PRESSURE BIOSCIENCES INC
Form 10-K
February 27, 2012

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

Form 10-K

(Mark One)

x	Annual Report Pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934 For the fiscal year ended December 31, 2011 or
¨	Transition Report Pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934 For the transition period from _____ to _____

Commission file number 000-21615

PRESSURE BIOSCIENCES, INC.
(Exact Name of Registrant as Specified in its Charter)

Massachusetts (State or Other Jurisdiction of Incorporation or Organization)	04-2652826 (I.R.S. Employer Identification No.)
14 Norfolk Avenue South Easton, Massachusetts (Address of Principal Executive Offices)	02375 (Zip Code)
(508) 230-1828 (Registrant's Telephone Number, Including Area Code)	

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

Title of Each Class	Name of Each Exchange on Which Registered
Common Stock, par value $.01 per share Preferred Share Purchase Rights	The Nasdaq Stock Market, LLC

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

(Title of Class)

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

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

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

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

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

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, 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 ¨	Smaller reporting company x
(Do not check if smaller reporting company)	

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

The aggregate market value of the voting and non-voting common stock held by non-affiliates of the registrant as of June 30, 2011 was $2,609,837 based on the closing price of the common stock as quoted on the NASDAQ Capital Market on that date.

As of February 15, 2012, there were 7,974,321 shares of the registrant's common stock outstanding.

Documents Incorporated by Reference

N/A.

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Introductory Comment

Throughout this Annual Report on Form 10-K, the terms "we," "us," "our," "the Company" and "our company" refer to Pressu BioSciences, Inc., a Massachusetts corporation, and, unless the context indicates otherwise, also includes our wholly-owned subsidiary.

PART I

SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS

This Annual Report on Form 10-K contains forward-looking statements within the meaning of Section 27A of the Securities Act of 1933, as amended (the "Securities Act") and Section 21E of the Securities Exchange Act of 1934, as amended (the "Exchange Act"). In some cases, forward-looking statements are identified by terms such as "may," "will," "should," "could," "would," "expects," "plans," "anticipates," "believes," "estimates," "projects," "predicts," "potential," and s expressions intended to identify forward-looking statements. Such statements include, without limitation, statements regarding:

- 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 April 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 mass spectrometry 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.

These forward-looking statements are only predictions and involve known and unknown risks, uncertainties, and other factors that may cause our actual results, levels of activity, performance, or achievements to be materially different from any future results, levels of activity, performance, or achievements expressed or implied by such forward-looking statements. Also, these forward-looking statements represent our estimates and assumptions only as of the date of this Annual Report on Form 10-K. Except as otherwise required by law, we expressly disclaim any obligation or undertaking to release publicly any updates or revisions to any forward-looking statement contained in this Annual Report on Form 10-K to reflect any change in our expectations or any change in events, conditions, or circumstances on which any of our forward-looking statements are based. Factors that could cause or contribute to differences in our future financial results include those discussed in the risk factors set forth in Part I, Item 1A of this Annual Report on Form 10-K as well as those discussed elsewhere in this Report. We qualify all of our forward-looking statements by these cautionary statements.

ITEM 1. BUSINESS.

Throughout this document we use the following terms: Barocycler®, PULSE®, and BioSeq®, which are registered trademarks of the Company. We also use the terms ProteoSolveTM, ProteoSolveLRSTM, the Power of PCTTM, the PCT ShredderTM, all of which are unregistered trademarks of the Company.

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;

-Biological sample preparation, which includes sample preparation for genomic, proteomic, lipidomic, metabolomic, 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 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 209 Barocycler instruments through the end of December 31, 2011, of which 132 have been purchased or are currently being leased by our customers. 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
Units installed in year	5	8	20	41	54	50	31

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. 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 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 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 $387,547 in principal and accrued 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

- 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.

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 during 2011, including the following:

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.

- 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.

- 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 diagnostics markets, 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.

- 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 of 2011 compared to the first half of 2011, with concomitant reductions in operating loss and cash burn.

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.

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.

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, 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 three distribution arrangements covering Japan, Austria, and Germany. 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.

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.

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 January 31, 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.

Executive Officers of the Registrant

The following table sets forth the names, ages and positions of our current executive officers as of February 15, 2012:

Name	Age	Position
Richard T. Schumacher	61	President, Chief Executive Officer, Chief Financial Officer, Treasurer, Secretary and Director
Edmund Ting, Ph.D.	57	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

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.

ITEM 1A. RISK FACTORS.

This Annual Report on Form 10-K contains forward-looking statements that involve risks and uncertainties, such as statements of our objectives, expectations and intentions. The cautionary statements made in this Annual Report on Form 10-K should be read as applicable to all forward-looking statements wherever they appear in this report. Our actual results could differ materially from those discussed herein. Factors that could cause or contribute to such differences include those discussed below, as well as those discussed elsewhere in this report.

As of February 15, 2012, we had available cash of approximately $430,000. We require additional capital to fund our 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 February 15, 2012, we had available cash of approximately $430,000 which, based on current projections, will be sufficient to fund operations until April 2012. We need substantial additional capital to fund our operations beyond April 2012.

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 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 proceeds of approximately $765,000, which included the conversion of $387,547 in principal and accrued 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.

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 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 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 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 significant 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 three international distribution agreements that cover Japan, Austria, and Germany. 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:

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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 NASDAQ, 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 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 equity units 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 offering 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, and Series D Convertible Preferred Stock. In connection with those private placements and registered direct offering, 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 and Series B Convertible Preferred Stock was, and each share of Series C Convertible Preferred Stock is, 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. As of January 31, 2012, there were no shares of Series A Convertible Preferred Stock or Series B Convertible Preferred Stock issued and outstanding. If all of the outstanding shares of Series C Convertible Preferred Stock and Series D Convertible Preferred Stock, together with our outstanding warrants issued in connection with our private placements and registered direct offering, were converted or exercised into shares of our common stock, an additional 6,344,886 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.

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, with the sale price fluctuating from a low of $0.51 to a high of $2.29 since December 31, 2009. 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 remaining listed on the NASDAQ Capital Market.

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.

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, currently authorize the issuance of up to 20,000,000 shares of common stock and 1,000,000 shares of preferred stock. As of January 31, 2012, we had 6,925,531 shares of common stock issued and outstanding, 88,098 shares of Series C Convertible Preferred Stock issued and outstanding, which shares of Series C Convertible Preferred Stock are convertible into 880,980 shares of common stock and 677 shares of Series D Convertible Preferred Stock issued and outstanding, which shares of Series D Convertible Preferred Stock are convertible into 1,041,539 shares of common stock. As of January 31, 2012, we had options and warrants to purchase an aggregate of approximately 6,270,951 shares of our common stock outstanding, and had an additional 394,500 shares of common stock reserved for future awards that we may grant under our equity compensation plan. 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 completing any offering requiring additional authorized shares of common stock. From time to time we also may increase the number of shares available for issuance in connection with our equity compensation plan, we may adopt new 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, 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.

Our shares of Series C Convertible Preferred Stock and Series D 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 C Convertible Preferred Stock, and a preference upon a liquidation of our company, which will reduce amounts available for distribution to our common stockholders.

The holders of our shares of Series C Convertible Preferred Stock are entitled to receive a cumulative dividend at the rate of 5% per annum of the purchase price paid for the Series C Convertible Preferred Stock, payable, either in cash or in shares of common stock at our option, semi-annually within 45 days of each of June 30th and December 31st, which commenced on June 30, 2011. If we elect to pay the dividends 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. A payment of dividends in common stock will have a dilutive effect on our common stockholders. Further, the shares of Series C Convertible Preferred Stock and 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.

Our common stock may be delisted from The NASDAQ Capital Market, which could negatively impact the price of our common stock, liquidity for our stockholders and our ability to access the capital markets.

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. We have submitted a revised plan of compliance for the Panel's review and have requested a further extension of time. While we are diligently working to regain compliance with all applicable NASDAQ listing criteria, including the minimum stockholders' equity and minimum bid price of $1.00 per share, there can be no assurance that the Panel will grant our request for a further extension of time for continued listing or that we will be able to successfully complete our plan to achieve compliance.

