September 1, 2012. On January 30, 2013, Ms. Taylor's salary was increased to $194,400 per annum, retroactive to January 1, 2013.

SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT

The following table sets forth, as of December 31, 2013, certain information regarding the beneficial ownership of common stock by (i) each stockholder known by the Company to be the beneficial owner of more than 5% of the outstanding shares thereof; (ii) each director of the Company; (iii) each Executive Officer of the Company; and (iv) all of our current directors and executive officers as a group. Information regarding Thomas Girschweiler and Walter Villiger is presented on a pro forma as adjusted basis, after giving effect to the assumed conversion of their promissory notes into an aggregate of 3,321,405 units on an assumed conversion date of March 25, 2014.

Directors and Executive Officers

Name and Address of Beneficial Owner	Common Stock	Percentage of Class	
Directors and Executive Officers			
Michael Rice (Officer and Director)(1)	507,413	9.2	%
Aby J. Mathew (Officer) (2)	204,471	3.9	%
Raymond Cohen (Director) (3)	99,643	1.9	%
Andrew Hinson (Director)(4)	60,713	1.2	%
Daphne Taylor (Officer) (5)	44,641	0.9	%
Rick Stewart (Director)	4,762	0.1	%
Joseph Schick (Director)	--	--	
Total shares owned by Executive Officers and Directors(6)	937,267	15.8	%
5% Stockholders			
Walter Villiger(7)	5,143,194	58.5	%
Thomas Girschweiler(8)	4,392,427	52.3	%
Beskivest Chart LTD Goodmans Bay Center West Bay Street & Sea View Drive Nassau, Bahamas	518,217	10.3	%
Roderick de Greef(9)	390,696	7.5	%
John G. Baust 175 Raish Hill Road Candor, NY 13743	254,500	5.1	%

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Shares of common stock subject to options and warrants that are exercisable or will be exercisable within 60 days of December 31, 2013 are deemed outstanding for computing the number of shares beneficially owned. The percentage of the outstanding shares held by a person holding such options or warrants includes those currently exercisable or exercisable within 60 days of December 31, 2013, but such options and warrants are not deemed outstanding for computing the percentage of any other person. Except as indicated by footnote, and subject to community property laws where applicable, we believe that the persons named in the table have sole voting and investment power with respect to all shares shown as beneficially owned by them. Unless otherwise indicated, the business address of each person listed is in care of 3303 Monte Villa Parkway, #310, Bothell, WA 98021.

(1) Includes options to purchase 507,413 shares of common stock issuable under stock options exercisable within 60 days from December 31, 2013.
(2) Includes options to purchase 172,050 shares of common stock issuable under stock options exercisable within 60 days from December 31, 2013.
(3)

Includes options to purchase 96,427 shares of common stock issuable under stock options exercisable within 60 days from December 31, 2013.

(4) Includes options to purchase 60,713 shares of common stock issuable under stock options exercisable within 60 days from December 31, 2013.

(5) Includes options to purchase 44,641 shares of common stock issuable under stock options exercisable within 60 days from December 31, 2013.

(6) Includes the securities listed in footnotes 1-5, in addition to options to purchase 15,624 shares of common stock issuable under stock options exercisable within 60 days from December 31, 2013.

(7) Includes 214,286 shares of common stock issuable upon the exercise of outstanding warrants, all of which are currently exercisable, and the issuance of approximately 1.8 million units in exchange for the conversion of $5.7 million principal amount of outstanding promissory note and approximately $2.0 million of interest accrued thereon. The warrants issued upon conversion of the notes will not include a beneficial ownership limitation. On February 11, 2014, Mr. Villiger assigned his respective rights and obligations under the promissory note, the facility agreement and the note conversion agreement to his wholly-owned entity, WAVI Holding AG. Despite the assignment, Mr. Villiger retains beneficial ownership of the promissory notes and all securities issuable pursuant to the note conversion agreement.

(8) Includes options to purchase 60,713 shares of common stock issuable under stock options exercisable within 60 days from December 31, 2013 and 214,286 shares of common stock issuable upon the exercise of outstanding warrants, all of which are currently exercisable, and the issuance of approximately 1.5 million units in exchange for the conversion of $4.9 million principal amount of outstanding promissory note and approximately $1.7 million of interest accrued thereon. The warrants issued upon conversion of the notes will not include a beneficial ownership limitation. On February 11, 2014, Mr. Girschweiler assigned his respective rights and obligations under the promissory note, the facility agreement and the note conversion agreement to his wholly-owned entity, Taurus4757 GmbH. Despite the assignment, Mr. Girschweiler retains beneficial ownership of the promissory notes and all securities issuable pursuant to the note conversion agreement. Mr. Girschweiler ceased to be a director of the Company on March 5, 2014.

(9) Includes options to purchase 111,388 shares of common stock issuable under stock options exercisable within 60 days from December 31, 2013 and 89,286 shares of common stock issuable upon the exercise of outstanding warrants, all of which are currently exercisable; includes 5,715 shares of common stock beneficially owned by Mr. de Greef in the name of deGreef & Company Inc.

DIRECTOR INDEPENDENCE

We currently have five directors: Michael Rice, Raymond Cohen, Andrew Hinson, Rick Stewart and Joe Schick. Messrs. Cohen, Hinson, Schick and Stewart are considered independent under the rules of the Nasdaq Stock Market.

