PRESSURE BIOSCIENCES INC
Form S-1/A
May 25, 2012

As filed with the Securities and Exchange Commission on May 25, 2012

Registration No. 333-178335

UNITED STATES

SECURITIES AND EXCHANGE COMMISSION

WASHINGTON, D.C. 20549

AMENDMENT NO. 3
TO
FORM S-1

REGISTRATION STATEMENT

UNDER

THE SECURITIES ACT OF 1933

PRESSURE BIOSCIENCES, INC.
(Exact name of registrant as specified in its charter)

Massachusetts	3829	04-2652826
(State or other jurisdiction of incorporation or organization)	(Primary Standard Industrial Classification Code Number)	(I.R.S. Employer Identification No.)

14 Norfolk Avenue
South Easton, Massachusetts 02375
(508) 230-1828
(Address, including zip code, and telephone number, including area code, of registrant's principal executive offices)

Richard T. Schumacher
President and Chief Executive Officer
Pressure BioSciences, Inc.
14 Norfolk Avenue
South Easton, Massachusetts 02375
(508) 230-1828
(Name, address, including zip code, and telephone number, including area code, of agent for service)

Copies to:
Steven R. London, Esq.
Pepper Hamilton LLP

15th Floor, Oliver Street Tower
125 High Street
Boston, MA 02110-1817
(617) 204-5107

Approximate date of commencement of proposed sale to the public: As soon as practicable after this Registration Statement becomes effective.

If any of the securities being registered on this Form are to be offered on a delayed or continuous basis pursuant to Rule 415 under the Securities Act of 1933 check the following box: x

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

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

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

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

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

CALCULATION OF REGISTRATION FEE

Title of each class of securities to be registered	Proposed Maximum Aggregate Offering Price (1)	Amount of Registration Fee
Series F Convertible Preferred Stock, $0.01 par value per share		
Common Stock, $0.01 par value per share, issuable upon conversion of Series F Convertible Preferred Stock (2)		
Common Stock issuable in lieu of cash payment of dividends on the Series F Convertible Preferred Stock (2)		
Series A Junior Participating Preferred Stock Purchase Rights (3)		
Total	$5,000,000	$573 (4)

(1)Estimated solely for the purpose of calculating the registration fee pursuant to Rule 457(o) under the Securities Act of 1933, as amended (the "Securities Act"). Pursuant to Rule 416 under the Securities Act, the shares being registered hereunder include such indeterminate number of shares of common stock as may be issuable with respect to the shares being registered hereunder as a result of share splits, share dividends, anti-dilution provisions, or similar transactions. No additional registration fee is being paid for these shares.

(2)No additional consideration is payable upon conversion of the Series F Convertible Preferred Stock or upon issuance of shares of common stock in lieu of cash payment of dividends on the Series F Convertible Preferred Stock.

(3)This registration statement also relates to the rights to purchase shares of Series A Junior Participating Preferred Stock of the registrant, which, pursuant to the terms of the registrant's Rights Agreement dated February 27, 2003, as amended, will be attached to all shares of common stock issued until the occurrence of certain events prescribed in the Rights Agreement. The rights will not be exercisable and will be transferred with and only with shares of our common stock until the occurrence of certain events prescribed in the Rights Agreement.

(4)Previously paid $917 with the initial filing of this registration statement.

The registrant hereby amends this registration statement on such date or dates as may be necessary to delay its effective date until the registrant shall file a further amendment which specifically states that this registration

statement shall thereafter become effective in accordance with Section 8(a) of the Securities Act of 1933, as amended, or until the registration statement shall become effective on such date as the Commission, acting pursuant to Section 8(a), may determine.

The information in this prospectus is not complete and may be changed. We may not sell these securities until the registration statement filed with the Securities and Exchange Commission is effective. This prospectus is not an offer to sell these securities, and it is not soliciting an offer to buy these securities, in any state where the offer or sale is not permitted.

PRELIMINARY PROSPECTUS

Subject to Completion, Dated May 25, 2012

Pressure BioSciences, Inc.
5,000 Shares of ____% Series F Convertible Preferred Stock
_____ Shares of Common Stock

We are offering up to 5,000 shares of our ____% Series F convertible preferred stock ("Series F Preferred Stock") at a purchase price of $1,000 per share. We are also offering up to _____ shares of our common stock issuable upon conversion of, and payable as dividends on, the Series F Preferred Stock. The Series F Preferred Stock will be offered directly to one or more accredited investors pursuant to a stock purchase agreement under which we will sell and the investors will purchase, in one or more closings, an aggregate of $5,000,000 of Series F Preferred Stock pursuant to the terms of the stock purchase agreement. The Series F Preferred Stock is convertible into common stock at $____ per share. Dividends are payable annually, at our option, in cash or common stock. We may redeem the Series F Preferred Stock at any time for cash. For a more detailed description of the Series F Preferred Stock and our shares of common stock, see the section entitled "Description of Securities" beginning on page 24 of this prospectus.

Our common stock is traded on the OTCQB Marketplace, operated by the OTC Markets Group, under the ticker symbol "PBIO". The last reported sale price of our shares of common stock on May 15, 2012 was $0.40 per share. There is no established public trading market for the Series F Preferred Stock and we do not expect such a market to develop. In addition, we do not intend to apply for listing of the Series F Preferred Stock on any national securities exchange. We have retained Moody Capital Solutions, Inc. (the "Placement Agent") to act as our exclusive Placement Agent in connection with this offering and to use its "best efforts" to solicit offers to purchase the Series F Preferred Stock. The Placement Agent is deemed an underwriter within the meaning of Section 2(a)(11) of the Securities Act in connection with the offering. We intend to enter into a Placement Agent agreement with the Placement Agent, relating to the Series F Preferred Stock offered by this prospectus. The Placement Agent is not purchasing or selling any of our Series F Preferred Stock pursuant to this prospectus, nor are we requiring any minimum purchase or sale of any specific number of Series F Preferred Stock. We will enter into a securities purchase agreement directly with investors in connection with the offering. Because there is no minimum offering amount required as a condition to the closing of this offering, the actual public offering amount, Placement Agent fees and proceeds to us are not presently determinable and may be substantially less than the maximum amounts set forth below. See "Plan of Distribution" beginning on page 34 of this prospectus for more information regarding this arrangement.

Investing in our securities involves a high degree of risk. See "Risk Factors" beginning on page 10 of this prospectus for more information.

	Per Unit	Total

Public offering price	$1,000	$5,000,000
Placement Agent fees1	90	450,000
Proceeds, before expenses, to us2	$910	$4,550,000

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(1) For the purpose of estimating the Placement Agent's fees, we have assumed that the Placement Agent will receive its maximum commission on all sales made in the offering. The Placement Agent will also be entitled to be reimbursed for certain expenses as described in the "Plan of Distribution" beginning on page 34 of this prospectus.

(2) We estimate total expenses of this offering, excluding the Placement Agent's fees and expenses, will be approximately $300,000. For information concerning our obligation to reimburse the Placement Agent for certain of its expenses see "Plan of Distribution" beginning on page 34 of this prospectus. This offering expires on the earlier of (i) the date upon which all of the Series F Preferred Stock being offered have been sold, or (ii) _____, 2012. We expect that delivery of the Series F Preferred Stock being offered pursuant to this prospectus will be made to purchasers on or about _____, 2012. In either event, the offering may be closed without further notice to you.

Neither the Securities and Exchange Commission 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.

MOODY CAPITAL SOLUTIONS, INC.

The date of this prospectus is May 25, 2012.

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You should rely only on the information contained in this prospectus. We have not authorized anyone to provide you with information different from that contained in this prospectus. If anyone provides you with different or inconsistent information, you should not rely on it. We are offering to sell, and seeking offers to buy, Series F Preferred Stock only in jurisdictions where offers and sales are permitted. You should assume that the information contained in this prospectus is accurate only as of the date of this prospectus, regardless of the time of delivery of this prospectus or of any sale of Series F Preferred Stock. 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 that we believe are reliable as of their respective dates, while other information is based on our internal sources.

CAUTIONARY NOTE REGARDING FORWARD-LOOKING STATEMENTS

The statements in this prospectus and in any "free writing prospectus" that we have authorized for use in connection with this offering, contain certain forward-looking statements within the meaning of Section 27A of the Securities Act, as amended, or the Securities Act, Section 21E of the Securities Exchange Act of 1934, as amended, or the Exchange Act, and the Private Securities Litigation Reform Act of 1995, that are subject to risks and uncertainties. All statements other than statements of historical facts contained herein, including statements regarding our financial condition, operations, plans, objectives, goals, business strategies, future events, capital expenditures, future results, our competitive strengths, and the trends in our industry are forward-looking statements. The words "believe," "may," "could," "estimate," "continue," "anticipate," "intend," "should," "plan," "expect," "appear," "future," "likely," "probabl "potential" and similar expressions, as they relate to us, are intended to identify forward-looking statements.

Forward-looking statements reflect only our current expectations. In any forward-looking statement, where we express an expectation or belief as to future results or events, such expectation or belief is expressed in good faith as of the date of such statement and believed to have a reasonable basis, but there can be no assurance that the statement of expectation or belief will be achieved or accomplished. Our actual results, performance or achievements could differ materially from those expressed in, or implied by, the forward-looking statements due to a number of uncertainties, many of which are unforeseen. Such forward-looking statements include statements relating to:

- our need for, and our ability to raise, additional equity or debt financing on acceptable terms, if at all;
- our need to take additional cost reduction measures, cease operations or sell our operating assets, if we are unable to obtain sufficient additional financing;
- our belief that we have sufficient liquidity to finance normal operations until the end of May 2012;
- the options we may pursue in light of our financial condition;
- the amount of cash necessary to operate our business;
- the anticipated uses of grant revenue and the potential for increased grant revenue in future periods;
- our plans and expectations with respect to our pressure cycling technology ("PCT") operations;
- our belief that PCT has achieved initial market acceptance in the sample preparation market;
- the expected increase in number of PCT units installed and the increase in revenues from the sale of consumable products and extended service contracts;
- the expected development and success of new product offerings;
- the potential applications for PCT;
- the expected expenses of, and benefits and results from, our research and development efforts;
- the expected benefits and results from our collaboration programs, strategic alliances and joint ventures;
- our expectation of obtaining additional research grants from the government in the future;

- our expectations of the results of our development activities funded by government research grants;
- the potential size of the market for biological sample preparation;
- general economic conditions;
- the anticipated future financial performance and business operations of our company;
- our reasons for focusing our resources in the market for genomic, proteomic, lipidomic, and small molecule sample preparation;
- the importance of mass spectrometry as a laboratory tool;
- the advantages of PCT over other current technologies as a method of sample extraction and for other applications;
- the capabilities and benefits of our PCT sample preparation system and consumable products;
- our belief that laboratory scientists will achieve results comparable to those reported to date by certain research scientists who have published or presented publicly on PCT;
- our ability to retain our core group of scientific, administrative, and sales personnel; and
- our ability to expand our customer base in sample preparation and for other applications of PCT.

You should read this prospectus and the documents that we reference herein, as well as the exhibits filed with the registration statement of which this prospectus forms a part, and the registration statement, completely and with the understanding that our actual future results may be materially different from what we expect. In addition, you should refer to the “Risk Factors” section beginning on page 10 of this prospectus. Because of these factors or others, the forward-looking statements in this prospectus and the registration statement may not prove to be accurate. Furthermore, if our forward-looking statements prove to be inaccurate, the inaccuracy may be material. In light of the significant uncertainties in these forward-looking statements, you should not regard these statements as a representation or warranty by us or any other person that we will achieve our objectives and plans in any specified time frame, if at all. Accordingly, you should not place undue reliance on these forward-looking statements.

You should assume that the information appearing in this prospectus is accurate as of the date on the front cover of this prospectus. All subsequent written and oral forward looking statements attributable to us or the persons acting on our behalf are expressly qualified in their entirety by the applicable cautionary statements. We undertake no obligation to update any forward-looking statements, whether as a result of new information, future events or otherwise, except as may be required by applicable law or regulation. We qualify all of the information presented in this prospectus and the registration statement, and particularly our forward-looking statements, by these cautionary statements.

PROSPECTUS SUMMARY

This summary highlights information about Pressure BioSciences and this offering contained elsewhere in this prospectus and is qualified in its entirety by the more detailed information and financial statements included elsewhere in this prospectus. You should read this entire prospectus carefully, including "Risk Factors", "Management's Discussion and Analysis of Financial Condition and Results of Operations" and our financial statements and related notes included elsewhere in this prospectus, before making an investment decision. In this prospectus, unless otherwise specified or the context otherwise requires, the terms "we", "us", "our", "the Company", or "ours" refer to Pressure BioSciences, Inc. and consolidated subsidiary.

About Pressure BioSciences

We are focused on solving the challenging problems inherent in biological sample preparation, a crucial laboratory step performed by scientists worldwide working in biological life sciences research. Sample preparation is a term that refers to a wide range of activities that precede most forms of scientific analysis. Sample preparation is often complex, time-consuming, and in our belief, one of the most error-prone steps of scientific research. It is a widely-used laboratory undertaking, the requirements of which drive what we believe is a large and growing worldwide market. We have developed and patented a novel, enabling technology platform that can control the sample preparation process. It is based on harnessing the unique properties of hydrostatic pressure. This process, called pressure cycling technology, or PCT, uses alternating cycles of hydrostatic pressure between ambient and ultra-high levels (35,000 psi or greater) to safely, conveniently and reproducibly control the actions of molecules in biological samples, such as cells and tissues from human, animal, plant, and microbial sources.

Our pressure cycling technology uses internally developed instrumentation that is capable of cycling pressure between ambient and ultra-high levels - at controlled temperatures and specific time intervals - to rapidly and repeatedly control the interactions of bio-molecules, such as DNA, RNA, proteins, lipids, and small molecules. Our laboratory instrument, the Barocycler®, and our internally developed consumables product line, including PULSE ("Pressure Used to Lyse Samples for Extraction") Tubes, other processing tubes, and application specific kits (which include consumable products and reagents) together make up our PCT Sample Preparation System, or PCT SPS.

We hold 14 United States and 10 foreign patents covering multiple applications of PCT in the life sciences field. Our pressure cycling technology employs a unique approach that we believe has the potential for broad use in a number of established and emerging life sciences areas, including;

-sample preparation for genomic, proteomic, and small molecule studies;
-pathogen inactivation;
-protein purification;
-control of chemical (particularly enzymatic) reactions; and
-immunodiagnostics (clinical laboratory testing).

Within the broad field of biological sample preparation, we focus the majority of our product development efforts in three specific areas: mass spectrometry, forensics, and histology.

- Mass Spectrometry. A mass spectrometer is a laboratory instrument used in the analysis of biological samples in life sciences research. We believe that mass spectrometry is a multi-billion dollar market, and that PCT offers significant advantages in speed and quality compared to current techniques used in the preparation of samples for mass spectrometry analysis.

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Forensics. The detection of DNA has become a part of the analysis of forensic samples by laboratories and criminal justice agencies worldwide in their efforts to identify the perpetrators of violent crimes and missing persons. Scientists from the University of North Texas and Florida International University have reported improvements in DNA yield from forensic samples (e.g., bone, hair) using PCT in the sample preparation process. We believe that PCT may be capable of differentially extracting DNA from sperm and (female) epithelial cells in swabs collected from rape victims and stored in rape kits. We also believe that there are many completed but untested rape kits

- that remain untested for reasons such as cost, time, and quality of results. We further believe that the ability to differentially extract DNA from sperm and not epithelial cells could reduce the cost of such testing, while increasing quality, safety, and speed.

- Histology. The most commonly used technique worldwide for the preservation of cancer and other tissues for subsequent pathology evaluation is formalin-fixation followed by paraffin-embedding ("FFPE"). We believe that the quality and analysis of FFPE tissues is highly problematic, and that PCT offers significant advantages over current processing methods, including standardization, speed, biomolecule recovery, and safety.

Since we began operations as Pressure BioSciences in February 2005, we have installed 216 Barocycler instruments through March 31, 2012, of which 138 currently remain installed. Our customers include researchers at academic laboratories, government agencies, biotechnology, pharmaceutical and other life sciences companies in the United States, and six foreign distribution partners.

	2005	2006	2007	2008	2009	2010	2011	Q1 2012
Units installed in year	5	8	20	41	54	50	31	7

We expect the number of units installed will increase in future periods as we continue to gain commercial awareness of our technology, although we may experience some delays in customer purchases due to current economic conditions in the United States and globally. We continue to expect that some portion of future installations will be for the smaller, lower priced, Barocycler NEP2320 model and some will be placed under lease or short-term rental agreements. Therefore, we expect that the average revenue per installation may continue to fluctuate from period to period as we continue to drive our installed base and commercialize PCT. We also expect that as we continue to expand the installed base of Barocycler instruments in the field, we will realize increasing revenue from the sale of consumable products and extended service contracts. In the short-term, these recurring revenue streams may continue to fluctuate from period to period.

Our business is subject to a number of risks of which you should be aware before investing in our securities, such as:

- History of Operating Losses - We have experienced significant operating losses in the area of PCT in each period since we began investing resources in PCT. These losses have resulted principally from research and development, sales and marketing, and general and administrative expenses associated with the development of our PCT business. We expect to continue to incur operating losses until sales of our PCT products increase substantially. During the three months ended March 31, 2012, we recorded a net loss to common shareholders of ($1,087,321) or ($0.14) per share, as compared to ($966,455) or ($0.34) per share for the three months ended March 31, 2011.

- Going Concern from Independent Registered Public Accounting Firm - The audit report issued by our independent registered public accounting firm on our audited consolidated financial statements for the fiscal year ended December 31, 2011 contains an explanatory paragraph regarding our ability to continue as a going concern. The audit report states that our auditing firm has substantial doubt in our ability to continue as a going concern due to the risk that we may not have sufficient cash and liquid assets at December 31, 2011 to cover our operating and capital requirements for the next twelve-month period; and if sufficient cash cannot be obtained, we will have to substantially alter, or possibly even discontinue, operations. Based on our current projections, including equity financing subsequent to December 31, 2011, we believe our current cash resources will enable us to extend our cash resources to fund normal operations until the end of May 2012.

These risks and the other risks that we face are more fully described under the heading “Risk Factors,” which you should review carefully before you decide to buy our securities.

Corporate Information

We were incorporated in the Commonwealth of Massachusetts in August 1978 as Boston Biomedica, Inc. In September 2004, we completed the asset sale of the Boston Biomedica core business units and began to focus exclusively on the development and commercialization of our PCT platform. Following this change in business strategy, we changed our legal name from Boston Biomedica, Inc. to Pressure BioSciences, Inc. and our NASDAQ symbol from BBII to PBIO, and commenced operations as Pressure BioSciences in February 2005. As of April 5, 2012 our common stock commenced trading on the OTCQB Marketplace under the ticker symbol PBIO.

Our principal executive offices are located at 14 Norfolk Avenue, South Easton, Massachusetts 02375. Our telephone number is (508) 230-1828 and our website address is www.pressurebiosciences.com. Information included or referred to on our website is not a part of this prospectus.

THE OFFERING

As of May 15, 2012, our common stock was listed and commenced trading on the OTCQB Marketplace, operated by the OTC Markets Group, under the ticker symbol “PBIO”. The last reported sale price of our shares of common stock on May 15, 2012 was $0.40 per share.

Series F Preferred Stock offered by us	5,000 shares of Series F Preferred Stock.
Offering price:	$1,000 per share.
Manner of offering:	The preferred stock will be offered by us directly to one or more accredited investors pursuant to a stock purchase agreement.
Use of proceeds:	Assuming all shares are sold, we estimate that the net proceeds to us from this offering will be approximately $___ million. We intend to use the net proceeds from this offering to support a comprehensive sales distribution strategy of our current products and the development and commercialization of future products, to fund our research and development activities, for general working capital needs, and for the repayment of up to $150,000 in principal amount outstanding under a promissory note_. See “Use of Proceeds” on page 22.
Market for preferred stock:	Our Series F Preferred Stock will have no public market.
Risk factors:	See “Risk Factors” on page 10 for a discussion of factors you should consider carefully before deciding to invest in our Series F Preferred Stock or our common stock.
Conversion:	Each share of our Series F Preferred Stock is convertible at any time at the option of the holder into approximately _____ shares of our common stock, which is determined by dividing the stated value of the preferred stock of $1,000 by the conversion price of $_____ per share of common stock. Upon an early conversion, the holder will also receive all accrued but unpaid dividends and dividends that otherwise would be due through the eighth anniversary of the original issue date of the preferred stock. We may convert up to 500 shares of the preferred stock if the average volume weighted average price of our common stock exceeds $2.00 per share for 20 of 25 consecutive trading days, and other conditions are met during a specified period. The holder will be prohibited, however, from converting the Series F Preferred Stock into shares of our common stock if, as a result of such conversion, the holder together with its affiliates, would own more than 9.99% of the total number of shares of our common stock then issued and outstanding.
Liquidation preference:	In the event of our liquidation, dissolution, or winding up, for so long as at least 250 shares of Series F Preferred Stock remain outstanding, holders will receive a payment equal to $1,000 per share of preferred stock plus accrued and unpaid dividends before any proceeds are distributed to the holders of our common stock. Thereafter, preferred holders will receive the liquidation amount of $1,000 per share of Series F Preferred Stock plus accrued and unpaid dividends on a proportionate and pari passu basis with the holders of our common stock.
Voting rights:	

	Shares of Series F Preferred Stock will generally have no voting rights, except with respect to the issuance of any preferred stock that is not junior to the preferred stock, changes in the preferred stock and except as required by law. The holders of the preferred stock will agree not to vote or exercise dissenter's rights with respect to any shares of common stock they receive upon conversion of, in payment of dividends on their shares of preferred stock.
Dividends:	Each holder of the Series F Preferred Stock will initially be entitled to receive dividends at the rate of _____% per year of the stated value of $1,000 for each share of preferred stock payable annually beginning on the first such date after the original issue date, and on each conversion date and redemption date. The dividend rate is subject to adjustment, such that the rate will be adjusted downward by 98.731 basis points for each $0.05, if any, that the closing bid price of our common stock rises above $____ per share, subject to a minimum dividend rate of 2.00% per year, and will be adjusted upward by 98.731 basis points for each $0.05, if any, that the closing bid price of our common stock falls below $____ per share, subject to a maximum dividend rate of 15.00% per year. The cash dividend rate will be based on the closing bid price of our shares of common stock on the trading day immediately prior to the dividend payment date, conversion date or redemption date. We can elect to pay the dividends in cash or in shares of common stock, or a combination thereof. If we choose to pay dividends in shares of common stock, the shares of common stock used to pay the dividends will be valued at 85% of the volume weighted average price of our shares of common stock on the trading day immediately prior to the day on which the dividend shares are electronically issued to the holders of the Series F Preferred Stock.
Redemption:	Prior to the eighth anniversary of the original issue date of the Series F Preferred Stock, we may, at our option, redeem any or all of the shares of preferred stock at any time at a redemption price of $1,000 per share of preferred stock, plus any accrued but unpaid dividends, plus dividends that otherwise would have been due through such anniversary. Thereafter, we may redeem any or all of the preferred stock at any time at a redemption price of $1,000 per share, plus any accrued but unpaid dividends. In addition, if we determine to liquidate, dissolve or wind-up our business, or engage in any liquidation event, subject to the liquidation preference described above, we must redeem the preferred stock at the applicable redemption price.
Limitations on conversion:	Notwithstanding anything herein to the contrary, the preferred stock may not be converted by any holder, if after such conversion or exercise such holder would beneficially own more 9.99% of the shares of common stock then outstanding.
Shares of Series F Preferred Stock to be issued and outstanding after this offering:	5,000 shares of Series F Preferred Stock
Shares of common stock issued and outstanding before this offering:	10,356,449

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Shares of common stock to be issued and outstanding after this offering, including shares of common stock underlying the Series F Preferred Stock:	

The number of shares of common stock outstanding before and after the offering is based on 10,356,449 shares issued and outstanding as of May 15, 2012 and excludes:

- 1,555,500 shares of common stock issuable upon exercise of options outstanding at May 15, 2012 with a weighted average exercise price of $2.17 per share;
- 267,500 shares of common stock reserved for future grants and awards under our equity incentive plans as of May 15, 2012;
- 5,115,532 shares of common stock issuable upon exercise of outstanding warrants issued prior to this offering;
- 461,539 shares of common stock issuable upon conversion of our outstanding Series D Convertible Preferred Stock;
- 392,157 shares of common stock issuable upon conversion of our outstanding Series E Convertible Preferred Stock;
- 301,724 shares of common stock issuable in lieu of cash payment of dividends, and make-whole payment, on the Series E Convertible Preferred Stock; and

- _____ shares of common stock issuable in lieu of cash payment of dividends, and make-whole payment, on the Series F Preferred Stock.

Unless otherwise specifically stated, information throughout this prospectus assumes (i) no exercise of outstanding options or warrants to purchase shares of our common stock, and (ii) no conversion of our outstanding preferred stock.

RISK FACTORS

You should carefully consider the risks described below before making an investment decision. You should also refer to the other information in this prospectus, including our financial statements and the related notes thereto. The risks and uncertainties described below are not the only risks and uncertainties we face. Additional risks and uncertainties not presently known to us or that we currently deem immaterial also may impair our business operations. If any of the following risks actually occur, our business, results of operations and financial condition could suffer. In that event, the trading price of our shares of common stock could decline, and you may lose all or part of your investment in the Series F Preferred Stock. The risks discussed below also include forward-looking statements and our actual results may differ substantially from those discussed in these forward-looking statements.

Risks Related to Our Business

As of May 15, 2012, we had available cash of approximately $90,000. We require additional capital to fund our normal operations and cannot ensure that additional capital will be available on acceptable terms or at all.

We have experienced negative cash flows from operations from our pressure cycling technology business since we commenced our pressure cycling technology operations. As of May 15, 2012, we had available cash of approximately $90,000 which, based on current projections, will be sufficient to fund normal operations until the end of May 2012. We need substantial additional capital to fund our operations in periods beyond May 2012. If we are unable to raise sufficient funds from this offering or other sources of financing, we may need to cease our business operations.

We have received an opinion from our independent registered public accounting firm expressing doubt regarding our ability to continue as a going concern.

The audit report issued by our independent registered public accounting firm on our audited consolidated financial statements for the fiscal year ended December 31, 2011 contains an explanatory paragraph regarding our ability to continue as a going concern. The audit report states that our auditing firm has substantial doubt in our ability to continue as a going concern due to the risk that we may not have sufficient cash and liquid assets at December 31, 2011 to cover our operating and capital requirements for the next twelve-month period; and if sufficient cash cannot be obtained, we would have to substantially alter, or possibly even discontinue, operations. The accompanying consolidated financial statements do not include any adjustments that might result from the outcome of this uncertainty.

Management has developed a plan to continue operations. This plan includes further reductions in expenses and obtaining equity or debt financing. Although we have successfully completed equity financings and reduced expenses in the past, we cannot assure you that our plans to address these matters in the future will be successful.

Such an opinion from our independent registered accounting firm could adversely affect our ability to obtain additional financing on favorable terms, if at all, as such an opinion may cause investors to have reservations about our long-term prospects, and may adversely affect our relationships with customers. There can be no assurance that our auditing firm will not qualify its opinion in the future. If we cannot successfully continue as a going concern, our stockholders may lose their entire investment in us.

We have identified a material weakness in our internal control over financial reporting that could result in a material misstatement of our financial statements.

Our management is responsible for maintaining disclosure controls and procedures that are designed to ensure that information required to be disclosed in our reports to the SEC is recorded, processed, summarized and reported within the time periods specified in the SEC's rules and forms, and that such information is accumulated and communicated to our management, including our principal executive officer and our principal financial officer, as appropriate, to allow timely decisions regarding required disclosure. Our management assessed the effectiveness of the design and operation of our disclosure controls and procedures as of March 31, 2012 and concluded that the

material weaknesses identified in our Annual Report on Form 10-K for the year ended December 31, 2011 relating to the lack of sufficient segregation of duties and lack of sufficiency of personnel have not been fully remediated due to our limited financial resources, and therefore our disclosure controls and procedures were not effective as of March 31, 2012.

A material weakness is a deficiency, or combination of deficiencies, in internal control over financial reporting that creates a reasonable possibility that a material misstatement of our annual or interim financial statements will not be prevented or detected on a timely basis. While we have performed additional substantive procedures to ensure that our consolidated financial statements as of and for the three month period ended March 31, 2012, are fairly stated in all material respects in accordance with GAAP, the completion of our remediation efforts are largely dependent upon our securing additional financing to cover the costs of implementing the changes required. If we are unsuccessful in securing such funds, remediation efforts may be adversely affected in a material manner. If our efforts are insufficient to remediate our material weaknesses, our financial statements may contain material misstatements. Any failure on our part to remediate the material weaknesses successfully may affect the results of the periodic management evaluations on the effectiveness of our internal control over financial reporting and disclosure controls and procedures that we must include in our periodic reports. A material weakness could also cause investors to lose confidence in our reported financial information.

We cannot give any assurance that the measures we are taking to remediate the identified material weaknesses will be effective. We also cannot assure that other material weaknesses will not arise as a result of our failure to maintain adequate disclosure controls and procedures or circumvention of those controls and procedures. Additionally, even if we succeed in improving our controls and procedures, those controls and procedures may not be adequate enough to prevent irregularities, identify irregularities or facilitate a fair presentation of our financial statements or reports we file with the SEC.

We will need a greater amount of additional capital than we currently expect to need if we experience unforeseen costs or expenses, unanticipated liabilities or delays in implementing our business plan, developing our products and achieving commercial sales.

We need substantial capital to implement our sales distribution strategy for our current products and to develop and commercialize future products using our pressure cycling technology products and services in the sample preparation area, as well as for applications in other areas of life sciences. Our capital requirements will depend on many factors, including but not limited to:

- the problems, delays, expenses, and complications frequently encountered by early-stage companies;
- market acceptance of our pressure cycling technology products and services for sample preparation;
- the success of our sales and marketing programs; and
- changes in economic, regulatory or competitive conditions in the markets we intend to serve.

To satisfy our potential capital requirements to cover the cost of implementing our sales distribution strategy for our current products and services and to develop and commercialize future products and services using our pressure

cycling technology relating to sample preparation and other life science applications, we need to raise additional funds in the public or private capital markets. We may seek to raise any necessary additional funds through the issuance of warrants, equity or debt financings or executing collaborative arrangements with corporate partners or other sources, which may be dilutive to existing stockholders or otherwise have a material effect on our current or future business prospects. Additional financing may not be available to us on a timely basis, if at all, or on terms acceptable to us. If adequate funds are not available or if we fail to obtain acceptable additional financing, we may be required to:

severely limit or cease our operations or otherwise reduce planned expenditures and forego other business opportunities, which could harm our business;

- obtain financing with terms that may have the effect of substantially diluting or adversely affecting the holdings or the rights of the holders of our capital stock; or

- obtain funds through arrangements with future collaboration partners or others that may require us to relinquish rights to some or all of our technologies or products.

Our actual results and performance, including our ability to raise additional capital, may be adversely affected by current economic conditions.

Our actual results and performance could be adversely affected by the current economic conditions in the global economy, which continue to pose a risk to the overall demand for our products from our customers who may elect to defer or cancel purchases of, or decide not to purchase, our products in response to continuing tightness in the credit markets, negative financial news and general uncertainty in the economy. In addition, our ability to obtain additional financing, on acceptable terms, if at all, may be adversely affected by the uncertainty in the current economic climate.

We have a history of operating losses, anticipate future losses and may never be profitable.

We have experienced significant operating losses in the area of PCT in each period since we began investing resources in PCT. These losses have resulted principally from research and development, sales and marketing, and general and administrative expenses associated with the development of our PCT business. During the three months ended March 31, 2012, we recorded a net loss to common shareholders of ($1,087,321) or ($0.14) per share, as compared to ($966,455) or ($0.34) per share for the three months ended March 31, 2011. We expect to continue to incur operating losses until sales of our PCT products increase substantially. We cannot be certain when, if ever, we will become profitable. Even if we were to become profitable, we might not be able to sustain such profitability on a quarterly or annual basis.

Our financial results depend on revenues from our pressure cycling technology products and services, and from government grants.