If we fail to comply with the listing standards applicable to issuers listed on The NASDAQ Capital Market by the deadline set forth above or any extension of such deadline, our common stock will be delisted from The NASDAQ Capital Market.

If we are unsuccessful in maintaining our NASDAQ listing, then we may pursue listing and trading of our shares of common stock on the Over-The-Counter Bulletin Board or another securities exchange or association with different listing standards than NASDAQ. We anticipate the change in listings 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, if our shares of common stock were removed from listing with The NASDAQ Capital Market and we are unsuccessful in listing our shares of common stock on another national securities exchange, the shares may be 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. If our shares of common stock were delisted and determined to be 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.

ITEM 1B. UNRESOLVED STAFF COMMENTS.

Not Applicable.

ITEM 2. 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 in Boston, 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.

ITEM 3. LEGAL PROCEEDINGS.

We are not currently involved in any legal proceedings.

ITEM 4. MINE SAFETY DISCLOSURES.

Not applicable.

PART II

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

Our common stock is traded on the NASDAQ Capital Market under the trading symbol "PBIO".

The following table sets forth, for the periods indicated, the high and low sales price per share of common stock, as reported by the NASDAQ Capital Market from January 1, 2010 through December 31, 2011.

	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

Authorized Capital

As of January 31, 2012, we were 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 and 850 shares have been designated as Series D Convertible Preferred Stock. As of January 31, 2012, there were 6,925,531 shares of common stock issued and outstanding, 88,098 shares of Series C Convertible Preferred Stock outstanding and 677 shares of Series D Convertible Preferred Stock issued and outstanding. As of January 31, 2012, there were no shares of Series A Junior Participating Preferred Stock, Series A Convertible Preferred Stock or Series B Convertible 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 increase our authorized common stock prior to completing any offering requiring additional authorized shares of common stock.

Dividends

We have never declared or paid any cash dividends on our common stock and do not plan to pay any cash dividends on our common stock in the foreseeable future. The shares of Series C Convertible Preferred Stock and 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.

Holders of our Series A Convertible Preferred Stock were entitled to receive a cumulative dividend at the rate of 5% per annum of $11.50, payable semi-annually on June 30 and December 31, which commenced on June 30, 2009. The holders of our Series B Convertible Preferred Stock issued in November 2009 and March 2010 were entitled to receive a cumulative dividend at the rate of 5% per annum of the purchase price based on the 10-day volume weighted average stock price, payable semi-annually within 45 days of June 30th and December 31st, which commenced on December 31, 2009. As of December 31, 2011, there were no shares of Series A Convertible Preferred Stock or Series B Convertible Preferred Stock issued and outstanding. Holders of our Series C Convertible Preferred Stock are entitled to receive a cumulative dividend at the rate of 5% per annum of the purchase price paid for the Series C Convertible Preferred Stock ($1.25 per share common stock equivalent), payable semi-annually on June 30 and December 31, commencing on June 30, 2011. Dividends may be paid in cash

or in shares of common stock at our option, subject to certain conditions. Dividends issued or to be issued for the years ended December 31, 2011 and 2010 are outlined in the table below.

Common shares issued

	For The Year Ended December 31,	
	2011	2010
Series A	163,808	162,581
Series B	-	27,486
Series C	-	-
	163,808	190,067

Common shares to be issued December 31,

	For The Year Ended	
	2011	2010
Series A	-	66,102
Series B	-	30,855
Series C	-	-
	-	96,957

Dividends paid in common stock or cash

	For The Year Ended December 31,	
	2011	2010
Series A	$188,380	$186,954
Series B	65,543	35,975
Series C	-	-
	$253,923	$222,929

Dividends payable

	For The Year Ended December 31,	
	2011	2010
Series A	$-	$75,983
Series B	56,872	42,037
Series C	37,673	-
	$94,545	$118,020

Recent Sales of Unregistered Securities

On October 28, 2011, we issued 32,941 shares of our common stock to holders of Series A Convertible Preferred Stock in payment of dividends accrued through September 30, 2011. The stock dividends were issued without registration under the Securities Act, in reliance upon the exemption set forth in Section 4(2) of the Securities Act, for transactions not involving a public offering.

In October 2011, we issued warrants to purchase 47,955 shares of our Common Stock in exchange for the conversion of Series A Convertible Preferred Stock held by certain individuals who did not also hold warrants issued in connection with the issuance of the Series A Convertible Preferred Stock. These warrants have an exercise price of $0.90 and a maturity date of August 12, 2016. The warrants were issued without registration under the Securities Act, in reliance upon the exemption set forth in Section 4(2) of the Securities Act, for transactions not involving a public offering.

On November 1, 2011, we issued 15,000 shares of our common stock to an investor relations firm for payment of services rendered over the past three months. The shares were issued without registration under the Securities Act, in reliance upon the exemption set forth in Section 4(2) of the Securities Act, for transactions not involving a public offering.

On January 31, 2012, we issued 100,000 shares of our common stock to an investor relations firm for payment of services to be rendered over twelve months. The shares were issued without registration under the Securities Act, in reliance upon the exemption set forth in Section 4(2) of the Securities Act, for transactions not involving a public offering.

On February 7, 2012, we completed a private placement (the “February 2012 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, resulting in net aggregate proceeds of approximately $765,000, after deducting $35,000 in offering costs. Seven accredited 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 some of the convertible promissory notes we issued in 2011. The securities were issued in the February 2012 Private Placement without registration under the Securities Act, in reliance upon the exemption from registration set forth in Rule 506 of Regulation D ("Regulation D") promulgated under the Securities Act. We based our reliance, in part, upon representations made by each purchaser of shares, including, but not limited to, representations as to the purchaser's status as an "accredited investor" (as defined in Rule 501(a) under Regulation D) and the purchaser's investment intent. The securities were not offered or sold by any form of general solicitation or general advertising; as such terms are used in Rule 502 under Regulation D. The securities cannot be reoffered or

resold in the United States absent an effective registration statement or an exemption from the registration requirements under applicable federal and state securities laws.

Repurchases by Pressure BioSciences

We did not repurchase any of our equity securities during 2011.

ITEM 6. SELECTED FINANCIAL DATA.
Not Applicable.

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

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 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. 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 February 2012, in which we sold units consisting of shares of restricted common stock and warrants to purchase shares of common stock for net proceeds of approximately $765,000, which included the conversion of $387,547 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
- 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.

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 and B Convertible Preferred Stock. 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

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 placementand 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

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 annum.

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.

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. We have submitted a revised plan of compliance for the Panel's review and have requested a further extension of time. While we are diligently working to regain compliance with all applicable NASDAQ listing criteria, including the minimum stockholders' equity and minimum bid price of $1.00 per share, there can be no assurance that the Panel will grant our request for a further extension of time for continued listing or that we will be able to successfully complete our plan to achieve compliance.

If we fail to comply with the listing standards applicable to issuers listed on The NASDAQ Capital Market by the deadline set forth above or any extension of such deadline, our common stock will be delisted from The NASDAQ Capital Market.

If we are unsuccessful in maintaining our NASDAQ listing, then we may pursue listing and trading of our shares of common stock on the Over-The-Counter Bulletin Board or another securities exchange or association with different listing standards than NASDAQ. We anticipate the change in listings 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.

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 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.

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”). 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 for 2011.

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 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 annum.

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.

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, lease, or rent 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 is recognized upon shipment through a common carrier. 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 with the residual revenue allocated to the delivered elements. 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. An impairment analysis of intangible assets as of December 31, 2011 concluded they were not impaired.

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.