DESCRIPTION OF SECURITIES

General

As of the date of this prospectus, our authorized capital stock consisted of 150,000,000 shares of common stock, $0.001 par value per share, and 1,000,000 shares of preferred stock, $0.001 par value per share. Our board of directors may establish the rights and preferences of the preferred stock from time to time. As of January 31, 2014, there were 5,029,920 shares of our common stock outstanding, and there were no shares of preferred stock issued and outstanding.

Immediately following the consummation of the offering and assuming the sale by us of 3,604,651 shares of common stock in this offering, and the estimated issuance of 3,321,405 shares to the noteholders in exchange for the conversion of the promissory notes and all accrued and unpaid interest thereon, we expect to have authorized capital stock consisting of 150,000,000 shares of common stock, $0.001 par value per share, and 1,000,000 shares of preferred stock, $0.001 par value per share, and 11,955,976 shares of common stock outstanding and no shares of preferred stock outstanding.

Common Stock

Holders of our common stock are entitled to one vote per share. Our certificate of incorporation does not provide for cumulative voting. Holders of our common stock are entitled to receive dividends declared by our board of directors out of funds legally available for the payment of dividends, subject to the rights, if any, of preferred stockholders. In the event of our liquidation, dissolution, or winding up, holders of common stock are entitled to share ratably in all of our assets remaining after we pay our liabilities and distribute the liquidation preference of any then outstanding preferred stock. The rights, preferences and privileges of holders of common stock are subject to, and may be adversely affected by, the rights of holders of any series of preferred stock that we may designate and issue in the future. Holders of common stock have no preemptive or other subscription or conversion rights. There are no redemption or sinking fund provisions applicable to the common stock. All outstanding shares of our common stock are fully paid and nonassessable, and any shares of our common stock to be issued upon an offering pursuant to this prospectus and the related prospectus supplement will be fully paid and nonassessable upon issuance.

Warrants

The material terms and provisions of the warrants being offered pursuant to this prospectus are summarized below. This summary of some provisions of the warrants is not complete. For the complete terms of the warrants, you should refer to the form warrant filed as an exhibit to the registration statement of which this prospectus is a part.

Each unit issued in this offering includes one common stock warrant. The warrants issued in this offering will be governed by the terms of a physical warrant certificate. Each whole warrant entitles the purchaser to purchase one share of our common stock at a price equal to $4.75 per share at any time for up to seven years after the date of the closing of this offering. The holder of a warrant will not be deemed a holder of our underlying common stock until the warrant is exercised.

Subject to certain limitations as described below the warrants are immediately exercisable and expire on the seventh anniversary of the date of issuance. Subject to limited exceptions, a holder of warrants will not have the right to exercise any portion of its warrants if the holder, together with its affiliates, would beneficially own in excess of 4.99% of the number of shares of our common stock outstanding immediately after giving effect to such exercise.

The exercise price and the number of shares issuable upon exercise of the warrants is subject to appropriate adjustment in the event of recapitalization events, stock dividends, stock splits, stock combinations, reclassifications,

reorganizations or similar events affecting our common stock, and also upon any distributions of assets, including cash, stock or other property to our stockholders. The warrant holders must pay the exercise price in cash upon exercise of the warrants, unless such warrant holders are utilizing the cashless exercise provision of the warrants. After the close of business on the expiration date, unexercised warrants will become void.

In addition, in the event we consummate a merger or consolidation with or into another person or other reorganization event in which our common shares are converted or exchange for securities, cash or other property, or we sell, lease, license, assign, transfer, convey or otherwise dispose of all or substantially all of our assets or we or another person acquire 50% or more of our outstanding common shares, then following such event, the holders of the warrants will be entitled to receive upon exercise of the warrants the same kind and amount of securities, cash or property which the holders would have received had they exercised the warrants immediately prior to such fundamental transaction. Any successor to us or surviving entity shall assume the obligations under the warrants. In addition, as further described in the form of warrant filed as an exhibit to the registration statement of which this prospectus forms a part, in the event of any fundamental transaction completed for cash, or a going private transaction under Rule 13e-3 of the Exchange Act, or involving a person not trading on a national securities exchange, the holders of the warrants will have the right to require us to purchase the warrants for an amount in cash that is determined in accordance with a formula set forth in the warrants.

Upon the holder's exercise of a warrant, we will issue the shares of common stock issuable upon exercise of the warrant within three business days following our receipt of notice of exercise.

Prior to the exercise of any warrants to purchase common stock, holders of the warrants will not have any of the rights of holders of the common stock purchasable upon exercise, including the right to vote or to receive any payments of dividends on the common stock purchasable upon exercise.

Warrant holders may exercise warrants only if the issuance of the common shares upon exercise of the warrants is covered by an effective registration statement, or an exemption from registration is available under the Securities Act and the securities laws of the state in which the holder resides. We intend to use commercially reasonable efforts to have the registration statement, of which this prospectus forms a part, effective when the warrants are exercised. The warrant holders must pay the exercise price in cash upon exercise of the warrants unless there is not an effective registration statement or, if required, there is not an effective state law registration or exemption covering the issuance of the shares underlying the warrants (in which case, the warrants may only be exercised via a "cashless" exercise provision).