We currently rely on revenues from our pressure cycling technology products and services in the sample preparation area and from revenues derived from grants awarded to us by governmental agencies, such as the National Institutes of Health. We have been unable to achieve market acceptance of our product offerings to the extent necessary to achieve significant revenue. Competition for government grants is very intense, and we can provide no assurance that we will continue to be awarded grants in the future. If we are unable to increase revenues from sales of our pressure cycling technology products and services and government grants, our business will fail.

We may be unable to obtain market acceptance of our pressure cycling technology products and services.

Many of our initial sales of our pressure cycling technology products and services have been to our collaborators, following their use of our products in studies undertaken in sample preparation for genomics, proteomics and small molecules studies. Our technology requires scientists and researchers to adopt a method of sample extraction that is different than existing techniques. Our PCT sample preparation system is also more costly than existing techniques. Our ability to obtain market acceptance will depend, in part, on our ability to demonstrate to our potential customers that the benefits and advantages of our technology outweigh the increased cost of our technology compared to existing methods of sample extraction. If we are unable to demonstrate the benefits and advantages of our products and technology as compared to existing technologies, we will not gain market acceptance and our business will fail.

Our business may be harmed if we encounter problems, delays, expenses, and complications that often affect companies that have not achieved market acceptance.

Our pressure cycling technology business continues to face challenges in achieving market acceptance. If we encounter problems, delays, expenses and complications, many of which may be beyond our control or may harm our business or prospects. These include:

- unanticipated problems and costs relating to the development, testing, production, marketing, and sale of our products;
- delays and costs associated with our ability to attract and retain key personnel;
- availability of adequate financing; and
- competition.

The sales cycle of our pressure cycling technology products is lengthy. We have incurred and may continue to incur significant expenses and we may not generate any significant revenue related to those products.

Many of our current and potential customers have required between three and six months or more to test and evaluate our pressure cycling technology products. This increases the possibility that a customer may decide to cancel its order or otherwise change its plans, which could reduce or eliminate our sales to that potential customer. As a result of this lengthy sales cycle, we have incurred and may continue to incur significant research and development, selling and marketing, and general and administrative expense related to customers from whom we have not yet generated any revenue from our products, and from whom we may never generate the anticipated revenue if a customer is not satisfied with the results of the evaluation of our products or if a customer cancels or changes its plans.

Our business could be harmed if our products contain undetected errors or defects.

We are continuously developing new, and improving our existing, pressure cycling technology products in sample preparation and we expect to do so in other areas of life sciences depending upon the availability of our resources. Newly introduced products can contain undetected errors or defects. In addition, these products may not meet their performance specifications under all conditions or for all applications. If, despite internal testing and testing by our collaborators, any of our products contain errors or defects or fail to meet customer specifications, then we may be required to enhance or improve those products or technologies. We may not be able to do so on a timely basis, if at all, and may only be able to do so at considerable expense. In addition, any significant reliability problems could result in adverse customer reaction, negative publicity or legal claims and could harm our business and prospects.

Our success may depend on our ability to manage growth effectively.

Our failure to manage growth effectively could harm our business and prospects. Given our limited resources and personnel, growth of our business could place significant strain on our management, information technology systems, sources of manufacturing capacity and other resources. To properly manage our growth, we may need to hire additional employees and identify new sources of manufacturing capabilities. Failure to effectively manage our growth could make it difficult to manufacture our products and fill orders, as well as lead to declines in product quality or increased costs, any of which would adversely impact our business and results of operations.

Our success is substantially dependent on the continued service of our senior management.

Our success is substantially dependent on the continued service of our senior management. We do not have long-term employment agreements with our key employees. The loss of the services of any of these individuals could make it

more difficult to successfully operate our business and achieve our business goals. In addition, our failure to retain existing engineering, research and development and sales personnel could harm our product development capabilities and customer and employee relationships, delay the growth of sales of our products and could result in the loss of key information, expertise or know-how.

We may not be able to hire or retain the number of qualified personnel, particularly engineering and sales personnel, required for our business, which would harm the development and sales of our products and limit our ability to grow.

Competition in our industry for senior management, technical, sales, marketing, finance and other key personnel is intense. If we are unable to retain our existing personnel, or attract and train additional qualified personnel, either because of competition in our industry for such personnel or because of insufficient financial resources, our growth may be limited. Our success also depends in particular on our ability to identify, hire, train and retain qualified engineering and sales personnel with experience in design, development and sales of laboratory equipment.

Our reliance on a single third party for all of our manufacturing, and certain of our engineering, and other related services could harm our business.

We currently rely on Source Scientific, LLC ("Source Scientific"), a third party contract manufacturer, to manufacture our PCT instrumentation, provide engineering expertise, and manage the majority of our sub-contractor supplier relationships. Because of our dependence on one manufacturer, our success will depend, in part, on the ability of Source Scientific to manufacture our products cost effectively, in sufficient quantities to meet our customer demand, if and when such demand occurs, and meeting our quality requirements. If Source Scientific experiences manufacturing problems or delays, or if Source Scientific decides not to continue to provide us with these services, our business may be harmed. While we believe other contract manufacturers are available to address our manufacturing and engineering needs, if we find it necessary to replace Source Scientific, there will be a disruption in our business and we would incur additional costs and delays that would harm our business.

Our failure to manage current or future alliances or joint ventures effectively may harm our business.

We have entered into business relationships with three distribution partners and one co-marketing partner, and we may enter into additional alliances, joint ventures or other business relationships to further develop, market and sell our pressure cycling technology product line. We may not be able to:

- identify appropriate candidates for alliances, joint ventures or other business relationships;
- assure that any candidate for an alliance, joint venture or business relationship will provide us with the support anticipated;
- successfully negotiate an alliance, joint venture or business relationship on terms that are advantageous to us; or
- successfully manage any alliance or joint venture.

Furthermore, any alliance, joint venture or other business relationship may divert management time and resources. Entering into a disadvantageous alliance, joint venture or business relationship, failing to manage an alliance, joint venture or business relationship effectively, or failing to comply with any obligations in connection therewith, could harm our business and prospects.

We may not be successful in growing our international sales.

We cannot guarantee that we will successfully develop our international sales channels to enable us to generate significant revenue from international sales. We currently have four international distribution agreements that cover Japan, Austria, Germany, Switzerland, Holland, Belgium and Luxembourg. We have generated limited sales to date from international sales and cannot guarantee that we will be able to increase our sales. As we expand, our international operations may be subject to numerous risks and challenges, including:

- multiple, conflicting and changing governmental laws and regulations, including those that regulate high pressure equipment;

- reduced protection for intellectual property rights in some countries;
- protectionist laws and business practices that favor local companies;
- political and economic changes and disruptions;
- export and import controls;
- tariff regulations; and
- currency fluctuations.

Our operating results are subject to quarterly variation. Our operating results may fluctuate significantly from period to period depending on a variety of factors, including the following:

- our ability to increase our sales of our pressure cycling technology products for sample preparation on a consistent quarterly or annual basis;
- the lengthy sales cycle for our products;
- the product mix of the Barocycler instruments we install in a given period, and whether the installations are completed pursuant to sales, rental or lease arrangements, and the average selling prices that we are able to command for our products;
- our ability to manage our costs and expenses;
- our ability to continue our research and development activities without unexpected costs and expenses; and
- our ability to comply with state and federal regulations without incurring unexpected costs and expenses.

Our instrumentation operates at high pressures and may therefore become subject to certain regulation in the European Community. Regulation of high pressure equipment may limit or hinder our development and sale of future instrumentation.

Our Barocycler instruments operate at high pressures. If our Barocycler instruments exceed certain pressure levels, our products may become subject to the European Pressure Equipment Directive, which requires certain pressure equipment meet certain quality and safety standards. We do not believe that we are subject to this directive because our Barocycler instruments are currently below the threshold documented in the text of the directive. If our interpretation were to be challenged, we could incur significant costs defending the challenge, and we could face production and selling delays, all of which could harm our business.

We expect that we will be subject to regulation in the United States, such as the Food and Drug Administration ("FDA"), and overseas, if and when we begin to invest more resources in the development and commercialization of PCT in applications outside of sample preparation.

Our current pressure cycling technology products in the area of sample preparation are not regulated by the FDA. Applications in which we intend to develop and commercialize pressure cycling technology, such as protein purification, pathogen inactivation and immunodiagnostics, are expected to require regulatory approvals or clearances from regulatory agencies, such as the FDA, prior to commercialization. We expect that obtaining these approvals or

clearances will require a significant investment of time and capital resources and there can be no assurance that such investments will receive approvals or clearances that would allow us to commercialize the technology for these applications.

If we are unable to protect our patents and other proprietary technology relating to our pressure cycling technology products, our business will be harmed.

Our ability to further develop and successfully commercialize our products will depend, in part, on our ability to enforce our patents, preserve our trade secrets, and operate without infringing the proprietary rights of third parties. We currently have 14 United States patents issued and several pending patent applications for our pressure cycling technology. Several of these have been followed up with foreign applications, for which three patents have been issued in Europe and three patents have been issued in Australia, two in Japan, and two in Canada. We expect to file additional foreign applications in the future relating to our pressure cycling technology, and we will file additional United States applications as we develop new patentable intellectual property. The patents which have been issued expire between 2015 and 2027.

There can be no assurance that:

- any patent applications filed by us will result in issued patents;
- patent protection will be secured for any particular technology;
- any patents that have been or may be issued to us will be valid or enforceable;
- any patents will provide meaningful protection to us;
- others will not be able to design around our patents; or
- our patents will provide a competitive advantage or have commercial value.

The failure to obtain adequate patent protection would have a material adverse effect on us and may adversely affect our ability to enter into, or affect the terms of, any arrangement for the marketing or sale of any product.

Our patents may be challenged by others.

We could incur substantial costs in patent proceedings, including interference proceedings before the United States Patent and Trademark Office, and comparable proceedings before similar agencies in other countries, in connection with any claims that may arise in the future. These proceedings could result in adverse decisions about the patentability of our inventions and products, as well as about the enforceability, validity, or scope of protection afforded by the patents.

If we are unable to maintain the confidentiality of our trade secrets and proprietary knowledge, others may develop technology and products that could prevent the successful commercialization of our products.

We rely on trade secrets and other unpatented proprietary information in our product development activities. To the extent we rely on trade secrets and unpatented know-how to maintain our competitive technological position, there can be no assurance that others may not independently develop the same or similar technologies. We seek to protect our trade secrets and proprietary knowledge, in part, through confidentiality agreements with our employees, consultants, advisors and contractors. These agreements may not be sufficient to effectively prevent disclosure of our confidential information and may not provide us with an adequate remedy in the event of unauthorized disclosure of such information. If our employees, consultants, advisors, or contractors develop inventions or processes independently that may be applicable to our products, disputes may arise about ownership of proprietary rights to those inventions and processes. Such inventions and processes will not necessarily become our property, but may

remain the property of those persons or their employers. Protracted and costly litigation could be necessary to enforce and determine the scope of our proprietary rights. Failure to obtain or maintain trade secret protection, for any reason, could harm our business.

If we infringe on the intellectual property rights of others, our business will be harmed.

It is possible that the manufacture, use or sale of our pressure cycling technology products or services may infringe patent or other intellectual property rights of others. We may be unable to avoid infringement of the patent or other intellectual property rights of others and may be required to seek a license, defend an infringement action, or challenge the validity of the patents or other intellectual property rights in court. We may be unable to secure a license on terms and conditions acceptable to us, if at all. Also, we may not prevail in any patent or other intellectual property rights litigation. Patent or other intellectual property rights litigation is costly and time-consuming, and there can be no assurance that we will have sufficient resources to bring any possible litigation related to such infringement to a successful conclusion. If we do not obtain a license under such patents or other intellectual property rights, or if we are found liable for infringement, or if we are unsuccessful in having such patents declared invalid, we may be liable for significant monetary damages, may encounter significant delays in successfully commercializing and developing our pressure cycling technology products, or may be precluded from participating in the manufacture, use, or sale of our pressure cycling technology products or services requiring such licenses.

We may be unable to adequately respond to rapid changes in technology and the development of new industry standards.

The introduction of products and services embodying new technology and the emergence of new industry standards may render our existing pressure cycling technology products and related services obsolete and unmarketable if we are unable to adapt to change. We may be unable to allocate the funds necessary to improve our current products or introduce new products to address our customers' needs and respond to technological change. In the event that other companies develop more technologically advanced products, our competitive position relative to such companies would be harmed.

We may not be able to compete successfully with others that are developing or have developed competitive technologies and products.

A number of companies have developed, or are expected to develop, products that compete or will compete with our products. We compete with companies that have existing technologies for the extraction of nucleic acids, proteins and small molecules from cells and tissues, including methods such as mortar and pestle, sonication, rotor-stator homogenization, French press, bead beating, freezer milling, enzymatic digestion, and chemical dissolution.

We are aware that there are additional companies pursuing new technologies with similar goals to the products developed or being developed by us. Some of the companies with which we now compete, or may compete in the future, have or may have more extensive research, marketing, and manufacturing capabilities, more experience in genomics and proteomics sample preparation, protein purification, pathogen inactivation, immunodiagnostics, and DNA sequencing and significantly greater technical, personnel and financial resources than we do, and may be better positioned to continue to improve their technology to compete in an evolving industry. To compete, we must be able to demonstrate to potential customers that our products provide improved performance and capabilities. Our failure to compete successfully could harm our business and prospects.

Provisions in our articles of organization and bylaws and our shareholder rights agreement may discourage or frustrate shareholders' attempts to remove or replace our current management.

Our articles of organization and bylaws contain provisions that may make it more difficult or discourage changes in our management that our stockholders may consider to be favorable. These provisions include:

- a classified board of directors;

- advance notice for stockholder nominations to the board of directors;

- limitations on the ability of stockholders to remove directors; and
- a provision that allows a majority of the directors to fill vacancies on the board of directors.

- Our shareholders rights agreement, or "poison pill", may also have the effect of discouraging or preventing a change in control.

These provisions could prevent or frustrate attempts to make changes in our management that our stockholders consider to be beneficial and could limit the price that our stockholders might receive in the future for shares of our common stock.

The costs of compliance with the reporting obligations of the Exchange Act, and with the requirements of the Sarbanes-Oxley Act of 2002 and the Dodd-Frank Wall Street Reform and Consumer Protection Act, may place a strain on our limited resources and our management's attention may be diverted from other business concerns.

As a result of the regulatory requirements applicable to public companies, we incur legal, accounting, and other expenses that are significant in relation to the size of our company. In addition, the Sarbanes-Oxley Act of 2002 and the Dodd-Frank Wall Street Reform and Consumer Protection Act, as well as rules subsequently implemented by the SEC and the trading market on which are shares of commons stock are traded have required changes in corporate governance and financial disclosure practices of public companies, some of which are currently applicable to us and others will or may become applicable to us in the future. These rules and regulations will increase our legal and financial compliance costs and may make some activities more time-consuming. These requirements may place a strain on our systems and on our management and financial resources.

Certain of our net deferred tax assets could be substantially limited if we experience an ownership change as defined in the Internal Revenue Code.

Certain of our net operating losses ("NOLs") give rise to net deferred tax assets. Our ability to utilize NOLs and to offset our future taxable income and/or to recover previously paid taxes would be limited if we were to undergo an "ownership change" within the meaning of Section 382 of the Internal Revenue Code, which we refer to as the Code. In general, an "ownership change" occurs whenever the percentage of the stock of a corporation owned by "5-percent shareholders" (within the meaning of Section 382 of the Code) increases by more than 50 percentage points over the lowest percentage of the stock of such corporation owned by such "5-percent shareholders" at any time over the preceding three years.

An ownership change under Section 382 of the Code would establish an annual limitation on the amount of NOLs we could utilize to offset our taxable income in any single taxable year to an amount equal to (i) the product of a specified rate, which is published by the U.S. Treasury, and the aggregate value of our outstanding stock plus (ii) the amount of unutilized limitation from prior years. The application of these limitations might prevent full utilization of the deferred tax assets attributable to our NOLs. We may already have or will have experienced an ownership change as defined by Section 382 through the sale of equity and, therefore, we will consider whether the sale of Series F Preferred Stock will result in limitations of our net operating losses under Section 382 when we start to generate taxable income. However, whether a change in ownership occurs in the future is largely outside of our control, and there can be no assurance that such a change will not occur.

Risks Related to Share Ownership

The holders of our common stock could suffer substantial dilution.

In connection with the private placements and registered direct offerings we completed during the past few years, we have issued shares of Series A Convertible Preferred Stock, Series B Convertible Preferred Stock, Series C Convertible Preferred Stock, Series D Convertible Preferred Stock and Series E Convertible Preferred Stock. In

connection with those private placements and registered direct offerings, we also issued warrants to purchase shares of Series A Convertible Preferred Stock, warrants to purchase shares of Series B Convertible Preferred Stock, and warrants to purchase shares of common stock. Each share of Series A Convertible Preferred Stock, Series B Convertible Preferred Stock and Series C Convertible Preferred Stock was convertible into 10 shares of common stock. Each share of Series D Convertible Preferred Stock is convertible into 1,538.46 shares of common stock and each share of Series E Convertible Preferred Stock is convertible into approximately 980 shares of common stock. As of May 15, 2012, there were no shares of Series A Convertible Preferred Stock, Series B Convertible Preferred

Stock or Series C Convertible Preferred Stock issued and outstanding. If all of the outstanding shares of Series D Convertible Preferred Stock and Series E Convertible Preferred Stock as of May 15, 2012, together with our outstanding warrants issued in connection with our private placements and registered direct offerings, were converted or exercised into shares of our common stock, an additional 5,969,227 shares of common stock would be issued and outstanding. The additional issuance of common stock would cause immediate and substantial dilution to our existing stockholders, and could cause a significant reduction in the market price of our common stock.

There is no public market for the Series F Preferred Stock to be sold in this offering.

There is no established public trading market for the Series F Preferred Stock being sold in this offering, and we do not expect a market to develop. In addition, we do not intend to apply for listing the Series F Preferred Stock on any securities exchange. Without an active market, the liquidity of these securities will be limited.

As a new investor, you will incur substantial dilution in this offering and from future equity issuances, and as result, our share price could decline.

The per share common stock equivalent conversion price of the Series F Preferred Stock is substantially higher than the net tangible book value (deficit) per share of our outstanding shares of common stock. Our pro forma net tangible book value (deficit) as of March 31, 2012 was ($757,442) or ($0.08) per share of common stock (assuming the conversion of all of our shares of Series C Convertible Preferred Stock and Series D Convertible Preferred Stock issued and outstanding as of March 31, 2012) (and excluding shares of common stock issuable upon exercise of all outstanding options and warrants). Net tangible book value (deficit) per share represents total tangible assets less total liabilities, divided by the number of shares of common stock issued and outstanding. After giving effect to the sale of 5,000 shares of Series F Preferred Stock in this offering and assuming the conversion of all the shares of Series F Preferred Stock sold in the offering at a conversion price of $____ (and including shares of common stock issuable upon conversion of all of our shares of Series C Convertible Preferred Stock and Series D Convertible Preferred Stock issued and outstanding as of March 31, 2012, and excluding shares of common stock issued in exchange for our Series C Units subsequent to March 31, 2012, shares issuable upon conversion of all of our issued and outstanding shares of Series E Convertible Preferred Stock issued in April 2012 and shares of common stock issuable upon exercise of all outstanding options and warrants), our as adjusted pro forma net tangible book value as of March 31, 2012 would have been $_____, or $____ per share. This represents an immediate increase in net tangible book value of $____ per share to existing common stockholders and an immediate dilution in net tangible book value of $____ per share to investors in this offering (on an as-if-converted, per share common stock equivalent basis).

In addition to this offering, subject to market conditions and other factors, it is likely that we will pursue additional capital to finance our operations and the development, manufacture and marketing of other products under development and new product opportunities. Accordingly, we may conduct future offerings of equity or debt securities. The exercise of outstanding options and warrants and future equity issuances, including future public offerings or future private placements of equity securities and any additional shares issued in connection with acquisitions, may result in dilution to investors. In addition, the market price of our shares of common stock could fall as a result of resales of any of these shares of common stock due to an increased number of shares available for sale in the market.

Sales of a significant number of shares of our common stock in the public market, or the perception of such possible sales, could depress the market price of our common stock.

Sales of a substantial number of shares of our common stock or other equity-related securities in the public markets, including in an offering of our common stock or preferred stock, could depress the market price of our common stock and impair our ability to raise capital through the sale of additional equity or equity-related securities. We cannot

predict the effect that future sales of our common stock or other equity-related securities would have on the market price of our common stock.

Our share price could be volatile and our trading volume may fluctuate substantially.

The price of our shares of common stock has been and may in the future continue to be extremely volatile. Many factors could have a significant impact on the future price of our shares of common stock, including:

- our inability to raise additional capital to fund our operations, whether through the issuance of equity securities or debt;
- our failure to successfully implement our business objectives;
- compliance with ongoing regulatory requirements;
- market acceptance of our products;
- technological innovations and new commercial products by our competitors;
- changes in government regulations;
- general economic conditions and other external factors;
- actual or anticipated fluctuations in our quarterly financial and operating results;
- the degree of trading liquidity in our shares of common stock; and
- our ability to meet the minimum standards required for our common stock to continue to be listed and quoted on one of the OTC Markets.

A decline in the price of our shares of common stock could affect our ability to raise further working capital and adversely impact our ability to continue operations.

A decline in the price of our shares of common stock could result in a reduction in the liquidity of our common stock and a reduction in our ability to raise capital. Because a significant portion of our operations has been and will continue to be financed through the sale of equity securities, a decline in the price of our shares of common stock could be especially detrimental to our liquidity and our operations. Such reductions and declines may force us to reallocate funds from other planned uses and may have a significant negative effect on our business plans and operations, including our ability to continue our current operations. If the price for our shares of common stock declines, it may be more difficult to raise additional capital. If we are unable to raise sufficient capital, and we are unable to generate funds from operations sufficient to meet our obligations, we will not have the resources to continue our operations. Further, if the price for our shares of common stock declines, the dividend rate on our Series E Convertible Preferred Stock and Series F Preferred Stock will increase, which would result in us paying holders of Series E Convertible Preferred Stock and Series F Preferred Stock a greater amount of dividends in cash or in additional shares of common stock. If the amount of the cash dividends we pay increases, we will have less cash available for operations. Similarly, if we pay the increased dividends in additional shares of our common stock, our stockholders will suffer additional dilution.

The market price for our shares of common stock may also be affected by our ability to meet or exceed expectations of analysts or investors. Any failure to meet these expectations, even if minor, may have a material adverse effect on the market price of our shares of common stock.

If we issue additional securities in the future, it will likely result in the dilution of our shares of existing stockholders.

Our restated articles of organization, as amended, authorize the issuance of up to 20,000,000 shares of common stock and 1,000,000 shares of preferred stock. As of May 15, 2012, we had 10,356,449 shares of common stock issued and outstanding, 300 shares of Series D Convertible Preferred Stock issued and outstanding, which shares of Series D Convertible Preferred Stock are convertible into 461,539 shares of common stock, and 400 shares of Series E Convertible Preferred Stock issued and outstanding, which shares of Series E Convertible Preferred Stock are

convertible into 392,157 shares of common stock. As of May 15, 2012, we had options and warrants to purchase an aggregate of approximately 6,671,032 shares of our common stock outstanding, and an additional 267,500 shares of common stock reserved for future awards that we may grant under our equity compensation plans. In December 2011, our stockholders approved an amendment to our restated articles of organization, as amended, to increase the number of our authorized shares of common stock from 20,000,000 to 50,000,000. We plan to file articles of amendment to increase our authorized common stock prior to the completion of this offering. From time to time we also may increase the number of shares available for issuance in connection with our equity compensation plans and we may issue awards to our employees and others who provide services to us outside the terms of our equity compensation plans. Our board of directors may fix and determine the designations, rights, preferences or other variations of each class or series of preferred stock and may choose to issue some or all of such shares to provide additional financing in the future.

The issuance of any securities for acquisition, licensing or financing efforts, upon conversion of any preferred stock or exercise of warrants, in lieu of payment of cash dividends or to make the make-whole payment to holders of Series E Convertible Preferred Stock or Series F Preferred Stock or pursuant to our equity compensation plans, or otherwise may result in a reduction of the book value and market price of the outstanding shares of our common stock. If we issue any such additional securities, such issuance will cause a reduction in the proportionate ownership and voting power of all current stockholders. Further, such issuance may result in a change in control of our Company.

Financial Industry Regulatory Authority ("FINRA") sales practice requirements may also limit a stockholder's ability to buy and sell our common stock.

FINRA has adopted rules that require that in recommending an investment to a customer, a broker-dealer must have reasonable grounds for believing that the investment is suitable for that customer. Prior to recommending speculative low-priced securities to their non-institutional customers, broker-dealers must make reasonable efforts to obtain information about the customer's financial status, tax status, investment objectives and other information. Under interpretations of these rules, FINRA believes that there is a high probability that speculative low-priced securities will not be suitable for at least some customers. FINRA requirements make it more difficult for broker-dealers to recommend that their customers buy our common stock, which may limit your ability to buy and sell our common stock and have an adverse effect on the market for our shares.

We have never paid dividends on our common stock and do not anticipate paying any in the foreseeable future.

We have never declared or paid a cash dividend on our common stock and we do not expect to pay cash dividends on our common stock in the foreseeable future.

The shares of Series F Preferred Stock being offered pursuant to this prospectus, as well as our shares of Series D Convertible Preferred Stock and Series E Convertible Preferred Stock, are entitled to certain rights, privileges and preferences over our common stock, including the right to receive dividends, in the case of the Series E Convertible Preferred Stock and Series F Preferred Stock, and a preference upon a liquidation of our company, which will reduce amounts available for distribution to our common stockholders.

Each holder of the Series F Preferred Stock will be entitled to receive dividends at the rate of ____% per year of the stated value for each share of Series F Preferred Stock held by such holder payable annually beginning on the first such date after the original issue date, and on each conversion date and redemption date. The dividend rate on the Series F Preferred Stock is subject to adjustment depending on the closing bid price of our common stock as described in this prospectus. The dividends will be paid annually in cash or, at our election and subject to certain conditions described in this prospectus, in shares of our common stock. In addition, the holders of our shares of Series E Convertible Preferred Stock are entitled to receive a dividend at the rate of 10.5% per year of the purchase price paid

for the Series E Convertible Preferred Stock, payable, either in cash or in shares of common stock at our option. The dividend rate on the Series E Convertible Preferred Stock is also subject to adjustment depending on the closing bid price of our common stock. If we elect to pay the dividends on the Series E Convertible Preferred Stock or the Series F Preferred Stock in cash, we will have less cash available for operations, and less cash available to the holders of common stock upon a liquidation of our company. The effect of the dividend payable on the Series F Preferred Stock, if we pay it in cash, is that more than half of the net proceeds of this offering may be used to pay

the holders of the Series F Preferred Stock. A payment of dividends in common stock will have a dilutive effect on our common stockholders.

Holders of our shares of Series D Convertible Preferred Stock are entitled to payment prior to payment to the holders of common stock in the event of liquidation of the Company. Further, in the event of our liquidation, dissolution, or winding up, in the case of each of our Series E Convertible Preferred Stock and Series F Preferred Stock, for as long as at least 250 shares of preferred stock remain outstanding, preferred holders will receive a payment equal to $1,000 per share of Series E Convertible Preferred Stock or Series F Preferred Stock, as the case may be, plus accrued and unpaid dividends before any proceeds are distributed to the holders of our common stock. Thereafter, preferred holders will receive the liquidation amount $1,000 per share of Series E Convertible Preferred Stock or Series F Preferred Stock, as the case may be, plus accrued and unpaid dividends on a pari passu basis with the holders of our common stock.

We failed to meet applicable NASDAQ Stock Market requirements and as a result we delisted our stock from The NASDAQ Capital Market, which could adversely affect the market liquidity of our common stock and harm our businesses.

Until April 5, 2012, our common stock was traded on The NASDAQ Capital Market. As a result of our stockholders' equity falling below the minimum $2.5 million requirement and the bid price of our common stock remaining below the minimum $1.00 per share requirement for continued inclusion on The NASDAQ Capital Market, on April 5, 2012, our common stock was delisted from The NASDAQ Capital Market and on April 5, 2012 our common stock began trading on the OTCQB Marketplace under the ticker symbol PBIO. We continue to file periodic reports with the Securities and Exchange Commission in accordance with the requirements of Section 12(g) of the Securities Exchange Act of 1934, as amended.

Our delisting from The NASDAQ Capital Market and commencement of trading on the OTCQB Marketplace may result in a reduction in some or all of the following, each of which could have a material adverse effect on our shareholders:

- the liquidity of our shares of common stock;
- the market price of our shares of common stock;
- our ability to obtain financing for the continuation of our operations;
- the number of institutional and other investors that will consider investing in our shares of common stock;
- the number of market markers in our shares of common stock;
- the availability of information concerning the trading prices and volume of our shares of common stock; and the number of broker-dealers willing to execute trades in our shares of common stock.

Furthermore, as a result of our delisting, our shares of common stock are subject to the so-called "penny stock" rules. The SEC has adopted regulations that define a penny stock to be any equity security that has a market price per share of less than $5.00, subject to certain exceptions, such as any securities listed on a national securities exchange. For any transaction involving a penny stock, unless exempt, the rules impose additional sales practice requirements on broker-dealers, subject to certain exceptions. As a result of being a penny stock, a broker-dealer may find it more difficult to trade our shares of common stock and an investor may find it more difficult to acquire or dispose of our shares of common stock on the secondary market. Investors in penny stocks should be prepared for the possibility that they may lose their whole investment.

USE OF PROCEEDS

Assuming all shares are sold, we estimate that the net proceeds to us from this offering will be approximately $___ million. However, the offering does not specify any minimum sale of any specific number of shares as a result of which the net proceeds actually received by us may be considerably less than this estimate. We intend to use the net proceeds from this offering to support a comprehensive sales distribution strategy of our current products and the development and commercialization of future products, to fund our research and development activities, for general working capital needs, for the repayment of up to $150,000 of the aggregate principal amount outstanding under a

promissory note, and to fund dividends paid in cash on our Series E Convertible Preferred Stock and Series F Preferred Stock.

As of May 15, 2012, our outstanding indebtedness, in the aggregate principal amount of $150,000, consisted of a promissory note in the aggregate principal amount of $150,000 due on May 4, 2012. The promissory note was interest free until May 4, 2012. We did not pay the principal of the promissory note on or before May 4, 2012, and, as a result, we began accruing interest on the principal amount of the promissory note at a rate of 18% per year commencing on May 5, 2012.

We cannot estimate precisely the allocation of the net proceeds from this offering among these uses. The amounts and timing of the expenditures may vary significantly, depending on numerous factors, including the amount of cash used in our operations. Accordingly, our management will have broad discretion in the application of the net proceeds of this offering. We reserve the right to change the use of proceeds as a result of certain contingencies such as competitive developments and other factors. Pending the uses described above, we may temporarily invest the net proceeds of this offering in short- and medium-term interest-bearing obligations, investment-grade instruments, bank certificates of deposit and government securities until we use them for their stated purpose.

DETERMINATION OF OFFERING PRICE

Some of the factors considered in determining the offering price of the shares were the history and prospects of Pressure BioSciences and comparable companies, similar prior offerings of comparable companies, our management, our capital structure, and currently prevailing general conditions in equity securities markets, including current market valuations of publicly traded companies considered comparable to our company. We cannot assure you, however, that the price at which the Series F Preferred Stock or shares of common stock may be sold after this offering will not be lower than the current offering price. There is no trading market in our Series F Preferred Stock, and we do not expect a trading market to develop after this offering.

DILUTION

Our pro forma net tangible book value (deficit) as of March 31, 2012 was ($757,442) or ($0.08) per share of common stock (assuming the conversion of all of our shares of Series C Convertible Preferred Stock and Series D Convertible Preferred Stock issued and outstanding as of March 31, 2012) (and excluding shares of common stock issuable upon exercise of all outstanding options and warrants). Net tangible book value (deficit) per share represents total tangible assets less total liabilities, divided by the number of shares of common stock issued and outstanding. After giving effect to the sale of 5,000 shares of Series F Preferred Stock in this offering and assuming the conversion of all the shares of Series F Preferred Stock sold in the offering at a conversion price of $____ (and including shares of common stock issuable upon conversion of all of our shares of Series C Convertible Preferred Stock and Series D Convertible Preferred Stock issued and outstanding as of March 31, 2012, and excluding shares of common stock issued in exchange for our Series C Units subsequent to March 31, 2012, shares issuable upon conversion of all of our issued and outstanding shares of Series E Convertible Preferred Stock issued in April 2012 and shares of common stock issuable upon exercise of all outstanding options and warrants), our as adjusted pro forma net tangible book value as of March 31, 2012 would have been $_____, or $____ per share. This represents an immediate increase in net tangible book value of $____ per share to existing common stockholders and an immediate dilution in net tangible book value of $____ per share to investors in this offering (on an as-if-converted, per share common stock equivalent basis). The following table illustrates this calculation.