RECENT ACCOUNTING STANDARDS

The Financial Accounting Standards Board, or "FASB," issued Accounting Standards Update, or ASU No. 2009-13, Revenue Recognition (Topic 605) — Multiple-Deliverable Revenue Arrangements, or ("ASU 2009-13"). ASU 2009-13 amends existing revenue guidance related to revenue arrangements with multiple deliverables to allow the use of companies' estimated selling prices as the value for deliverable elements under certain circumstances and to eliminate the use of the residual method for allocation of deliverable elements. ASU 2009-13 is effective for fiscal years beginning on or after June 15, 2010, with earlier adoption permitted. We evaluated the impact of this standard on the financial statements and determined that there was no material impact.

In January 2010, the FASB issued ASU 2010-06 "Fair Value Measurements and Disclosures" ("ASU 2010-06"). ASU 2010-06 updated section ASC 820-10, Fair Value Measurements and Disclosures, to require a greater level of disaggregated information and more robust disclosure about valuation techniques and inputs to fair value measurements. ASU 2010-06 is effective for interim and annual reporting periods beginning after December 15, 2009, with the exception of the disclosures about purchases, sales, issuances and settlements in the roll forward of activity in Level 3 fair value measures which are effective for interim and annual reporting periods beginning after December 15, 2010. We have determined that there is no significant impact to our operations from this guidance.

ITEM 7A. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK.

Not Applicable

Report of Independent Registered Public Accounting Firm

To the Board of Directors of
Pressure BioSciences, Inc. and Subsidiary:

We have audited the consolidated balance sheets of Pressure BioSciences, Inc. and Subsidiary (the "Company") as of December 31, 2011 and 2010, and the related consolidated statements of operations, changes in stockholders' equity (deficit), and cash flows for the years then ended. These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these financial statements based on our audits.

We conducted our audits in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the consolidated financial statements are free of material misstatement. The Company is not required to have, nor were we engaged to perform, an audit of its internal control over financial reporting. Our audits included consideration of internal control over financial reporting as a basis for designing audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Company's internal control over financial reporting. Accordingly, we express no such opinion. An audit also includes examining, on a test basis, evidence supporting the amounts and disclosures in the consolidated financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the financial position of Pressure BioSciences, Inc. and Subsidiary as of December 31, 2011 and 2010, and the results of their operations and their cash flows for the years then ended in conformity with accounting principles generally accepted in the United States of America.

The accompanying financial statements have been prepared assuming that the Company will continue as a going concern. As discussed in Note 1 to the financial statements, the Company has had recurring net losses and continues to experience negative cash flows from operations. These conditions raise substantial doubt about its ability to continue as a going concern. Management's plans regarding those matters also are described in Note 1. The financial statements do not include any adjustments that might result from the outcome of this uncertainty.

/s/ MARCUM LLP

Boston, Massachusetts
February 27, 2012

ITEM 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA.

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
- 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.

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

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 requirements of the Securities and Exchange Commission ("SEC") Staff Bulletin No. 99.

(2) Summary of Significant Accounting Policies

(i) 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.

(ii) 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 and warrant derivative liability. 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.

(iii) 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.

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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, lease, or rent 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 installations. Product revenue related to sales of PCT instrumentation to our foreign distributors is recognized upon shipment through a common carrier. 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 the HUB440 and 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.

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 with the residual revenue allocated to the delivered elements. 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.

(iv) Cash and Cash Equivalents

Our policy is to invest available cash in short-term, investment grade interest-bearing obligations, including money market funds, and bank and corporate debt instruments. Securities purchased with initial maturities of three months or less are valued at cost plus accrued interest, which approximates fair value, and are classified as cash equivalents. As of December 31, 2010, we held $20,000 in a restricted account as collateral for our corporate credit card and therefore classified this balance as short-term restricted cash on our consolidated balance sheet. The restricted account was

liquidated in early 2011.

(v) Research and Development

Research and development costs, which are comprised of costs incurred in performing research and development activities including wages and associated employee benefits, facilities, consumable products and overhead costs that are expensed as incurred. In support of our research and development activities we utilize our Barocycler instruments that are capitalized as fixed assets and depreciated over their expected useful life.

(vi) Inventories

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Inventories are valued at the lower of cost (average cost) or market (sales price). The cost of Barocyclers consists of the cost charged by the contract manufacturer. The cost of manufactured goods includes material, freight-in, direct labor, and applicable overhead. The composition of inventory as of December 31, 2011 and 2010 is as follows:

	December 31,	
	2011	2010
Raw materials	$193,121	$198,534
Finished goods	875,892	905,522
Total	$1,069,013	$1,104,056

(vii) Property and Equipment

Property and equipment are stated at cost, less accumulated depreciation. For financial reporting purposes, depreciation is recognized using the straight-line method, allocating the cost of the assets over their estimated useful lives of three years for certain laboratory equipment, from three to five years for management information systems and office equipment, and three years for all PCT finished units classified as fixed assets.

(viii) Intangible Assets

We have classified as intangible assets, costs associated with the fair value of acquired intellectual property. Intangible assets, including patents, are being amortized on a straight-line basis over sixteen years. We perform an annual review of our intangible assets for impairment. When impairment is indicated, any excess of carrying value over fair value is recorded as a loss. An impairment analysis of intangible assets was performed as of December 31, 2011. Based on this analysis, we have concluded that no impairment of intangible assets had occurred.

(ix) Long-Lived Assets and Deferred Costs

The Company’s long-lived assets and other assets are reviewed for impairment in accordance with the guidance of the FASB ASC 360-10-05, Property, Plant, and Equipment, whenever events or changes in circumstances indicate that the carrying amount of the asset may not be recoverable. Recoverability of an asset to be held and used is measured by a comparison of the carrying amount of an asset to the future undiscounted cash flows expected to be generated by the asset. If such asset is considered to be impaired, the impairment to be recognized is measured by the amount by which the carrying amount of the asset exceeds its fair value. Through December 31, 2011, the Company had not experienced impairment losses on its long-lived assets. While our current and historical operating losses and cash flow are indicators of impairment, we performed an impairment test at December 31, 2011 and determined that such long-lived assets were not impaired.

(x) Concentrations

Credit Risk

Our financial instruments that potentially subject us to concentrations of credit risk consist primarily of cash, cash equivalents and trade receivables. We have cash investment policies which, among other things, limit investments to investment-grade securities. We perform ongoing credit evaluations of our customers, and the risk with respect to trade receivables is further mitigated by the fact that many of our customers are government institutions and university labs.

The following table illustrates the level of concentration of the below two groups within revenue as a percentage of total revenues during the years ended December 31, 2011 and 2010:

	For the Year Ended December 31,	
	2011	2010
Top Five Customers	37%	47%
Federal Agencies	26%	38%

The following table illustrates the level of concentration of the below two groups within accounts receivable as a percentage of total accounts receivable balance as of December 31, 2011 and 2010:

	December 31,	
	2011	2010
Top Five Customers	89%	72%
Federal Agencies	42%	29%

Product Supply

Source Scientific, LLC has been our sole contract manufacturer for all of our PCT instrumentation. 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.

(xi) Computation of Loss per Share

Basic loss per share is computed by dividing loss available to common shareholders by the weighted average number of common shares outstanding. Diluted loss per share is computed by dividing loss available to common shareholders by the weighted average number of common shares outstanding plus additional common shares that would have been outstanding if dilutive potential common shares had been issued. For purposes of this calculation, convertible preferred stock, common stock dividends, warrants to acquire preferred stock convertible into common stock, and warrants and options to acquire common stock, are all considered common stock equivalents in periods in which they have a dilutive effect and are excluded from this calculation in periods in which these are anti-dilutive. The following table illustrates our computation of loss per share for the years ended December 31, 2011 and 2010.

	For the Year Ended December 31,

	2011	2010
Numerator:		
Net loss	$(2,996,312)	$(3,128,262)
Accrued interest on convertible debt, after tax	18,896	-
Accrued dividend for Preferred Stock	(164,904)	(118,020)
Deemed dividend on warrant modifications	(704,844)	-
Beneficial conversion feature for Preferred Stock	(1,006,574)	(154,389)
Series A Preferred dividends paid in Common Stock	(188,380)	(186,968)
Series B Preferred dividends paid in Common Stock	-	(35,975)
Series B Preferred dividends paid in cash	(65,543)	(7,212)
Net loss applicable to common shareholders	$(5,107,661)	$(3,630,826)
Denominator for basic and diluted loss per share:		
Weighted average common stock shares outstanding	6,618,484	2,687,141
Loss per common share - basic and diluted	$(0.77)	$(1.35)

The following table presents securities that could potentially dilute basic loss per share in the future. For all periods presented, the potentially dilutive securities were not included in the computation of diluted loss per share because these securities would have been anti-dilutive.