Anti-Takeover Provisions

Our certificate of incorporation and bylaws include a number of provisions that could deter hostile takeovers or delay or prevent changes in control of our company, including the following:

- the chairman of the board and the president may call a special meeting of the stockholders at any time, and upon written request of the holders of 35% of the outstanding shares entitled to vote at the meeting, the secretary and president are required to call special meetings of stockholders, and the business transacted at such special meetings of stockholders is limited to the business stated in the notice of such meetings;
- advance notice procedures for stockholders seeking to nominate candidates for election as directors at our annual meeting of stockholders, including certain requirements regarding the form and content of a stockholder's notice;
- our board of directors may designate the terms of and issue new series of preferred stock;
- unless otherwise required by our bylaws, our certificate of incorporation or by law, our board may amend our bylaws without stockholder approval; and
- our board may fill vacancies on our board of directors.

In addition, we are subject to Section 203 of the Delaware General Corporation Law, which prohibits a Delaware corporation from engaging in any "business combination" with an "interested stockholder," for a period of three years after the date of the transaction in which a person became an "interested stockholder," unless:

- prior to such date the board of directors of the corporation approved either the "business combination" or the transaction that resulted in the stockholder becoming an "interested stockholder";
- upon consummation of the transaction which resulted in the stockholder becoming an "interested stockholder," the "interested stockholder" owned at least 85% of the voting stock of the corporation outstanding at the time the transaction commenced, excluding for purposes of determining the number of voting shares outstanding (but not the voting shares owned by the "interested stockholder") those shares owned (1) by persons who are directors and also officers and (2) employee stock plans in which employee participants do not have the right to determine confidentially whether shares held subject to the plan will be tendered in a tender or exchange offer; or
- at or subsequent to such time the "business combination" is approved by the board of directors and authorized at an annual or special meeting of stockholders, and not by written consent, by the affirmative vote of a least 66 2/3% of the outstanding voting stock that is not owned by the "interested stockholder."

A “business combination” includes mergers, stock or asset sales and other transactions resulting in a financial benefit to the “interested stockholders.” An “interested stockholder” is a person who, together with affiliates and associates, owns (or within three years, did own) 15% or more of the corporation’s voting stock. Although Section 203 permits us to elect not to be governed by its provisions, we have not made this election. As a result of the application of Section 203, our potential acquirers may be discouraged from attempting to effect an acquisition transaction with us, thereby possibly depriving holders of our securities of certain opportunities to sell or otherwise dispose of such securities at above-market prices pursuant to such transactions.

Transfer Agent and Registrar

The transfer agent and registrar for our common stock is American Stock Transfer & Trust Company.

Listing

The shares of our common stock are currently quoted on the OTCQB under the symbol “BLFS.” We have applied for the listing of our common stock on the Nasdaq Capital Market under the symbol “BLFS.” We do not intend to apply for listing of the warrants on any securities exchange or other trading system.

PLAN OF DISTRIBUTION

Ladenburg Thalmann & Co. Inc., which we refer to herein as the placement agent, has agreed to act as exclusive placement agent in connection with this offering subject to the terms and conditions of the placement agency agreement dated March 20, 2014. The placement agent is not purchasing or selling any units offered by this prospectus, nor is it required to arrange the purchase or sale of any specific number or dollar amount of units, but has agreed to use its best efforts to arrange for the sale of all of the units offered hereby. Therefore, we will enter into a purchase agreement directly with investors in connection with this offering and we may not sell the entire amount of units offered pursuant to this prospectus.

This offering is being made on a “best efforts, minimum/maximum” basis and there can be no assurance that we will sell the entire amount of units pursuant to this prospectus. We will not close unless we sell the minimum of 1,395,350 units and raise gross proceeds of not less than $6,000,005, nor will we sell more than the maximum of 3,604,651 units. Our officers, directors or affiliates will not purchase units in this offering.

Pursuant to an escrow agreement among us, the placement agent and Signature Bank, as escrow agent, the funds received in payment for the units sold in this offering will be submitted by subscribers to a non-interest bearing escrow account, and will be held by the escrow agent until we and the placement agent notify the escrow agent that this offering has closed and the net proceeds are to be delivered to us. The closing will occur, as to all subscriptions duly received and accepted by us, in one closing, and we do not intend to hold multiple closings in the offering. If the offering does not close prior to March 31, 2014 or is terminated, the escrow agent will promptly return all funds to all subscribers, without interest or offset. The units will not be certificated. The shares of common stock and the warrants will be immediately separable and issued separately.

We have agreed, if we close on at least the minimum amount: (A) to pay the placement agent a cash fee equal to: (i) 7% of aggregate gross proceeds of $1.00 up to $5,000,000 to us from the sale of the units; (ii) 8% of aggregate gross proceeds of $5,000,001 up to $10,000,000 to us from the sale of the units; and 8.5% of the incremental amount of aggregate gross proceeds above $10,000,000 to us from the sale of units.

Subject to compliance with FINRA Rule 5110(f)(2)(D), we have also agreed to reimburse the placement agent’s reasonable out-of-pocket expenses in connection with the offering in an amount not to exceed 1% of the aggregate gross proceeds of the offering. In addition, subject to FINRA Rule 5110(f)(2)(D), we have granted to the placement agent a right of first refusal with respect to additional raises of funds by means of a public offering or a private placement of equity or debt securities during the 12 months following the effective date of this registration statement. The following table shows the per unit and total placement agent's fees (excluding placement agent expenses) that we will pay to the placement agent in connection with the sale of the units offered pursuant to this prospectus assuming the minimum and maximum amounts of the units offered hereby.