Series F Preferred Stock conversion price (on a per share common stock equivalent basis)		$ -
Pro forma net tangible book value per share as of March 31, 2012	$ -	

Increase per share attributable to this offering	$	-
As adjusted pro forma tangible book value per share after this offering		$ -
Dilution per share to new investors in this offering (on a per share common stock equivalent basis)		$ -

The number of shares of common stock outstanding used in the table and calculations above is based on 8,499,898 shares outstanding as of March 31, 2012, 880,980 shares of common stock reserved for issuance upon conversion of

outstanding shares of Series C Convertible Preferred Stock and 461,539 shares of common stock reserved for issuance upon conversion of outstanding shares of Series D Convertible Preferred Stock, and excludes: 1,555,500 shares of common stock reserved for issuance upon exercise of outstanding stock options, at a weighted average exercise price of $2.17 per share; 5,310,388 shares of common stock reserved for issuance upon exercise of outstanding warrants to purchase our common stock, at a weighted average exercise price of $1.28 per share; 1,372,247 shares of common stock and 686,124 warrants to purchase shares of common stock issued upon conversion of the outstanding shares of Series C Convertible Preferred Stock into the February 2012 private placement; 490,196 shares of common stock reserved for issuance upon conversion of outstanding shares of Series E Convertible Preferred Stock sold in April 2012 and 301,724 shares of common stock issuable in lieu of cash payment of dividends and the make whole payment on the shares of Series E Convertible Preferred Stock; and _____ shares of common stock issuable in payment of dividends on the Series F Preferred Stock.

DIVIDEND POLICY

We have not declared or paid cash dividends on our shares of common stock and do not anticipate paying any cash dividends on our shares of common stock in the foreseeable future. We expect to retain future earnings, if any, to fund the development and growth of our business. Our board of directors will determine future dividends on our shares of common stock, if any. The Series F Preferred Stock included in this offering will be entitled to a dividend, payable annually, at a rate of ____% per year of the stated value of the Series F Preferred Stock as described in the section "Description of Securities." So long as any shares of Series E Convertible Preferred Stock or Series F Preferred Stock are outstanding, we may not declare or pay any dividends on our common stock.

CAPITALIZATION

The following table sets forth our capitalization as of March 31, 2012:

- on an actual basis;
- on a pro forma basis to reflect the increase in the number of our authorized shares of common stock from 20,000,000 to 50,000,000, as approved by our stockholders in December 2011 (see the section "Description of Securities", below) and to reflect the sale of 5,000 shares of Series F Preferred Stock in this offering and assuming the conversion of all the shares of Series F Preferred Stock sold in the offering at a conversion price of $____, after deducting the fees and other estimated offering related expenses payable by us.

The offering does not specify any minimum purchase or sale of any specific number of shares. As a result, our actual total capitalization following completion of the offering may be significantly less than the "Pro forma as adjusted" total capitalization reflected in the below table.

You should read the information in this table together with "Management's Discussion and Analysis of Financial Condition and Results of Operations" and our financial statements and the accompanying notes included elsewhere in this prospectus.

	Actual	Pro forma	
Cash and cash equivalents	$15,492		$_
Shareholders' equity:			_

Series A convertible preferred stock, $.01 par value; 313,960 shares authorized; 0 shares issued and outstanding on March 31, 2012	-
Series B convertible preferred stock, $.01 par value; 279,256 shares authorized; 0 shares issued and outstanding on March 31, 2012	-
Series C convertible preferred stock, $.01 par value; 88,098 shares authorized; 88,098 shares issued and outstanding on March 31, 2012 and pro forma	881
Series D convertible preferred stock, $.01 par value; 850 shares authorized; 300 shares issued and outstanding on March 31, 2012 and pro forma	3
Series F convertible preferred stock, $.01 par value; 5,000 shares authorized; none issued and outstanding at March 31, 2012, and 5,000 shares issued and outstanding pro forma	-
Common stock, $.01 par value; 20,000,000 shares authorized; 8,499,898 shares issued and outstanding on March 31, 2012 and pro forma	84,999
Warrants to acquire preferred stock and common stock	2,510,504
Additional paid-in capital	14,358,536
Accumulated deficit	(17,590,761)
Total shareholders' equity	(635,838)
Total capitalization	$(635,838)

The number of shares of common stock outstanding used in the table and calculations above is based on 8,499,898 shares outstanding as of March 31, 2012, 880,980 shares of common stock reserved for issuance upon conversion of outstanding shares of Series C Convertible Preferred Stock and 461,539 shares of common stock reserved for issuance upon conversion of outstanding shares of Series D Convertible Preferred Stock, and excludes: 1,555,500 shares of common stock reserved for issuance upon exercise of outstanding stock options, at a weighted average exercise price of $2.17 per share; 5,310,388 shares of common stock reserved for issuance upon exercise of outstanding warrants to purchase our common stock, at a weighted average exercise price of $1.28 per share; 1,372,247 shares of common stock and 686,124 warrants to purchase shares of common stock issued upon conversion of the outstanding shares of Series C Convertible Preferred Stock into the February 2012 private placement; 490,196 shares of common stock reserved for issuance upon conversion of outstanding shares of Series E Convertible Preferred Stock sold in April 2012 and 301,724 shares of common stock issuable in lieu of cash payment of dividends and the make whole payment on the shares of Series E Convertible Preferred Stock; and _____ shares of common stock issuable in payment of dividends on the Series F Preferred Stock.

DESCRIPTION OF SECURITIES

This prospectus relates to the sale of Series F Preferred Stock. The terms of the Series F Preferred Stock are described below under the caption "Description of Series F Preferred Stock."

Authorized Capital

As of May 15, 2012, our restated articles of organization, as amended, provides that we are authorized to issue 20,000,000 shares of common stock, $.01 par value, and 1,000,000 shares of preferred stock, $.01 par value. Of the 1,000,000 shares of preferred stock, 20,000 shares have been designated as Series A Junior Participating Preferred Stock, 313,960 shares have been designated as Series A Convertible Preferred Stock, 279,256 shares have been designated as Series B Convertible Preferred Stock, 88,098 shares have been designated as Series C Convertible Preferred Stock, 850 shares have been designated as Series D Convertible Preferred Stock and 500 shares have been

designated as Series E Convertible Preferred Stock. As of May 15, 2012, there were 10,356,449 shares of common stock issued and outstanding, 300 shares of Series D Convertible Preferred Stock issued and outstanding and 400 shares of Series E Convertible Preferred Stock issued and outstanding. As of May 15, 2012, there were no shares of Series A Junior Participating Preferred Stock, Series A Convertible Preferred Stock, Series B Convertible Preferred Stock, Series C Convertible Preferred Stock or Series F Preferred Stock issued and outstanding.

In December 2011, our stockholders approved an amendment to our restated articles of organization, as amended, to increase the number of our authorized shares of common stock from 20,000,000 to 50,000,000. We plan to file articles of amendment to our restated articles of organization, as amended, to effect the increase in our authorized shares of common stock prior to completion of this offering.

Description of Shares of Capital Stock

Common Stock

The holders of our common stock are entitled to one vote per share on all matters to be voted on by shareholders and are entitled to receive such dividends, if any, as may be declared from time to time by our board of directors from funds legally available therefor. The holders of our common stock do not have cumulative voting rights in the election of directors. Upon our liquidation or dissolution, subject to the liquidation preferences of the holders of our, Series D Convertible Preferred Stock, Series E Convertible Preferred Stock and Series F Preferred Stock to be sold in this offering, if any are issued and outstanding at the time of our liquidation or dissolution, the holders of our common stock are entitled to receive all assets available for distribution to the shareholders. Shares of our common stock have no preemptive or other subscription rights, and there are no conversion rights or redemption or sinking fund provisions with respect to such shares.

Preferred Stock

A total of 297,336 shares of preferred stock have not yet been designated to any class or series. Our board of directors may, without future action of our shareholders, issue any undesignated shares of preferred stock in one or more classes or series and fix the rights and preferences thereof, including the dividend rights, dividend rates, conversion rights, voting rights, terms of redemption (including sinking fund provisions), redemption price or prices, liquidation preferences and the number of shares constituting any class or series, or the designations of such class or series. The voting and other rights of the holders of our common stock may be subject to and adversely affected by, the rights of holders of any preferred stock that are currently issued or that may be issued in the future.

Description of Series F Preferred Stock

Our restated articles of organization, as amended, authorize 1,000,000 shares of preferred stock. Our board of directors is authorized, without further stockholder action, to establish various classes or series of shares of preferred stock from time to time and to determine the rights, preferences and privileges of any unissued class or series including, among other matters, any dividend rights, dividend rates, conversion rights, voting rights, terms of redemption (including sinking fund provisions), redemption price or prices, liquidation preferences, the number of shares constituting any such class or series, and the designation of such class or series, and to issue any such shares. Our board of directors may, without shareholder approval, issue additional classes or series of shares of preferred stock with voting and conversion rights which could adversely affect the voting power of the holders of the shares of common stock or the Series F Preferred Stock, except as prohibited by the certificate of designation of preferences, rights and limitations of Series F Preferred Stock, or certificate of designation.

In connection with the completion of this offering, we expect our board of directors to adopt resolutions which would authorize 5,000 shares of a new class of shares designated ____% Series F Convertible Preferred Stock (the "Series F Preferred Stock"). The material terms and provisions of the Series F Preferred Stock are summarized below. For the complete terms of the Series F Preferred Stock, you should refer to the form of certificate of designation of ____% Series F Convertible Preferred Stock which has been filed as an exhibit to the registration statement of which this prospectus is a part.

Voting Rights

Except as required by Massachusetts law, and except with respect to the issuance of any preferred stock that is not junior to the Series F Preferred Stock, holders of the Series F Preferred Stock will not have rights to vote on any matters, questions or proceedings, including the election of directors. The holders of Series F Preferred Stock will agree not to vote or exercise dissenter's rights on any shares of common stock they receive upon conversion of, in payment of dividends on, or as a Make-Whole Payment on, their shares of Series F Preferred Stock. We will not, without the affirmative approval of the holders of a majority of the shares of the Series F Preferred Stock then outstanding, voting as a class, (i) alter or change adversely the powers, preferences or rights given to the Series F Preferred Stock, (ii) amend our restated articles of organization, as amended, in breach of any of provision of the certificate of designation relating to the Series F Preferred Stock, (iii) increase the authorized number of shares of Series F Preferred Stock, or (iv) enter into any agreement with respect to the foregoing. For so long as at least 100 shares of Series F Preferred Stock remain outstanding, we will not, without the affirmative approval of the holders of a majority of the shares of the Series F Preferred Stock then outstanding, voting as a class, (i) authorize or create any class of stock ranking as to distribution of dividends senior to the Series F Preferred Stock or (ii) liquidate, dissolve or wind-up our business and affairs,

Conversion

Subject to certain ownership limitations as described below, each share of Series F Preferred Stock is convertible at any time at the option of the holder into shares of our common stock at a conversion ratio determined by dividing the stated value of the Series F Preferred Stock (or $1,000) by a conversion price of $____ per share. Accordingly, each share of Series F Preferred Stock is convertible into approximately _____ shares of common stock. The conversion price is subject to adjustment in the case of stock splits, stock dividends, combinations of shares and similar recapitalization transactions. There are no anti-dilution provisions, including resets or ratchets that adjust the conversion price or conversion ratio, other than the customary adjustments for stock splits, combinations of shares and similar recapitalization transactions.

If the average volume weighted average price of our common stock for 20 trading days during any consecutive 25 trading day period beginning after the original issue date (a "Threshold Period"), exceeds $2.00 per share, at our election, upon 20 days advance written notice (a "forced conversion notice") to all holders of Series F Preferred Stock, we may require each holder to convert all or part of such holder's Series F Preferred Stock plus all accrued but unpaid dividends thereon and other amounts due in respect of the Series F Preferred Stock, including the Make-Whole Payment, into shares of common stock at the then current conversion ratio. We may not deliver a forced conversion notice, and such notice shall not be effective if delivered, unless all of the Equity Conditions (as defined below) have been met on each day during the Equity Conditions Measuring Period (as described below). We may not require conversion of more than 1,000 shares of Series F Preferred Stock in any Equity Conditions Measuring Period. The "Equity Conditions" are as follows:

- on each day during the period beginning 30 trading days before the date we give the holder notice of conversion and ending 20 trading days after the date of the conversion notice, which we refer to as the Equity Conditions Measuring Period, our common stock is designated for quotation on a trading market and has not been suspended from trading on such exchange or market nor shall delisting or suspension by such exchange or market been threatened or pending either (A) in writing by such exchange or market or (B) by falling below the then effective minimum listing maintenance requirements of such exchange or market;

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during the Equity Conditions Measuring Period, we have delivered shares issuable upon all conversions or redemptions of the Series F Preferred Stock in accordance with their terms to the holder on a timely basis;

- we have no knowledge of any fact that would cause both the registration statement not to be effective and available for the issuance of the shares of common stock upon such conversion, Section 3(a)(9) of the Securities Act not to be available for the issuance of the shares of common stock upon such conversion and

- Rule 144 under the Securities Act not to be available for the resale of all the shares of common stock issuable upon conversion of the Series F Preferred Stock;

- a minimum of $600,000 in aggregate trading volume has traded on the trading market during 20 out of 25 trading days prior to the date of determination; and

- we are otherwise in compliance with and shall not have breached any provision, covenant, representation or warranty of any transaction document.

Subject to limited exceptions, a holder of Series F Preferred Stock will not have the right to convert, and we will not have the right to force such holder to convert, any portion of his, her, or its Series F Preferred Stock if the holder, together with its affiliates, would beneficially own in excess of 9.99% of the number of our shares of common stock outstanding immediately after giving effect to his, her, or its conversion.

Dividends and Make-Whole Payments

Each holder of the Series F Preferred Stock will initially be entitled to receive dividends at the rate of ____% per year of the stated value of $1,000 for each share of Series F Preferred Stock, payable annually beginning on the first such date after the original issue date, and on each conversion date and redemption date. The dividend rate is subject to adjustment, such that the rate will be adjusted downward by 98.731 basis points for each $0.05, if any, that the closing bid price of our common stock rises above $____ per share, subject to a minimum dividend rate of 2.00% per year, and will be adjusted upward by 98.731 basis points for each $0.05, if any, that the closing bid price of our common stock falls below $____ per share, subject to a maximum dividend rate of _____% per year. The dividend rate will be based on the closing bid price of our common stock on the trading day immediately prior to the dividend payment date, conversion date or redemption date. We can elect to pay the dividends in cash or in shares of common stock, or a combination thereof. If we choose to pay dividends in shares of common stock, the shares of common stock used to pay the dividends will be valued at 85% of the volume weighted average price of our shares of common stock on the trading day immediately prior to the day on which the dividend shares are delivered electronically to the holders of Series F Preferred Stock.

In the event a holder converts his, her or its shares of Series F Preferred Stock, or we redeem or elect a forced conversion of the Series F Preferred Stock, in each case prior to the eighth anniversary date of the original issue date, we must pay to the holder in cash, or at our option, in shares of common stock valued as described below, or a combination of cash and shares of common stock, with respect to the Series F Preferred Stock so converted or redeemed, an amount equal to the amount of dividends that otherwise would have been due through such anniversary less the amount of any dividends paid in cash or in shares of common stock on such Series F Preferred Stock on or before the date of conversion or redemption. Shares of common stock used to pay all or a portion of such payment will be valued at 85% of the volume weighted average price of our shares of common stock on the trading day immediately prior to the day on which the Make-Whole Payment is delivered electronically to the holders of the Series F Preferred Stock.

The Series F Preferred Stock ranks with respect to dividend rights (1) senior to our common stock, (2) junior to our Series A Convertible Preferred Stock, Series B Convertible Preferred Stock and Series C Convertible Preferred Stock, (3) senior to our Series D Convertible Preferred Stock, and (4) pari passu with our Series E Convertible Preferred Stock. So long as any shares of Series F Preferred Stock are outstanding, no dividends or other distributions may be paid, declared or set apart with respect to our common stock. Our common stock may not be redeemed while any

shares of Series F Preferred Stock are outstanding.

Redemption

We may redeem for cash any or all of the shares of Series F Preferred Stock at any time after the eighth anniversary of the original issue date of the Series F Preferred Stock at the redemption price per share, which we refer to as the Series F Redemption Price, equal to $1,000 per share of Series F Preferred Stock, plus any accrued but unpaid dividends with respect to such shares of Series F Preferred Stock, which we refer to as the Series F Liquidation Value. Prior to the eighth anniversary of the original issue date of the Series F Preferred Stock, we may,

at our option, redeem the shares at any time at a price per share equal to the Series F Liquidation Value plus any dividends that otherwise would have been payable through such anniversary, less any dividends that have been paid, which we refer to as the Early Redemption Price.

Liquidation

The Series F Preferred Stock ranks, with respect to rights upon liquidation, winding-up or dissolution, (1) senior to our common stock until such time as fewer than 250 shares of Series F Preferred Stock are outstanding, and thereafter on a pari passu basis with our common stock, (2) junior with respect to all of our currently outstanding preferred stock, other than our Series E Convertible Preferred Stock, which is pari passu with the Series F Preferred Stock upon a liquidation, winding-up or dissolution, and (3) junior to our existing and future indebtedness.

In the event of our liquidation, dissolution, or winding up, for so long as at least 250 shares of Series F Preferred Stock are outstanding, holders will receive a payment equal to $1,000 per share of Series F Preferred Stock plus accrued and unpaid dividends before any proceeds are distributed to the holders of our common stock. Thereafter, holders will receive the liquidation amount of $1,000 per share of Series F Preferred Stock plus accrued and unpaid dividends on a proportionate and pari passu basis with the holders of our common stock.

Shareholder Rights Plan

On February 27, 2003, our board of directors declared a dividend of one preferred share purchase right (a "Right") for each outstanding share of common stock on March 21, 2003 (the "Record Date") to the stockholders of record on that date. After March 21, 2003, a Right will be attached to each share of common stock issued by our company, including with each share of common stock issued upon conversion of the Series F Preferred Stock sold in this offering and in lieu of cash payment of dividends, including the Make-Whole Payment, on the Series F Preferred Stock. Each Right gives the holder the right to purchase from us one one-thousandth of a share of our Series A Junior Participating Preferred Stock (the "Preferred Shares"), at a price of $45.00 per one one-thousandth of a Preferred Share (the "Purchase Price"), subject to adjustment. Selected terms and provisions of the Rights are summarized below. For a complete description and terms of the Rights, you should refer to the Rights Agreement, dated as of February 27, 2003, between the Company and Computershare Trust Company, Inc., as amended (the "Rights Agreement").

Until the earlier to occur of (i) 10 days following a public announcement that a person or group of affiliated or associated persons has acquired beneficial ownership of 15% or more of the outstanding shares of common stock or any person or group who as of February 27, 2003 beneficially owned 15% or more of the outstanding shares of common stock acquired beneficial ownership of any additional shares of common stock (with certain exceptions, an "Acquiring Person") or (ii) 10 business days (or such later date as may be determined by action of our board of directors prior to such time as any person becomes an Acquiring Person) following the beginning of, or announcement of an intention to make, a tender offer or exchange offer the completion of which would result in the beneficial ownership by a person or group of 15% or more of such outstanding shares of common stock (the earlier of such dates being called the "Distribution Date"), the Rights will be evidenced by a summary of rights attachment to the common stock certificates that gave rise to the Rights.

The Rights Agreement provides that, until the Distribution Date, the Rights will be transferred with and only with the shares of common stock. Until the Distribution Date (or earlier redemption or expiration of the Rights), new common stock certificates issued after the Record Date or upon transfer or new issuance of shares of common stock will contain a note incorporating the Rights Agreement by reference. Until the Distribution Date (or earlier redemption or expiration of the Rights), the surrender or transfer of any certificates for shares of common stock outstanding as of the Record Date, even without such a note or a copy of the summary of rights being attached to the certificate, will also constitute the transfer of the Rights associated with the shares of common stock represented by such certificate. As soon as practicable following the Distribution Date, separate certificates evidencing the Rights ("Right Certificates") will be mailed to holders of record of the shares of common stock as of the close of business on the Distribution Date and such separate Right Certificates alone will evidence the Rights.

The Rights are not exercisable until the Distribution Date. The Rights will expire on February 27, 2013 (the "Final Expiration Date"), unless the Final Expiration Date is advanced or extended or unless we redeem or exchange the Rights at an earlier time, in each case, as described below.

The purchase price payable, and the number of Preferred Shares or other securities or property issuable, upon exercise of the Rights are subject to adjustment from time to time to prevent dilution (i) in the event of a stock dividend on, or a subdivision, combination or reclassification of, the Preferred Shares, (ii) upon the grant to holders of the Preferred Shares of certain rights or warrants to subscribe for or purchase Preferred Shares at a price, or securities convertible into Preferred Shares with a conversion price, less than the then current market price of the Preferred Shares or (iii) upon the distribution to holders of the Preferred Shares of evidences of indebtedness or assets (excluding regular periodic cash dividends paid out of earnings or retained earnings or dividends payable in Preferred Shares) or of subscription rights or warrants (other than those referred to above).

The number of outstanding Rights and the number of one one-thousandths of a Preferred Share issuable upon exercise of each Right are also subject to adjustment in the event of a stock split of the common stock or a stock dividend on the common stock payable in shares of common stock or subdivisions, consolidations or combinations of the common stock occurring, in any such case, prior to the Distribution Date.

Preferred Shares purchasable upon exercise of the Rights will not be redeemable. Each holder of Preferred Shares will receive a quarterly dividend payment of 1,000 times the dividend declared per share of common stock. If we

liquidate, the holders of the Preferred Shares will be entitled to an aggregate payment of 1,000 times the aggregate payment made per share of common stock. Each Preferred Share will have 1,000 votes, voting together with the common stock. If we merge, consolidate or are a party to another transaction where shares of common stock are exchanged, each holder of Preferred Shares will have the right to receive 1,000 times the amount received per share of common stock. These rights are protected by customary antidilution provisions.

Because of the Preferred Shares' dividend, liquidation and voting rights, the value of the one one-thousandth of a Preferred Share purchasable upon exercise of each Right should be similar in value to one share of our common stock.

If any person becomes an Acquiring Person, each holder of a Right, other than Rights beneficially owned by the Acquiring Person and its affiliates and associates (which will thereafter be void), will thereafter have the right to receive upon exercise that number of shares of common stock having a market value of two times the exercise price of the Right. If, at any time after a Person becomes an Acquiring Person, we are acquired in a merger or other business combination transaction or 50% or more of our consolidated assets or earning power are sold, proper provision will be made so that each holder of a Right will thereafter have the right to receive, upon the exercise thereof at the then current exercise price of the Right, that number of shares of common stock of the person with whom we have engaged in the transaction described above (or its parent) which at the time of such transaction will have a market value of two times the exercise price of the Right.

If we do not have sufficient shares of authorized common stock to issue the number of shares of common stock required, or if our board of directors chooses, we will deliver upon payment of the exercise price of a Right an amount of cash or securities or other assets equivalent in value to the shares of common stock issuable upon exercise of a Right; provided that, if we fail to meet this obligation within 30 days following the first occurrence of an event triggering the right to purchase shares of common stock, we must deliver, upon exercise of a Right but without requiring payment of the exercise price then in effect, shares of common stock (to the extent available) and then, if necessary, Preferred Shares (to the extent available) and then, if necessary, cash equal in value to the difference between the value of the shares of common stock otherwise issuable upon the exercise of a Right and the exercise price then in effect. Our board of directors may extend the 30-day period described above for up to an additional 60 days to permit the taking of action that may be necessary to authorize sufficient additional shares of common stock to permit the issuance of shares of common stock upon the exercise in full of the Rights.

At any time after any person becomes an Acquiring Person and before the acquisition by any person or group of a majority of the outstanding shares of common stock, our board of directors may exchange the Rights (other than Rights owned by such person or group which have become void), in whole or in part, for shares of common stock or Preferred Shares at an exchange ratio of one share of common stock, or a fractional Preferred Share (or other preferred stock) of the same value as a share of common stock, per Right (subject to adjustment).

With some exceptions, no adjustment in the Purchase Price will be required until cumulative adjustments require an adjustment of at least 1% in such Purchase Price. No fractional Preferred Shares or shares of common stock will be issued (other than fractions that are integral multiples of one one-thousandth of a Preferred Share, which may, at our election, be evidenced by depositary receipts) and instead, an adjustment in cash will be made based on the current market price of the Preferred Shares or the shares of common stock.

At any time before any person becomes an Acquiring Person, our board of directors may redeem the Rights in whole, but not in part, at a price of $0.001 per Right (the "Redemption Price") payable, at our option, in cash, shares of common stock or such other form of consideration as our board of directors may choose. The redemption of the Rights may be made effective at the time and in the manner that our board of directors in its sole discretion may choose. Immediately upon any redemption of the Rights, the right to exercise the Rights will terminate and the only right of the holders of Rights will be to receive the Redemption Price.

For so long as the Rights are then redeemable, we may amend the Rights Agreement in any manner except that we may not change the Redemption Price. After the Rights are no longer redeemable, we may amend the Rights Agreement in any manner that does not negatively affect the interests of Rights holders, except that we may not change the Redemption Price.

Until a Right is exercised, the Right holder will have no rights as our stockholder, including, without limitation, the right to vote at our meetings or to receive dividends from us.

Massachusetts Law

Massachusetts Anti-Takeover and Related Statutes

Control Share Acquisition Law. Under Chapter 110D of the Massachusetts General Laws governing "control share acquisitions," any shareholder of certain publicly-held Massachusetts corporations who acquires certain ranges of voting power — one-fifth or more but less than one-third of all voting power, one-third or more but less than a majority of all voting power, or a majority or more of all voting power — may not (except in certain transactions) vote such stock unless the shareholders (excluding the shares held by the interested shareholders) of the corporation so authorize. As permitted by Chapter 110D, our amended and restated by-laws, as amended, include a provision which excludes us from the applicability of that statute.

Business Combination Statute. Chapter 110F of the Massachusetts General Laws, entitled "Business Combinations with Interested Shareholders," applies to publicly-held Massachusetts corporations with 200 or more shareholders of record. Generally, this statute prohibits such Massachusetts corporations from engaging in a "business combination" with an "interested shareholder" for a period of three years following the date of the transaction in which the person becomes an interested shareholder unless (a) the interested shareholder obtains the approval of the corporation's board of directors prior to becoming an interested shareholder; (b) the interested shareholder acquires at least 90% of the voting stock of the corporation (excluding shares held by certain affiliates of the corporation) outstanding at the time he becomes an interested shareholder; or (c) the business combination is both approved by the board of directors and authorized at an annual or special meeting of shareholders by the holders of at least two-thirds of the outstanding voting stock of the corporation (excluding shares held by the interested shareholder). An "interested shareholder" is a person who, together with affiliates and associates, owns (or at any time within the prior three years did own) 5% or more of the outstanding voting stock of the corporation. A "business combination" includes, among other transactions, a merger, stock or asset sale and other transactions resulting in a financial benefit to the shareholder. Our restated articles of organization, as amended, and amended and restated by-laws, as amended, do not expressly provide for opting out of the provisions of Chapter 110F. As a result, the application of this statute to us could discourage or make it more difficult for any person or group of persons to attempt to obtain control over us. We may at any time amend our restated articles of organization, as amended, or amended and restated by-laws, as amended, to elect not to be governed by Chapter 110F, by a vote of the holders of a majority of our outstanding common stock, but such an amendment would not be effective for 12 months and would not apply to a business combination with any person who became an interested shareholder prior to the date of the amendment.

Certain Provisions of Our Restated Articles of Organization, as amended, Amended and Restated By-Laws, as amended, and Shareholder Rights Plan

Our restated articles of organization, as amended, include several provisions which may render more difficult an unfriendly tender offer, proxy contest, merger or other change in control of our ownership.

Preferred Stock. Our restated articles of organization, as amended, permit our board of directors to issue preferred stock in one or more series and to fix the rights, preferences, privileges and restrictions thereof, without further vote or action by the shareholders. The issuance of preferred stock may have the effect of delaying, deferring or preventing our change in control and may adversely affect the voting and other rights of the holders of our common stock. See “Preferred Stock” and “Shareholders Rights Plan” above.

Classification of Board of Directors. Our restated articles of organization, as amended, provide for the classification of our board of directors into three classes, with the classes being elected for staggered three-year terms. At each annual meeting of shareholders, directors will be elected to succeed those in the class whose term then expires, and each elected director shall serve for a term expiring at the third succeeding annual meeting of shareholders after such director's election, and until the director's successor is elected and qualified. Thus, directors stand for election only once in three years. This provision also restricts the ability of shareholders to enlarge the

board of directors. Changes in the number of directors may be effected by a vote of a majority of the Continuing Directors (as defined in our restated articles of organization, as amended) or by the shareholders by vote of at least 80% of our outstanding common stock, voting as a single class. Under this provision, directors may only be removed with or without cause by the affirmative vote of the holders of at least 80% of the combined voting power of the outstanding shares of our common stock, voting together as a single class, or upon the vote of a majority of the Continuing Directors.

Fair Price Provision. Our restated articles of organization, as amended, contain a "Fair Price Provision" that is intended to protect shareholders who do not tender their shares in a takeover bid by guaranteeing them a minimum price for their shares in any subsequent attempt to purchase such remaining shares at a price lower than the acquirer's original acquisition price. The Fair Price Provision requires the affirmative vote of the holders of at least 80% of our outstanding common stock for certain business combinations with a Related Person (as defined in our restated articles of organization, as amended), unless specified price criteria and procedural requirements are met or the business combination is approved by a majority of the Continuing Directors. Continuing Director is defined in our restated articles of organization, as amended, to include any director (i) who is not an affiliate of any beneficial owner of 5% of the voting power of our outstanding voting stock, and (ii) who served as a director before such beneficial owner acquired his 5% beneficial ownership interest. Any successor of a Continuing Director who is unaffiliated with a 5% beneficial owner and who is recommended to succeed a Continued Director by a majority of the Continuing Directors is also a Continuing Director. A Related Person includes a person who, together with affiliates and associates, beneficially owns more than 5% our outstanding common stock.

Shareholder Rights Plan. Under the Rights Agreement described above, each outstanding share of common stock has attached to it one purchase right which entitles the holder to purchase from us one one-thousandth of a share of Series A Junior Participating Preferred Stock at a price of $45.00, subject to adjustment. This could prevent or delay a change in control of our ownership.

Indemnification Provision. Our restated articles of organization, as amended, provide that we may, either in our bylaws or by contract, provide for the indemnification of our directors, officers, employees and agents, by whomever elected or appointed, to the fullest extent permitted by applicable law, as it may be amended from time to time. Our amended and restated bylaws, as amended, authorize us to indemnify our directors, officers, employees, and agents. Insofar as indemnification for liabilities arising under the Securities Act of 1933 may be permitted to directors, officers or persons controlling the registrant pursuant to the foregoing provisions, the registrant has been informed that in the opinion of the Securities and Exchange Commission such indemnification is against public policy as expressed in the Act and is therefore unenforceable.

MARKET FOR COMMON EQUITY AND RELATED STOCKHOLDER MATTERS

Market Information

As of April 5, 2012, our common stock was listed and commenced trading on the OTCQB Marketplace, operated by the OTC Markets Group, under the ticker symbol “PBIO”. On May 15, 2012, the last reported sale price of our common stock on the OTCQB Marketplace was $0.40 per share. The market for our common stock is limited and volatile. The following table sets forth the range of high and low bid quotations or high and low closing prices, as applicable, for our common stock for each of the periods indicated as reported by The NASDAQ Capital Market through April 4, 2012 and as reported by the OTCQB Marketplace since April 5, 2012. The prices quoted on the OTCQB Marketplace and The NASDAQ Capital Market reflect inter-dealer prices, without retail mark-up, mark-down or commissions. The OTCQB Marketplace and The NASDAQ Capital Market prices listed below may not represent actual transaction prices. There is no established public trading market for the Series F Preferred Stock and we do not expect a market to develop.