	For the Year Ended December 31,	
	2011	2010
Stock options	1,508,500	201,110
Convertible debt	412,000	-
Common stock warrants	4,775,501	1,740,800
Preferred stock warrants	-	940,550
Convertible preferred stock:		
Series A Convertible Preferred	-	2,621,350
Series B Convertible Preferred	-	887,110
Series C Convertible Preferred	880,980	-
Series D Convertible Preferred	1,143,077	-
	8,720,058	6,390,920

(xii) Accounting for Income Taxes

We account for income taxes under the asset and liability method, which requires recognition of deferred tax assets, subject to valuation allowances, and liabilities for the expected future tax consequences of events that have been included in the financial statements or tax returns. Deferred income taxes reflect the net tax effects of temporary differences between the carrying amounts of assets and liabilities for financial reporting and income tax purposes. The Company considers many factors when assessing the likelihood of future realization of our deferred tax assets, including recent cumulative earnings experience by taxing jurisdiction, expectations of future taxable income or loss, the carry-forward periods available to us for tax reporting purposes, and other relevant factors. A valuation allowance is established if it is more likely than not that all or a portion of the net deferred tax assets will not be realized. If substantial changes in the company’s ownership should occur, as defined in Section 382 of the Internal Revenue Code, there could be significant limitations on the amount of net loss carry forwards that could be used to offset future taxable income.

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The benefit of $23,710 that was realized in 2010 relates to legislation within the Housing Assistance Tax Act of 2008 which provided the Company the option to claim a refundable tax credit in exchange for foregoing bonus depreciation.

(xiii) Accounting for Stock-Based Compensation

We maintain equity compensation plans under which incentive stock options and non-qualified stock options are granted to employees, independent members of our Board of Directors and outside consultants. We recognize equity compensation expense over the requisite service period using the Black-Scholes formula to estimate the fair value of the stock options on the date of grant.

Determining Fair Value of Stock Option Grants

Valuation and Amortization Method - The fair value of each option award is estimated on the date of grant using the Black-Scholes pricing model based on certain assumptions. The estimated fair value of employee stock options is amortized to expense using the straight-line method over the vesting period, which generally is over three years.

Expected Term - The Company uses the simplified calculation of expected life, described in the FASB ASC 718, Compensation-Stock Compensation, as the Company does not currently have sufficient historical exercise data on which to base an estimate of expected term. Using this method, the expected term is determined using the average of the vesting period and the contractual life of the stock options granted.

Expected Volatility - Expected volatility is based on the Company's historical stock volatility data over the expected term of the award.

Risk-Free Interest Rate - The Company bases the risk-free interest rate used in the Black-Scholes valuation method on the implied yield currently available on U.S. Treasury zero-coupon issues with an equivalent remaining term.

Forfeitures - As required by FASB ASC 718, Compensation-Stock Compensation, the Company records stock-based compensation expense only for those awards that are expected to vest. The Company estimated a forfeiture rate of 5% for awards granted based on historical experience and future expectations of options vesting. We used this historical rate as our assumption in calculating future stock-based compensation expense.

The following table summarizes the assumptions we utilized for grants of stock options to the three sub-groups of our stock option recipients during the twelve months ended December 31, 2011 and 2010:

Assumptions	Outside Consultants	Non-Employee Board Members	CEO and other Officers and Employees
Expected life	2.0 (yrs)	5.0 (yrs)	6.0 (yrs)
Expected volatility	79.60%	55.66% - 77.86%	55.66% - 101.83%
Risk-free interest rate	1.27%	2.60% - 4.94%	1.00% - 4.94%
Forfeiture rate	0.00%	5.00%	5.00%

Expected dividend yield	0.0%	0.0%	0.0%

We recognized stock-based compensation expense of $121,974 and $273,181 for the years ended December 31, 2011 and 2010, respectively. The following table summarizes the effect of this stock-based compensation expense within each of the line items within our Consolidated Statement of Operations:

	For the Year Ended, December 31,	
	2011	2010
Research and development	$39,375	$73,097
Selling and marketing	43,201	72,609
General and administrative	39,398	127,475
Total stock-based compensation expense	$121,974	$273,181

During the years ended December 31, 2011 and 2010, the total fair value of stock options awarded was $135,403 and $64,248, respectively.

As of December 31, 2011, the total estimated fair value of unvested stock options to be amortized over their remaining vesting period was $99,547. The non-cash, stock based compensation expense associated with the vesting of these options will be $31,695 in 2012, $26,244 in 2013, $24,467 in 2014 and $17,141 in 2015.

(xiv) Fair Value of Financial Instruments

Due to their short maturities, the carrying amounts for cash and cash equivalents, accounts receivable, accounts payable, and accrued expenses approximate their fair value. Short-term and long-term liabilities are primarily related to liabilities transferred under contractual arrangements with carrying values that approximate fair value.

(xv) Reclassifications

Certain prior year amounts have been reclassified to conform to our current year presentation. Deposits were moved to long-term assets to be consistent with the lease term of our headquarters.

(xvi) Recent Accounting Standards

The Financial Accounting Standards Board, or FASB, issued Accounting Standards Update, or ASU, No. 2009-13, Revenue Recognition (Topic 605) — Multiple-Deliverable Revenue Arrangements, or ASU 2009-13. ASU 2009-13 amends existing revenue guidance related to revenue arrangements with multiple deliverables to allow the use of companies' estimated selling prices as the value for deliverable elements under certain circumstances and to eliminate the use of the residual method for allocation of deliverable elements. ASU 2009-13 was effective for fiscal years beginning on or after June 15, 2010, with earlier adoption permitted. We evaluated the impact of this standard on the financial statements and determined that there was no material impact on adoption.

In January 2010, the FASB issued ASU 2010-06 "Fair Value Measurements and Disclosures" ("ASU2010-06"). ASU 2010-06 updated section ASC 820-10 to require a greater level of disaggregated information and more robust disclosure about valuation techniques and inputs to fair value measurements. ASU 2010-06 was effective for interim and annual reporting periods beginning after December 15, 2009, with the exception of the disclosures about purchases, sales, issuances and settlements in the roll forward of activity in Level 3 fair value measures which are effective for interim and annual reporting periods beginning after December 15, 2010. The Company determined that there was no significant impact to its operations from this guidance.

(xvii) Advertising

Advertising costs are expensed as incurred. During 2010 we incurred $23,545 in advertising expense. We did not purchase any advertising, print or otherwise, in 2011.

(xviii) Rent Expense

Rental costs are expensed as incurred. During 2011 and 2010 we incurred $132,648 and $140,789, respectively in rent expense for the use of our corporate office and research and development facilities.

(xix) Fair Value Measurements

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The Company adopted the guidance of FASB ASC Topic 820, "Fair Value Measurements and Disclosures" ("ASC 820") as of June 30, 2011, as it related to all financial assets and financial liabilities that are recognized or disclosed at fair value in the financial statements on a recurring basis.

The Company generally defines fair value as the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date (exit price). The Company uses a three-tier fair value hierarchy, which classifies the inputs used in measuring fair values. These tiers include: Level 1, defined as observable inputs such as quoted prices for identical instruments in active markets; Level 2, defined as inputs other than quoted prices in active markets that are either directly or indirectly observable; and Level 3, defined as unobservable inputs in which little or no market data exists, therefore requiring an entity to develop its own assumptions.

Financial assets and liabilities are classified in their entirety based on the lowest level of input that is significant to the fair value measurement. The Company has determined that it does not have any financial assets measured at fair value and that its financial liabilities are currently all classified within Level 3 in the fair value hierarchy.