	Minimum Offering	Maximum Offering
Per unit placement agent's fees	$0.31	0.34
Offering total	$430,000	1,217,500

Because this is a best efforts minimum/maximum offering, the actual public offering amount, placement agent fees, and proceeds to us, if any, are not presently determinable and may be substantially less than the maximum offering set forth above.

Our obligations to issue and sell units to the purchasers is subject to the conditions set forth in the securities purchase agreement, which may be waived by us at our discretion. A purchaser's obligation to purchase units is subject to the conditions set forth in the securities purchase agreement as well, which may also be waived.

We estimate the total offering expenses in this offering that will be payable by us, excluding the placement agent's fees, will be approximately $649,000 which include legal, accounting and printing costs, various other fees and reimbursement of the placement agent's expenses. The foregoing does not purport to be a complete statement of the terms and conditions of the placement agent agreement and the securities purchase agreement. A copy of the placement agent agreement and the form of securities purchase agreement with investors are included as exhibits to the registration statement of which this prospectus forms a part.

The placement agent is an underwriter within the meaning of Section 2(a)(11) of the Securities Act, and any commissions received by it and any profit realized on the resale of the units sold by it while acting as principal might be deemed to be underwriting discounts or commissions under the Securities Act. As an underwriter, the placement agent would be required to comply with the Securities Act and the Exchange Act including without limitation, Rule 10b-5 and Regulation M under the Exchange Act. These rules and regulations may limit the timing of purchases and sales of shares of common stock and warrants by the placement agent acting as principal. Under these rules and regulations, the placement agent: may not engage in any stabilization activity in connection with our securities; and may not bid for or purchase any of our securities or attempt to induce any person to purchase any of our securities, other than as permitted under the Exchange Act, until it has completed its participation in the distribution.

Indemnification

Pursuant to the placement agency agreement, we have agreed to indemnify the placement agent against certain liabilities, including liabilities under the Securities Act, and liabilities arising from breaches of representations and warranties contained in the placement agency agreement, or to contribute to payments which the placement agent or other indemnified parties may be required to make in respect of any such liabilities.

Determination of Offering Price

In determining the offering price for the shares of common stock and warrants, and the exercise price of the warrants, we will consider a number of factors including, but not limited to, the current market price of our common stock, trading prices of our common stock over a period of time, the illiquidity and volatility of our common stock prevailing market conditions, our historical performance, our future prospects and the future prospects of our industry in general, our capital structure, estimates of our business potential and earnings prospects, the present state of our development and an assessment of our management and the consideration of the above factors in relation to market valuation of companies engaged in businesses and activities similar to ours. Once the offering price has been determined, the common stock offering price and warrant offering price will remain fixed for the duration of the offering. In addition to prevailing market conditions, the factors considered in determining the initial public offering price were our financial information, our historical performance, our future prospects and the future prospects of our industry in general, our capital structure, estimates of our business potential and earnings prospects, the present state of our development and an assessment of our management and the consideration of the above factors in relation to market valuation of companies engaged in businesses and activities similar to ours.

It is also possible that after the offering, the shares of common stock will not trade in the public market at or above the offering price.

CHANGES IN AND DISAGREEMENTS WITH ACCOUNTANTS ON ACCOUNTING AND FINANCIAL DISCLOSURE

None.

LEGAL MATTERS

The validity of the shares of common stock offered by this prospectus will be passed upon for us by Dorsey and Whitney LLP. The placement agent was represented by Ellenoff Grossman & Schole LLP in the United States.

EXPERTS

The financial statements for the years ended December 31, 2013 and 2012, consisting of our balance sheets as of December 31, 2013 and 2012, and the related statements of operations, shareholders' equity (deficiency), and cash flows for the years then ended, included in this prospectus have been audited by Peterson Sullivan LLP, independent registered public accounting firm, to the extent and for the periods set forth in their report appearing elsewhere herein, and are included in reliance upon such report given upon the authority of said firm as experts in auditing and accounting.

WHERE YOU CAN FIND MORE INFORMATION

We are subject to the informational requirements of the Securities Exchange Act of 1934 and are required to file annual, quarterly and other reports, proxy statements and other information with the SEC. You may inspect and copy these reports, proxy statements and other information at the public reference facilities maintained by the SEC in Washington, D.C. (100 F Street N.E., Washington, D.C. 20549). You may obtain information on the operation of the public reference rooms by calling the SEC at (800) SEC-0330. Additionally, the SEC maintains an Internet site (http://www.sec.gov) that contains our filed reports, proxy and information statements, and other information that we file electronically with the SEC.

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All information included in the Audited Financial Statements as at and for the periods ended December 31, 2013 and December 31, 2012 do not reflect the issuance of an estimated 3,321,405 units to the noteholders in exchange for the conversion of $10.6 million principal amount of outstanding promissory notes and the approximate $3.7 million of accrued and unpaid interest thereon.

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Board of Directors and Shareholders
BioLife Solutions, Inc.
Bothell, Washington

We have audited the accompanying balance sheets of BioLife Solutions, Inc. ("the Company") as of December 31, 2013 and 2012, and the related statements of operations, shareholders' equity (deficiency), and cash flows for the years then ended. These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these financial statements based on our audits.

We conducted our audits in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audits to obtain reasonable assurance about whether the financial statements are free of material misstatement. The Company has determined that it is not required to have, nor were we engaged to perform, an audit of its internal control over financial reporting. Our audits included consideration of internal control over financial reporting as a basis for designing audit procedures that are appropriate in the circumstances, 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. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

In our opinion, the financial statements referred to above present fairly, in all material respects, the financial position of BioLife Solutions, Inc. as of December 31, 2013 and 2012, and the results of its operations and its cash flows for the years then ended, in conformity with accounting principles generally accepted in the United States.