	Period Ended May 15, 2012	
	High	Low
Second Quarter (through May 15, 2012)	$0.75	$0.36
First Quarter	$0.97	$0.50

	Year Ended December 31, 2011	
	High	Low
First Quarter	$1.53	$1.11
Second Quarter	$1.25	$0.91
Third Quarter	$1.15	$0.62
Fourth Quarter	$0.96	$0.51

	Year Ended December 31, 2010	
	High	Low
First Quarter	$1.97	$1.36
Second Quarter	$1.84	$1.02
Third Quarter	$1.77	$1.09
Fourth Quarter	$2.29	$1.24

The table above shows only historical comparisons. The comparisons may not provide meaningful information to you in determining whether to purchase our Series F Preferred Stock because our Series F Preferred Stock is not traded on any exchange. You are urged to obtain current market quotations for our common stock and to review carefully the other information contained in this prospectus and the registration statement of which this prospectus is a part.

Holders of Record

As of May 15, 2012, there were approximately 235 registered holders and 1,400 beneficial holders of shares of our common stock.

Dividend Policy

Since we began operations in 2005 as Pressure BioSciences, Inc., we have not paid or declared any cash dividends on our common stock. We currently intend to retain any earnings for future growth and, therefore, do not expect to pay cash dividends on our common stock in the foreseeable future. However, we are required to pay dividends on our Series E Convertible Preferred Stock at the rate of 10.5% per year of the stated $1,000 per share value of the Series E Convertible Preferred Stock, payable in cash or in shares of common stock at our option, until conversion or redemption. The shares of Series F Preferred Stock included in this offering are entitled to a dividend, payable annually in cash or shares of our common stock at our option, at a rate of 5.25% per year until conversion or redemption as described in the section “Description of Securities.” So long as any shares of Series E Convertible Preferred Stock or Series F Preferred Stock are outstanding, we may not declare or pay any dividends on our common stock.

Equity Compensation Plan

We maintain a number of equity compensation plans for employees, officers, directors and other entities and individuals whose efforts contribute to our success. The table below sets forth certain information as of our fiscal year ended December 31, 2011 regarding the shares of our common stock available for grant or granted under our equity compensation plans.

Plan Category	Number of securities to be issued upon exercise of outstanding options	Weighted-average exercise price of outstanding options	Number of securities remaining available for future issuance under equity compensation plans
Equity compensation plans approved by security holders(1)	1,508,500	$ 2.34	394,500

(1) Includes the following plans: 1999 Non-Qualified Stock Option Plan and 2005 Equity Incentive Plan.

For additional information regarding our equity compensation plans, please see Note 8 in the Notes to Consolidated Financial Statements for the fiscal year ended December 31, 2011 included elsewhere in this prospectus.

PLAN OF DISTRIBUTION

Moody Capital Solutions, Inc., which we refer to herein as the Placement Agent, has agreed to act as our exclusive Placement Agent in connection with this offering subject to the terms and conditions of the Placement Agency Agreement dated May 25, 2012. The Placement Agent is not purchasing or selling any Series F Preferred Stock offered by this prospectus nor is it required to arrange the purchase or sale of any specific number or dollar amount of Series F Preferred Stock, but has agreed to use its best efforts to arrange for the sale of all of the Series F Preferred Stock 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 Series F Preferred Stock offered pursuant to this prospectus. There can be no assurance that we will sell the entire amount of Series F Preferred Stock offered pursuant to this prospectus.

Confirmations and definitive prospectuses will be delivered, or otherwise made available, to all purchasers who agree to purchase Series F Preferred Stock, informing the purchasers of the closing date(s) as to such Series F Preferred Stock. Purchasers will also be informed of the date and manner in which they must transmit the purchase price for their Series F Preferred Stock.

On each closing date, the following will occur:

- we will receive funds in the amount of the aggregate purchase price of the Series F Preferred Stock being sold by us on such closing date;
- we will deliver Series F Preferred Stock being sold on such closing date; and
- we will pay the Placement Agent, a Placement Agent fee in accordance with the terms of our Placement Agency Agreement.

We have agreed to pay the Placement Agent a Placement Agent’s cash fee equal to 3% of the gross proceeds of the offering. The maximum aggregate gross proceeds of the offering is $5,000,000. Subject to compliance with FINRA Rule 5110(f)(2)(D), we have also agreed to reimburse the Placement Agent's expenses up to a maximum of 1% of the gross proceeds raised in the offering.

The following table shows the per share and total Placement Agent's fees we will pay to the Placement Agent in connection with the sale of the Series F Preferred Stock offered pursuant to this prospectus assuming the purchase of all of the Series F Preferred Stock offered hereby.

Per unit Placement Agent's fees	$	30
Maximum offering total	$	150,000

Because there is no minimum offering amount required as a condition to the closing in this offering, the actual total offering commissions, if any, are not presently determinable and may be substantially less than the maximum amount set forth above.

Our obligations to issue and sell Series F Preferred Stock to the purchasers are 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 Series F Preferred Stock is subject to the conditions set forth in the securities purchase agreement as well, which may be waived by the purchaser.

We have agreed to indemnify the Placement Agent against certain liabilities, including liabilities under the Securities Act of 1933, as amended, or the Securities Act. We may also be required to contribute to payments the Placement Agent may be required to make in respect of such liabilities.

We are offering pursuant to this prospectus up to 5,000 of our Series F Preferred Stock, but there can be no assurance that the offering will be fully subscribed. Accordingly, we may sell substantially less than 5,000 of our Series F Preferred Stock, in which case our net proceeds would be substantially reduced and the total Placement Agent fees may be substantially less than the maximum total set forth above.

We estimate the total offering expenses of this offering that will be payable by us, excluding the Placement Agent's fees and expenses, will be approximately $300,000, which includes our registration, legal, accounting and printing costs and various other fees.

The foregoing does not purport to be a complete statement of the terms and conditions of the Placement Agency Agreement and the stock purchase agreement. A copy of the form of stock purchase agreement with the investors is included as an exhibit to the registration statement of which this prospectus forms a part. See "Where You Can Find More Information" on page 76 of this prospectus.

The Placement Agent is deemed to be 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 Series F Preferred Stock sold by it while acting as principal will be deemed to be underwriting discounts or commissions under the Securities Act. As an underwriter, the Placement Agent is required to comply with the Securities Act and the Exchange Act, including, without limitation, Rule 415(a)(4) under the Securities Act and 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 Series F Preferred Stock 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.

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

The following discussion and analysis should be read in conjunction with our Consolidated Financial Statements and related Notes included elsewhere in this prospectus. Some of the information contained in this Management's Discussion and Analysis of Financial Condition and Results of Operations and elsewhere in this prospectus may contain forward-looking statements based on management's current expectations and projections about future events. There can be no assurance that actual results, outcomes or business conditions will not differ materially from those expected or projected in such forward-looking statements as a result of various factors, including, among others, trends in the demand for our products and services, trends in the industries that consume our products and services, global economic conditions, especially as they impact our markets, our ability to develop new products and services and other potential risks and uncertainties discussed in the Risk Factors section of this prospectus. The dollar amounts included in this Management's Discussion and Analysis of Financial Condition and Results of Operations are in thousands unless otherwise indicated. References to fiscal years refer to the Company's fiscal year which ends on December 31.

Overview

We are focused on solving the challenging problems inherent in biological sample preparation, a crucial laboratory step performed by scientists worldwide working in biological life sciences research. Sample preparation is a term that refers to a wide range of activities that precede most forms of scientific analysis. Sample preparation is often complex, time-consuming, and in our belief, one of the most error-prone steps of scientific research. It is a widely-used laboratory undertaking, the requirements of which drive what we believe is a large and growing worldwide market. We have developed and patented a novel, enabling technology platform that can control the sample preparation process. It is based on harnessing the unique properties of high hydrostatic pressure. This process, called pressure cycling technology, or PCT, uses alternating cycles of hydrostatic pressure between ambient and ultra-high levels (35,000 psi or greater) to safely, conveniently and reproducibly control the actions of molecules in biological samples, such as cells and tissues from human, animal, plant, and microbial sources.

Our pressure cycling technology uses internally developed instrumentation that is capable of cycling pressure between ambient and ultra-high levels - at controlled temperatures and specific time intervals - to rapidly and repeatedly control the interactions of bio-molecules, such as DNA, RNA, proteins, lipids, and small molecules. Our laboratory instrument, the Barocycler®, and our internally developed consumables product line, including PULSE (Pressure Used to Lyse Samples for Extraction) Tubes, other processing tubes, and application specific kits (which include consumable products and reagents) together make up our PCT Sample Preparation System, or PCT SPS.

We have experienced negative cash flows from operations with respect to our pressure cycling technology business since our inception. As of March 31, 2012, we did not have adequate working capital resources to satisfy our current liabilities and as a result we have substantial doubt about our ability to continue as a going concern. Based on our current projections, including equity financing completed subsequent to March 31, 2012, we believe our current cash resources will enable us to extend our cash resources to fund normal operations until the end of May 2012.

The audit report issued by our independent registered public accounting firm on our audited financial statements for the fiscal year ended December 31, 2011 contains an explanatory paragraph regarding our ability to continue as a going concern. The audit report issued by our independent registered public accounting firm for our financial statements for the fiscal year ended December 31, 2011 states that the auditing firm has substantial doubt in our ability to continue as a going concern due to the risk that we may not have sufficient cash and liquid assets at December 31, 2011 to cover our operating and capital requirements for the next twelve-month period; and if sufficient cash cannot be obtained, we would have to substantially alter, or possibly even discontinue, operations. The accompanying

financial statements do not include any adjustments that might result from the outcome of this uncertainty.

Such an opinion from our independent registered accounting firm could adversely affect our ability to obtain additional financing on favorable terms, if at all, as such an opinion may cause investors to have reservations about

our long-term prospects, and may adversely affect our relationships with customers. There can be no assurance that our auditing firm will not qualify its opinion in the future. If we cannot successfully continue as a going concern, our stockholders may lose their entire investment in us.

Management has developed a plan to continue operations. This plan includes further reductions in expenses and obtaining equity or debt financing including our most recently completed financing in April 2012, in which we sold shares of convertible preferred stock for net proceeds of approximately $395,000. Although we have successfully completed equity financings and reduced expenses in the past, we cannot assure you that our plans to address these matters in the future will be successful. Additional financing may not be available to us on a timely basis, if at all, or on terms acceptable to us. In the event we are unable to raise sufficient funds on terms acceptable to us, we may be required to:

- severely limit or cease our operations or otherwise reduce planned expenditures and forego other business opportunities, which could harm our business. The financial statements included in this prospectus do not include adjustments that may be required in the event of the disposal of assets or the discontinuation of the business;

- obtain financing with terms that may have the effect of diluting or adversely affecting the holdings or the rights of the holders of our capital stock; or

- obtain funds through arrangements with future collaboration partners or others that may require us to relinquish rights to some or all of our technologies or products.

We currently focus the majority of our resources in the area of biological sample preparation, referring to a wide range of activities that precede scientific analysis performed by scientists worldwide working in biological life sciences research.

Within the broad field of biological sample preparation, we focus the majority of our product development efforts in three specific areas: mass spectrometry, forensics, and histology.

- Mass Spectrometry. A mass spectrometer is a laboratory instrument used in the analysis of biological samples in life sciences research. We believe that mass spectrometry is a several billion dollar market, and that PCT offers significant advantages in speed and quality compared to current techniques used in the preparation of samples for mass spectrometry analysis.

- Forensics. The detection of DNA has become a part of the analysis of forensic samples by laboratories and criminal justice agencies worldwide in their efforts to identify the perpetrators of violent crimes and missing persons. Scientists from the University of North Texas and Florida International University have reported improvements in DNA yield from forensic samples (e.g., bone, hair) using PCT in the sample preparation process. We believe that that PCT may be capable of differentially extracting DNA from sperm and (female) epithelial cells in swabs collected from rape victims and stored in rape kits. We believe that there are many completed but untested rape kits that remain untested for reasons such as cost, time, and quality of results. We further believe that the ability to differentially extract DNA from sperm and not epithelial cells could reduce the cost of such testing, while increasing quality, safety, and speed.

- Histology. The most commonly used technique worldwide for the preservation of cancer and other tissues for subsequent pathology evaluation is formalin-fixation followed by paraffin-embedding (“FFPE”). We believe that the quality and analysis of FFPE tissues is highly problematic, and that PCT offers significant advantages over current processing methods, including standardization, speed, biomolecule recovery, and safety.

We view federal agency grants to be an important part of our business plan. These types of grants allow us to bill the federal agency for work that we are planning to perform as part of the development and commercialization of our technology. We generally start by submitting initial grant requests that are in response to requests for proposals ("RFPs") from the federal government through their Small Business Innovation Research ("SBIR")

program. Initial ("SBIR Phase I") grants are meant to fund approved research projects for six months, and generally have budgets of approximately $100,000 to $150,000. Additionally, because our work in SBIR Phase I grants has been successful, we have applied, and may in the future apply, for larger National Institutes of Health ("NIH") SBIR Phase II grants. Such larger grants are typically for a two-year period and are in excess of $750,000 to support significant research projects in areas we would otherwise expect to support with internal funds should SBIR Phase II grants not be awarded. To date we have been awarded two NIH SBIR Phase I grants and one SBIR Phase II grant.

In March 2010, the U.S. Army Medical Research Acquisition Activity ("USAMRAA") awarded us an SBIR Phase I grant for approximately $100,000. We completed the work on the grant in October 2010.

During the second half of 2011, we commenced work on a new NIH SBIR Phase I grant in the approximate amount of $160,000, and on a Department of Defense SBIR Phase II grant in the approximate amount of $750,000.

Until April 5, 2012, our common stock was traded on The NASDAQ Capital Market. As a result of our stockholders' equity falling below the minimum $2.5 million requirement and the bid price of our common stock remaining below the minimum $1.00 per share requirement for continued inclusion on The NASDAQ Capital Market, on April 5, 2012, our common stock was delisted from The NASDAQ Capital Market and on April 5, 2012 our common stock began trading on the OTCQB Marketplace under the ticker symbol PBIO. We continue to file periodic reports with the Securities and Exchange Commission in accordance with the requirements of Section 12(g) of the Securities Exchange Act of 1934, as amended.

Adjustment of Amounts Previously Reported on Warrant Valuations

At December 31, 2011, we reviewed our accounting for the valuation of the modifications in the third quarter of 2011 made to the warrants issued in connection with the Series A Convertible Preferred Stock and Series B Convertible Preferred Stock private placements. We determined that the valuation methodology used should be adjusted. As a result of the change in methodology, the revised valuations differ from those previously reported in the unaudited financial statements included in our Quarterly report on Form 10-Q for the period ended September 30, 2011. There is no material effect on the audited financial statements for the year ended December 31, 2011.

The effect of this adjustment is an increase in a deemed dividend in determining Net loss to Common Shareholders for the period ending September 30, 2011. There is no material effect on reported Stockholders' Equity, Net Loss, or Cash Flows. The effect on amounts as previously reported is as follows:

	September 30, 2011			
	As Previously Reported	As Adjusted	% Change	
Balance Sheets (Stockholders' Equity)				
Warrants to acquire preferred stock and common stock	1,823,852	2,203,101	21	%
Additional paid-in capital	12,802,217	12,802,217	0	%
Accumulated deficit	(14,545,260)	(14,924,509)	3	%
Stockholders' equity	145,388	145,388	0	%

	For the Three Months Ended September 30, 2011		
	As Previously Reported	As Adjusted	% Change

Statements of Operations				
Net loss	$(561,723)	$(561,723)	0	%
Net loss applicable to common shareholders	(953,846)	(1,333,095)	40	%
Net loss per share attributable to common shareholders	(0.15)	(0.21)	42	%

	For the Nine Months Ended September 30, 2011			
	As Previously Reported	As Adjusted	% Change	
Statements of Operations				
Net loss	$(2,153,269)	$(2,153,269)	0	%
Net loss applicable to common shareholders	(3,092,843)	(3,472,092)	12	%
Net loss per share attributable to common shareholders	(0.50)	(0.56)	11	%

We have analyzed the impact of these adjustments and concluded that it is not material with respect to any financial reporting period after taking into consideration the requirements of the SEC Staff Bulletin No. 99. Further, these adjustments do not have an impact on amounts previously reported, operating trends or publicly reported results such as would have a material effect on investor expectations.

Results of Operations

Three Months Ended March 31, 2012 and 2011

Revenue

We recognized revenue of $305,661 for the three months ended March 31, 2012 as compared to $180,643 during the three months ended March 31, 2011. This increase is due to an increase in grant revenue offset by lower rental income on installed Barocyclers.

PCT Products, Services, Other. Revenue from the sale of PCT products and services was $164,772 for the three months ended March 31, 2012 as compared to $180,643 during the three months ended March 31, 2011. We had fewer active Barocycler leases during the first quarter of 2012 due to expirations. Sales of consumables of $16,621 were recorded for the three months ended March 31, 2012 compared to $18,731 during the same period in the prior year. Our domestic and foreign installations of PCT systems are set forth in the table below.

	For the Three Months Ended March 31,	
	2012	2011
Domestic	5	8
International	2	2
Total PCT System Installations	7	10

Grant Revenue. During the three months ended March 31, 2012, we recorded $140,889 of grant revenue. We continue to work on a Phase I grant received from the National Institutes of Health, or NIH, to help fund the development of a high pressure-based system to improve the processing of cancer and other samples, and a Phase II grant received from the Department of Defense, or DOD, to fund the development of a PCT-based system to improve the processing of pathogenic organisms. Both grants were awarded in the second half of 2011. During the three months ended March 31, 2011, we did not have any active grants.

Cost of PCT Products and Services

The cost of PCT products and services was $78,194 for the three months ended March 31, 2012 compared to $78,929 for the comparable period in 2011. While we sold one less Barocycler in the current quarter than in the prior period in 2011, product costs stayed flat. We sold a demonstration unit during the three months ended March 31, 2011. A portion of the unit's cost was already recognized through depreciation.

Research and Development

Research and development expenditures were $271,611 during the three months ended March 31, 2012 as compared to $218,965 in the same period in 2011. We applied engineering costs of approximately $55,000 to our inventory value in the prior period to reflect costs involved in manufacturing new product lines.

Research and development expense recognized in the three months ended March 31, 2012 and 2011 included $2,618 and $21,604 of non-cash, stock-based compensation expense, respectively. This decrease is due to expense adjustments for fully vested options included in the first quarter of 2011, which did not occur in the same period in 2012.

Selling and Marketing

Selling and marketing expenses decreased to $238,092 for the three months ended March 31, 2012 from $303,839 for the comparable period in 2011. This decrease was primarily due to employee related savings from a smaller headcount offset by tradeshow and travel related expenses.

During the three months ended March 31, 2012 and 2011, selling and marketing expense included $3,113 and $31,012 of non-cash, stock-based compensation expense, respectively. This decrease is due to expense adjustments for fully vested options included in the first quarter of 2011, which did not occur in the same period in 2012.

General and Administrative

General and administrative costs totaled $682,346 for the three months ended March 31, 2012 as compared to $412,529 for the comparable period in 2011. We increased our investor relations efforts in the current period. We also incurred increased audit fees relating to accounting matters and legal fees in connection with our completed

private placements and amendments to our Registration Statement on Form S-1 originally filed in December 2011.

During the three months ended March 31, 2012 and 2011, general and administrative expense included $3,137 and $16,350 of non-cash, stock-based compensation expense, respectively. This decrease is due to expense adjustments for fully vested options included in the first quarter of 2011, which did not occur in the same period in 2012.

Operating Loss

Our operating loss was $964,582 for the three months ended March 31, 2012 as compared to $833,619 for the comparable period in 2011. The increased operating loss resulted primarily for the reasons noted above.

Other income (expense), net

Interest (Expense) Income

Interest expense totaled $56,313 for the three months ended March 31, 2012 as compared to interest income of $254 for the three months ended March 31, 2011. We recorded $10,170 of interest expense for the three months ended March 31, 2012 related to our short-term loans. We also amortized approximately $46,000 of imputed interest against the debt discount on these short-term loans relating to warrants issued with these loans.

Change in fair value of warrant derivative liability

During the three months ended March 31, 2012, we recorded non-cash charge of $42,012 for warrant revaluation expense in our consolidated statements of operations due to an increase in the fair value of the warrant liability related to warrants issued in our Series C private placement and Series D registered direct offering. This increase in fair value was primarily due to an adjustment in the exercise price and number of warrants relating to the Series D registered direct offering effected with the February 2012 private placement.

Net Loss

During the three months ended March 31, 2012, we recorded a net loss to common shareholders of $1,087,321 or $(0.14) per share, as compared to a net loss to common shareholders of $966,455 or $(0.34) per share in the three months ended March 31, 2011. The increase is due to increased operating costs partially offset by the conclusion of dividend payments to Series A holders. We accrued dividends for the Series B Convertible Preferred Stock through April 3, 2012.

Year Ended December 31, 2011 as compared to 2010

Revenue

We had total revenue of $987,729 in the year ended December 31, 2011 as compared to $1,340,032 in the prior year.

PCT Products, Services, Other. Revenue from the sale of PCT products and services was $767,765 in 2011 as compared to $877,567 in 2010. We generated consumable sales of $102,209 for the year ended December 31, 2011 compared to $104,924 during the prior year, a decrease of $2,715 or 2.6%. The number of PCT sales and active leases decreased during 2011 compared to 2010. The decrease in revenue from PCT sales and leases during 2011 was partially offset by sales of our SG3 Shredder Kit. Our new distributor for the SG3 Shredder Kit purchased 12 units during 2011. Our domestic and foreign installations of PCT systems as of December 31, 2011 and 2010 are set forth in the table below.

Unit Installations-Sales and Lease Arrangements

	2011	2010
Domestic	25	42

International	6	8
Total Installations	31	50

The decrease in PCT instrument installations and consumables was due to several factors. Our Vice President of Sales resigned in early May 2011. His responsibilities included direct sales in the New England territory and supervision of three Sales Directors. Sales and marketing activities were further limited during the first half of 2011 compared to the same period in 2010 as a result of our limited financial resources. The decrease in PCT consumable

sales was due primarily to significant purchases of PULSE Tubes (both Non-Disk and Shredder) by certain clients during 2010 whose studies ended prior to the second quarter of 2011.

Grant Revenue. During 2011, we recorded $219,964 of grant revenue as compared to $462,465 in 2010. We commenced work in the third quarter of 2011 on a Phase I grant received from the NIH and a Phase II grant received from the Department of Defense. During 2010, we completed a SBIR Phase II grant previously granted to us.

Cost of PCT Products and Services

The cost of PCT products and services was $342,865 for the year ended December 31, 2011, compared to $376,514 in 2010. Our gross profit margin on PCT products and services decreased to 55% for the year ended December 31, 2011, as compared to 57% for 2010. The decrease in the gross profit margin on PCT products and services was due primarily to sales of some fully depreciated Barocycler units in the prior year and discounting to our distributors.

The relationship between the cost of PCT products and services and PCT revenue depends greatly on the mix of instruments we sell, the quantity of such instruments, and the mix of consumable products that we sell in a given period.

Research and Development

Research and development expenditures decreased to $969,473 during 2011 from $1,232,566 in 2010 by $263,093, or 21%. This decrease resulted primarily from the completion of employee stock option vesting and discontinued research by a collaborative partner funded through our SBIR Phase II grant, which was completed in 2010.

Research and development expense included $39,375 and $73,097 of non-cash, stock-based compensation in 2011 and 2010, respectively.

Selling and Marketing

Selling and marketing expenses decreased to $931,073 in 2011 from $1,204,892 in 2010, by $273,819, or 23%. This decrease was primarily due to the completion of vesting of a significant number of employee stock options, reduced marketing activities and employee cost savings relating to the departure of our Vice President of Sales.

Selling and marketing expense included $43,201 and $72,609 of non-cash, stock-based compensation expense in 2011 and 2010, respectively.

General and Administrative

General and administrative costs were $2,034,458 in the year ended December 31, 2011, as compared to $1,924,814 in 2010, an increase of $109,644 or 6%. We incurred increased legal fees in 2011 relating to contract negotiations, our securities offerings, and matters relating to the annual shareholder meeting. We incurred increased audit fees relating to accounting matters associated with our completed private placements and our Registration Statement on Form S-3 for our registered direct offering completed in November 2011.

During the years ended December 31, 2011 and 2010, general and administrative expense included $39,398 and $127,475 of non-cash, stock-based compensation expense, respectively.

Operating Loss

Our operating loss was $3,290,140 for the year ended December 31, 2011 as compared to $3,398,754 for the comparable period in 2010, a decrease of $108,614 or 3%. The decreased operating loss resulted primarily from lower non-cash, stock-based compensation expense, and reduced spending offset by lower sales activity.

Other income (expense), net

Interest (Expense) Income

Interest expense totaled $138,071 for the year ended December 31, 2011 as compared to interest income of $2,303 for the year ended December 31, 2010. We recorded $29,071 of interest expense for the year ended December 31, 2011 related to our short-term loans. We also amortized approximately $109,000 of imputed interest against the debt discount on these short-term loans relating to warrants issued with these loans.

Therapeutic Discovery Credit

In November 2010, we were awarded a $244,000 grant under the Qualifying Therapeutic Discovery Project (QTDP) program under The Patient Protection and Affordable Care Act of 2010 (PPACA).

Change in Fair Value of Warrant Derivative Liability

During the year ended December 31, 2011, we recorded non-cash income of $430,423 for warrant revaluation expense in our consolidated statements of operations due to a decrease in the fair value of the warrant liability related to warrants issued in our Series C private placement and Series D registered direct offering. This decrease in fair value was primarily due to a decrease in the price per share of our common stock on December 31, 2011 as compared to the date of issuance of the warrants.

Income Taxes

In 2010, we realized a tax benefit of $23,710 related to legislation within the Housing Assistance Tax Act of 2008 which enabled us to claim a refundable tax credit in exchange for foregoing bonus depreciation.

Net Loss

During the year ended December 31, 2011, we recorded a net loss applicable to common shareholders of $5,107,661 or $(0.77) per share, as compared to $3,630,826 or $(1.35) per share in 2010. We recorded $1,006,574 in the current year relating to the beneficial conversion calculation associated with the intrinsic value of the Series C Convertible Preferred Stock and Series D Convertible Preferred Stock. In the prior year, we recorded $154,389 for a beneficial conversion feature on the Series B Convertible Preferred Stock. We paid approximately $66,000 in dividends to holders of the Series B Convertible Preferred Stock in the current year. We also recorded a deemed dividend of $704,844 in connection with warrant modifications done in the third quarter of 2011. See Note 2 of the Notes to Consolidated Financial Statements under the “Computation of Loss per Share” heading.

Liquidity and Financial Condition

Three Months Ended March 31, 2012 and 2011

As of March 31, 2012, we did not have adequate working capital resources to satisfy our current liabilities. Based on our current projections, including the proceeds from our equity financing completed subsequent to March 31, 2012, we believe our current cash resources will enable us to extend our cash resources to fund normal operations until the end of May 2012.

We will need substantial additional capital to fund our operations in periods beyond May 2012. In the event that we are unable to obtain financing on acceptable terms, or at all, we will likely be required to cease our operations, pursue a plan to sell our operating assets, or otherwise modify our business strategy, which could materially harm our future

business prospects.

Net cash used in operations for the three months ended March 31, 2012 was $584,737 as compared to $508,052 for the three months ended March 31, 2011. The increase in cash used in operations in 2012 as compared to 2011 is principally due to an increase in operating loss of $132,727 offset by payments to third parties in shares of the Company's common stock in lieu of cash.

Net cash used in investing activities for the three months ended March 31, 2012 was not significant as compared to cash used of $7,568 for the same period in the prior year. Cash used in investing activities during the prior period was for Barocycler instruments that we purchased and installed under lease agreements.

Net cash provided by financing activities for the three months ended March 31, 2012 was $377,454 as compared to $43,980 for the same period in the prior year.

On February 7, 2012, we completed a private placement with 7 accredited investors, pursuant to which we sold an aggregate of 971,867 shares of common stock, $0.01 par value ("Shares"), resulting in gross proceeds to us of $800,000 (the "Private Placement"). The price per unit was $0.8025 for units consisting of 789,350 shares and 394,677 warrants, and was $0.9125 for units consisting of the remaining 182,517 shares and 91,260 warrants. Of the $800,000 invested in the private placement, $412,453 was received in cash and $387,547 was from the conversion of outstanding principal and interest on convertible promissory notes issued by us in 2011. In connection with the Private Placement, we paid our investment banker a fee of $35,000 for providing advisory services.

Fiscal year ended December 31, 2011 compared to fiscal year ended December 31, 2010

As of December 31, 2011, we did not have adequate working capital resources to satisfy our current liabilities. In February 2012, we raised an aggregate of $800,000 in a private placement of units consisting of a total of 971,867 shares of restricted common stock and 485,937 warrants to purchase restricted common stock. Of the $800,000 invested in the private placement, $412,453 was received in cash and $387,547 was from the conversion of outstanding principal and interest on convertible promissory notes we issued in 2011. Based on our current projections, including equity financing subsequent to December 31, 2011, we believe our current cash resources will enable us to extend our cash resources until April 2012.

We will need substantial additional capital to fund our operations in periods beyond April 2012. If we are able to obtain additional capital or otherwise increase our revenues, we may increase spending in specific research and development applications and engineering projects and may hire additional sales personnel or invest in targeted marketing programs. In the event that we are unable to obtain financing on acceptable terms, or at all, we will likely be required to cease our operations, pursue a plan to sell our operating assets, or otherwise modify our business strategy, which could materially harm our future business prospects.

Net cash used in operating activities for the year ended December 31, 2011 was $2,141,863 as compared to $2,872,180 for the year ended December 31, 2010. The prior period cash usage included an increase in Barocycler inventory of $638,900 received from our supplier due to anticipated sales. Our accounts payable balance was $890,676 as of December 31, 2011, as compared to $234,568 as of December 31, 2010. This increase is due to our efforts to conserve cash for use in operating the business until we secure additional capital.

Net cash used in investing activities for the year ended December 31, 2011 was $2,642 as compared to $92,111 in the prior year. We purchased computer equipment in 2011 while we purchased tooling and Barocycler equipment for lease arrangements in the prior year.

Net cash provided by financing activities for the year ended December 31, 2011 was $1,814,431 as compared to $1,907,362 in the prior year. We raised approximately $1.1 million in aggregate gross proceeds in 2011 from our Series C Convertible Preferred Stock private placement offset by approximately $396,000 in offering costs excluding the issuance of additional warrants to the placement agent. The Series C Convertible Preferred Stock private placement was completed in two tranches. In April 2011, we completed the first tranche, pursuant to which we sold an aggregate of 55,048 units for a purchase price of $15.00 per unit, resulting in gross proceeds to us of $825,720. In June 2011, we completed the second tranche, pursuant to which we reduced the purchase price to $12.50 per unit and

we issued an additional 11,011 units to the purchasers who participated in the first tranche, without any additional gross proceeds to us. In the second tranche we also sold 22,039 units for a purchase price of $12.50 per unit with gross proceeds of $275,485. Each unit consisted of (i) one share of Series C Convertible Preferred Stock convertible into 10 shares of our Common Stock (subject to adjustment for stock splits, stock dividends, recapitalization, etc.), and (ii) a three-year warrant to purchase 10 shares of our Common Stock at a per share exercise price equal to the sum of (x) the Common Stock equivalent of the Series C Convertible Preferred

Stock private placement unit purchase price (y) plus $0.88. The warrants issued in this private placement are exercisable until the close of business on the third anniversary of the applicable closing date.

In the second half of 2011, we received six-month loans of $412,000. Each of the loans has a term of six months, which may be extended with mutual consent of the parties. The interest rate under the promissory notes is 20% per annum. Under another promissory note, we are required to pay $150,000 to a former placement agent prior to May 5 2012. The promissory note issued to the former placement agent is interest free, provided that, if the Company does not repay the principal amount on or before the maturity date, it will accrue interest at a rate of 18% per year.