The following tables set forth the Company's financial liabilities that were accounted for at fair value on a recurring basis as of December 31, 2011. The Company did not have financial liabilities measured at fair value in 2010.

		Fair value measurements at December 31, 2011 using:		
	December 31, 2011	Quoted prices in active markets (Level 1)	Significant other observable inputs (Level 2)	Significant unobservable inputs (Level 3)
Series C Common Stock Purchase Warrants	$205,353	$-	$-	$ 205,353
Series D Common Stock Purchase Warrants	231,200	-	-	231,200
	$436,553	$-	$-	$ 436,553

	January 1, 2011	Change in Fair Value	December 31, 2011
Series C Common Stock Purchase Warrants	$-	$205,353	$205,353
Series D Common Stock Purchase Warrants	-	231,200	231,200
	$-	$436,553	$436,553

(3) Property and Equipment, net

Property and equipment as of December 31, 2011 and 2010 consisted of the following components:

	December 31,	
	2011	2010
Laboratory and manufacturing equipment	$172,560	$172,560
Office equipment	137,093	134,451
Leasehold improvements	8,117	8,117
PCT collaboration, demonstration and leased systems	461,858	513,256
Total property and equipment	779,628	828,384
Less accumulated depreciation	(690,457)	(635,607)
Net book value	$89,171	$192,777

Depreciation expense for the years ended December 31, 2011 and 2010 was $92,683 and $148,799, respectively.

(4) Intangible Assets, net

Intangible assets as of December 31, 2011 reflect an estimate of purchase price attributable to patents in connection with the 1998 acquisition of BioSeq, Inc. and the PCT business. Acquired PCT patents are being amortized to expense on a straight line basis at the rate of $48,632 per year over their estimated remaining useful lives of approximately 6 years. We performed a review of our intangible assets for impairment. When impairment is indicated, any excess of carrying value over fair value is recorded as a loss. An impairment analysis of intangible assets was performed as of December 31, 2011. We have concluded that there is no impairment of intangible assets. Intangible assets at December 31, 2011 and 2010 consisted of the following:

	December 31,	
	2011	2010
PCT Patents	$778,156	$778,156
Less accumulated amortization	(644,394)	(595,762)
Net book value	$133,762	$182,394

Amortization expense for each of the years ended December 31, 2011 and 2010 was $48,632 and is expected to be $48,632 per year during the next three years.

(5) Retirement Plan

We provide all of our employees with the opportunity to participate in our retirement savings plan. Our retirement savings plan has been qualified under Section 401(k) of the Internal Revenue Code. Eligible employees are permitted to contribute to the plan through payroll deductions within statutory limitations and subject to any limitations included in the plan. During 2011 and 2010 we contributed $13,156 and $11,232, respectively, in the form of discretionary company matching contributions.

(6) Income Taxes

The components of the benefit for income taxes are as follows:

	For the Year Ended December 31,	
	2011	2010
Current benefit: federal	$-	$23,710

Current benefit: state	-	-
Total current benefit	-	23,710
Deferred provision: federal	-	-
Deferred provision: state	-	-
Total deferred provision	-	-
Total benefit for income taxes	$-	$23,710

Significant items making up the deferred tax assets and deferred tax liabilities as of December 31, 2011 and 2010 are as follows:

	December 31,	
Current deferred taxes:	2011	2010
Accounts receivable allowance	$3,787	$-
Other accruals	47,631	56,344
Less: valuation allowance	(51,418)	(56,344)
Total current deferred tax assets (liabilities)	$-	$-
Long term deferred taxes:		
Accelerated tax depreciation	$29,524	$29,472
Non-cash, stock-based compensation, nonqualified	387,676	389,975
Goodwill and intangibles	(52,763)	(73,450)
Operating loss carryforwards and tax credits	6,519,386	5,357,221
Less: valuation allowance	(6,883,823)	(5,703,218)
Total long term deferred tax assets (liabilities), net	-	-
Total net deferred tax liabilities	$-	$-

A valuation allowance is established if it is more likely than not that all or a portion of the deferred tax asset will not be realized. Accordingly, a valuation allowance was established in 2011 and 2010 for the full amount of our deferred tax assets due to the uncertainty of realization. We believe based on our projection of future taxable operating income for the foreseeable future, it is more likely than not that we will not be able to realize the benefit of the deferred tax asset at December 31, 2011. The benefit that was realized in 2010 related to legislation within the Housing Assistance Tax Act of 2008 which provided taxpayers the option to elect to claim refundable tax credits in exchange for foregoing bonus depreciation.

We had net operating loss carry-forwards for federal income tax purposes of $10,921,054 as of December 31, 2011. Included in these numbers are loss carry-forwards that were obtained through the acquisition of BioSeq, Inc. and are subject to Section 382 NOL limitations. These net operating loss carry-forwards expire at various dates from 2012 through 2031. We have not performed a Section 382 analysis but we estimate that approximately $50,000 of the restricted net operating loss carry-forwards will become available each year until 2031 once we generate taxable income.

We are considering whether the sale of capital stock and warrants in connection with our private placements and registered direct offering completed in 2009, 2010 and 2011 will result in further limitations of our net operating losses under Section 382.

We had net operating loss carry-forwards for state income tax purposes of approximately $18,986,747 at December 31, 2011. These net operating loss carry-forwards expire at various dates from 2012 through 2031.

Our effective income tax (benefit) provision rate was different than the statutory federal income tax (benefit) provision rate as follows:

	For the Year Ended December 31,	
	2011	2010
Federal tax benefit rate	34 %	34 %
Permanent differences	2 %	1 %
State tax expense	0 %	0 %
Refundable AMT and R&D tax credit	0 %	(1) %
Net operating loss carryback	0 %	0 %
Valuation allowance	(36) %	(35) %
Effective income tax benefit (provision) rate from continuing operations	0 %	(1) %

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(7) Commitments and Contingencies

Operating Leases

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 extended the lease term until 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 in Boston, pursuant to which we are leasing laboratory and office space on campus at the university for research and development activities. We pay $5,000 per month for the use of these facilities.

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

Royalty Commitments

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 fiscal years ended December 31, 2011 and 2010, we incurred $21,090 and $36,330 in royalties, respectively.

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 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

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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. Our only obligation for 2011 was a minimum royalty payment of $7,500.

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”). 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 of approximately $1,200 for 2011.

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 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 annum.

(8) Stockholders’ Equity (Deficit)

Preferred Stock

We are authorized to issue 1,000,000 shares of preferred stock with a par value of $0.01. 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 and 850 shares have been designated as Series D Convertible Preferred Stock. As of December 31, 2011, there were 88,098 shares of Series C Convertible Preferred Stock outstanding and 743 shares of Series D Convertible Preferred Stock issued and outstanding. As of December 31, 2011, there were no shares of Series A Junior Participating Preferred Stock, Series A Convertible Preferred Stock or Series B Convertible Preferred Stock issued and outstanding.

Series A Convertible Preferred Stock

On February 12, 2009, we completed a private placement, pursuant to which we sold an aggregate of 156,980 units (the “Series A Units”) for a purchase price of $11.50 per unit (the “Series A Purchase Price”), resulting in

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gross proceeds to us of $1,805,270 (the "Series A Private Placement"). Each Series A Unit consisted of (i) one share of Series A Convertible Preferred Stock convertible into 10 shares of our common stock, (ii) a warrant to purchase one share of Series A Convertible Preferred Stock at an exercise price equal to $12.50 per share, with a term expiring 15 months after the date of closing ("15-Month Series A Preferred Stock Warrant"); and (iii) a warrant to purchase 10 shares of common stock at an exercise price equal to $2.00 per share, with a term expiring 30 months after the date of closing (the "30-Month Common Stock Warrants"). We did not pay any placement fees associated with this transaction but the expenses related to the offering totaled approximately $233,000.