/S/ PETERSON SULLIVAN LLP

Seattle, Washington
February 12, 2014

BIOLIFE SOLUTIONS, INC.

Balance Sheets
(unaudited)

	December 31, 2013	December 31, 2012
Assets		
Current assets		
Cash and cash equivalents	$ 156,273	$ 196,478
Accounts receivable, trade, net of allowance for doubtful accounts of $1,100 at December 31, 2013 and 2012	1,009,316	600,153
Inventories	420,924	656,397
Prepaid expenses and other current assets	291,745	174,731
Total current assets	1,878,258	1,627,759
Property and equipment		
Leasehold improvements	1,121,362	919,035
Furniture and computer equipment	300,581	288,725
Manufacturing and other equipment	764,258	741,771
Subtotal	2,186,201	1,949,531
Less: Accumulated depreciation	(862,157)	(615,085)
Net property and equipment	1,324,044	1,334,446
Long term deposits	36,166	36,166
Deferred financing costs, net	114,874	171,458
Total assets	$ 3,353,342	$ 3,169,829
Liabilities and Shareholders’ Equity (Deficiency)		
Current liabilities		
Accounts payable	$ 867,070	$ 862,492
Accrued expenses and other current liabilities	146,626	8,495
Accrued compensation	503,194	363,101
Deferred rent	111,250	111,250
Deferred revenue	—	20,000
Total current liabilities	1,628,140	1,365,338
Long term liabilities		
Promissory notes payable, related parties	10,603,127	10,603,127
Accrued interest, related parties	3,501,610	2,759,391
Deferred rent, long term	891,986	838,829
Deferred revenue, long term	—	89,167
Total liabilities	16,624,863	15,655,852
Commitments and Contingencies (Note 8)		
Shareholders' equity (deficiency)		
Common stock, $0.001 par value; 150,000,000 shares authorized, 5,029,920 and 4,977,418 shares issued and outstanding at December 31, 2013 and 2012	5,030	4,977

Additional paid-in capital	43,618,686	43,320,077
Accumulated deficit	(56,895,237)	(55,811,077)
Total shareholders' equity (deficiency)	(13,271,521)	(12,486,023)
Total liabilities and shareholders' equity (deficiency)	$ 3,353,342	$ 3,169,829

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

BioLife Solutions, Inc.

Statements of Operations

	Years Ended December 31,	
	2013	2012
Revenue		
Product sales	$ 8,340,234	$ 5,642,990
Licensing revenue	609,167	20,000
Total revenue	8,949,401	5,662,990
Cost of product sales	5,186,514	3,370,571
Gross profit	3,762,887	2,292,419
Operating expenses		
Research and development	487,816	463,638
Sales and marketing	841,451	619,202
General and administrative	2,718,977	2,151,817
Total operating expenses	4,048,244	3,234,657
Operating loss	(285,357)	(942,238)
Other income (expenses)		
Other income	—	94,253
Interest expense	(742,219)	(733,430)
Amortization of deferred financing costs	(56,584)	(78,539)
Gain on disposal of property and equipment	—	368
Total other income (expenses)	(798,803)	(717,348)
Net Loss	$ (1,084,160)	$ (1,659,586)
Basic and diluted net loss per common share	$ (0.22)	$ (0.33)
Basic and diluted weighted average common shares used to calculate net loss per common share	5,007,999	4,977,418

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

BioLife Solutions, Inc.

Statements of Shareholders' Equity (Deficiency)

	Common Stock Shares	Common Stock Amount	Additional Paid-in Capital	Accumulated Deficit	Total Shareholders' Equity (Deficiency)
Balance, December 31, 2011	4,977,418	$ 4,977	$ 42,966,028	$ (54,151,491)	$ (11,180,486)
Stock-based compensation	—	—	216,094	—	216,094
Warrants issued as consideration for deferred financing costs	—	—	137,955	—	137,955
Net loss	—	—	—	(1,659,586)	(1,659,586)
Balance, December 31, 2012	4,977,418	$ 4,977	$ 43,320,077	$ (55,811,077)	$ (12,486,023)
Stock-based compensation	—	—	248,204	—	248,204
Stock option/warrant exercises	47,740	48	50,410	—	50,458
Issuance of stock upon vesting of restricted stock units	4,762	5	(5)	—	—
Net loss	—	—	—	(1,084,160)	(1,084,160)
Balance, December 31, 2013	5,029,920	$ 5,030	$ 43,618,686	$ (56,895,237)	(13,271,521)

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

BioLife Solutions, Inc.