In November 2011, we completed a registered direct offering, pursuant to which we sold an aggregate of 843 units for a purchase price of $1,000 per unit, resulting in gross proceeds to us of $843,000. Each unit consists of (i) one share of Series D Convertible Preferred Stock, $0.01 par value per share convertible into 1,538.46 shares of our common stock and (ii) a five-year warrant to purchase approximately 614 shares of our common stock (which number of shares is equal to 39.9% of the purchase price of the units divided by $0.65) at a per share exercise price of $0.81 and will be exercisable beginning on or after May 10, 2012 through and including the close of business on May 10, 2017.

Commitments and Contingencies

Royalty Commitments

In 1996, we acquired our initial equity interest in BioSeq, Inc., which at the time was developing our original pressure cycling technology. BioSeq, Inc. acquired its pressure cycling technology from BioMolecular Assays, Inc. (“BMA”) under a technology transfer and patent assignment agreement. In 1998, we purchased all of the remaining outstanding capital stock of BioSeq, Inc., and at such time, the technology transfer and patent assignment agreement was amended to require us to pay BMA a 5% royalty on our sales of products or services that incorporate or utilize the original pressure cycling technology that BioSeq, Inc. acquired from BioMolecular Assays, Inc. We are also required to pay BMA 5% of the proceeds from any sale, transfer or license of all or any portion of the original pressure cycling technology. These payment obligations terminate in 2016. During the year ended December 31, 2011 and 2010, we incurred approximately $21,090 and $36,330, respectively and during the three months ended March 31, 2012 and 2011, we incurred $5,288 and $5,994, respectively, in royalty expense associated with our obligation to BMA..

In connection with our acquisition of BioSeq, Inc., we licensed certain limited rights to the original pressure cycling technology back to BMA. This license is non-exclusive and limits the use of the original pressure cycling technology by BMA solely for molecular applications in scientific research and development and in scientific plant research and development. BMA is required to pay us a royalty equal to 20% of any license or other fees and royalties, but not including research support and similar payments, it receives in connection with any sale, assignment, license or other transfer of any rights granted to BMA under the license. BMA must pay us these royalties until the expiration of the patents held by BioSeq, Inc. in 1998, which we anticipate will be 2016. We have not received any royalty payments from BMA under this license.

Battelle Memorial Institute

In December 2008, we entered into an exclusive patent license agreement with the Battelle Memorial Institute ("Battelle"). The licensed technology is described in the patent application filed by Battelle on July 31, 2008 (US serial number 12/183,219). This application includes subject matter related to a method and a system for improving the analysis of protein samples, including through an automated system utilizing pressure and a pre-selected agent to obtain a digested sample in a significantly shorter period of time than current methods, while maintaining the integrity of the sample throughout the preparatory process. Pursuant to the terms of the agreement, we paid Battelle a non-refundable initial fee of $35,000. In addition to royalty payments on net sales on “licensed products”, we are

obligated to make minimum royalty payments for each year that we retain the rights outlined in the patent license agreement and we are required to have our first commercial sale of the licensed products within one year following the issuance of the patent covered by the licensed technology. The minimum annual royalty was $5,000 for 2010 and $7,500 for 2011. Our minimum annual royalty payment for 2012 is $10,000.

Target Discovery Inc.

In March 2010, we signed a strategic product licensing, manufacturing, co-marketing, and collaborative research and development agreement with Target Discovery Inc. (“TDI”). TDI’s Chief Executive Officer is a board member of Pressure BioSciences, Inc. Under the terms of the agreement, we have been licensed by TDI to manufacture and sell a highly innovative line of chemicals used in the preparation of tissues for scientific analysis ("TDI reagents"). The TDI reagents were designed for use in combination with our pressure cycling technology. The companies believe that the combination of PCT and the TDI reagents can fill an existing need in life science research for an automated method for rapid extraction and recovery of intact, functional proteins associated with cell membranes in tissue samples. We owe a royalty fee of approximately $1,200 on qualifying sales through March 31, 2012.

Severance and Change of Control Agreements

Each of Mr. Schumacher, Dr. Ting, Dr. Lazarev, and Dr. Lawrence, executive officers of the Company, is entitled to receive a severance payment if terminated by us without cause. The severance benefits would include a payment in an amount equal to one year of such executive officer’s annualized base salary compensation plus accrued paid time off. Additionally, the officer will be entitled to receive medical and dental insurance coverage for one year following the date of termination.

Each of these executive officers, other than Mr. Schumacher, is entitled to receive a change of control payment in an amount equal to one year of such executive officer’s annualized base salary compensation, accrued paid time off, and medical and dental coverage, in the event of a change of control of the Company. In the case of Mr. Schumacher, this payment would be equal to two years of annualized base salary compensation, accrued paid time off, and two years of medical and dental coverage. The severance payment is meant to induce the executive to become an employee of the Company and to remain in the employ of the Company, in general, and particularly in the occurrence of a change in control.

Investment Banking Agreement

On November 4, 2011, the Company entered into an agreement with a former placement agent, pursuant to which the Company and the placement agent released each other of their respective obligations under a prior investment banking agreement. In connection with this agreement, the Company issued the placement agent a promissory note with an original principal amount of $150,000 with a maturity date of May 4, 2012. The promissory note was interest free until May 4, 2012. The Company did not pay the principal of the promissory note on or before May 4, 2012, and, as a result, the Company began accruing interest on the principal amount of the promissory note at a rate of 18% per year commencing on May 5, 2012.

Convertible Debt

Loans in the aggregate amount of $362,000 from four individuals were converted into common stock and warrants in the February 2012 private placement. Principal and interest of $56,139 remained outstanding as of March 31, 2012. We paid $43,000 towards the outstanding balance in April 2012.

Lease Commitments

We lease building space under non-cancelable leases in South Easton, MA and in the Venture Development Center at the University of Massachusetts in Boston.

Following is a schedule by years of future minimum rental payments required under operating leases with initial or remaining non-cancelable lease terms in excess of one year as of December 31, 2011:

Year ending December 31:	
2012	$117,600
2013	121,644
Thereafter	-
Total minimum payments required	$239,244

Critical Accounting Policies

Principles of Consolidation

The consolidated financial statements include the accounts of Pressure BioSciences, Inc., and its wholly-owned subsidiary PBI BioSeq, Inc. All intercompany accounts and transactions have been eliminated in consolidation.

Use of Estimates

To prepare our consolidated financial statements in conformity with accounting principles generally accepted in the United States of America, we are required to make significant estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the reporting period. In addition, significant estimates were made in projecting future cash flows to quantify impairment of assets, deferred tax assets, the costs associated with fulfilling our warranty obligations for the instruments that we sell, and the estimates employed in our calculation of fair value of stock options awarded. We base our estimates on historical experience and on various other assumptions that we believe to be 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 could differ from the estimates and assumptions used.

Revenue Recognition

We recognize revenue in accordance with FASB ASC 605, Revenue Recognition. Revenue is recognized when realized or earned when all the following criteria have been met: persuasive evidence of an arrangement exists; delivery has occurred and risk of loss has passed to the customer; the seller’s price to the buyer is fixed or determinable; and collectability is reasonably assured.

Our current instruments, the Barocycler NEP3229 and NEP2320, require a basic level of instrumentation expertise to set-up for initial operation. To support a favorable first experience for our customers, we send a highly trained technical representative to the customer site to install every Barocycler that we sell or lease through our domestic sales force. The installation process includes uncrating and setting up the instrument, followed by introductory user training. Product revenue related to current Barocycler instrumentation is recognized upon the completion of the installation and introductory training process of the instrumentation at the customer location, for domestic and foreign installations. Product revenue related to sales of PCT instrumentation to our foreign distributors and overseas customers is recognized upon shipment through a common carrier unless installation is specifically requested by the customer. We provide for the expected costs of warranty upon the recognition of revenue for the sales of our instrumentation. Our sales arrangements do not provide our customers with a right of return. Product revenue related to our consumable products such as PULSE Tubes, MicroTubes, and application specific kits is recorded upon shipment through a common carrier. Shipping costs are included in sales and marketing expense. Any shipping costs billed to customers are recognized as revenue.

In accordance with FASB ASC 840, Leases, we account for our lease agreements under the operating method. We record revenue over the life of the lease term and we record depreciation expense on a straight-line basis over the thirty-six month estimated useful life of the Barocycler instrument. The depreciation expense associated with assets under lease agreement is included in the "Cost of PCT products and services" line item in our consolidated statements of operations. Many of our lease and rental agreements allow the lessee to purchase the instrument at any point during the term of the agreement with partial or full credit for payments previously made. We pay all maintenance costs associated with the instrument during the term of the leases.

Revenue from government grants is recorded when expenses are incurred under the grant in accordance with the terms of the grant award.

Our transactions sometimes involve multiple elements (i.e., products and services). Revenue under multiple element arrangements is recognized in accordance with FASB ASC 605-25 Multiple-Element Arrangements ("ASC 605"). When vendor specific objective evidence or third party evidence of selling price for deliverables in an arrangement cannot be determined, the Company develops a best estimate of the selling price to separate deliverables and allocates arrangement consideration using the relative selling price method. Additionally, this guidance eliminates the residual method of allocation. If an arrangement includes undelivered elements that are not essential to the functionality of the delivered elements, we defer the fair value of the undelivered elements based on the estimated selling price of the total arrangement. Fair value is determined based upon the price charged when the element is sold separately. If there is not sufficient evidence of the fair value of the undelivered elements, no revenue is allocated to the delivered elements and the total consideration received is deferred until delivery of those elements for which objective and reliable evidence of the fair value is not available. We provide certain customers with extended service contracts with revenue recognized ratably over the life of the contract.

Intangible Assets

We have classified as intangible assets, costs associated with the fair value of certain assets of businesses acquired. Intangible assets relate to the remaining value of acquired patents associated with PCT. The cost of these acquired patents is amortized on a straight-line basis over sixteen years. We annually review our intangible assets for impairment. When impairment is indicated, any excess of carrying value over fair value is recorded as a loss. As of May 15, 2012, no event has come to our attention that would cause us to record an impairment of intangible assets.

Long-Lived Assets and Deferred Costs

In accordance with FASB ASC 360-10-05, Property, Plant, and Equipment, if indicators of impairment exist, we assess the recoverability of the affected long-lived assets by determining whether the carrying value of such assets can be recovered through the undiscounted future operating cash flows related to the long-lived assets. If impairment is indicated, we measure the amount of such impairment by comparing the carrying value of the asset to the fair value of the asset and record the impairment as a reduction in the carrying value of the related asset and a charge to operating results. While our current and historical operating losses and cash flow are indicators of impairment, we performed an impairment analysis at December 31, 2011 and determined that our long-lived assets were not impaired.

Warrant Derivative Liability

The warrants issued in connection with the Series C Convertible Preferred Stock private placement (the "Series C Warrants") and warrants issued in connection with the registered direct offering of Series D Convertible Preferred Stock (the ("Series D Warrants") are measured at fair value and liability-classified because the Series C Warrants are entitled to certain rights in subsequent financings and the Series D Warrants contain "down-round protection" and therefore, do not meet the scope exception for treatment as a derivative under ASC 815, Derivatives and Hedging, ("ASC 815"). Since "down-round protection" is not an input into the calculation of the fair value of the warrants, the warrants cannot be considered indexed to the Company's own stock which is a requirement for the scope exception as outlined under ASC 815. The estimated fair value of the warrants was determined using the binomial model, resulting in an allocation of the gross proceeds of $583,250 to the total warrants issued in the Series C private placement and $283,725 to the warrants issued in the Series D registered direct offering. The fair value will be affected by changes in inputs to that model including our stock price, expected stock price volatility, the contractual term, and the risk-free interest rate. We will continue to classify the fair value of the warrants as a liability until the warrants are exercised,

expire or are amended in a way that would no longer require these warrants to be classified as a liability, whichever comes first. The down-round protection for the Series C Warrants expires 12 months subsequent to the issuance of the Series C Units and the down-round protection for the Series D Warrants survives for the life of the Series D Warrants which ends in May 2017.

BUSINESS

Overview

We are focused on solving the challenging problems inherent in biological sample preparation, a crucial laboratory step performed by scientists worldwide working in biological life sciences research. Sample preparation is a term that refers to a wide range of activities that precede most forms of scientific analysis. Sample preparation is often complex, time-consuming, and in our belief, one of the most error-prone steps of scientific research. It is a widely-used laboratory undertaking, the requirements of which drive what we believe is a large and growing worldwide market. We have developed and patented a novel, enabling technology platform that can control the sample preparation process. It is based on harnessing the unique properties of high hydrostatic pressure. This process, called pressure cycling technology, or PCT, uses alternating cycles of hydrostatic pressure between ambient and ultra-high levels (35,000 psi or greater) to safely, conveniently and reproducibly control the actions of molecules in biological samples, such as cells and tissues from human, animal, plant, and microbial sources.

Our pressure cycling technology uses internally developed instrumentation that is capable of cycling pressure between ambient and ultra-high levels - at controlled temperatures and specific time intervals - to rapidly and repeatedly control the interactions of bio-molecules, such as DNA, RNA, proteins, lipids, and small molecules. Our laboratory instrument, the Barocycler®, and our internally developed consumables product line, including PULSE (Pressure Used to Lyse Samples for Extraction) Tubes, other processing tubes, and application specific kits (which include consumable products and reagents) together make up our PCT Sample Preparation System, or PCT SPS.

We hold 14 United States and 10 foreign patents covering multiple applications of PCT in the life sciences field. Our pressure cycling technology employs a unique approach that we believe has the potential for broad use in a number of established and emerging life sciences areas, including;

-sample preparation for genomic, proteomic, and small molecule studies;
-pathogen inactivation;
-protein purification;
-control of chemical (particularly enzymatic) reactions; and
-Immunodiagnostics (clinical laboratory testing).

Within the broad field of biological sample preparation, we focus the majority of our product development efforts in three specific areas: mass spectrometry, forensics, and histology.

- Mass Spectrometry. A mass spectrometer is a laboratory instrument used in the analysis of biological samples in life sciences research. We believe that mass spectrometry is a multi-billion dollar market, and that PCT offers significant advantages in speed and quality compared to current techniques used in the preparation of samples for mass spectrometry analysis.

- Forensics. The detection of DNA has become a part of the analysis of forensic samples by laboratories and criminal justice agencies worldwide in their efforts to identify the perpetrators of violent crimes and missing persons. Scientists from the University of North Texas and Florida International University have reported improvements in DNA yield from forensic samples (e.g., bone, hair) using PCT in the sample preparation process. We believe that that PCT may be capable of differentially extracting DNA from sperm and (female) epithelial cells in swabs collected from rape victims and stored in rape kits. We believe that there are many completed but untested rape kits that remain untested for reasons such as cost, time, and quality of results. We further believe that the ability to differentially extract DNA from sperm and not epithelial cells could reduce the cost of such testing, while increasing quality, safety, and speed.

- Histology. The most commonly used technique worldwide for the preservation of cancer and other tissues for subsequent pathology evaluation is formalin-fixation followed by paraffin-embedding ("FFPE"). We believe that the quality and analysis of FFPE tissues is highly problematic, and that

- PCT offers significant advantages over current processing methods, including standardization, speed, biomolecule recovery, and safety.

Since we began operations as Pressure BioSciences in February 2005, we have installed 216 Barocycler instruments through March 31, 2012, of which 138 currently remain installed. Our customers include researchers at academic laboratories, government agencies, biotechnology, pharmaceutical and other life sciences companies in the United States, and distribution partners in foreign countries.

	2005	2006	2007	2008	2009	2010	2011	2012
Units installed in year	5	8	20	41	54	50	31	7

We have experienced negative cash flows from operations with respect to our pressure cycling technology business since our inception. As of December 31, 2011, we did not have adequate working capital resources to satisfy our current liabilities. As of May 15, 2012, we had a total cash balance of approximately $90,000. Based on our current projections, including equity financing subsequent to March 31, 2012, we believe our current cash resources will enable us to extend our cash resources to fund normal operations until the end of May 2012.

Developments

Despite the uncertainty in the capital markets since 2009 and the concomitant decrease in the capital budgets of our existing and prospective customers and despite our limited financial resources, during this time, we reported a number of accomplishments, including the following:

2009

- Sale of Series A and B (first tranche) Convertible Preferred Stock in a Private Placement. We received approximately $1.8 million and $1.2 million from the sale of securities in two private placements to accredited investors in February and November, respectively.

- SBIR Phase I Grant to Study the Human Microbiome. We were awarded approximately $110,000 from the NIH to study microorganisms that live on or in the human body.

- Most Outstanding Manuscript for 2009. Our research and development scientists were awarded the prize for the “most outstanding manuscript for 2009” from the Journal of Biomolecular Techniques.

- Three United States Department of Agriculture (“USDA”) Scientists Present Data on the Advantages of PCT. Researchers from three different USDA sites presented data at a national conference citing the advantages of PCT in the detection of microorganisms in food crops.

    - Addition to our Board of Directors. We added Mr. Alan D. Rosenson to our board of directors.

- Release of Two New Consumable, PCT-based Products. We released two new PCT-based kits to the market, focused in the area of genomics (DNA, RNA) research.

- PCT Shown to Improve the Detection of DNA in the Forensics Samples. Scientists presented data at the Annual International Society for Human Identity indicating that PCT improved the detection of DNA in challenging forensics samples.

- Our PCT Revenue Exceeds $1 Million for the First Time. We posted total revenue of approximately $1.2 million, while showing a significant decrease in expenses.

2010

- Sale of Series B Convertible Preferred Stock in a Private Placement. We received approximately $500,000 from the sale of securities in a private placement to accredited investors in March.

- Exercise of 100% of our 15-Month Series A Preferred Stock Purchase Warrants. We received $1,229,650 from the exercise of 98,372 15-Month Series A Preferred Stock Purchase Warrants. As a result, when combined with previous exercises, 100% of the 15-Month Series A Stock Purchase Warrants had been exercised.

- Therapeutic Discovery Grant Program. We received $244,479 related to a federal tax credit enacted in 2010 for qualifying research expenditures deducted in 2009. The program was designed for companies with 250 employees or less. Its goal was to support investment in qualified biomedical projects that show potential to develop new therapies, address unmet medical needs, and reduce the long-term growth of healthcare costs.

    - Patents Granted. We were issued five additional patents related to our PCT platform. Of the five patents, one was granted in the U.S., one in Japan, one in Canada, and two in Australia. With these grants, we have 24 issued PCT patents: 14 in the U.S., three in Europe, three in Australia, two in Canada, and two in Japan.

- Collaboration with the Lawrence Berkeley National Laboratory (“LBNL”) – Scientists at LBNL used our PCT platform in studies aimed at improving the analysis of microorganisms in environments with low biomass, such as oil reservoirs or deep sea oil plumes from oil spills. These scientists have suggested that improved microbe analysis may lead to better strategies for oil spill clean-up.

- Cooperative Research and Development Agreement, or CRADA, with the Armed Forces Institute of Pathology. A CRADA was announced with the purpose of developing pressure-based methods to improve the quality and speed of formalin fixed, paraffin embedded, or FFPE tissue preparations, and to improve the quality and yield of biomolecule extraction (DNA, RNA, Proteins, Lipids, Small Molecules) from archival FFPE tissue samples.

- Product Licensing, Manufacturing, Co-Marketing, and Collaborative R&D Agreement. We announced a strategic product licensing, manufacturing, co-marketing, and collaborative research and development agreement with Target Discovery Inc.

    - Launch of New Products. We announced the launch of the Shredder SG3 and two new kits for the isolation of mitochondria from two kinds of solid tissues - skeletal muscle and lung.

- Revenue Growth. We posted total revenue of approximately $1.3 million, as compared to approximately $1.2 million in 2009.

2011

- Sale of Series C Convertible Preferred Stock in a Private Placement. We received approximately $1.1 million from the sale of securities in a private placement to accredited investors in April and June.

- Worldwide e-Commerce Distribution Deal Signed. We signed a worldwide, non-exclusive agreement with KeraFAST LLC for the e-commerce distribution of our Shredder SG3, related Shredder consumables, our IEF buffer.

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- Product Pipeline for 2011 – 2013 Announced. We announced our targeted schedule for the release of four new PCT-based products: the Barocycler HUB440 (released in July 2011), the FFPE Extraction Service (Q4 of 2012), the XstreamPCT HPLC Digestion Module (Q4 of 2013), and the High Throughput Multi-well System (Q4 2013).

- Multiple Presentations on the Advantages of PCT at National and International Meetings. Researchers from academia, government, pharma, and the biotechnology industry reported advantages when using our PCT Platform in their sample preparation processes at four scientific conferences between May and December 2011.

- 100% Conversion of Series A Convertible Preferred Stock and Series B Convertible Preferred Stock. All 87 holders of our Series A Convertible Preferred Stock and Series B Convertible Preferred Stock voluntarily converted their shares into our common stock.

- We Were Awarded $810,000 in National Institutes of Health and Department of Defense Grants. We were awarded approximately $160,000 from the National Institutes of Health to help fund the development of a high pressure-based system to improve the processing of cancer and other samples, and approximately $650,000 from the Department of Defense to help fund the development of a PCT-based system to improve the processing of pathogenic organisms, specifically viruses and bacteria.

- Registered Direct Offering with Net Proceeds of Approximately $843,000. We raised approximately $843,000 through the sale of Series D Convertible Preferred Stock and warrants to purchase shares of our common stock in a registered direct offering.

- Second half of 2011 Results. We reported an approximate 65% increase in total revenue for the second half compared to the first half of 2011, with concomitant reductions in operating loss and cash burn.

2012

- Co-marketing/selling and research and development agreement with Digilab Inc.(“Digilab”) Under this agreement with Digilab, a provider of products for life sciences, analytical chemistry and diagnostic markets, we intend to co-market and sell their respective product lines worldwide, including in industry publications, at scientific meetings, on each company’s website, through common collaborator studies, at key industry trade shows, and in visits to customer sites. We also intend to explore ways to co-develop new instrumentation, accessories/modules for existing instrumentation, and consumables that combine the robotics and high throughput capabilities of Digilab products with the extraction, protein digestion, and other advantages of our PCT platform.

- Collaboration with the Henry C. Lee Institute of Forensic Science (“HCL Institute”). The HCL Institute will evaluate the use of the Company’s PCT platform for the extraction of DNA and other biomolecules from such samples as bone, hair, plant tissue, pollen, and finger nails. The HCL Institute will also evaluate the PCT platform for detection of counterfeit foods, which may adulterate food products such as rice and tea.

- Distribution Agreement with LA Biosystems BV (“LABio”). In March 2012, we entered into a distribution agreement with Netherlands-based life sciences company LA Biosystems. Under the terms of the agreement, we granted LABio the exclusive right to market and sell our PCT sample preparation instruments and consumables in Belgium, the Netherlands, and Luxembourg. In addition, LABio has been granted the non-exclusive right to market and sell our recently released, patent-pending, mechanical homogenization device, the Shredder SG3, and its associated consumables, in the same three countries.

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- Collaboration with Sage-N Research, Inc. ("Sage-N Research"). In March 2012, we entered into a collaboration development and co-marketing agreement with Sage-N Research, a supplier of data integration software for proteomics. Under the collaboration, Sage-N Research will work with us to develop software applications to integrate our PCT sample preparation instruments with the Sage-N Research software platform.

- Co-marketing/selling and research and development agreement with Leap Technologies, Inc.("LEAP") Under the Agreement, we plan to develop a next generation sample preparation system by combining the Company's PCT platform with LEAP's proprietary robotics and lab automation equipment. The companies share an industry focus in proteomics sample preparation, primarily in mass spectrometry. We believe that by combining the best attributes of both technology platforms, we can develop a sample preparation system superior in quality and robustness to current methods.

- Expanded strategic technology license and supply agreement with Target Discovery ("TDI"). In April 2012, we signed an expanded strategic technology license and supply agreements with TDI. TDI's Chief Executive Officer is a board member of Pressure BioSciences, Inc. Under these agreements, TDI now has the right to use PBI's PCT Platform for their planned entry into the clinical diagnostics testing market. The planned commercial diagnostic services will initially target what the companies believe are critical, unmet needs in treatment selection guidance for ovarian cancer. Until now, PBI's PCT Platform has been available on a "research-use-only" basis.

- February 2012 Private Placement. In February 2012, we raised an aggregate of $800,000 in a private placement of units consisting of a total of 971,867 shares of restricted common stock and 485,937 warrants to purchase restricted common stock. Seven current investors, including our President and Chief Executive Officer, our Chairman of the Board of Directors, and two investors from our November 2011 registered direct offering, participated in the private placement. The price per unit was $0.8025 for units consisting of 789,350 shares and 394,677 warrants, and was $0.9125 for units consisting of the remaining 182,517 shares and 91,260 warrants. Of the $800,000 invested in the private placement, $412,453 was received in cash and $387,547 was from the conversion of outstanding principal and interest on convertible promissory notes we issued in 2011.

- Registered Direct Offering with Net Proceeds of Approximately $395,000. In April 2012, we raised $500,000 in gross proceeds ($395,000 in net proceeds) through the sale of Series E Convertible Preferred Stock in a registered direct offering.

Corporate Information

We were incorporated in the Commonwealth of Massachusetts in August 1978 as Boston Biomedica, Inc. In September 2004, we completed the sale of the Boston Biomedica core business units and began to focus exclusively on the development and commercialization of the PCT platform. Following this change in business strategy, we changed our legal name from Boston Biomedica, Inc. to Pressure BioSciences, Inc., or PBI, and commenced operations as Pressure BioSciences in February 2005.

Available Information

Our Internet website address is http://www.pressurebiosciences.com. Through our website, we make available, free of charge, reports we file with the Securities and Exchange Commission ("SEC") including our annual report on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K and any amendments to those reports, as soon as reasonably practicable after we electronically file such material with, or furnish it to, the SEC. These SEC reports can be accessed through the investor relations section of our website. The information found on our website is not part of this or any other report we file with or furnish to the SEC.

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You may read and copy any materials we file with the SEC at the SEC's Public Reference Room at 100 F Street, NE, Washington, DC 20549. You may obtain information on the operation of the Public Reference Room by calling the SEC at 1-800-SEC-0330. The SEC also maintains an Internet website that contains reports, proxy and information statements, and other information regarding Pressure BioSciences and other issuers that file electronically with the SEC. The SEC's Internet website address is http://www.sec.gov.

Sample Preparation for Genomic, Proteomic, and Small Molecule Studies

The Market

Since February 2005, we have focused substantially all of our research and development and commercialization efforts on sample preparation for genomic, proteomic, and small molecule studies. This market is comprised of academic and government research institutions, biotechnology and pharmaceutical companies, and other public and private laboratories that are engaged in studying genomic, proteomic and small molecule material within plant and animal cells and tissues.

We elected to initially focus our resources in the market of genomic, proteomic, and small molecule sample preparation because we believe it is an area that:

- is a rapidly growing market;
- has a large and immediate need for better technology;
- is comprised mostly of research laboratories, which are subject to minimal governmental regulation;
- is the least technically challenging application for the development of our products;
- is compatible with our technical core competency; and
- is the area in which we currently have strong patent protection.

We believe that our existing Barocycler instrumentation, and PCT consumable products fill an important and growing need in the sample preparation market for the safe, rapid, versatile, reproducible, and quality extraction of nucleic acids, proteins, and small molecules from a wide variety of plant and animal cells and tissues.

Mass Spectrometry

Mass spectrometry is frequently used by research scientists to evaluate proteins and nucleic acids (DNA and RNA). We believe that mass spectrometry is one of the most powerful laboratory tools used today and that it is playing an increasingly important role in the analysis of biological samples in life sciences research. A number of companies and research laboratories in this market are currently our customers, or are in the process of evaluating our technology for use in their laboratories.

Our plan is to focus primarily on the application of PCT-enhanced protein digestion for the mass spectrometry market and the advantages of PCT in this market, and the use of PCT in biomarker discovery, soil and plant biology, counter bio-terror and tissue pathology applications.

Forensics

The detection of DNA has become a part of the analysis of forensic samples by laboratories and criminal justice agencies worldwide in their efforts to identify the perpetrators of violent crimes and missing persons. Scientists from the University of North Texas and Florida International University have reported improvements in DNA yield from forensic samples (e.g., bone, hair) using PCT in the sample preparation process. We believe that PCT may be capable of differentially extracting DNA from sperm and (female) epithelial cells in swabs collected from rape victims and

stored in rape kits. We also believe that there are many completed but untested rape kits that remain untested for reasons such as cost, time, and quality of results. We further believe that the ability to differentially extract DNA from sperm and not epithelial cells could reduce the cost of such testing, while increasing quality, safety, and speed.

Histology

The most commonly used technique worldwide for the preservation of cancer and other tissues for subsequent pathology evaluation is formalin-fixation followed by paraffin-embedding, or FFPE. We believe that the quality and analysis of FFPE tissues is highly problematic, and that PCT offers significant advantages over current processing methods, including standardization, speed, biomolecule recovery, and safety.

Sample Extraction Process

The process of preparing samples for genomic, proteomic, and small molecule studies includes a crucial step called sample extraction, or sample disruption. This is the process of extracting nucleic acid (DNA and/or RNA), proteins, or small molecules from the plant or animal cells and tissues that are being studied. Sample preparation is widely regarded as a significant impediment to research and discovery, and sample extraction is generally regarded as the key part of sample preparation. Our current commercialization efforts are based upon our belief that pressure cycling technology provides a superior solution to sample extraction compared to other available technologies or procedures, and can thus significantly improve the quality of sample preparation.

Collaboration Program

Our collaboration program is an important element of our business strategy. Initiating a collaboration with a researcher involves the installation of a Barocycler instrument for an agreed upon period of time, generally three to six months, and the execution of an agreed upon work plan. Our primary objectives for entering into a collaboration agreement include:

- the development of a new application for PCT in sample preparation;
- the advancement and validation of our understanding of PCT within an area of life sciences in which we already have products;
- the demonstration of the effectiveness of PCT to specific research scientists who we believe can have a positive impact on market acceptance of PCT; and
- the expectation of peer-reviewed publications and/or presentations at scientific meetings by a third party on the merits of PCT.

Since we initiated our collaboration program in June 2005, third party researchers have cited the use of our PCT platform in publications and presentations. We believe that this program has provided, and continues to provide us with independent and objective data about PCT from well-respected laboratories throughout the United States.

Company Products

We believe our PCT products allow researchers to improve scientific research studies in the life sciences field. Our products are developed with the expectation of meeting or exceeding the needs of research scientists while enhancing the safety, speed, and quality that is available to them with existing sample preparation technology.

Barocycler Instrumentation

Our Barocycler product line consists of laboratory instrumentation that subjects a sample to cycles of pressure from ambient to ultra-high levels and then back to ambient, all in a precisely controlled manner. Our instruments, the Barocycler NEP3229 and Barocycler NEP2320, use cycles of high hydrostatic pressure to quickly and efficiently break up the cellular structures of a specimen to release nucleic acids, proteins, lipids and small molecules from the

specimen into our consumable processing tube, referred to as our PULSE Tubes. Our Barocycler instrumentation is designed to fit on a laboratory bench top, inside a biological safety cabinet, or on the shelf of a laboratory cold room. Our instruments have an external chiller hook-up (to control temperature during the PCT process), automatic fill and dispensing valves, and an integrated micro-processor keypad. The microprocessor is capable of saving up to 99 specific PCT protocols, so the researcher can achieve maximum reproducibility for the extraction of nucleic acids, proteins, lipids, or small molecules from various biological samples. Our Barocycler instruments, together with our consumable products described below, make up our current PCT Sample Preparation System ("PCT SPS").

Barocycler NEP3229 – The Barocycler NEP3229 contains two units, a user interface and a power source, comprised primarily of a 1.5 horsepower motor and pump assembly (hydraulic). Combined, the two components of the NEP3229 weigh approximately 350 pounds. The Barocycler NEP3229 is capable of processing up to three samples simultaneously using our specially designed, single-use PULSE Tubes.

Barocycler NEP2320 – The Barocycler NEP2320 is a smaller and more compact version of our NEP3229 unit. It weighs approximately 80 pounds (with accessories), processes one sample at a time, and works on compressed air (pneumatic) and not hydraulics like the larger NEP3229 unit. Because this instrument is pneumatic, the NEP2320 can be easily attached by an air hose to a typical 85 psi air compressor found in most scientific laboratories, to many consumer-sold portable compressors, or even to bottled gas. This instrument is used by our sales directors as a demonstration instrument and is marketed as a second instrument alternative to our PCT SPS.

Barocycler HUB440 – The Barocycler HUB440, introduced in 2011, is capable of creating and controlling hydrostatic pressure from 35 Bar (500 psi) up to 4,000 Bar (58,000 psi). The Barocycler HUB440 is the first portable, ready to use pressure generator for the laboratory bench.