As a result of the issuance of Common Stock in connection with dividends paid on the Series A Preferred Stock and the Series B Preferred Stock, the exercise price of the 30-Month Common Stock Warrants has been adjusted from $2.00 to $1.72 in accordance with the terms of the 30-Month Common Stock Purchase Warrants.

On or about August 10, 2011, holders of 30-Month Common Stock Warrants to purchase 1,569,800 shares of Common Stock entered into an amendment to the 30-Month Common Stock Warrants which extended the expiration date of the warrants to August 11, 2012. On or about September 30, 2011, 30-Month Common Stock Warrants to purchase 1,556,750 shares of Common Stock were further amended to reduce the exercise price from $1.74 to $0.90 and to extend the term until August 12, 2016 and, with respect to affiliates, August 12, 2015. A 30-Month Common Stock Warrant to purchase 13,050 shares of Common Stock was not amended and was further adjusted by common stock dividends issued in October 2011 resulting in an effective exercise price of $1.72 per share, subject to future adjustment, with a term expiring on August 11, 2012.

The proceeds from the sale of each Series A Unit was allocated between the Series A Convertible Preferred Stock, the 15-Month Series A Preferred Stock Warrant and the 30-Month Common Stock Warrant based on the residual method. The estimated fair value of the warrants was determined using the Black-Scholes formula, resulting in an allocation of the gross proceeds of $882,253 to the total warrants issued. The allocation of the gross proceeds to the Series A Convertible Preferred Stock was $923,017. In accordance with the provisions of ASC 470-20, Debt with Conversion and Other Options ("ASC 470-20"), an additional adjustment between Additional Paid in Capital and Accumulated Deficit of $489,803 was recorded to reflect an implicit non-cash dividend related to the allocation of proceeds between the stock and warrants issued. The $489,803 represents the value of the adjustment to additional paid in capital related to the beneficial conversion feature of the Series A Convertible Preferred Stock. The value adjustment was calculated by subtracting the fair market value of the underlying common stock on February 12, 2009 issuable upon conversion of the Series A Convertible Preferred Stock from the fair market value of the Series A Convertible Preferred Stock as determined when the Company performed a fair market value allocation of the proceeds to the Series A Convertible Preferred Stock and warrants.

In September and October 2011, all shares of the outstanding shares of Series A Convertible Preferred Stock were voluntarily converted. The Company has no obligation or intention to issue any more shares of Series A Convertible Preferred Stock.

Each share of Series A Convertible Preferred Stock received a cumulative dividend at the rate of 5% per annum of the Series A Purchase Price, payable semi-annually on June 30 and December 31, commencing on June 30, 2009 (with the first payment being pro-rated based on the number of days occurring between the date of issuance and June 30, 2009). The Company was permitted to pay dividends in cash or in shares of common stock at our option, subject to certain conditions. The shares of Series A Convertible Preferred Stock were also entitled to a liquidation preference,

such that in the event of any voluntary or involuntary liquidation, dissolution or winding up of our Company, the holders of Series A Convertible Preferred Stock would have been paid out of the assets of the Company available for distribution to our stockholders before any payment was paid to the holders of common stock, an amount per share equal to the Series A Purchase Price, plus accrued and unpaid dividends. The Series A Convertible Preferred Stock would have been treated on an equivalent basis with the holders of the Series B Convertible Preferred Stock and Series C Convertible Preferred Stock with respect to payments made in connection with a liquidation. The Board approved the final payment to Series A holders in the form of common stock for accrued dividends through September 30, 2011.

Each share of Series A Convertible Preferred Stock was convertible into 10 shares of common stock at any time at the option of the holder, subject to adjustment for stock splits, stock dividends, recapitalizations and similar transactions (the “Series A Conversion Ratio”). Unless waived under certain circumstances by the holder of Series A

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Convertible Preferred Stock, such holder's shares of Series A Convertible Preferred Stock could not have been converted if upon such conversion the holder's beneficial ownership would exceed certain thresholds. Each share of Series A Convertible Preferred Stock would have been automatically converted into shares of common stock at the Series A Conversion Ratio then in effect: (i) if, after 12 months from the closing of the Series A Private Placement, the common stock traded on the NASDAQ Capital Market (or other primary trading market or exchange on which the common stock was then traded) at a price equal to $4.00 for 20 out of 30 consecutive trading days with average daily trading volume of at least 10,000 shares or (ii) upon a registered public offering by the Company at a per share price equal to $2.30 with aggregate gross proceeds to the Company of not less than $10 million.

The holders of Series A Convertible Preferred Stock were not entitled to vote on any matters presented to the stockholders of the Company for their action or consideration at any meeting of stockholders of the Company (or by written consent of stockholders in lieu of meeting), except that the holders of Series A Convertible Preferred Stock would have been entitled to vote separately as a class on any matters that would amend, alter or repeal any provision of our Restated Articles of Organization, as amended, in a manner that adversely affects the powers, preferences or rights of the Series A Convertible Preferred Stock and such holders would have been entitled to vote on any matters required by law.

At any time after February 11, 2014, upon 30 days written notice, we would have had the right to redeem the outstanding shares of Series A Convertible Preferred Stock at a price equal to the Series A Purchase Price, plus all accrued and unpaid dividends thereon. The redemption price could have also been paid in two annual installments.

On or about September 30, 2011, 46 of the 47 holders of both the outstanding Series A Convertible Preferred Stock and Series A 30-Month Common Stock Purchase Warrants, issued in the Series A Convertible Preferred Stock financing completed by the Company in February 2009, voluntarily converted an aggregate of 247,187 shares of Series A Preferred Stock into 2,471,870 shares of the Company's Common Stock.

15-Month Series A Preferred Stock Warrants and 30-Month Common Stock Warrants

Subject to the terms and conditions of the applicable warrants, the Company had the right to call for cancellation of the 15-Month Series A Preferred Stock Warrants if the volume weighted average price of our common stock on the NASDAQ Capital Market (or other primary trading market or exchange on which our common stock is then traded) equaled or exceeded $1.75 for either (i) 10 consecutive trading days or (ii) 15 out of 25 consecutive trading days. Pursuant to these provisions, on March 30, 2010, the Company called all of the 15-Month Series A Preferred Stock Warrants.

The 15-Month Series A Preferred Stock Warrants had an exercise price equal to $12.50 per share, with a term expiring on May 12, 2010. Each of the 15-Month Series A Preferred Stock Warrants were exercised in connection with the warrant call and, therefore, there are no longer any 15-Month Series A Preferred Stock Warrants outstanding. The amended 30-Month Common Stock Warrants have an exercise price equal to $0.90 per share, with a term expiring on August 12, 2016 (August 12, 2015 for Affiliates). Unless waived under certain circumstances by the holder of the 30-Month Common Stock Warrant, such holder's 30-Month Common Stock Warrants may not be exercised if upon such exercise the holder's beneficial ownership would exceed certain thresholds. Each of the 15-Month Series A Preferred Stock Warrants permitted, and each of the 30-Month Common Stock Warrants permit the holder to conduct a "cashless exercise" at any time the holder of the warrant is an "affiliate" as defined in the applicable Securities Purchase

Agreement of the Company.

The warrant exercise price and/or number of shares issuable upon exercise of the applicable warrant were subject to adjustment for stock dividends, stock splits or similar capital reorganizations, as set forth in the warrants. The 30-Month Common Stock Warrants that were amended as described above, no longer provide for adjustment to the exercise price and/or number of shares issuable upon exercise of the applicable warrant for stock dividends.

Subject to the terms and conditions of the 30-Month Common Stock Warrant, the Company has the right to call for cancellation the 30-Month Common Stock Warrant if the volume weighted average price for our common stock on the NASDAQ Capital Market (or other primary trading market or exchange on which our common stock is then traded) equals or exceeds $2.80 for either (i) 10 consecutive trading days or (ii) 15 out of 25 consecutive trading days.