Statements of Cash Flows

	Years Ended December 31,	
	2013	2012
Cash flows from operating activities		
Net loss	$ (1,084,160)	$ (1,659,586)
Adjustments to reconcile net loss to net cash provided by operating activities		
Depreciation	247,072	169,644
Gain on disposal of property and equipment	—	(368)
Stock-based compensation expense	248,204	216,094
Amortization of deferred financing costs	56,584	78,539
Lease incentives received from landlord, net of amortization of deferred rent related to lease incentives	52,162	861,802
Change in operating assets and liabilities		
(Increase) Decrease in		
Accounts receivable, trade	(409,163)	(53,010)
Inventories	235,473	(150,441)
Prepaid expenses and other current assets	(117,014)	(84,287)
Increase (Decrease) in		
Accounts payable	4,578	459,389
Accrued compensation and other current liabilities	278,224	227,718
Accrued interest, related parties	742,219	733,430
Deferred rent	995	76,010
Deferred revenue	(109,167)	(20,000)
Net cash provided by operating activities	146,007	854,934
Cash flows from investing activities		
Cash received from sale of property and equipment	—	1,400
Purchase of property and equipment	(236,670)	(1,151,720)
Net cash used in investing activities	(236,670)	(1,150,320)
Cash flows from financing activities		
Proceeds from notes payable	—	475,000
Proceeds from exercise of common stock options and warrants	50,458	—
Net cash provided by financing activities	50,458	475,000
Net increase (decrease) in cash and cash equivalents	(40,205)	179,614
Cash and cash equivalents - beginning of year	196,478	16,864
Cash and cash equivalents - end of year	$ 156,273	$ 196,478
Non-cash financing activities		
Deferred financing costs from issuance of warrants (see note 6)	$ —	$ 137,955

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

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NOTES TO FINANCIAL STATEMENTS

1. Organization and Significant Accounting Policies

Business

BioLife Solutions, Inc. ("BioLife," "us," "we," "our," or the "Company") develops, manufactures and markets patent hypothermic storage and cryopreservation solutions for cells and tissues. The Company's proprietary HypoThermosol® FRS, CryoStor®, and generic BloodStor®, and SAVSU®'s biopreservation media products and precision thermal packaging products are marketed to the biobanking, drug discovery, and regenerative medicine 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. BioLife's products are serum-free and protein-free, fully defined, and are formulated to reduce preservation-induced, delayed-onset cell damage and death. BioLife's enabling technology provides academic and clinical researchers significant improvements in post-thaw cell, tissue, and organ viability and function. Additionally, for our direct, distributor, and contract customers, we perform custom formulation, fill, and finish services.

Recent Developments

On January 17, 2014, our Board of Directors approved an amendment to our certificate of incorporation to effect a reverse stock split by a ratio of 1 for 14, with no reduction in the number of shares of common stock that were previously authorized in our certificate of incorporation. The reverse stock split was effective on January 29, 2014. Unless otherwise noted, all share and per share data in this annual report give effect to the 1-for-14 reverse stock split of our common stock.

On December 16, 2013, we entered into a note conversion agreement with each of Thomas Girschweiler, a director and stockholder of the Company, and Walter Villiger, an affiliate of the Company. The noteholders hold, as of December 31, 2013, an aggregate $14.1 million of our indebtedness, including $10.6 million principal amount of outstanding promissory notes and approximately $3.5 million of accrued and unpaid interest under secured convertible multi-draw term loan facility agreements entered into with each of the noteholders on January 11, 2008, which we refer to as the facility agreements. Pursuant to the note conversion agreements, the noteholders have agreed to convert the outstanding indebtedness into equity securities on substantially similar terms and in connection with the Company's next offer and sale of its equity for cash (a "Qualified Financing"). The entire outstanding indebtedness of the notes, including all accrued and unpaid interest through the date of the conversion, will convert into substantially identical securities of the Company issued in the Qualified Financing, at a conversion price equal to the per security offering price in the Qualified Financing in consideration for the cancellation of the entire principal amount of indebtedness and accrued interest thereon, and the release of all related security interests. Cash will be paid in lieu of any fractional securities that would otherwise be issuable.

On December 16, 2013, we filed an application to list our common stock on the Nasdaq Capital Market. We cannot assure you that we will be able to comply with the standards necessary in order to obtain a listing of our common stock on the Nasdaq Capital Market.

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 by the weighted average number of common shares 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, 2013 and 2012 since the effect is anti-dilutive due to the Company's net losses. Common stock equivalents include 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, 2013 and 2012:

	2013	2012
Basic and diluted weighted average common stock shares outstanding	5,007,999	4,977,418
Potentially dilutive securities excluded from loss per share computations:		
Common stock options	1,417,309	1,452,082
Common stock purchase warrants	517,858	551,339

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.

Inventories

Inventories represent biopreservation solutions and raw materials and are stated at the lower of cost or market. 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 Financing Costs

Deferred financing costs consist of fees associated with obtaining or restructuring existing debt. These fees are amortized over the term of the related debt using the effective interest method.

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.

Revenue related to licensing agreement activity is recognized over the estimated term of the service period or when no further performance obligations exist. Payments received in advance of the related licensing agreement period are recorded as deferred revenue and recognized when earned. During the first quarter of 2013, we negotiated a new intellectual property license agreement that provides one customer with limited access to our intellectual property under certain conditions. This customer paid upfront fees for the specific rights and there are no future performance obligations. The upfront fee of $500,000 was recognized as revenue during 2013 and $109,167 in deferred revenue associated with this customer was recognized as all future performance obligations associated with the previous license agreements were cancelled with the agreement signed in the first quarter of 2013.

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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, 2010 to 2013.

Advertising

Advertising costs are expensed as incurred and totaled $4,725 and $15,607 for the years ended December 31, 2013 and 2012, respectively.

Fair value of financial instruments

The carrying value of cash and cash equivalents, approximate their fair value (determined based on level 1 inputs in the fair value hierarchy) based on the short-term nature of these financial instruments. The carrying values of notes payable and accrued interest approximate their fair value (determined based on level 3 inputs in the far value hierarchy) because interest rates of notes payable approximate 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, 2013 and 2012 this is the Company's only operating unit and segment.