PCT MicroTube Adapter Kit – The PCT MicroTube Adapter Kit includes an ergonomically designed, space-saving Workstation, PCT MicroTubes and MicroCaps, and specialized tools to enable the user to process up to forty-eight samples simultaneously in our PCT SPS, as compared to three with the Barocycler NEP3229.

The PCT Shredder – The patent-pending PCT Shredder is designed to help research scientists safely, rapidly, and conveniently disrupt very tough samples, such as ticks, muscle, and seeds, that require homogenization prior to PCT or other sample preparation methods. The PCT Shredder uses a similar PULSE Tube as the PCT SPS, and allows scientists to homogenize tough samples prior to extraction with the PCT SPS, but without the need to transfer the sample into a second processing container between steps.

The Shredder SG3 –The Shredder SG3 is a low shear mechanical homogenization system for use with tough, fibrous and other difficult-to-disrupt tissues and organisms. The Shredder SG3 uses a variety of Shredder PULSE Tubes to directly and rapidly grind a biological sample which, when combined with selected buffers, can provide effective extraction of proteins, DNA, RNA, lipids and small molecules from tissues and organisms. The Shredder SG3 is similar in function to The PCT Shredder, but features a three position force setting lever, which enables the operator to select and apply reproducible force to the sample during the shredding process and eliminates the need for the operator to exert force for long periods when processing one or more samples.

Consumable Products

PULSE Tubes (FT500) – The FT500 PULSE Tube is a specially-designed, plastic, single-use, processing container with two chambers separated by a small disk with small holes. This small disk is referred to as a Lysis Disk. PULSE Tubes transmit the power of PCT from the Barocycler instrument to the sample. In sample extraction, the specimen is placed on the Lysis Disk, buffers are added to the PULSE tube, the PULSE Tube is capped and placed in the pressure chamber of the Barocycler instrument, pressure chamber fluid is added, and pressurization begins. As pressure increases, a small moveable piston pushes the specimen from the top (sample) chamber, through the Lysis Disk and into the bottom (fluid retention) chamber. When pressure is released, the sample (now partially homogenized) is pulled back through the Lysis Disk by the receding ram. The combination of physical passage through the Lysis Disk, rapid pressure changes, and other biophysical mechanisms related to cycled pressure break up the cellular structures of the specimen to quickly and efficiently release nucleic acids, proteins, lipids, and small molecules.

Non-Disk PULSE Tubes (FT500-ND) – The FT500-ND PULSE Tube is a specially-designed, plastic, single-use, processing container with one chamber separated by a small disk with small holes. The FT500-ND is similar to the FT500 in look and feel, except there is no Lysis Disk separating the body of the processing container into two chambers, as in the FT500. The design change was based on market demand for a new PCT consumable for the rapid and reproducible processing of solutions and suspensions that do not require partial homogenization by passage through a Lysis Disk, and for a consumable that could accept smaller sample volumes. The FT500-ND offers variable sample volumes with a range five times that of the existing FT500.

ProteoSolve - SB – (ProteoSolve for Systems Biology) is a PCT-dependent method for the simultaneous extraction, isolation, and fractionation of nucleic acids (DNA and RNA), proteins, and lipids from animal and plant samples routinely used in laboratory research. This patent-pending kit contains proprietary reagents, consumable processing containers (PULSE Tubes), and instructions for use, and is intended to be used with our patented PCT Sample Preparation System. The kit is based on an approach to a "systems biology" sample preparation method that was first unveiled during early 2008, in collaboration with Dr. Alexander Ivanov of the Harvard School of Public Health.

ProteoSolve - CE – (ProteoSolve for Conventional Extraction) is a PCT-dependent kit for the extraction of proteins from a variety of samples using optimized detergent-based reagent system compatible with two-dimensional electrophoresis or two-dimensional chromatographic separation for proteomic analysis. The kit contains the reagents and instructions necessary for the extraction of either denatured or non-denatured proteins, which can then be used for the analysis of protein structure and function.

Mitochondria Isolation Kits – These kits contain the chemical ingredients necessary for a scientist to extract mitochondria from skeletal muscle and lung tissue for subsequent analysis. Mitochondria play a major role in generating the energy required to power most cell processes and are involved in other important cell functions. Mitochondria have been implicated in several human diseases, including heart disease, stroke, Parkinson's disease, cancer, and other mitochondrial diseases.

We believe our development of these products has helped, and will continue to help, drive the adoption of PCT within the life sciences market.

Company Services

Government Grants – We view federal agency grants to be an important part of our business plan. These types of grants allow us to bill the federal agency for work that we are planning to perform as part of the development and commercialization of our technology. We generally start by submitting initial grant requests that are in response to requests for proposals (“RFPs”) from the federal government through their Small Business Innovation Research (“SBIR”) program. Initial (“SBIR Phase I”) grants are meant to fund approved research projects for six months, and generally have budgets of approximately $100,000 to $150,000. Additionally, because our work in SBIR Phase I grants has been successful, we have applied, and may in the future apply, for larger National Institutes of Health (“NIH”) SBIR Phase II grants. Such larger grants are typically for a two-year period and are in excess of $750,000 to support significant research projects in areas we would otherwise expect to support with internal funds should SBIR Phase II grants not be awarded. To date we have been awarded two NIH SBIR Phase I grants and one SBIR Phase II grant. The data on one of the NIH SBIR Phase I grants was the basis for the submission, and subsequent award, of the NIH SBIR Phase II grant awarded to us in the approximate amount of $850,000 in August 2008. The Phase II grant is for work in the area of using PCT to extract protein biomarkers, sub-cellular molecular complexes, and organelles, with the expectation that these studies will ultimately lead to the release of a new, commercially available PCT-based system, with validated protocols, end-user kits, and other consumables intended for the extraction of clinically important protein biomarkers, sub-cellular molecular complexes, and organelles from human and animal tissues. Both of the NIH SBIR Phase I grants have been completed and the NIH SBIR Phase II grant has been completed.

In March 2010, the U.S. Army Medical Research Acquisition Activity (“USAMRAA”) awarded us an SBIR Phase I grant for approximately $100,000. We completed the work on the grant in October 2010.

During the second half of 2011, we commenced work on a new NIH SBIR Phase I grant in the approximate amount of $160,000, and on a Department of Defense SBIR Phase II grant in the approximate amount of $750,000.

Extended Service Contracts - We offer extended service contracts on our laboratory instrumentation to all of our customers. These service contracts allow a customer who purchases a Barocycler instrument to receive on-site scheduled preventative maintenance, on-site repair and replacement of all worn or defective component parts, and telephone support, all at no incremental cost for the life of the service contract. We offer one-year and four-year extended service contracts to customers who purchase Barocycler instruments.

Other Applications of Pressure Cycling Technology

PCT is an enabling, platform technology based on a physical process that had not previously been used to control bio-molecular interactions. During its early development, under the legacy business of Boston Biomedica, Inc., our scientists were researching and developing applications of pressure cycling technology in many areas of the life sciences, including genomic, proteomic, and small molecule sample preparation. The data generated during these early years, combined with the data generated since we began focusing on PCT operations in February 2005, form the basis of knowledge that we believe will allow us to successfully commercialize PCT both within and outside of the sample preparation market.

Our research and development efforts have shown that, in addition to genomic, proteomic and small molecule sample preparation, PCT is potentially beneficial in a number of other areas of the life sciences, including pathogen inactivation, protein purification, forensics, histology, control of chemical (particularly enzymatic) reactions, and immunodiagnostics. Other applications in the sample preparation market, include forensics and histology, as we discuss above. Our pursuit of these markets, however, depends on a number of factors, including our success in commercializing PCT in the area of sample preparation, our judgment regarding the investment required to be successful in these areas, the value of these markets to our company, and the availability of sufficient financial resources. Below is a brief explanation of each of these additional potential applications and a short description of why we believe PCT can be used to improve scientific studies in these areas.

Pathogen Inactivation

Biological products manufactured for human use, such as blood, vaccines, and drugs, are put through rigorous processing protocols in an effort to minimize the potential of that product to transmit disease. These protocols may include methods to remove infectious materials (such as pre-processing testing, filtration, or chromatography), or methods to inactivate infectious materials that are not captured in the removal steps (such as pasteurization, irradiation, and solvent detergent inactivation). Notwithstanding current diligence in both the removal and inactivation steps, significant concern remains that some bacteria and viruses capable of transmitting infection to recipients may not be removed or inactivated with current procedures. In addition, some removal and inactivation methods may not be useful because of cost, safety, ease-of-use, or other practical concerns. To that end, we believe that a new inactivation method is needed that can safely, rapidly and inexpensively inactivate pathogens in blood, vaccines, and drugs without the need for chemical or other potentially toxic additives. We believe we have successfully generated proof-of-concept that PCT can satisfy this need. We believe that compared to current procedures, a process that uses PCT has the potential to increase safety and yield, lower cost, and decrease the potential side effects of current methods. We have been issued US, European, and Japanese patents for this PCT-dependent inactivation technology.

Protein Purification

Many vaccines and drugs are comprised of proteins. These proteins need to be purified from complex mixtures as part of the manufacturing process. Current purification techniques often result in the loss of a significant amount of the protein. Therefore, any method that could increase the amount of protein being recovered in the purification step, could subsequently lead to a reduction in cost to the manufacturer. We believe we have successfully generated proof-of-concept that PCT can satisfy this need. We believe that compared to current purification procedures, a process that uses PCT has the potential to increase protein recovery, increase the quality of the product, and lower production costs. We have been issued U.S. and European patents in this area.

Control of Chemical (Particularly Enzymatic) Reactions

Chemical reactions encompass many important interactions in nature. Methods used to control chemical reactions could have a positive effect on the quality, speed, and overall result of the reaction. The control and detection of chemical reactions is particularly useful in the biotechnology field for synthesizing and characterizing such molecules as nucleic acids and polypeptides. We believe that PCT offers distinct advantages in controlling chemical reactions over current methods, since PCT can provide precise, automated control over the timing and

synchronization of chemical reactions, particularly enzymatic reactions. We have been issued U.S. and European patents in this area.

Immunodiagnostics

Many tests used in the clinical laboratory today are based on the formation of a complex between two proteins, such as an antigen and an antibody. Such “immunodiagnostic” methods are used for the detection of infectious agents (such as HIV, hepatitis viruses, and West Nile virus), as well as for endocrine, drug testing, and cancer diagnostics. We have generated proof-of-concept that PCT may be used to control bio-molecular interactions between proteins, such as antigens and antibodies. We believe this capability may provide a greater degree of sensitivity and quantitative accuracy in immunodiagnostic testing than that offered by methods that are available today. We have been issued U.S. and European patents in this area.

Customers

Our customers include researchers at academic laboratories, government agencies, and biotechnology, pharmaceutical, and other life science companies in the United States. Our customers also include three foreign distribution partners. Our goal is to continue our market penetration in these target groups and releasing products in our publicized product pipeline. We also believe that there is a significant opportunity to sell and/or lease additional Barocycler instrumentation to additional laboratories at current customer institutions.

If we are successful in commercializing PCT in applications beyond our current focus area of genomic, proteomic, and small molecule sample preparation, and if we are successful in our attempts to attract additional capital, our potential customer base could expand to include hospitals, reference laboratories, blood banks and transfusion centers, plasma collection centers, pharmaceutical manufacturing plants, and other sites involved in each specific application. If we are successful in forensics, our potential customers could be laboratories, military, and other government agencies. If we are successful in histology, our potential customers could be pharmaceutical companies, hospitals, and laboratories focused on drug discovery or correlation of disease states.

Competition

We compete with companies that have existing technologies for the extraction of nucleic acids, proteins, and small molecules from cells and tissues, including methods such as mortar and pestle grinding, sonication, rotor-stator homogenization, French Press, bead beating, freezer milling, enzymatic digestion, and chemical dissolution. We believe that there are a number of significant issues related to the use of these methods, including: complexity, sample containment, cross-contamination, shearing of bio-molecules of interest, limited applicability to different sample types, ease-of-use, reproducibility, and cost. We believe that our PCT Sample Preparation System offers a number of significant advantages over these methods, including labor reduction, temperature control, precision, reproducibility, versatility, efficiency, simplicity, and safety. To compete, we must be able to clearly and conclusively demonstrate to potential customers that our products provide these improved performance capabilities.

We believe that our PCT Sample Preparation System is a novel and enabling system for genomic, proteomic, and small molecule sample preparation. As such, many users of current manual techniques will need to be willing to challenge their existing methods of sample preparation and invest time to evaluate a method that could change their overall workflow in the sample preparation process, prior to adopting our technology. We are also aware that the cost of the PCT Sample Preparation System may be greater than the cost of many of the other techniques currently employed. Consequently, we are focusing our sales efforts on those product attributes that we believe will be most important and appealing to potential customers, namely versatility, reproducibility, quality, and safety.

Manufacturing and Supply

Source Scientific, LLC currently provides all of the manufacturing and assembly services for our instrumentation products under an informal, unwritten understanding. We plan to continue to utilize Source Scientific, LLC as our primary assembler and contract manufacturer of our current, and future, Barocycler instruments. Until we develop a broader network of manufacturers and subcontractors, obtaining alternative sources of supply or manufacturing services could involve significant delays and other costs and challenges, and may not be

available to us on reasonable terms, if at all. The failure of a supplier or contract manufacturer to provide sufficient quantities, acceptable quality and timely products at an acceptable price, or an interruption of supplies from such a supplier could harm our business and prospects.

Research and Development

Our research and development activities are split into two functional areas, applications and engineering.

Applications Research and Development

Our highly educated and trained staff has years of experience in molecular and cellular biology, virology, and proteomics. Our team of scientists focuses on the development of our PCT Sample Preparation System and further commercialization of PCT-dependent genomic, proteomic, and small molecule sample preparation methods. Dr. Alexander Lazarev, our Vice President of Research & Development, meets regularly with our sales, marketing, and engineering staff to discuss market needs and trends. Our applications research and development team is responsible for the technical review of all scientific collaborations, for the support of our marketing and sales departments through the generation of internal data in a number of areas of market interest, and in the development of commercially-viable PCT-dependent products.

Engineering Research and Development

Our engineering research and development team is focused on the design and development of new and improved instrumentation and consumable products to support the commercialization of PCT. Our engineering department is led by Dr. Edmund Ting, our Senior Vice President of Engineering. The primary focus of our engineering group is to ensure seamless production processes, perform installations and field service, and work with our application scientists to complete the development of a high throughput sample processing system for the mass spectrometry market.

Product Pipeline

The following instruments are in our 2012-2013 research and development pipeline:

- Barocycler FFPE Protein Extraction Service - A service offering the enhanced extraction of proteins from formalin-fixed, paraffin-embedded (FFPE) samples using a modified Barocycler instrument that combines the advantages of pressure cycling, high temperature, and certain reagents. Estimated release: Fourth Quarter of 2012.

- XstreamPCT™ HPLC Digestion Module - For automated, in-line, on-demand PCT-enhanced protein digestion; the first module in PBI's PCT-based HPLC platform. Estimated release: Fourth Quarter of 2013.

- Barocycler HT Multiwell (48-384) - For high throughput, PCT-enhanced biomolecule extraction/accelerated enzymatic digestion; process 48 - 384 samples. Estimated release: Fourth Quarter of 2013.

Sales and Marketing

Our sales and marketing efforts are centered on using the independent data developed and disseminated by our collaboration partners to help drive the installed base of our PCT Sample Preparation System. The development of scientific data by our partners and our internal researchers provides our sales and marketing staff with additional tools that are essential in selling a new technology such as PCT.

Sales

Direct US Sales Force

Our domestic sales force currently consists of three full-time sales directors. We believe that hiring seasoned sales professionals, with significant industry experience, will allow us to more effectively penetrate the market with a small, focused sales force. We may increase the number of sales professionals if our financial resources permit and if we believe that doing so will accelerate our commercialization efforts.

Foreign Distributor Network

Currently we have four distribution arrangements covering Japan, Austria, Germany, Belgium, the Netherlands and Luxembourg. Specifically, in June 2008, we entered into a distribution agreement with Veritas Corporation ("Veritas") of Tokyo, Japan pursuant to which we granted Veritas exclusive distribution rights to all of our products in Japan. This agreement extends through December 31, 2013. In October 2011, we entered into a distribution agreement with IUL Instruments GmbH ("IUL") of Germany pursuant to which we granted IUL exclusive distribution rights to all of our products in Germany through March 31, 2013. In November 2011, we entered into a distributor agreement with Oroboros Instruments Corp. ("Oroboros") of Austria pursuant to which we granted Oroboros non-exclusive world-wide distribution rights to the PBI Shredder SG3 System and related products through December 31, 2012. In March 2012, we entered into a distribution agreement with LABio, a Netherlands-based life sciences company, pursuant to which we granted LABio the exclusive right to market and sell our sample preparation instruments and consumables in Belgium, the Netherlands, and Luxembourg. In addition, we granted LABio the non-exclusive right to market and sell our recently released, patent-pending, mechanical homogenization device, the Shredder SG3, and its associated consumables, in the same three countries.

Marketing

Our marketing function includes Dr. Nathan Lawrence, our Vice President of Marketing. Dr. Lawrence oversees and directs marketing activities such as trade show attendance and sponsorship, on-line advertising, website maintenance and improvement, search engine optimization, creation and dissemination of a PCT newsletter, market research initiatives, and the arrangement of on-location seminars, lectures, and demonstrations of PCT capabilities. Our marketing function is also responsible for the overall coordination of our collaboration programs, from initial set-up, research plan design, and training, service, and data analysis. Some of these responsibilities are shared with other PBI departments (such as Research and Development), but marketing drives the collaborative process. Dr. Lawrence is also responsible for the continued coordination and support of our foreign and domestic distribution partners.

In January 2012, we entered a co-marketing/selling and research and development agreement with Digilab, a provider of products for life sciences, analytical chemistry and diagnostic markets, under which we intend to co-market and sell our respective product lines worldwide, including in industry publications, at scientific meetings, on each company's website, through common collaborator studies, at key industry trade shows, and in visits to customer sites. We also intend to explore ways to co-develop new instrumentation, accessories/modules for existing instrumentation, and consumables that combine the robotics and high throughput capabilities of Digilab products with the extraction, protein digestion, and other advantages of our PCT platform.

Intellectual Property

We believe that protection of our patents and other intellectual property is essential to our business. Subject to the availability of sufficient financial resources, our practice is to file patent applications to protect technology, inventions, and improvements to inventions that are important to our business development. We also rely on trade secrets, know-how, and technological innovations to develop and maintain our potential competitive position. To date, we have been granted 14 United States patents, three European patents, three Australian patents, two Japanese patents, and two Canadian patents. Our issued patents expire between 2015 and 2027. Our failure to obtain and maintain adequate patent protection may adversely affect our ability to enter into, or affect the terms of, any arrangement for

the marketing or sale of any of our PCT products. It may also allow our competitors to duplicate our products without our permission and without compensation.

License Agreements Relating to Pressure Cycling Technology

BioMolecular Assays, Inc.

In 1996, we acquired our initial equity interest in BioSeq, Inc., which at the time was developing our original pressure cycling technology. BioSeq, Inc. acquired its pressure cycling technology from BioMolecular Assays, Inc. under a technology transfer and patent assignment agreement. In 1998, we purchased all of the remaining outstanding capital stock of BioSeq, Inc., and at such time, the technology transfer and patent assignment agreement was amended to require us to pay BioMolecular Assays, Inc. a 5% royalty on our sales of products or services that incorporate or utilize the original pressure cycling technology that BioSeq, Inc. acquired from BioMolecular Assays, Inc. We are also required to pay BioMolecular Assays, Inc. 5% of the proceeds from any sale, transfer or license of all or any portion of the original pressure cycling technology. These payment obligations terminate in 2016. During the year ended December 31, 2011 and 2010, we incurred approximately $21,090 and $36,330, respectively in royalty expense associated with our obligation to BioMolecular Assays, Inc.

In connection with our acquisition of BioSeq, Inc., we licensed certain limited rights to the original pressure cycling technology back to BioMolecular Assays, Inc. This license is non-exclusive and limits the use of the original pressure cycling technology by BioMolecular Assays, Inc. solely for molecular applications in scientific research and development and in scientific plant research and development. BioMolecular Assays, Inc. is required to pay us a royalty equal to 20% of any license or other fees and royalties, but not including research support and similar payments, it receives in connection with any sale, assignment, license or other transfer of any rights granted to BioMolecular Assays, Inc. under the license. BioMolecular Assays, Inc. must pay us these royalties until the expiration of the patents held by BioSeq, Inc. in 1998, which we anticipate will be 2016. We have not received any royalty payments from BioMolecular Assays, Inc. under this license.

Battelle Memorial Institute

In December 2008, we entered into an exclusive patent license agreement with the Battelle Memorial Institute ("Battelle"). The licensed technology is the subject of a patent application filed by Battelle in 2008 and relates to a method and a system for improving the analysis of protein samples, including through an automated system utilizing pressure and a pre-selected agent to obtain a digested sample in a significantly shorter period of time than current methods, while maintaining the integrity of the sample throughout the preparatory process. In addition to royalty payments on net sales on “licensed products”, we are obligated to make minimum royalty payments for each year that we retain the rights outlined in the patent license agreement and we are required to have our first commercial sale of the licensed products within one year following the issuance of the patent covered by the licensed technology. The minimum annual royalty for 2010 was $5,000. Our only obligation for 2011 was a minimum royalty payment of $7,500. Our minimum annual royalty payment for 2012 is $10,000.

Regulation

Many of our activities are subject to regulation by governmental authorities within the United States and similar bodies outside of the United States. The regulatory authorities may govern the collection, testing, manufacturing, safety, efficacy, labeling, storage, record keeping, transportation, approval, advertising, and promotion of our products, as well as the training of our employees.

All of our commercialization efforts to date are focused in the area of genomic, proteomic, and small molecule sample preparation. We do not believe that our current Barocycler products used in sample preparation are considered “medical devices” under the United States Food, Drug and Cosmetic Act (the “Act”) and we do not believe that we are subject to the law’s general control provisions that include requirements for registration, listing of devices, quality regulations, labeling, and prohibitions against misbranding and adulteration. We also do not believe that we are subject to regulatory inspection and scrutiny. If, however, we are successful in commercializing PCT in applications

beyond our current focus area of genomic, proteomic, and small molecule sample preparation, such as protein purification, pathogen inactivation and immunodiagnostics, our products may be considered “medical devices” under the Act, at which point we would be subject to the law’s general control provisions and regulation by the U.S. Food and Drug Administration (the “FDA”) that include requirements for registration listing of devices, quality regulations, labeling, and prohibitions against misbranding and adulteration. The process of obtaining approval to market these devices in the other potential applications of PCT would be costly and time consuming and could prohibit us from pursuing such markets.

We may also become subject to the European Pressure Equipment Directive, which requires certain pressure equipment meet certain quality and safety standards. We do not believe that we are currently subject to this directive because our Barocycler instruments are below the threshold documented in the text of the directive. If our interpretation were to be challenged, we could incur significant costs defending the challenge, and we could face production and selling delays, all of which could harm our business.

We self-certified that our Barocycler instrumentation was electromagnetically compatible, or CE, compliant, which means that our Barocycler instruments meet the essential requirements of the relevant European health, safety and environmental protection legislation. In order to maintain our CE Marking, a requirement to sell equipment in many countries of the European Union, we are obligated to uphold certain safety and quality standards.

Employees

At May 15, 2012, we had 13 full-time employees and 3 part-time employees. All employees enter into confidentiality agreements intended to protect our proprietary information. We believe that our relations with our employees are good. None of our employees are represented by a labor union. Our performance depends on our ability to attract and retain qualified professional, scientific and technical staff. The level of competition among employers for skilled personnel is high. Subject to our limited financial resources, we attempt to maintain employee benefit plans to enhance employee morale, professional commitment and work productivity and provide an incentive for employees to remain with us.

PROPERTIES

Our corporate offices are currently located at 14 Norfolk Avenue, South Easton, Massachusetts 02375. In November 2007, we signed a lease agreement commencing in February 2008 pursuant to which we lease approximately 5,500 square feet of office space. We renewed the lease through September 30, 2012 with a monthly payment of $4,800.

Effective January 1, 2010, we entered into a three-year lease agreement with the University of Massachusetts, pursuant to which we are leasing laboratory and office space at the Venture Development Center on campus at the university for research and development activities. We pay $5,000 per month for the use of these facilities at the University of Massachusetts. We believe that our facilities are adequate for our operations and that suitable additional space will be available if and when needed.

MANAGEMENT

Executive Officers

Our executive officers are appointed by, and serve at the discretion of, our board of directors. The following table sets forth information about our executive officers.

Name	Age	Position
Richard T. Schumacher	61	President, Chief Executive Officer, Chief Financial Officer, Treasurer, Clerk and Director(1)
Edmund Ting, Ph.D.	58	Senior Vice President of Engineering
Nathan P. Lawrence, Ph.D.	57	Vice President of Marketing
Alexander Lazarev, Ph.D.	47	Vice President of Research and Development
Joseph L. Damasio, Jr.	37	Vice President of Finance and Administration

(1) Mr. Schumacher's term of office as a director continues until 2014.

Set forth below is biographical information for each of our executive officers.

Mr. Richard T. Schumacher, the founder of the Company, has served as a director of the Company since 1978. He has served as the Company's Chief Executive Officer since April 16, 2004 and President since September 14,

2004. He previously served as Chief Executive Officer and Chairman of the Board of the Company from 1992 to February 2003. From July 9, 2003 until April 14, 2004 he served as a consultant to the Company pursuant to a consulting agreement. He served as President of the Company from 1986 to August 1999. Mr. Schumacher served as the Director of Infectious Disease Services for Clinical Sciences Laboratory, a New England-based medical reference laboratory, from 1986 to 1988. From 1972 to 1985, Mr. Schumacher was employed by the Center for Blood Research, a nonprofit medical research institute associated with Harvard Medical School. Mr. Schumacher received a B.S. in Zoology from the University of New Hampshire.

Dr. Edmund Ting joined us as Senior Vice President of Engineering on April 24, 2006. Prior to joining us, Dr. Ting served as the Chief Research Officer of Avure Technologies, a leading worldwide manufacturer of high pressure hydrostatic processing equipment for the food and materials processing industry, where he worked from 2001 to 2006. From 1990 to 2001, Dr. Ting was employed by Flow International Corporation, a world leader in the ultrahigh pressure waterjet cutting technology market, and the parent company of Avure Technologies until November 2005. Dr. Ting last held the position of Vice President of Engineering Research and Development at Flow International Corporation. From 1984 to 1990, Dr. Ting was a research scientist and then a group leader at Grumman Aerospace Corporation. Dr. Ting earned a Bachelor of Science degree in mechanical engineering from Northeastern University and a Science Doctorate in materials science and engineering from the Massachusetts Institute of Technology.

Dr. Nathan P. Lawrence was appointed as our Vice President of Marketing and Sales on April 1, 2006. Dr. Lawrence joined Pressure BioSciences Inc. in 2005, serving as Director of Research and Development until his promotion to Vice President of Marketing in 2006. Dr. Lawrence was responsible for the development of protocols based on Pressure Cycling Technology (PCT). From 2004 through 2005, Dr. Lawrence worked for 454 Life Sciences Inc. in product development. Prior to 454 Life Sciences, Dr. Lawrence was Director of Research and Development for Boston Biomedica, Inc. from 1998 to 2004. He was primarily responsible for the development of PCT, as well as the development of nucleic acid-based diagnostic assays. Prior to joining Boston Biomedica, Inc., Dr. Lawrence held several positions with increasing responsibility in Research and Development and manufacturing at Becton Dickinson and Gene Trak Systems. Dr. Lawrence holds a BA from the University of Miami, an M.S. from Southern Connecticut State University, and a Ph.D. from Yale University.

Dr. Alexander Lazarev has served as our Vice President of Research and Development since 2007. Prior to that, he served as our Director of Research and Development, since joining us in 2006. Prior to joining us, Dr. Lazarev worked as a Visiting Scientist at the Barnett Institute of Chemical and Biological Analysis at Northeastern University in 2005, and served as a Director of New Technology Development at Proteome Systems, Inc., where he was involved in research and development of innovative proteomic analysis applications from 2001 until early 2006. From 1998 to 2001, Dr. Lazarev was employed as Senior Scientist at the Proteomics Division of Genomic Solutions, Inc. Prior to his employment at Genomic Solutions, Inc., Dr. Lazarev was employed in an analytical contract service startup company, PhytoChem Technologies, Inc., which was founded as a spin-off from ESA, Inc. in 1997. Previously, Dr. Lazarev held various scientific positions at the Ohio State University School of Medicine and the Uniformed Services University of Health Sciences. Most of his scientific career has been dedicated to development of methods and applications for biochemical analysis. Since 2005, Dr. Lazarev has been elected as an Executive Board member of the MASSEP.org, a non-profit scientific discussion forum dedicated to the promotion and improvement of chromatography and other analytical technologies. Dr. Lazarev earned his undergraduate and graduate degrees at the University of Kazan, Russian Federation.

Mr. Joseph L. Damasio, Jr. was appointed as our Vice President of Finance and Administration on December 20, 2011. Mr. Damasio has more than 13 years of finance and accounting experience, most recently serving as our Controller since November 2008. Mr. Damasio previously served as Accounting Manager after joining us in January 2007. Before joining us, Mr. Damasio was a senior financial analyst at BearingPoint Inc., a management and technology consulting firm from January 2004 to January 2007. Before joining BearingPoint Inc., Mr. Damasio spent

three years as an auditor with PricewaterhouseCoopers LLP. Mr. Damasio began his financial career with NEN Life Science Products Inc., a subsidiary of PerkinElmer Inc. Mr. Damasio earned a bachelor's degree in accounting, with honors, from the University of Massachusetts. He holds an MBA and MSF from Boston College. He is a Certified Public Accountant in Massachusetts.

Non-Employee Directors

The following table sets forth information about the individuals who serve as our non-employee directors.

Name	Age	Position	Board Committees	Term of office
R. Wayne Fritzsche	63	Chairman of the Board		2012
Calvin A. Saravis, Ph.D.	82	Director	Compensation; Nominating and Scientific Advisory Board	2012
Jeffrey N. Peterson	56	Director	Compensation; Nominating	2012
J. Donald Payne	56	Director	Audit; Compensation; Nominating	2013
Alan D. Rosenson	47	Director	Audit; Compensation; Nominating	2013
Alan I. Goldberg	69	Director	Audit	2014
Gregory G. Freitag	50	Director	Audit	2014

Mr. R. Wayne Fritzsche has served as a director and our Chairman of the Board of Directors since October 2003. Mr. Fritzsche has served as a member of our Scientific Advisory Board since 1999. Mr. Fritzsche is the founder of FAI LLC, a consulting firm that provides strategic, financial, and scientific consulting to medical companies in the life sciences and healthcare industries, and has served as its President since 1991. He was a part of the founding group of The Immune Response Company (IMNR) along with Dr. Jonas Salk. From 2001 until 2004, Mr. Fritzsche has served as a board member of Opexa Pharmaceuticals, a multiple sclerosis and cell immunology therapy company, and Vascular Sciences, Inc., an extracorporeal, macular degeneration company. He also previously served as a board member of Intelligent Medical Imaging, Inc., an automated microscopic imaging company, from 1994 to 1997, Clarion Pharmaceuticals, a drug development company, from 1994 to 1996, Nobex Pharmaceuticals, Inc., a drug delivery firm, from 1996 to 2001, Cardio Command, Inc., a transesophageal cardiac monitoring and pacing firm, from 1999 to 2001, and Hesed BioMed, Inc. an antisense oligonucleotide and catalytic antibody company, from 2000 to 2002. Mr. Fritzsche is a founder of Transplan, Inc., an organ transplant device company whose primary focus is in heart transplant. Mr. Fritzsche holds a BA from Rowan University (formerly Glassboro State College), and an MBA from the University of San Diego.

Dr. Calvin A. Saravis has served as a director since 1986. Dr. Saravis has also served as Chairman of our Scientific Advisory Board since 2003. From 1984 to 1998 he was an Associate Professor of Surgery (Biochemistry) at Harvard Medical School (presently emeritus) and Chief, Division of Immunology, Department of Surgery, Harvard Medical School, Boston City Hospital; and from 1983 to 1999, he was an Associate Research Professor of Pathology at Boston University School of Medicine (presently emeritus). From 1971 to 1997, Dr. Saravis was a Senior Research Associate at the Mallory Institute of Pathology and from 1979 to 1997 he was a Senior Research Associate at the Cancer Research Institute-New England Deaconess Hospital. Dr. Saravis received his Ph.D. in immunology and serology from Rutgers University.