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The warrants granted in connection with the Series A Units were valued based on a Black-Scholes pricing model at the date of the grant. The 15-Month Series A Preferred Stock Warrants and 30-Month Common Stock Warrants were granted with an exercise price of $12.50 per share of Series A Convertible Preferred Stock and $2.00 per share of common stock, respectively. The 15-Month Series A Preferred Stock Warrants and 30-Month Common Stock Warrants vested immediately. The relative fair value of the warrants was calculated to be $882,253 and was recorded to stockholders' equity in the first quarter of 2009. The assumptions for the Black-Scholes pricing model are represented in the table below with the 15-month Series A Preferred Stock Warrants being reflected on a per share common stock equivalent basis.

Assumptions	Preferred		Common	
Expected life (in months)	15.0		30.0	
Expected volatility	142.0	%	109.0	%
Risk-free interest rate	0.875	%	1.375	%
Exercise price	$1.25		$2.00	
Stock price	$0.90		$0.90	
Fair value per warrant	$0.45		$0.41	

On March 30, 2010, the Company called for cancellation any 15-Month Series A Preferred Stock Warrants that remained unexercised as of April 28, 2010. In connection with this warrant call, 15-Month Series A Preferred Stock Warrants to purchase 98,372 shares of Series A Convertible Preferred Stock were exercised at $12.50 per share, for gross proceeds to the Company of $1,229,650, before deducting expenses associated with the warrant call notice. 15-Month Series A Preferred Stock Warrants to purchase an additional 10,150 shares of Preferred Stock were exercised on a cashless basis, resulting in the net issuance of 2,883 shares of Series A Convertible Preferred Stock. Pursuant to the terms of the 15-Month Series A Preferred Stock Warrants, upon exercise of such warrants, the holders became entitled to receive an aggregate of 57,390 shares of common stock in payment of dividends on the Series A Convertible Preferred Stock paid on June 30, 2009 and December 31, 2009.

Series B Convertible Preferred Stock

On November 18, 2009, we sold an aggregate of 62,039 units (the "Series B Units") for a purchase price of $18.80 per unit (the "Series B Purchase Price"), resulting in gross proceeds to us of $1,166,333. This was the first tranche of a $2.5 million private placement. The second tranche closed on March 18, 2010 for the sale of 26,672 Series B Units with gross proceeds of $501,434 (collectively the two tranches are referred to as the "Series B Private Placements"). Each Series B Unit consisted of (i) one share of Series B Convertible Preferred Stock convertible into 10 shares of our common stock and (ii) a warrant to purchase one share of Series B Convertible Preferred Stock at an exercise price equal to $23.80 per share for warrants issued in November 2009 and at an exercise price of $28.80 for warrants issued in March 2010, in each case with a term expiring on August 11, 2011 (the "Series B Warrant").

In connection with the Series B Private Placements, we paid a finder's fee of $100,478, plus warrants to purchase 5,344 shares of Series B Convertible Preferred Stock at $28.80 per share, expiring August 11, 2012.

On or about August 10, 2011, holders of the Series B Warrants to purchase 887,110 shares of Common Stock entered into an amendment to the Series B Warrants which extended the expiration date of the Series B Warrants to August 11, 2012 and provided that they would be issuable for the equivalent number of shares of Common Stock at a proportionate exercise price. On or about September 30, 2011, Series B Warrants to purchase 887,110 shares of Common Stock were further amended to reduce the exercise price from $2.38 to $1.43, for Series B Warrants issued in November 2009, and from $2.88 to $1.75, for Series B Warrants issued in March 2010 and to extend the term of the Series B Warrants until August 12, 2016 and, with respect to affiliates, until August 12, 2015. All of the Series B Warrants are no longer exercisable for shares of Series B Convertible Preferred Stock.

The proceeds from the sale of each Series B Unit were allocated between the Series B Convertible Preferred Stock and the Series B Warrant based on the residual method. The estimated fair value of the Series B Warrants was determined using the Black-Scholes formula, resulting in an allocation of the gross proceeds of $592,685 to the total warrants issued for both tranches. The allocation of the gross proceeds to the Series B Convertible Preferred

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Stock was $1,075,083 for both tranches. In accordance with the provisions of ASC 470-20, an additional adjustment between Additional Paid in Capital and Accumulated Deficit of $294,838 was recorded to reflect an implicit non-cash dividend related to the allocation of proceeds between the Series B Convertible Preferred Stock and Series B Warrants issued in both tranches. The $294,838 represents the value of the adjustment to additional paid in capital related to the beneficial conversion feature of the Series B Convertible Preferred Stock. The value adjustment was calculated by subtracting the fair market value of the underlying common stock issuable upon conversion of the Series B Convertible Preferred Stock on the date of the respective closing from the fair market value of the Series B Convertible Preferred Stock as determined when the Company performed a fair market value allocation of the proceeds to the Series B Convertible Preferred Stock and Series B Warrants.

On or about September 30, 2011, all of the outstanding shares of Series B Convertible Preferred Stock were voluntarily converted into shares of Common Stock.

Each share of Series B Convertible Preferred Stock received a cumulative dividend at the rate of 5% per annum of the Series B Purchase Price, payable semi-annually on June 30 and December 31, commencing on December 31, 2009 (with the first payment being pro-rated based on the number of days occurring between the date of issuance and December 31, 2009). The Company was permitted to pay dividends in cash or in shares of common stock at our option, subject to certain conditions. The shares of Series B Convertible Preferred Stock were also entitled to a liquidation preference, such that in the event of any voluntary or involuntary liquidation, dissolution or winding up of our Company, the holders of Series B Convertible Preferred Stock would have been paid out of the assets of the Company available for distribution to our stockholders before any payment was paid to the holders of common stock, an amount per share equal to the Series B Purchase Price, plus accrued and unpaid dividends. The Series B Convertible Preferred Stock would have been treated on an equivalent basis with the holders of the Series A Convertible Preferred Stock and Series C Convertible Preferred Stock with respect to payments made in connection with a liquidation. The Board approved the method of payment in the form of common stock for the dividends payable with respect to December 31, 2009 and the June 30, 2010 (to the holders of Series B Convertible Preferred Stock issued in November 2009). The Board approved the method of payment in the form of cash for the dividends payable with respect to June 30, 2010 (to the holders of Series B Convertible Preferred Stock issued in March 2010), December 31, 2010 and for all dividends accrued through December 31, 2011.

Each share of Series B Convertible Preferred Stock was convertible into 10 shares of common stock at any time at the option of the holder, subject to adjustment for stock splits, stock dividends, recapitalizations and similar transactions (the “Series B Conversion Ratio”). Each share of Series B Convertible Preferred Stock would have been automatically converted into shares of common stock at the Series B Conversion Ratio then in effect: (i) if, after 12 months from the closing of the applicable tranche of the Series B Private Placement, the common stock traded on the NASDAQ Capital Market (or other primary trading market or exchange on which the common stock was then traded) at a price equal $5.64 for 20 out of 30 consecutive trading days with average daily trading volume of at least 10,000 shares or (ii) upon a registered public offering by the Company at a per share price equal to $5.64, with aggregate gross proceeds to the Company of not less than $10 million. Unless waived under certain circumstances by the holder of the Series B Convertible Preferred Stock, such holder’s Series B Convertible Preferred Stock could not have been converted if upon such conversion the holder’s beneficial ownership would exceed certain thresholds.

The holders of Series B Convertible Preferred Stock were not entitled to vote on any matters presented to the stockholders of the Company for their action or consideration at any meeting of stockholders of the Company (or by

written consent of stockholders in lieu of meeting), except that the holders of Series B Convertible Preferred Stock would have been entitled to vote separately as a class on any matters that would amend, alter or repeal any provision of our Restated Articles of Organization, as amended, in a manner that adversely affects the powers, preferences or rights of the Series B Convertible Preferred Stock and such holders would have also been entitled to vote on any matters required by law.

At any time after February 12, 2014, upon 30 days written notice, we would have had the right to redeem the outstanding shares of Series B Convertible Preferred Stock at a price equal to the Series B Purchase Price, plus all accrued and unpaid dividends thereon. The redemption price would have been payable in two annual installments. The Series B Convertible Preferred Stock, the Series A Convertible Preferred Stock and Series C Convertible

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Preferred Stock would have been treated on an equivalent basis with respect to payments made in connection with redemption.