Concentrations of credit risk and business risk

In 2013 and 2012, we derived approximately 49% and 46%, respectively, of our revenue from our relationship with one contract manufacturing customer and in 2013, we derived approximately 14% of our revenue from one other customer, which included license revenue and core product revenue. No other customer accounted for more than 10% of revenue in 2013 or 2012. At December 31, 2013, three customers accounted for approximately 64% of total gross accounts receivable. At December 31, 2012, two customers accounted for 47% of gross accounts receivable.

Revenue from customers located in foreign countries represented 9% and 11% total revenue during the years ended December 31, 2013 and 2012, respectively.

Research and development

Research and development costs are expensed as incurred.

Recent accounting pronouncements

There have been no new accounting pronouncements made effective during the year ended December 31, 2013 or not yet effective, that are of significance, or potential significance, to us.

Liquidity

We have incurred annual operating losses since inception, and may continue to incur operating losses. For the fiscal years ended December 31, 2013 and December 31, 2012, we had net losses of $1,084,160 and $1,659,586, respectively. As of December 31, 2013, our accumulated deficit was $56,895,237. We may not be able to successfully achieve or sustain profitability.

We believe our current cash and cash provided by operations will satisfy our working capital requirements, debt obligations and capital expenditures for the foreseeable future; however, we have filed a registration statement with the SEC to permit us to conduct a public offering of our common stock and warrants to purchase our common stock. If the public offering is completed, we intend to use the net proceeds thereof for general corporate purposes, including working capital. There can be no assurance that the public offering will be completed. Our future capital requirements and the adequacy of our available funds will depend on many factors, including future profitable operations, debt repayment, and competing technological and market developments.

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 of 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 expected 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, 2013 and 2012, the following weighted-average assumptions were used:

Assumptions	2013	2012
Risk-free rate	2.25%	0.77%
Annual rate of dividends	—	—
Historical volatility	105.20%	103.02%
Expected life	7.0 years	6.7 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 as allowed by SEC Staff Accounting Bulletin No. 107 and 110 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.

We recognize compensation expense for only the portion of options that are expected to vest. Therefore, management applies an estimated forfeiture rate that is derived from historical employee termination data. The estimated forfeiture rate applied for the years ended December 31, 2013 and 2012 was 7.00% and 8.15% and, respectively. If the actual number of forfeitures differs from those estimated by management, additional adjustments to compensation expense may be required in future periods. Our stock price volatility, option lives and expected forfeiture rates 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 methodology and, ultimately, the expense that will be recognized over the life of the option.

2. Inventories

Inventories consist of the following at December 31, 2013 and 2012:

	2013	2012
Raw materials	$334,031	$398,510
Work in progress	14,570	116,319
Finished goods	72,323	141,568
Total	$420,924	$656,397

3. Deferred Rent

Deferred rent consists of the following at December 31, 2013 and 2012:

	2013	2012
Landlord-funded leasehold improvements	$1,047,026	$900,989
Less accumulated amortization	(133,063)	(39,187)
Total (current portion $111,250)	913,963	861,802
Straight line rent adjustment	89,273	88,277
Total deferred rent	$1,003,236	$950,079

During 2013 and 2012, the Company recorded $191,583 and $900,989, respectively, in deferred rent relating to leasehold improvements funded by the Company's landlord as incentives under the facility lease, offset by payments to the landlord of $45,546 and none in 2013 and 2012, respectively. During the years ended December 31, 2013 and 2012, the Company recorded $93,876 and $39,187, respectively, in deferred rent amortization of these landlord funded leasehold improvements.

In addition, during the years ended December 31, 2013 and 2012, the Company recorded deferred rent of $995 and $88,277, 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.

4. Promissory Notes Payable

On May 30, 2012, each of our two most significant investors agreed to (i) increase the amount of their credit facilities to $5,750,000 (total of $11,500,000), and (ii) extend the date their note becomes due and payable, together with accrued interest thereon, to January 11, 2016. The notes are secured by all assets of the Company and accrue interest at the rate of 7% per annum.

5. Income Taxes

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

	2013	2012
Federal tax (benefit) at statutory rate	$ (368,614)	$ (564,259)
Expiration of net operating loss carryforwards	—	533,950
Change in valuation allowance	342,174	30,403
Other	(26,440)	(94)
Provision for income taxes, net	$ —	$ —

At December 31, 2013 and 2012, the components of the Company's deferred taxes are as follows:

	2013	2012
Deferred tax assets (liabilities)		
Net operating loss carryforwards	$ 7,836,904	$ 7,824,444
Accrued compensation	155,084	105,767
Depreciation	13,185	4,253
Stock-based compensation	375,678	350,401
Accrued related party interest	1,190,547	938,193
Other	13,916	20,082

Total	9,585,314	9,243,140
Less: Valuation allowance	(9,585,314)	(9,243,140)
Net deferred tax asset	$ —	$ —

The Company has the following net operating loss tax carryforwards available at December 31, 2013:

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
Total	$ 23,050,000

In the event of a significant change in the ownership of the Company, the utilization of such loss and tax credit carryforwards could be substantially limited.