Mr. Jeffrey N. Peterson has served as a director since July 2011. Since 1999, he has served as the chief executive officer of Target Discovery, Inc. (“TDI”), a personalized medicine diagnostics (PMDx) company. Mr. Peterson also

serves as Chairman of TDI's majority-owned subsidiary, Veritomyx, Inc., which is completing development and commercialization of a tool in accurate peptide, protein and isoform identification and characterization. Prior to joining TDI, Mr. Peterson served as CEO of Sharpe, Peterson, Ocheltree & Associates, an international business development consulting firm assisting Fortune 500 and many smaller firms in business expansion and strategy, for three years prior to incorporating TDI. Prior to that, he spent 9 years in key management roles in Abbott Laboratories' Diagnostics and International (Pharmaceuticals, Hospital Products, Nutritionals, Consumer) businesses, last serving as CEO and General Manager of Abbott South Africa. Mr. Peterson's experience prior to Abbott Laboratories included 11 years with General Electric's Engineered Materials and Plastics businesses, spanning roles in strategic planning, business development, technology licensing, marketing and sales, operations, quality control and R&D. Mr. Peterson holds BSChE and MSChE (Chemical Engineering) degrees from MIT. He serves as Chair Emeritus of the BayBio Institute, a non-profit organization serving the life science community, and on the board of BayBio, a trade association for the life sciences industry in Northern California. He is a member of the Coalition for 21st Century Medicine, and of BIO's Personalized Medicine & Diagnostics Group. Mr. Peterson

has served on the board of directors SanGlobal Ed Corp. (d/b/a MyVerse), a teen and collegiate personal and professional development web and mobile resource site.

Mr. J. Donald Payne has served as a director since December 2003. Commencing in 2011, Mr. Payne has served as the Senior Vice President and Chief Financial and Administrative Officer of Oncolix, Inc., a privately-held pharmaceutical company engaged in cancer research. Mr. Payne previously served as President and a Director of Nanospectra Biosciences, Inc., a privately-held medical device company developing products for cancer from 2001 until 2011. Prior to that, Mr. Payne held various executive positions in finance and administration of public and private life science companies since 1992, served as a financial executive in the energy industry from 1980 through 1990, and was in public accounting from 1976 to 1980. Mr. Payne received an MBA from Rice University in 1992 and a BBA from Texas A&M University in 1976. He is a Certified Public Accountant in Texas, and a member of the AICPA and Financial Executives Institute.

Mr. Alan D. Rosenson has served as a director since September 2009. Mr. Rosenson currently serves as President of ALJAR Investments, Inc., an investment firm which he founded in 1994 and through which he manages stock and bond portfolios for private clients. In 1987, Mr. Rosenson founded Consulting Innovations, Inc., an information systems firm, that currently provides consulting services and technology training to high-level executives and business owners. Mr. Rosenson has been a volunteer for various charities from 1990 to the present. Mr. Rosenson earned his B.A. degree from Indiana University with honors, and his MBA degree from Washington University in St. Louis.

Mr. Alan I. Goldberg has served as a director since July 2010. Mr. Goldberg has served as Chairman in the private investment company, Alphi Investment Management Co., from 1987 until 2000. He has been a member of the Chicago Board of Trade since 1977 and currently holds two memberships. He was a Vice President of Morgan Stanley Dean Witter from 1970 to 1977. He has a finance degree from the Kellogg School of Management at Northwestern University. He has served on private and public company boards, and is active in several educational and community charities.

Mr. Gregory G. Freitag, JD, CPA, has served as a director since July 2010. He has served as the Chief Financial Officer and a member of the Board of Directors of AxoGen, Inc. (formerly LecTec Corporation), an intellectual property licensing and holding company since June 2010, and as Chief Financial Officer and director of AxoGen Corporation, a wholly owned subsidiary of AxoGen, Inc., since October 2011. From June 2010 to September 2011, he also served as Chief Executive Officer of LecTec Corporation. Since May 2009, Mr. Freitag has been a founder and principal of FreiMc, LLC, a consulting and advisory firm, and EmployRx, Inc., a business that provides services to self–insured employers relating to prescription drug benefits. Mr. Freitag founded both FreiMc, LLC and EmployRx, Inc. Mr. Freitag previously served as the Director of Business Development at Pfizer Health Solutions, a former subsidiary of Pfizer, Inc., from January 2006 to May 2009. From July 2005 to January 2006, Mr. Freitag was a consultant for Guidant Corporation in their business development group. Prior to Guidant Corporation, Mr. Freitag was the Chief Executive Officer of HTS Biosystems, a biotechnology tools start–up company, from March 2000 until its sale in early 2005. Mr. Freitag was the Chief Operating Officer, Chief Financial Officer and General Counsel of Quantech, Ltd., a public point of care diagnostic company, from December 1995 to March 2000. Mr. Freitag received a B.A. degree in Business and Economics from Macalester College and a J.D. degree from the University of Chicago.

Board Independence

Our board of directors has reviewed the qualifications of each of Messrs. Payne, Goldberg, Freitag, Rosenson, Peterson and Dr. Saravis, constituting more than a majority of our directors, and has affirmatively determined that each individual is "independent" as such term is defined under the current listing standards of the NASDAQ Stock Market. The board of directors has determined that none of these directors has a material relationship with us that would interfere with the exercise of independent judgment. In addition, each member of the Audit Committee is independent as required under Section 10A(m)(3) of the Securities Exchange Act of 1934, as amended (the "Exchange Act").

Transactions with Related Persons

In June 2010, our board of directors extended the engagement of Mr. Wayne Fritzsche, our Chairman, as an investor relations consultant for us, with an increase of annual cash compensation to $110,000. In connection with

this engagement, Mr. Fritzsche has not been on our Audit Committee since April 1, 2009. As of the date of this prospectus, Mr. Fritzsche continues to provide consulting services to us.

On April 8, 2011 and April 12, 2011, we completed the first tranche of a private placement, pursuant to which we sold an aggregate of 55,048 units for a purchase price of $15.00 per unit, resulting in gross proceeds to us of $825,720 (the "Series C Private Placement"). This was the first tranche of the Series C Private Placement. In connection with the second tranche, the purchase price was reduced to $12.50 per unit and we issued an additional 11,011 units to the purchasers who participated in the first tranche, without any additional gross proceeds to us. The second tranche closed on June 20, 2011 for the sale of 22,039 units for a purchase price of $12.50 per unit with gross proceeds of $275,485. Each unit consisted of (i) one share of Series C Preferred Stock convertible into 10 shares of our common stock (subject to adjustment for stock splits, stock dividends, recapitalization, etc.) and (ii) a three-year warrant to purchase 10 shares of our common stock at a per share exercise price equal to the sum of (a) the common stock equivalent of the Series C Purchase Price (b) plus $0.88 (the "Series C Warrant"). The Series C Warrants have since been amended as to the exercise price. Mr. Richard T. Schumacher, our President, Chief Executive Officer, Chief Financial Officer and a director, participated in the Series C Private Placement on the same terms as the other investors. Mr. Schumacher received 6,021 Series C Units for a purchase price of $75,262.50. On April 5, 2012, along with all other holders of Series C Units, Mr. Schumacher exchanged all of his Series C Units for the units we offered in our February 2012 private placement consisting of shares of common stock and warrants to purchase shares of common stock (with a warrant to purchase 0.5 shares of common stock for each share of common stock purchased in the February 2012 private placement). In connection with such exchange, Mr. Schumacher received 93,786 number of shares of common stock and warrants to purchase 46,894 shares of common stock.

On September 7, 2011, we received a loan in the amount of $100,000 from Mr. Schumacher. The loan was made pursuant to a convertible debenture (the "Note") with a maturity date of March 7, 2012, which may be extended with mutual consent of the parties. The interest rate under the Note is 20% per year. The Note may be repaid, at Mr. Schumacher's election (i) in cash, (ii) by conversion into that number of securities issued in the next financing completed by us having an aggregate purchase price equal to the then outstanding principal amount of the Note, together with any accrued and unpaid interest due at the time of conversion or (iii) conversion into shares of our common stock at a conversion price of $1.00 per share. In connection with the loan, we issued warrants to Mr. Schumacher to purchase 12,048 shares of common stock, at an exercise price of $0.83 per share, and warrants to purchase 105,882 shares of common stock, at an exercise price of $0.85 per share. Both warrants are exercisable on or after March 07, 2012 and expire on September 7, 2014. On February 7, 2012, Mr. Schumacher converted the $100,000 principal amount of the Note in our private placement in February 2012 of shares of restricted common stock and warrants to purchase shares of common stock at a purchase price of $0.9125 per share for 109,589 shares of restricted common stock and 54,795 warrants at an exercise price of $0.85 per share.

On February 7, 2012, Mr. R. Wayne Fritzsche invested $12,453 in our private placement in February 2012 of shares of restricted common stock and warrants to purchase shares of common stock at a purchase price of $0.8025 per share for 15,518 shares of restricted common stock and 7,759 warrants at an exercise price of $0.74 per share.

On April 9, 2012, we completed a registered direct offering with Ironridge Global IV Ltd. ("Ironridge"), pursuant to which we sold an aggregate of 500 shares of our Series E Convertible Preferred Stock to Ironridge for a purchase price of $1,000 per share or an aggregate purchase price of $500,000. Each share of Series E Convertible Preferred Stock is convertible into approximately 980 shares of our common stock. The Series E Convertible Preferred Stock is entitled to a yearly dividend at a rate of 10.5% per year, subject to a credit risk and make-whole adjustment, and is payable in cash or shares of common stock at our election. Under certain conditions and subject to certain limitations, we may require Ironridge to convert their Series E Preferred Stock into common stock.

Executive Officer Compensation

General

Messrs. Payne, Peterson and Rosenson and Dr. Saravis are currently the members of the Compensation Committee. The Compensation Committee operates pursuant to a written charter, a current copy of which is publicly available

on the investor relations portion of our website at www.pressurebiosciences.com. The primary functions of the Compensation Committee include (i) reviewing and approving our executive compensation, (ii) reviewing the recommendations of the President and Chief Executive Officer regarding the compensation of our executive officers, (iii) evaluating the performance of the President and Chief Executive Officer, (iv) overseeing the administration and approval of grants of stock options and other equity awards under our equity incentive plans, and (v) recommending compensation for our board of directors and each committee thereof for review and approval by the board of directors.

The Compensation Committee may form and delegate authority to one or more subcommittees as it deems appropriate from time to time under the circumstances (including (a) a subcommittee consisting of a single member and (b) a subcommittee consisting of at least two members, each of whom qualifies as a "non-employee director," as such term is defined from time to time in Rule 16b-3 promulgated under the Exchange Act, and an "outside director," as such term is defined from time to time in Section 162(m) of the Internal Revenue Code of 1986, as amended, and the rules and regulations thereunder).

Compensation Objectives

In light of the relatively early stage of commercialization of our products, we recognize the importance of attracting and retaining key employees with sufficient experience, skills, and qualifications in areas vital to our success, such as operations, finance, sales and marketing, research and development, engineering, and individuals who are committed to our short- and long-term goals. The Compensation Committee has designed our executive compensation programs with the intent of attracting, motivating, and retaining experienced executives and, subject to our limited financial resources, rewarding them for their contributions by offering them a competitive base salary, potential for annual cash incentive bonuses, and long-term equity-based incentives, typically in the form of stock options. The Compensation Committee strives to balance the need to retain key employees with financial prudence given our history of operating losses, limited financial resources and the early stage of our commercialization.

Executive Officers and Director Compensation Process

The Compensation Committee considers and determines executive compensation according to an annual objective setting and measurement cycle. Specifically, corporate goals for the year are initially developed by our executive officers and are then presented to our board of directors and Compensation Committee for review and approval. Individual goals are intended to focus on contributions that facilitate the achievement of the corporate goals. Individual goals are first proposed by each executive officer, other than the President and Chief Executive Officer, then discussed by the entire senior executive management team and ultimately compiled and prepared for submission to our board of directors and the Compensation Committee, by the President and Chief Executive Officer. The Compensation Committee sets and approves the goals for the President and Chief Executive Officer. Generally, corporate and individual goals are set during the first quarter of each calendar year. The objective setting process is coordinated with our annual financial planning and budgeting process so our board of directors and Compensation Committee can consider overall corporate and individual objectives in the context of budget constraints and cost control considerations. Annual salary increases, bonuses, and equity awards, such as stock option grants, if any, are tied to the achievement of these corporate and individual performance goals as well as our financial position and prospects.

Under the annual performance review program, the Compensation Committee evaluates individual performance against the goals for the recently completed year. The Compensation Committee's evaluation generally occurs in the first quarter of the following year. The evaluation of each executive (other than the President and Chief Executive Officer) begins with a written self-assessment submitted by the executive to the President and Chief Executive

Officer. The President and Chief Executive Officer then prepares a written evaluation based on the executive's self-assessment, the President and Chief Executive Officer's evaluation, and input from others within the Company. This process leads to a recommendation by the President and Chief Executive Officer for a salary increase, bonus, and equity award, if any, which is then considered by the Compensation Committee. In the case of the President and Chief Executive Officer, the Compensation Committee conducts his performance evaluation and determines his compensation, including salary increase, bonus, and equity awards, if any. We generally expect, but are not required, to implement salary increases, bonuses, and equity awards, for all executive officers, if and to the extent granted, by April 1 of each year.

Non-employee director compensation is set by our board of directors upon the recommendation of the Compensation Committee. In developing its recommendations, the Compensation Committee is guided by the following goals: compensation should be fair relative to the required services for directors of comparable companies in our industry and at our company's stage of development; compensation should align directors' interests with the long-term interest of stockholders; the structure of the compensation should be simple, transparent, and easy for stockholders to understand; and compensation should be consistent with the financial resources, prospects, and competitive outlook for the Company.

In evaluating executive officer and director compensation, the Compensation Committee considers the practices of companies of similar size, geographic location, and market focus. In order to develop reasonable benchmark data the Compensation Committee has referred to publicly available sources such as Salary.com and the BioWorld Survey. While the Compensation Committee does not believe benchmarking is appropriate as a stand-alone tool for setting compensation due to the unique aspects of our business objectives and current stage of development, the Compensation Committee generally believes that gathering this compensation information is an important part of its compensation-related decision making process.

The Compensation Committee has the authority to hire and fire advisors and compensation consultants as needed and approve their fees. No advisors or compensation consultants were hired or fired in fiscal 2011.

The Compensation Committee is also authorized to delegate any of its responsibilities to subcommittees or individuals as it deems appropriate. The Compensation Committee did not delegate any of its responsibilities in fiscal 2011.

Summary Compensation Table

The Summary Compensation Table below sets forth the total compensation paid or earned for the fiscal years ended December 31, 2011 and 2010 for: (i) each individual serving as our Chief Executive Officer ("CEO") or acting in a similar capacity during any part of fiscal 2011; and (ii) the other two most highly paid executive officers (collectively, the "Named Executive Officers") who were serving as executive officers at the end of fiscal 2011.

Name and Principal Position	Fiscal Year	Salary(1)	Option Awards(2)	All other Compensation(3)	Total
Richard T. Schumacher	2011	$286,371	$11,835	$ 30,434	$328,640
President, Chief Executive Officer and Chief Financial Officer	2010	281,456	-	26,640	308,096
Edmund Ting, Ph.D	2011	197,634	11,835	1,304	210,773
Senior Vice President of Engineering	2010	192,546	-	1,329	193,875
Alexander Lazarev, Ph.D	2011	171,600	11,835	7,501	190,936
Vice President of Research and Development	2010	157,395	-	7,666	163,883

(1) Salary refers to base salary compensation paid through our normal payroll process. No bonus was paid to any Named Executive Officer for 2010 or 2011.

(2) Amounts shown do not reflect compensation received by the Named Executive Officers. Instead, the amounts shown are the aggregate grant date fair value as determined pursuant to FASB ASC 718, Compensation-Stock

Compensation. Please refer to Note 2, xiii, "Accounting for Stock-Based Compensation" in the Notes to Consolidated Financial Statements for the fiscal year ended December 31, 2011, for the relevant assumptions used to determine the valuation of stock option grants. No stock options were granted in 2010 to our executive officers.

(3) "All Other Compensation" includes our Company match to the executives' 401(k) contribution and premiums paid on life insurance for the executives. Both of these benefits are available to all of our employees. In the case of Mr. Schumacher, "All Other Compensation" also includes $7,980 in premiums we paid for a life insurance policy to which Mr. Schumacher's wife is the beneficiary. Mr. Schumacher's compensation includes $19,840 and $18,496 paid to his spouse, who is one of our part-time employees, for

2011 and 2010, respectively. "All Other Compensation" for Dr. Lazarev includes $6,000 paid to Dr. Lazarev in lieu of his participation in the medical benefit plan offered by the Company.

Outstanding Equity Awards at Fiscal Year End

The following table sets forth certain information regarding outstanding stock options awards for each of the Named Executive Officers as of December 31, 2011.

	Option Awards			
Name	Number of Securities Underlying Unexercised Options Exercisable	Number of Securities Underlying Unexercised Options Unexercisable (1)	Option Exercise Price ($)	Option Expiration Date
Richard T. Schumacher	60,000	0	$3.08	2/11/2012
President, Chief Executive Officer and				
Chief Financial Officer	30,000	0	$2.70	12/2/2012
	75,000	0	$2.92	6/17/2015
	30,000	0	$3.86	3/30/2016
	70,000	0	$3.51	2/12/2017
	75,000	0	$0.77	3/12/2019
		15,000	(2) $1.05	9/09/2021
Edmund Y. Ting, Ph.D	60,000	0	$3.87	4/24/2016
Senior Vice President of Engineering	12,000	0	$2.75	9/25/2018
	42,000	0	$0.77	3/12/2019
		15,000	(2) $1.05	9/09/2021
Alexander V. Lazarev, Ph.D	50,000	0	$3.88	3/02/2016
Vice President of Research & Development	10,000	0	$2.75	9/25/2018
	35,000	0	$0.77	3/12/2019
		15,000	(2) $1.05	9/9/2021

(1) All unvested stock options listed in this column were granted to the Named Executive Officer pursuant to our 2005 Equity Incentive Plan. All options expire ten years after the date of grant. Unvested stock options become fully vested and exercisable upon a change of control of our company.

(2) Options to purchase shares of common stock were granted on September 9, 2011 to each of the Named Executive Officers, of which 25% of the stock options will vest on the first anniversary of the date of grant while the remainder will vest monthly over the remaining three year vesting period.

Retirement Plan

All employees, including the Named Executive Officers, may participate in our 401(k) Plan. Under the 401(k) Plan, employees may elect to make before tax contributions of up to 60% of their base salary, subject to current Internal Revenue Service limits. The 401(k) Plan does not permit an investment in our common stock. We match employee contributions up to 50% of the first 2% of the employee's earnings. Our contribution is 100% vested immediately.

Severance Arrangements

Each of Mr. Schumacher, Dr. Ting, Dr. Lazarev, and Dr. Lawrence, executive officers of the Company, is entitled to receive a severance payment if terminated by us without cause. The severance benefits would include a payment in an amount equal to one year of such executive officer's annualized base salary compensation plus accrued paid time off. Additionally, the officer will be entitled to receive medical and dental insurance coverage for one year following the date of termination.

Change-in-Control Arrangements

Pursuant to severance agreements with four of our executive officers, each of Dr. Ting, Dr. Lazarev and Dr. Lawrence is entitled to receive a change of control payment in an amount equal to one year (other than Mr. Schumacher) of such executive officer's annualized base salary compensation, accrued paid time off, and medical and dental coverage, in the event of a change of control of our company. In the case of Mr. Schumacher, this payment is equal to two years of annualized base salary compensation, accrued paid time off, and two years of medical and dental coverage.

Pursuant to our 2005 Equity Incentive Plan, any unvested stock options held by a Named Executive Officer will become fully vested upon a change in control (as defined in the 2005 Equity Incentive Plan) of our company.

Director Compensation and Benefits

The following table sets forth certain information regarding compensation earned or paid to our directors during fiscal 2011.

Name	Fees Earned or Paid in Cash (1)	Stock Awards (1)	Option Awards (2)(3)	Total
R. Wayne Fritzsche	$10,000	$10,000	$-	$20,000
Calvin A. Saravis, Ph.D	10,000	20,000	-	30,000
J. Donald Payne	10,000	27,500	-	37,500
Alan D. Rosenson	10,000	20,000	-	30,000
Alan I. Goldberg	10,000	12,500	-	22,500
Gregory G. Freitag	10,000	12,500	-	22,500
Jeffrey N. Peterson	5,000	2,500	15,003	22,503

Our non-employee directors receive the following compensation for service as a director:

(1) Each director earned a quarterly stipend of $2,500 for attending meetings of the full board of directors (whether telephonic or in-person) and attending committee meetings in 2011. However, the board of directors elected to defer and accrue the cash payment of these fees until our financial performance improves as determined by the board of directors. We issued 124,996 shares of our common stock in September 2011 to current board members for payment of deferred board fees earned through September 30, 2011. Amounts shown under the heading "Stock Awards" do not reflect compensation received by the directors, but instead reflect the aggregate grant date fair value of the stock issued in lieu of payment of director fees as determined by the Company's closing stock price on September 1, 2011. New fees since October 1, 2011 will be deferred and accrued. There is no limit to the number of meetings of our board of directors or committees that may be called.

(2) Amounts shown do not reflect compensation received by the directors. Instead, the amounts shown are the aggregate grant date fair value as determined pursuant to FASB ASC 718, Compensation-Stock Compensation. Please refer to Note 2, xiii, “Accounting for Stock-Based Compensation” in the Notes to the Consolidated Financial Statements for the fiscal year ended December 31, 2011, for the relevant assumptions used to determine the valuation of stock option grants.

(3) The following table shows the total number of outstanding stock options and stock awards as of December 31, 2011 that have been issued as director compensation.

Name	Aggregate Number of Stock Options Outstanding	Aggregate Number of Stock Awards Outstanding
R. Wayne Fritzsche	135,000	11,904
Calvin A. Saravis, Ph.D	110,000	23,809
J. Donald Payne	88,000	32,738
Alan D. Rosenson	25,000	23,809
Alan I. Goldberg	25,000	14,880
Gregory G. Freitag	25,000	14,880
Jeffrey N. Peterson	25,000	2,976

SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT AND RELATED SHAREHOLDER MATTERS

Principal Shareholders Table

The following table sets forth certain information as of May 15, 2012 concerning the beneficial ownership of common stock for: (i) each director and director nominee, (ii) each Named Executive Officer in the Summary Compensation Table under “Executive Compensation” below, (iii) all executive officers and directors as a group, and (iv) each person (including any “group” as that term is used in Section 13(d)(3) of the Exchange Act) known by us to be the beneficial owner of 5% or more of our common stock. Unless otherwise noted below, the address for each of the persons below who are beneficial owners of 5% or more of our common stock is our corporate address at 14 Norfolk Avenue, South Easton, MA 02375.

Beneficial ownership has been determined in accordance with the rules of the SEC and is calculated based on 10,356,449 shares of our common stock issued and outstanding as of May 15, 2012. Shares of common stock subject to options, warrants, preferred stock or other securities convertible into common stock that are currently exercisable or convertible, or exercisable or convertible within 60 days of May 15, 2012, are deemed outstanding for computing the percentage of the person holding the option, warrant, preferred stock, or convertible security but are not deemed outstanding for computing the percentage of any other person.

Except as indicated by the footnotes below, we believe, based on the information furnished to us, that the persons and entities named in the table below have sole voting and investment power with respect to all shares of common stock that they beneficially own.

Name	Number of Shares of Common Stock Beneficially Owned	Percent of Class

Ironridge Global IV, Ltd. Harbour House, Waterfront Drive PO Box 972, Road Town Tortola, British Virgin Islands(1)	1,107,333	9.7%
Clayton A. Struve 175 W. Jackson Blvd Ste 440 Chicago, IL 60604(2)	1,023,848	9.9%
Richard T. Schumacher(3)	946,684	8.7%
R. Wayne Fritzsche(4)	710,795	6.6%
Alan D. Rosenson(5)	289,274	2.8%
Alan I. Goldberg(6)	249,027	2.4%
J. Donald Payne(7)	159,800	1.5%
Calvin A. Saravis, Ph.D(8)	123,809	1.2%
Edmund Y. Ting, Ph.D(9)	128,938	1.2%
Alexander V. Lazarev, Ph.D(10)	105,701	1.0%
Gregory G. Freitag(11)	98,688	0.9%
Jeffrey N. Peterson(12)	17,976	0.2%
All Executive Officers and Directors as a Group (twelve persons)(13)	2,982,310	24.7%

1) Based on a Schedule 13G filed with the SEC on April 9, 2012, by Ironridge Global IV, Ltd ("IV"), Ironridge Global Partners, LLC ("IGP"), Brendan T. O'Neil, Richard H. Kreger, John C. Kirkland and Keith Coulston (collectively, the "Reporting Persons"), IV reports sole dispositive power with respect to the 1,107,333 shares beneficially owned by IV. Voting and dispositive power is exercised by Peter Cooper, a director of IV. Each of IGP and Messrs. O'Neil, Kreger, Kirkland and Coulston disclaim beneficial ownership or control of any of the securities beneficially owned by IV. Messrs. O'Neil, Kreger, Kirkland and Coulston are each managing directors of IV, and managing directors, members and 30% beneficial owners of IGP. Mr. Coulston is a director, member and 10% beneficial owners of IGP. IGP is a stockholder and beneficial owner of IV. IV is prohibited from receiving any shares of common stock that would cause it to be deemed to beneficially own more than 9.99% of the issuer's total outstanding shares at any one time.

2) Excludes (i) 346,154 shares of Common Stock issuable upon conversion of Series D Convertible Preferred Stock; and (ii) 636,558 because such exercise is subject to "blocker" provisions as described below. The terms of the Company's Series D Convertible Preferred Stock and warrants issued in connection with the Series D Convertible Preferred Stock contain a limitation on conversion which prevents the holder from converting shares of Series D Preferred Stock into, or exercise of the warrants for, shares of Common Stock if, after giving effect to the conversion or exercise, as the case may be, the holder would beneficially own more than 4.99% of the outstanding shares of Common Stock. The holder may elect to increase this limitation to 9.99%, upon not less than 61 days prior written notice to the Company.

3) Includes (i) 280,000 shares of common stock issuable upon exercise of options; and (ii) 199,880 shares of common stock issuable upon the exercise of warrants. Does not include 20,162 shares of common stock held by Mr. Schumacher's minor son as his wife exercises all voting and investment control over such shares.

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Includes (i) 135,000 shares of common stock issuable upon exercise of options; and (ii) 219,310 shares of common stock issuable upon exercise of warrants.

4) Includes (i) 25,000 shares of common stock issuable upon exercise of options; and (ii) 131,500 shares of common stock issuable upon exercise of warrants.

5) Includes (i) 25,000 shares of common stock issuable upon exercise of options; and (ii) 96,960 shares of common stock issuable upon the exercise of warrants.

6) Includes (i) 88,000 shares of common stock issuable upon exercise of options; and (ii) 13,050 shares of common stock issuable upon the exercise of warrants.

7) Includes 100,000 shares of common stock issuable upon exercise of options.

8) Includes (i) 114,000 shares of common stock issuable upon exercise of options; and (ii) 5,220 shares of common stock issuable upon the exercise of warrants.

9) Includes (i) 95,000 shares of common stock issuable upon exercise of options; and (ii) 4,350 shares of common stock issuable upon the exercise of warrants.

10) Includes (i) 25,000 shares of common stock issuable upon exercise of options; and (ii) 26,640 shares of common stock issuable upon the exercise of warrants.

11) Includes 15,000 shares of common stock issuable upon exercise of options.

12) Includes (i) 132,000 shares of common stock issuable upon exercise of options; and (ii) 5,220 shares of common stock issuable upon the exercise of warrants held by executive officers not listed above.

MATERIAL U.S. FEDERAL INCOME TAX CONSIDERATIONS

This is a general summary of the material U.S. federal income tax consequences of the acquisition, ownership and disposition of our Series F Preferred Stock, which we refer to as our securities, purchased pursuant to this offering. This discussion assumes that shareholders will hold our securities as capital assets within the meaning of Section 1221 of the Internal Revenue Code of 1986, as amended (the “Code”). This discussion does not address all aspects of U.S. federal taxation that may be relevant to a shareholder in light of such shareholder’s particular circumstances. In addition, this discussion does not address: (1) U.S. gift or estate tax laws except to the limited extent set forth below, (2) state, local or foreign tax consequences, (3) the special tax rules that may apply to certain shareholders, including without limitation banks, insurance companies, financial institutions, broker-dealers, taxpayers that have elected mark-to-market accounting, taxpayers subject to the alternative minimum tax provisions of the Code, tax-exempt entities, regulated investment companies, real estate investment trusts, taxpayers whose functional currency is not the U.S. dollar, or U.S. expatriates or former long-term residents of the United States, or (4) the special tax rules that may apply to a shareholder that acquires, holds, or disposes of our securities as part of a straddle, hedge, wash sale, constructive sale or conversion transaction or other integrated investment. Additionally, this discussion does not consider the tax treatment of partnerships (including entities treated as partnerships for U.S. federal tax purposes) or other pass-through entities or persons who hold our securities through such entities. The tax treatment of a partnership and each partner thereof generally will depend upon the status and activities of the partnership and such partner. Thus,

partnerships, other pass-through entities and persons holding our securities through such entities should consult their own tax advisors.

This discussion is based on current provisions of the Code, U.S. Treasury regulations promulgated under the Code, judicial opinions, and published rulings and procedures of the U.S. Internal Revenue Service (the "IRS"), all as in effect on the date of this prospectus and all of which are subject to change, possibly with retroactive effect. We have

not sought, and will not seek, any ruling from the IRS or any opinion of counsel with respect to the tax consequences discussed below, and there can be no assurance that the IRS will not take a position contrary to the tax consequences discussed below or that any position taken by the IRS would not be sustained.

As used in this "Material U.S. Federal Income Tax Considerations" section only, the term "U.S. Person" means a person that is, for U.S. federal income tax purposes: (1) an individual citizen or resident of the United States, (2) a corporation (or other entity treated as a corporation for U.S. federal income tax purposes) created or organized in or under the laws of the United States or of any state thereof or the District of Columbia, (3) an estate the income of which is subject to U.S. federal income taxation regardless of its source, or (4) a trust if (A) a court within the United States is able to exercise primary supervision over the administration of the trust and one or more U.S. Persons have the authority to control all substantial decisions of the trust, or (B) it has in effect a valid election to be treated as a U.S. Person. As used in this discussion, the term "U.S. holder" means a beneficial owner of our securities that is a U.S. Person and the term "non-U.S. holder" means a beneficial owner of our securities (other than an entity that is treated as a partnership or other pass-through entity for U.S. federal income tax purposes) that is not a U.S. Person. Each prospective investor is urged to consult his, her or its own tax advisors with respect to the U.S. federal, state, local and foreign tax consequences to such investor of the acquisition, ownership and disposition of our securities.

General

There is no authority addressing the treatment, for U.S. federal income tax purposes, of securities with terms substantially the same as the Series F Preferred Stock, and, therefore, that treatment is not entirely clear. Each Series F preferred share should be treated for U.S. federal income tax purposes as an investment for one Series E preferred share which is convertible into 980 shares of our common stock, assuming a conversion price of $1.02 per share.

The foregoing treatment of the Series F Preferred Stock is not binding on the IRS or the courts. Because there are no authorities that directly address instruments that are similar to the Series F Preferred Stock, no assurance can be given that the IRS or the courts will agree with the characterization described above or the discussion below. Accordingly, each prospective investor is urged to consult his, her or its own tax advisors regarding the U.S. federal, state, local and any foreign tax consequences of an investment in a unit (including alternative characterizations of a unit). Unless otherwise stated, the following discussions are based on the assumption that the characterization of the Series F Preferred Stock described above is accepted for U.S. federal tax purposes.

U.S. Holders

Taxation of Distributions

If we pay distributions to U.S. holders of our shares of common stock or Series F Preferred Stock, such distributions generally will constitute dividends for U.S. federal income tax purposes to the extent paid from our current or accumulated earnings and profits, as determined under U.S. federal income tax principles. Distributions in excess of our current and accumulated earnings and profits will constitute a return of capital that will be applied against and reduce (but not below zero) the U.S. holder's adjusted tax basis in our shares of common stock or Series F Preferred Stock. Any remaining excess will be treated as gain realized on the sale or other disposition of the shares of common stock or Series F Preferred Stock and will be treated as described under "U.S. Holders—Gain or Loss on Sale, Exchange or Other Taxable Disposition of Common Stock or Convertible Preferred Shares" below.

Dividends paid to a U.S. holder that is a taxable corporation generally will qualify for the dividends received deduction if the requisite holding period is satisfied. With certain exceptions (including, but not limited to, dividends treated as investment income for purposes of investment interest deduction limitations), and provided certain holding period requirements are met and the U.S. holder refrains from making certain elections, dividends paid to a

non-corporate U.S. holder generally will constitute “qualified dividends” that will be subject to tax at the maximum tax rate accorded to net capital gains (currently 15 percent) for tax years beginning before January 1, 2013, after which the rate applicable to dividends is currently scheduled to return to the tax rate generally applicable to ordinary income. Also starting in 2013, the distinction between ordinary and qualified dividends will be eliminated, and all dividends will be subject to the ordinary income tax rates.

Conversion of Series F Preferred Stock into Common Stock

A U.S. holder who converts Series F Preferred Stock into our common stock generally will not recognize gain or loss, except that the fair market value of any shares of common stock attributable to dividend arrearages may be treated as a deemed distribution if not previously recognized, taxable as described above under "U.S. Holders—Taxation of Distributions". The adjusted tax basis of the shares of common stock (excluding any shares of common stock treated as a deemed distribution) will equal the tax basis of the Series F Preferred Stock exchanged and the holding period of the shares of common stock received (excluding any shares of common stock treated as a deemed distribution) will include the holding period of the Series F Preferred Stock. The tax basis of any shares of common stock treated as a deemed distribution will equal its fair market value on the date of the conversion, and the U.S. holder will begin a new holding period for such shares of common stock.

Gain or Loss on Sale, Exchange or Other Taxable Disposition of Common Stock or Convertible Preferred Shares

In general, a U.S. holder must treat any gain or loss recognized upon a sale, exchange or other taxable disposition of shares of our common stock or Series F Preferred Stock as capital gain or loss (other than a conversion of Series F Preferred Stock into shares of common stock, which will be treated as described above in "U.S. Holders—Conversion of Series F Preferred Stock into Common Stock"). Any such capital gain or loss will be long-term capital gain or loss if the U.S. holder's holding period for the disposition of shares of common stock or Series F Preferred Stock exceeds one year. In general, a U.S. holder will recognize gain or loss in an amount equal to the difference between (1) the sum of the amount of cash and the fair market value of any property received in such disposition and (2) the U.S. holder's adjusted tax basis in the disposition of shares of common stock or Series F Preferred Stock. A U.S. holder's adjusted tax basis in his, her or its common stock or Series F Preferred Stock generally will equal the U.S. holder's acquisition cost (that is, as discussed above, the portion of the purchase price of a unit allocated to a Series E preferred share) plus any deemed distributions as described above, less any prior distributions treated as a return of capital, as described above. Long-term capital gain realized by a non-corporate U.S. holder generally will be subject to a maximum rate of 15 percent for tax years beginning before January 1, 2013, after which the maximum long-term capital gains rate is scheduled to increase to 20 percent. The deduction of capital losses is subject to various limitations.

Non-U.S. Holders

Taxation of Distributions

In general, any distributions we make to a non-U.S. holder of our shares of common stock or Series F Preferred Stock, to the extent paid out of our current or accumulated earnings and profits (as determined under U.S. federal income tax principles), generally will constitute dividends for U.S. federal income tax purposes and, provided such dividends are not effectively connected with the non-U.S. holder's conduct of a trade or business within the United States, we generally will be required to withhold tax from the gross amount of the dividend at a rate of 30 percent, unless such non-U.S. holder is eligible for a reduced rate of withholding tax under an applicable income tax treaty and provides proper certification of his, her or its eligibility for such reduced rate (usually on an IRS Form W-8BEN). Any distribution not constituting a dividend will be treated first as reducing (but not below zero) the non-U.S. holder's adjusted tax basis in our Series F Preferred Stock or shares of common stock and, to the extent such distribution exceeds the non-U.S. holder's adjusted tax basis, as gain realized from the sale or other disposition of the Series F Preferred Stock or shares of common stock, which will be treated as described under "Non-U.S. Holders—Gain on Sale, Exchange or Other Taxable Disposition of Common Stock and Series F Preferred Stock" below. In addition, if we determine that we are likely to be classified as a "U.S. real property holding corporation" (see "Non-U.S. Holders—Gain on Sale, Exchange or Other Taxable Disposition of Common Stock and Series F Preferred Stock" below), we will withhold 10 percent of any distribution that exceeds our current and accumulated earnings and profits, which withheld amount may be claimed by the non-U.S. holder as a credit against the non-U.S. holder's U.S. federal income tax

liability.

Dividends we pay to a non-U.S. holder that are effectively connected with such non-U.S. holder's conduct of a trade or business within the United States (and, if certain income tax treaties apply, are attributable to a United States permanent establishment or fixed base maintained by the non-U.S. holder) generally will not be subject to U.S. withholding tax, provided such non-U.S. holder complies with certain certification and disclosure requirements

(usually by providing an IRS Form W-8ECI). Instead, such dividends generally will be subject to U.S. federal income tax, net of certain deductions, at the same graduated individual or corporate rates applicable to U.S. Persons. If the ultimate holder (ignoring intervening pass through entities) is a non-U.S. corporation or transparent entity or vehicle ultimately owned by a corporation, dividends that are effectively connected income may also be subject to a "branch profits tax" at a rate of 30 percent (or such lower rate as may be specified by an applicable income tax treaty) when ultimately remitted from the permanent establishment or fixed base to the non-U.S. holder. A corporation for this purpose means any entity treated as or electing to be treated as a corporation under U.S. tax law.

Conversion of Series F Preferred Stock into Common Stock

Non-U.S. holders generally will not recognize any gain or loss for U.S. federal income tax purposes upon the conversion of Series F Preferred Stock into our shares of common stock, except that the fair market value of any shares of common stock attributable to dividend arrearages may be treated as a deemed distribution if not previously recognized, taxable as described above under "Non-U.S. Holders—Taxation of Distributions."

Gain on Sale, Exchange or Other Taxable Disposition of Common Stock and Series F Preferred Stock

A non-U.S. holder generally will not be subject to U.S. federal income or withholding tax in respect of gain recognized on a sale, exchange or other disposition of our shares of common stock or Series F Preferred Stock in each case without regard to whether those securities were held as part of a unit, unless:

- the gain is effectively connected with the conduct of a trade or business by the non-U.S. holder within the United States (and, under certain income tax treaties, is attributable to a United States permanent establishment or fixed base maintained by the non-U.S. holder);

- the non-U.S. holder is an individual who is present in the United States for 183 days or more in the taxable year of disposition and certain other conditions are met; or

- we are or have been a "U.S. real property holding corporation" for U.S. federal income tax purposes at any time during the shorter of the five-year period ending on the date of disposition or the non-U.S. holder's holding period for the security disposed of, and, generally, in the case where our shares of common stock or Series F Preferred Stock, as applicable, are regularly traded on an established securities market, the non-U.S. holder has owned, directly or indirectly or constructively, more than 5 percent of our shares of common stock, or 5 percent of our Series F Preferred Stock, as applicable, at any time within the shorter of the five-year period ending on the date of disposition or such non-U.S. holder's holding period for such securities so disposed. There can be no assurance that our shares of common stock or our Series F Preferred Stock will be treated as regularly traded on an established securities market for this purpose.

Unless an applicable treaty provides otherwise, gain described in the first and third bullet points above will be subject to tax at generally applicable U.S. federal income tax rates. Any gains described in the first bullet point above of a non-U.S. holder that is a foreign corporation may also be subject to an additional 30 percent "branch profits tax". Gain described in the second bullet point above (which may be offset by U.S. source capital losses) will be subject to a flat 30 percent U.S. federal income tax. The gross proceeds from transactions that generate gains described in the third bullet point above generally will be subject to a 10 percent withholding tax, which withheld amount may be claimed by the non-U.S. holder as a credit against the non-U.S. holder's U.S. federal income tax liability. Non-U.S. holders should consult any income tax treaties applicable to them, as those treaties may provide for different rules.

We currently are not a U.S. real property holding corporation. However, we can provide no assurance that we will not become a U.S. real property holding corporation in the future. We will be classified as a U.S. real property holding

corporation if the fair market value of our "U.S. real property interests" equals or exceeds 50 percent of the sum of the fair market value of our worldwide real property interests plus our other assets used or held for use in a trade or business, as determined for U.S. federal income tax purposes. Each non-U.S. holder should consult its own

tax advisors as to whether the Series F Preferred Stock or shares of common stock will be treated as "U.S. real property interests" and the tax consequences resulting from such treatment.

Legislation Relating to Foreign Accounts

Legislation has been recently enacted that imposes significant certification, information reporting and other requirements, and in certain cases, withholding taxes, on certain types of payments made to "foreign financial institutions" and certain other non-U.S. entities. The legislation is generally effective for payments made after December 31, 2012. The failure to comply with the certification, information reporting and other specified requirements in the legislation would result in withholding tax being imposed on payments of dividends and sales proceeds to foreign intermediaries and certain non-U.S. holders. Non-U.S. holders should consult their own tax advisers regarding the application of this legislation to them.

Federal Estate Tax

Shares of common stock or Series F Preferred Stock owned or treated as owned by an individual who is not a U.S. citizen or resident (as specifically defined for U.S. federal estate tax purposes) at the time of his or her death will be included in the individual's gross estate for U.S. federal estate tax purposes, unless there is no federal estate tax in existence at such time or an applicable estate tax treaty provides otherwise, and therefore may be subject to U.S. federal estate tax.

Information Reporting and Backup Withholding

We must report annually to the U.S. Internal Revenue Service and to each U.S. holder and to each non-U.S. holder the amount of dividends paid to that holder and the amount of tax withheld with respect to those dividends. Copies of the information returns reporting those dividends and the amount of tax withheld may also be made available to the tax authorities in the country in which a non-U.S. holder is a resident under the provisions of an applicable income tax treaty.

Backup withholding, currently imposed at a rate of 28%, may apply to dividends paid by us. If you are a U.S. holder, backup withholding will apply if you fail to provide an accurate taxpayer identification number or certification of exempt status or fail to report all interest and dividends required to be shown on your federal income tax returns. Certain U.S. holders (including, among others, corporations) are not subject to backup withholding. If you are a non-U.S. holder, backup withholding will apply to dividend payments if you fail to provide us with the required certification that you are not a U.S. Person.

Payments of the proceeds from a disposition (including a redemption) effected outside the United States by or through a non-US. broker generally will not be subject to information reporting or backup withholding. However, information reporting, but generally not backup withholding, will apply to such a payment if the broker has certain connections with the United States unless the broker has documentary evidence in its records that the beneficial owner of the disposed securities is a non-U.S. holder and either specified conditions are met or an exemption is otherwise established. Backup withholding and information reporting will apply to dispositions made by or through a U.S. office of any broker (U.S. or foreign).

Backup withholding is not an additional tax. Any amounts withheld from a payment that result in an overpayment of taxes generally will be refunded, or credited against U.S. federal income tax liability, if any, provided that the required information is timely furnished to the IRS.

U.S. holders and non-U.S. holders should consult their own tax advisors regarding application of backup withholding in their particular circumstance and the availability of, and procedure for obtaining, an exemption from backup withholding under current U.S. Treasury regulations.

LEGAL PROCEEDINGS

As of the date hereof, we do not have any material pending legal proceedings.

Legal Matters

The validity of the securities offered hereby and certain other legal matters will be passed upon for us by Pepper Hamilton LLP, Boston, Massachusetts.

EXPERTS

The audited consolidated financial statements of Pressure BioSciences, Inc. as of and for the fiscal years ended December 31, 2011 and 2010 have been included in this prospectus in reliance upon the report of Marcum LLP, an independent registered public accounting firm, appearing elsewhere in this prospectus, and upon the authority of said firm as experts in accounting and auditing.

WHERE YOU CAN FIND MORE INFORMATION

We are subject to the reporting requirements of the Exchange Act, and we file annual, quarterly and current reports, proxy statements and other information with the SEC. You may read and copy the reports, proxy statements and other information that we file at the SEC's Public Reference Room at 100 F Street NE, Washington, D.C. 20549 at prescribed rates. Information on the operation of the Public Reference Room may be obtained by calling the SEC at 1-800-SEC-0330. Our filings are also available free of charge at the SEC's website at http://www.sec.gov.

We have filed with the SEC a registration statement on Form S-1 (Registration File No. 333-178335) covering the securities offered by this prospectus. This prospectus does not contain all of the information contained or incorporated by reference in the registration statement. For more information about us and our securities, you should read the registration statement and its exhibits. Copies of the registration statement, including its exhibits, may be inspected without charge at the offices of the SEC or obtained at prescribed rates from the Public Reference Room of the SEC at 100 F Street NE, Washington, D.C. 20549. Copies of the registration statement may be obtained without charge at the SEC's website.

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Pressure BioSciences, Inc. and Subsidiary

Annual Financial Statements

PRESSURE BIOSCIENCES, INC. AND SUBSIDIARY
CONSOLIDATED BALANCE SHEETS
DECEMBER 31, 2011 AND 2010

ASSETS	December 31, 2011	2010
CURRENT ASSETS		
Cash and cash equivalents	$222,775	$552,849
Restricted cash	-	20,014
Accounts receivable, net of allowances of $9,600 at December 31, 2011 and $0 at December 31, 2010	269,237	233,846
Inventories	1,069,013	1,104,056
Prepaid income taxes	4,739	1,442
Prepaid expenses and other current assets	143,591	296,756
Total current assets	1,709,355	2,208,963
PROPERTY AND EQUIPMENT, NET	89,171	192,777
OTHER ASSETS		
Deposits	6,472	6,472
Intangible assets, net	133,762	182,394
TOTAL ASSETS	$1,938,760	$2,590,606
LIABILITIES AND STOCKHOLDERS' EQUITY (DEFICIT)		
CURRENT LIABILITIES		
Accounts payable	$890,676	$234,568
Accrued employee compensation	180,437	172,251
Accrued professional fees and other	247,738	337,698
Deferred revenue	36,669	27,153
Promissory note	150,000	-
Convertible debt, net of unamortized discount of $17,088 as of December 31, 2011	394,912	-
Warrant derivative liability	436,553	-
Total current liabilities	2,336,985	771,670
LONG TERM LIABILITIES		
Deferred revenue	10,111	9,427
TOTAL LIABILITIES	2,347,096	781,097
COMMITMENTS AND CONTINGENCIES (Note 7)		
STOCKHOLDERS' EQUITY (DEFICIT)		
Series A convertible preferred stock, $.01 par value; 313,960 shares authorized; 0 shares issued and outstanding on December 31, 2011 and 262,135 shares issued and outstanding on December 31, 2010	-	2,621
Series B convertible preferred stock, $.01 par value; 279,256 shares authorized; 0 shares issued and outstanding on December 31, 2011 and 88,711 shares on December 31, 2010	-	887
Series C convertible preferred stock, $.01 par value; 88,098 shares authorized; 88,098 shares issued and outstanding on December 31, 2011 and 0 shares on December 31, 2010 (Liquidation value of $1,101,225)	881	-
Series D convertible preferred stock, $.01 par value; 850 shares authorized; 743 shares issued and outstanding on December 31, 2011 and 0 shares on December 31, 2010 (Liquidation value of $743,000)	7	-

Common stock, $.01 par value; 20,000,000 shares authorized; 6,723,993 shares issued and outstanding on December 31, 2011 and 2,711,750 shares issued and outstanding on December 31, 2010	67,240	27,118
Warrants to acquire preferred stock and common stock	2,203,101	1,248,909
Additional paid-in capital	13,823,875	12,095,237
Accumulated deficit	(16,503,440)	(11,565,263)
Total stockholders' equity (deficit)	(408,336)	1,809,509
TOTAL LIABILITIES AND STOCKHOLDERS' EQUITY (DEFICIT)	$1,938,760	$2,590,606

The accompanying notes are an integral part of these consolidated financial statements.

PRESSURE BIOSCIENCES, INC. AND SUBSIDIARY
CONSOLIDATED STATEMENTS OF OPERATIONS
FOR THE YEARS ENDED DECEMBER 31, 2011 AND 2010

	For the Year Ended December 31,	
	2011	2010
Revenue:		
PCT products, services, other	$767,765	$877,567
Grant revenue	219,964	462,465
Total revenue	987,729	1,340,032
Costs and expenses:		
Cost of PCT products and services	342,865	376,514
Research and development	969,473	1,232,566
Selling and marketing	931,073	1,204,892
General and administrative	2,034,458	1,924,814
Total operating costs and expenses	4,277,869	4,738,786
Operating loss	(3,290,140)	(3,398,754)
Other income (expense):		
Interest (expense) income	(136,595)	2,303
Therapeutic discovery credit	-	244,479
Change in fair value of warrant derivative liability	430,423	-
Total other income (expense)	293,828	246,782
Loss before income taxes	(2,996,312)	(3,151,972)
Income tax benefit	-	23,710
Net loss	(2,996,312)	(3,128,262)
Accrued interest on convertible debt	18,896	-
Accrued and deemed dividends on convertible preferred stock	(2,130,245)	(502,564)
Net loss applicable to common shareholders	$(5,107,661)	$(3,630,826)
Net loss per share attributable to common stockholders - basic and diluted	$(0.77)	$(1.35)
Weighted average common stock shares outstanding used in the basic and diluted net loss per share calculation	6,618,484	2,687,141

The accompanying notes are an integral part of these consolidated financial statements.

PRESSURE BIOSCIENCES, INC. AND SUBSIDIARY
CONSOLIDATED STATEMENTS OF CHANGES IN STOCKHOLDERS' EQUITY (DEFICIT)
FOR THE YEARS ENDED DECEMBER 31, 2011 AND 2010

	Series A Preferred Stock		Series B Preferred Stock		Series C Preferred Stock		Series D Preferred Stock		Total Preferred Stock	
	Shares	Amount	Shares	Amount	Shares	Amount	Shares	Amount	Shares	Amount
BALANCE, December 31, 2009	152,213	$1,523	62,039	$620	-	$-	-	$-	214,252	$2,143
Stock-based compensation	-	-	-	-	-	-	-	-	-	-
Stock option exercises	-	-	-	-	-	-	-	-	-	-
Issuance of convertible preferred stock	-	-	26,672	267	-	-	-	-	26,672	267
Issuance of common stock for services	-	-	-	-	-	-	-	-	-	-
Offering costs for issuance of preferred stock	-	-	-	-	-	-	-	-	-	-
Issuance of warrants	-	-	-	-	-	-	-	-	-	-
Stock warrant exercise	125,658	1,255	-	-	-	-	-	-	125,658	1,255
Beneficial conversion of issued preferred stock	-	-	-	-	-	-	-	-	-	-
Conversion of preferred stock to common stock	(15,736)	(157)	-	-	-	-	-	-	(15,736)	(157)
Common stock paid-in-kind dividends earned	-	-	-	-	-	-	-	-	-	-
Series B dividend paid in cash	-	-	-	-	-	-	-	-	-	-
Issuance of common stock for dividends paid-in-kind	-	-	-	-	-	-	-	-	-	-
Net loss	-	-	-	-	-	-	-	-	-	-
BALANCE, December 31, 2010	262,135	$2,621	88,711	$887	-	$-	-	$-	350,846	$3,508
Stock-based compensation	-	-	-	-	-	-	-	-	-	-

Stock option exercises	-	-	-	-	-	-	-	-	-	-
Issuance of convertible preferred stock	-	-	-	-	88,098	881	843	8	88,941	889
Issuance of common stock for services	-	-	-	-	-	-	-	-	-	-
Offering costs for issuance of preferred stock	-	-	-	-	-	-	-	-	-	-
Issuance of warrants in connection short-term loans	-	-	-	-	-	-	-	-	-	-
Issuance of stock in lieu of cash for Board of Director fees	-	-	-	-	-	-	-	-	-	-
Warrant modifications	-	-	-	-	-	-	-	-	-	-
Beneficial conversion of issued preferred stock	-	-	-	-	-	-	-	-	-	-
Conversion of preferred stock to common stock	(262,135)	(2,621)	(88,711)	(887)	-	-	(100)	(1)	(350,946)	(3,509)
Common stock paid-in-kind dividends earned	-	-	-	-	-	-	-	-	-	-
Series B dividend paid in cash	-	-	-	-	-	-	-	-	-	-
Issuance of common stock for dividends paid-in-kind	-	-	-	-	-	-	-	-	-	-
Net loss	-	-	-	-	-	-	-	-	-	-
BALANCE, December 31, 2011	-	$-	-	$-	88,098	$881	743	$7	88,841	$888

The accompanying notes are an integral part of these consolidated financial statements.

PRESSURE BIOSCIENCES, INC. AND SUBSIDIARY
CONSOLIDATED STATEMENTS OF CHANGES IN STOCKHOLDERS' EQUITY (DEFICIT) (CONTINUED)
FOR THE YEARS ENDED DECEMBER 31, 2011 AND 2010

	Common Stock		Stock	Additional Paid-In	Accumulated	Total Stockholders' (Deficit)
	Shares	Amount	Warrants	Capital	Deficit	Equity
BALANCE, December 31, 2009	2,328,426	$23,284	$1,352,165	$9,297,115	$(7,986,620)	$ 2,688,087
Stock-based compensation	-	-	-	273,182	-	273,182
Stock option exercises	18,897	189	-	20,031	-	20,220
Issuance of convertible preferred stock	-	-	-	328,107	-	328,374
Issuance of common stock for services	17,000	170	-	25,800	-	25,970
Offering costs for issuance of preferred stock	-	-	-	(53,689)	-	(53,689)
Issuance of warrants	-	-	307,416	-	-	307,416
Stock warrant exercise	-	-	(410,671)	1,830,691	-	1,421,275
Beneficial conversion of issued preferred stock	-	-	-	154,389	(154,389)	-
Conversion of preferred stock to common stock	157,360	1,573	-	(1,416)	-	-
Common stock paid-in-kind dividends earned	-	-	-	-	(118,020)	(118,020)
Series B dividend paid in cash	-	-	-	-	(7,212)	(7,212)
Issuance of common stock for dividends paid-in-kind	190,067	1,902	-	221,027	(170,760)	52,169
Net loss	-	-	-	-	(3,128,262)	(3,128,262)
BALANCE, December 31, 2010	2,711,750	$27,118	$1,248,909	$12,095,237	$(11,565,263)	$ 1,809,509
Stock-based compensation	-	-	-	121,974	-	121,974
Stock option exercises	41,103	411	-	43,569	-	43,980
Issuance of convertible preferred stock	-	-	-	1,076,359	-	1,077,247
Issuance of common stock for services	20,000	200	-	16,800	-	17,000
Offering costs for issuance of preferred stock	-	-	-	(794,012)	-	(794,012)
Issuance of warrants in connection short-term loans	-	-	249,348	-	-	249,348
Issuance of stock in lieu of cash for Board of Director fees	124,996	1,250	-	103,747	-	104,997
Warrant modifications	-	-	704,844	-	(704,844)	-
	-	-	-	1,006,574	(1,006,574)	-

Beneficial conversion of issued preferred stock						
Conversion of preferred stock to common stock	3,662,336	36,623	-	(33,114)	-	-
Common stock paid-in-kind dividends earned	-	-	-	-	(164,904)	(164,904)
Series B dividend paid in cash	-	-	-	-	(65,543)	(65,543)
Issuance of common stock for dividends paid-in-kind	163,808	1,638	-	186,741	-	188,379
Net loss	-	-	-	-	(2,996,312)	(2,996,312)
BALANCE, December 31, 2011	6,723,993	$67,240	$2,203,101	$13,823,875	$(16,503,440)	$ (408,336)

The accompanying notes are an integral part of these consolidated financial statements.

PRESSURE BIOSCIENCES, INC. AND SUBSIDIARY
CONSOLIDATED STATEMENTS OF CASH FLOWS
FOR THE YEARS ENDED DECEMBER 31, 2011 AND 2010

	For the Year Ended December 31,	
	2011	2010
CASH FLOWS FROM OPERATING ACTIVITIES:		
Net loss	$(2,996,312)	$(3,128,262)
Adjustments to reconcile net loss to net cash used in operating activities		
Depreciation and amortization	141,315	197,431
Accretion of interest and amortization of debt issue costs	108,876	-
Stock-based compensation expense	121,974	273,181
Borrowings on promissory note	150,000	-
Change in fair value of warrant derivative liability	(430,423)	-
Bad debt expense	9,600	-
Changes in operating assets and liabilities:		
Accounts receivable	(44,991)	(30,635)
Inventories	48,608	(465,706)
Deposits	-	175,538
Accounts payable	763,849	86,481
Accrued employee compensation	8,186	66,427
Deferred revenue and other accrued expenses	(78,500)	67,912
Prepaid expenses and other current assets	55,955	(114,547)
Net cash used in operating activities	(2,141,863)	(2,872,180)
CASH FLOWS FROM INVESTING ACTIVITIES:		
Purchases of property and equipment	(2,642)	(92,111)
Net cash used in investing activities	(2,642)	(92,111)
CASH FLOWS FROM FINANCING ACTIVITIES:		
Proceeds from stock option exercises	43,980	20,220
Decrease in restricted cash	20,014	-
Proceeds from stock warrant exercises	-	1,421,275
Borrowings on convertible debt	412,000	-
Net proceeds from the issuance of preferred stock	1,338,437	465,867
Net cash provided by financing activities	1,814,431	1,907,362
Change in cash and cash equivalents	(330,074)	(1,056,929)
Cash and cash equivalents, beginning of period	552,849	1,609,778
Cash and cash equivalents, end of period	$222,775	$552,849
SUPPLEMENTAL INFORMATION:		
Income taxes paid	$1,900	$-
Income tax refund received	23,710	244,479
Issuance of common stock dividend on preferred stock	188,379	222,931
Issuance of preferred stock warrants to placement agent	94,313	18,122

Issuance of common stock warrants for services	-	116,234
Issuance of common stock for services	4,999	25,970
Issuance of common stock for deferred board fees	104,997	-
Series B dividend paid in cash	65,543	7,212
Warrant modifications	704,844	-
Beneficial conversion feature on convertible preferred stock	1,006,574	154,389

The accompanying notes are an integral part of these consolidated financial statements.

PRESSURE BIOSCIENCES, INC. AND SUBSIDIARY
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

(1) Business Overview and Management Plans

We are focused on solving the challenging problems inherent in biological sample preparation, a crucial laboratory step performed by scientists worldwide working in biological life sciences research. Sample preparation is a term that refers to a wide range of activities that precede most forms of scientific analysis. Sample preparation is often complex, time-consuming, and in our belief, one of the most error-prone steps of scientific research. It is a widely-used laboratory undertaking, the requirements of which drive what we believe is a large and growing worldwide market. We have developed and patented a novel, enabling technology platform that can control the sample preparation process. It is based on harnessing the unique properties of high hydrostatic pressure. This process, called pressure cycling technology, or PCT, uses alternating cycles of hydrostatic pressure between ambient and ultra-high levels (35,000 psi or greater) to safely, conveniently and reproducibly control the actions of molecules in biological samples, such as cells and tissues from human, animal, plant, and microbial sources.

Our pressure cycling technology uses internally developed instrumentation that is capable of cycling pressure between ambient and ultra-high levels - at controlled temperatures and specific time intervals - to rapidly and repeatedly control the interactions of bio-molecules, such as DNA, RNA, proteins, lipids, and small molecules. Our laboratory instrument, the Barocycler®, and our internally developed consumables product line, including PULSE (Pressure Used to Lyse Samples for Extraction) Tubes, other processing tubes, and application specific kits (which include consumable products and reagents) together make up our PCT Sample Preparation System, or PCT SPS.

We have experienced negative cash flows from operations with respect to our pressure cycling technology business since our inception. As of December 31, 2011, we did not have adequate working capital resources to satisfy our current liabilities. Based on our current projections, including equity financing subsequent to December 31, 2011, we believe our current cash resources will enable us to extend our cash resources until April 2012.

As a result, the audit report issued by our independent registered public accounting firm on our audited financial statements for the fiscal year ended December 31, 2011 contains an explanatory paragraph regarding our ability to continue as a going concern due to the risk that we may not have sufficient cash and liquid assets at December 31, 2011 to cover our operating and capital requirements for the next twelve-month period; and if sufficient cash cannot be obtained, we would have to substantially alter, or possibly even discontinue, operations. The accompanying financial statements do not include any adjustments that might result from the outcome of this uncertainty.

Such an opinion from our independent registered accounting firm could adversely affect our ability to obtain additional financing on favorable terms, if at all, as such an opinion may cause investors to have reservations about our long-term prospects, and may adversely affect our relationships with customers. There can be no assurance that our auditing firm will not qualify its opinion in the future. If we cannot successfully continue as a going concern, our stockholders may lose their entire investment in us.

Management has developed a plan to continue operations. This plan includes further reductions in expenses and obtaining equity or debt financing including our most recently completed financing in February 2012, in which we sold units consisting of shares of restricted common stock and warrants to purchase shares of common stock for net aggregate proceeds of approximately $765,000, which included the conversion of $387,457 in principal and interest from convertible promissory notes. Although we have successfully completed equity financings and reduced expenses in the past, we cannot assure you that our plans to address these matters in the future will be successful. Additional financing may not be available to us on a timely basis, if at all, or on terms acceptable to us. In the event we are unable to raise sufficient funds on terms acceptable to us, we may be required to:

- severely limit or cease our operations or otherwise reduce planned expenditures and forego other business opportunities, which could harm our business. The accompanying financial statements do not include adjustments that may be required in the event of the disposal of assets or the discontinuation of the business;

- obtain financing with terms that may have the effect of diluting or adversely affecting the holdings or the rights of the holders of our capital stock; or

PRESSURE BIOSCIENCES, INC. AND SUBSIDIARY
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

- obtain funds through arrangements with future collaboration partners or others that may require us to relinquish rights to some or all of our technologies or products.

Our common stock is listed on The NASDAQ Capital Market. We previously received letters from the NASDAQ Stock Market LLC, or NASDAQ, on April 13, 2011, advising us that our stockholders' equity for the year ended December 31, 2010 had fallen below the minimum requirement for continued inclusion on The NASDAQ Capital Market and on August 15, 2011, advising us that, for the previous 30 consecutive business days, the bid price of our common stock had closed below the minimum $1.00 per share requirement for continued inclusion on The NASDAQ Capital Market. On October 4, 2011, we received written notification from the Listing Qualifications Department of the NASDAQ, or NASDAQ, stating that our common stock is subject to delisting from The NASDAQ Capital Market, pending our opportunity to request a hearing before a NASDAQ Listing Qualifications Panel (the "Panel"). We attended a hearing before the Panel on November 17, 2011 to consider further our plan to bring the Company into compliance with the stockholders' equity listing standard and the minimum $1.00 per share requirement.

On December 7, 2011, we received notice that the Panel granted our request for continued listing on The NASDAQ Capital Market subject to, among other things, our demonstration of compliance with the applicable minimum stockholders' equity requirement of $2.5 million by February 29, 2012. On February 15, 2012, we received notice from NASDAQ that the bid price of our common stock had not regained compliance with the minimum $1.00 per share requirement as of February 13, 2012, 180 calendar days after NASDAQ's August 15, 2011 notice. While we are working toward regaining compliance with all applicable requirements for continued listing on The NASDAQ Capital Market, including both minimum stockholders' equity and minimum bid price of $1.00 per share, there can be no assurance that we will be able to demonstrate compliance by the February 29, 2012 deadline or that the Panel will grant us an extension in the event compliance is not timely achieved.

The Company identified errors in its calculation of the incremental value of the warrants issued to holders of Series A and B Convertible Preferred Stock. As a result of this correction, the Company has identified an additional $379,000 that has been recorded as a deemed dividend. The Company has analyzed the impact of this item and concluded that it would not be material with respect to any reporting period after taking into consideration the re