6. Warrants

The following table summarizes warrant activity for the years ended December 31, 2013 and 2012:

	Year Ended December 31, 2013		Year Ended December 31, 2012	
	Shares	Wtd. Avg. Exercise Price	Shares	Wtd. Avg. Exercise Price
Outstanding at beginning of year	551,339	$ 0.98	444,196	$ 1.12
Granted	—	—	142,857	1.12
Exercised	(22,321)	1.12	—	—
Forfeited/Expired	(11,160)	1.12	(35,714)	3.50
Outstanding and exercisable at end of year	517,858	$ 1.02	551,339	$ 0.98

During the year ended December 31, 2012, the Company issued a total of 142,857 warrants to the current note holders in consideration for financing fees related to the restructuring of the existing promissory notes. The warrants were valued using the Black-Scholes option pricing model resulting in a total value of $137,955 in 2012, which was recorded as deferred financing costs and is being amortized to expense over the term of the notes.

The outstanding warrants have expiration dates between November 2014 and May 2017.

7. 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, 2013, there were outstanding options to purchase 415,709 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, 980,173 remain outstanding. All non-incentive stock options issued in 2012 were issued outside of the 1998 Plan.

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 142,857 shares of common stock were reserved for issuance upon the exercise of options granted under the 2013 Plan. 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, 2013, there were outstanding options to purchase 21,427 share of Company common stock and no unvested restricted stock units 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

The following is a summary of stock option activity under our stock option plans for 2013 and 2012, and the status of stock options outstanding at December 31, 2013 and 2012:

	Year Ended December 31, 2013		Year Ended December 31, 2012	
	Shares	Wtd. Avg. Exercise Price	Shares	Wtd. Avg. Exercise Price
Outstanding at beginning of year	1,452,082	$ 1.24	1,265,920	$ 1.16
Granted	21,427	9.67	224,991	1.67
Exercised	(25,419)	(1.00)	-	-
Forfeited	(29,001)	(1.56)	(38,383)	(1.18)
Expired - vested	(1,780)	(1.12)	(446)	(0.98)
Outstanding at end of year	1,417,309	$ 1.36	1,452,082	$ 1.24
Stock options exercisable at year end	1,177,588	$ 1.19	1,013,173	$ 1.15

Weighted average fair value of options granted was $8.20 and $1.37 per share for the years ended December 31, 2013 and 2012, respectively.

During the year ended December 31, 2013, stock options covering 25,415 shares of common stock with a total intrinsic value of $73,627 were exercised.

As of December 31, 2013, there was $9,998,946 of aggregate intrinsic value of outstanding stock options, including $8,492,895 of aggregate intrinsic value of exercisable 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 2013 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, 2013. This amount will change based on the fair market value of the Company’s stock.

The following table summarizes information about stock options outstanding at December 31, 2013:

Range of Exercise Prices	Number Outstanding at December 31, 2013	Weighted Average Remaining Contractual Life	Weighted Average Exercise Price
$0.49-$1.00	180,279	3.97	$ 0.90
$1.01-$1.30	799,861	5.52	$ 1.14
$1.31-$2.00	397,887	6.65	$ 1.42
$2.01-$10.50	39,282	9.39	$ 4.34
	1,417,309	5.74	$ 1.19

The weighted average remaining contractual life of exercisable options at December 31, 2013, is 5.34 years. Total unrecognized compensation cost at December 31, 2013 of $346,859 is expected to be recognized over a weighted average period of 1.8 years.

Restricted Stock Unit Activity

During 2013, we granted 4,762 restricted stock units to a Director under the 2013 Plan. The stock units were granted at the price of $10.50 per share, which was the fair value of the stock on the grant date. The Company recognized $50,000 in stock compensation related to this grant in 2013, which is included in general and administrative expenses. This grant was converted to Common Stock upon grant, as it was fully vested on the date of the grant. As of December 31, 2013, there were no restricted stock units outstanding.

8. Commitments and Contingencies

Leases

In November of 2012 we signed an amended lease agreement, which expanded the premises leased by the Company from the landlord to approximately 26,000 rentable square feet. The term of the lease was extended to July 31, 2021. The amendment includes two (2) options to extend the term of the lease, each option is for an additional period of five (5) 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 increased to approximately $46,000 effective August 1, 2013, with scheduled annual increases each August. The Company is 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, 2013:

Year Ending December 31	
2014	$ 568,000
2015	581,000

2016	593,000
2017	604,000
2018	616,000
Thereafter	1,649,000
Total	$ 4,611,000

Rental expense for this facility lease for the years ended December 31, 2013 and 2012 totaled $625,131 and $486,425, 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 the Chief Executive Officer, Chief Financial Officer, Chief Technology Officer, and Vice President of Manufacturing which automatically renew for successive one year periods in the event either party does not send the other a “termination notice” not less than 90 days prior to the expiration of the initial term or any subsequent term. The agreements provide for certain minimum compensation per month and incentive bonuses at the discretion of the Board of Directors. Under certain conditions, we may be required to continue to pay the base salary under the agreement for a period of up to two years.

Litigation

We are a party in a number of legal matters filed in the state of New York by the Company or John G. Baust, the Company’s former Chief Executive Officer, and members of his extended family related to damages sought due to breaches of employment and other agreements. We cannot reasonably estimate the potential loss related to these matters and therefore no accrual has been made as of December 31, 2013 or 2012.

9. Supplemental Cash Flow Disclosures

Actual cash payments

No cash was paid for either interest expense or income taxes for the years ended December 31, 2013 and 2012.

Units

Common Stock

Warrants

PROSPECTUS

March 20, 2014