Series B Warrants

The Series B Warrants issued in November 2009 originally had an exercise price equal to $23.80 and the Series B Warrants issued in March 2010 originally had an exercise price equal to $28.80, in each case with a term expiring on August 11, 2011. The Series B Warrants currently have an exercise price of $1.43 for Series B Warrants issued in November 2009, and $1.75 for Series B Warrants issued in March 2010, in each case with a term expiring on August 12, 2016 and, with respect to affiliates, August 12, 2015. The Series B Warrants are currently exercisable for shares of Common Stock. The Series B Warrants permit the holder to conduct a “cashless exercise” at any time the holder of the Series B Warrant is an “affiliate” (as defined in the Securities Purchase Agreement) of the Company.

The Series B Warrant exercise price and/or number of shares issuable upon exercise of the Series B Warrant will be subject to adjustment for stock splits or similar capital reorganizations, as set forth in the Series B Warrants, as amended.

Subject to the terms and conditions of the Series B Warrants, the Company has the right to call for cancellation of the Series B Warrants if the volume weighted average price of our common stock on the NASDAQ Capital Market (or other primary trading market or exchange on which our common stock is then traded) equals or exceeds $4.70 for either (i) 10 consecutive trading days or (ii) 15 out of 25 consecutive trading days.

In connection with the Series B Private Placements, we issued warrants to our placement agent to purchase 5,344 shares of Series B Convertible Preferred Stock at $28.80 per share, expiring August 11, 2012. The Series B Warrants and placement agent warrants were valued based on a Black-Scholes pricing model at the date of the grants. The Series B Warrants and placement agent warrants vested immediately. The relative fair value of the Series B Warrants was calculated to be $173,060 and was recorded to stockholders’ equity. The assumptions for the Black-Scholes pricing model are represented in the table below for the warrants issued in both tranches reflected on a per share common stock equivalent basis. The assumptions for the placement agent show the range of values for both tranches.

Assumptions	Preferred		Placement Agent	
Expected life (in months)	21.0		33.0	
Expected volatility	142.0	%	119.0	%
Risk-free interest rate	1.000	%	1.380	%
Exercise price	$2.38		$2.88	
Fair value per warrant	$0.95		$0.80	

Series C Convertible Preferred Stock

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 Series C Units (as defined below) for a purchase price of $12.50 per unit with gross proceeds of $275,485. Each unit ("Series C Unit") consists of (i) one share of Series C Convertible Preferred Stock, $0.01 par value per share (the "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 (i) the Common Stock equivalent of the Series C Purchase Price (ii) plus $0.88 (the "Series C Warrant"). The Series C Warrants are exercisable until the close of business on the third anniversary of the applicable closing date.

We engaged an investment banker (the "Investment Banker") to assist with the Series C Private Placement. The Company paid the Investment Banker a cash retainer fee of $50,000 and issued a warrant to the Investment Banker

to purchase 100,000 shares of Common Stock at an exercise price of $3.00 per share. In connection with the Series C Private Placement, we paid the Investment Banker a fee of (i) approximately $66,000 cash, (ii) an expense allowance of approximately $16,500, (iii) a warrant to purchase 61,638 shares of Common Stock exercisable at a purchase price of $1.50, and (iv) a warrant to purchase 61,638 shares of Common Stock exercisable at a purchase price of $2.38.

The proceeds from the sale of each Series C Unit was allocated between the Series C Convertible Preferred Stock and the Series C Warrants based on the residual method. The estimated fair value of the Series C Warrants was determined using a binomial formula, resulting in an allocation of the gross proceeds of $583,250 to the total warrants issued. The allocation of the gross proceeds to the Series C Convertible Preferred Stock was $517,958. In accordance with the provisions of ASC 470-20, an additional adjustment between Additional Paid in Capital and Accumulated Deficit of $476,434 was recorded to reflect an implicit non-cash dividend related to the allocation of proceeds between the stock and warrants issued. The $476,434 represents the value of the adjustment to additional paid in capital related to the beneficial conversion feature of the Series C Convertible Preferred Stock. The value adjustment was calculated by subtracting the fair market value of the underlying common stock on April 7 and June 20 issuable upon conversion of the Series C Convertible Preferred Stock from the fair market value of the Series C Convertible Preferred Stock as determined when the Company performed a fair market value allocation of the proceeds to the Series C Convertible Preferred Stock and warrants. We used a binomial formula since the warrants have down-round protection and are recorded as a liability. See “Warrant Derivative Liability” section within this footnote.

Each share of Series C Convertible Preferred Stock will receive a cumulative dividend at the rate of 5% per annum of the respective tranche purchase price, payable semi-annually on June 30 and December 31, commencing on June 30, 2011 (with the first payment being pro-rated based on the number of days occurring between the date of issuance and June 30, 2011). Dividends may be paid in cash or in shares of common stock at our option, subject to certain conditions. The shares of Series C Convertible Preferred Stock also are entitled to a liquidation preference, such that in the event of any voluntary or involuntary liquidation, dissolution or winding up of our Company, the holders of Series C Convertible Preferred Stock will be paid out of the assets of the Company available for distribution to our stockholders before any payment shall be paid to the holders of common stock, an amount per share equal to the Series C Purchase Price, plus accrued and unpaid dividends. Prior to the conversion of all of the outstanding shares of Series A Convertible Preferred Stock and Series B Convertible Preferred Stock, the Series C Convertible Preferred Stock was treated on an equivalent basis with the Series A Convertible Preferred Stock and Series C Preferred Stock with respect to payments made in connection with a liquidation. The Company elected to pay the dividend payable on June 30, 2011 in cash.

Each share of Series C Convertible Preferred Stock is convertible into 10 shares of common stock at any time at the option of the holder, subject to adjustment for stock splits, stock dividends, recapitalizations and similar transactions (the “Series C Conversion Ratio”). Each share of Series C Convertible Preferred Stock will automatically be converted into shares of common stock at the Series C Conversion Ratio then in effect: (i) if, after 12 months from the closing of the applicable tranche of the Series C Private Placement, the common stock trades on the NASDAQ Capital Market (or other primary trading market or exchange on which the common stock is then traded) at a price equal to three-tenths of the Series C Unit purchase price for 20 out of 30 consecutive trading days with average daily trading volume of at least 10,000 shares or (ii) upon a registered public offering by the Company at a per share price equal to at least three-tenths of the Series C Unit purchase price, with aggregate gross proceeds to the Company of not less than $10 million. Unless waived under certain circumstances by the holder of the Series C Convertible Preferred Stock, such holder’s Series C Convertible Preferred Stock may not be converted if upon such conversion the holder’s

beneficial ownership would exceed certain thresholds.

The holders of Series C Convertible Preferred Stock are not entitled to vote on any matters presented to the stockholders of the Company for their action or consideration at any meeting of stockholders of the Company (or by written consent of stockholders in lieu of meeting), except that the holders of Series C Convertible Preferred Stock may vote separately as a class on any matters that would amend, alter or repeal any provision of our Restated Articles of Organization, as amended, in a manner that adversely affects the powers, preferences or rights of the Series C Convertible Preferred Stock and such holders may also vote on any matters required by law.

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If we consummate an equity financing (other than the exercise of employee stock options under the Company's stock option plans, the Series C Private Placement or the exercise of any Series C Warrants, or the exercise or conversion of any currently outstanding Common Stock equivalents) within twelve months after the initial Closing and the gross proceeds to the Company from the sale of the Units are less than $4 million, then each holder of Series C Units may exchange all, but not less than all, of his, her or its Series C Units for the equity securities issued in such next financing and shall become subject to the terms and conditions of such next financing; provided that the exchange of the purchaser's Series C Units for next financing securities is permitted under the rules and regulations of the NASDAQ Trading Market then in effect. The number of next financing securities into which a purchaser's Series C Units may be exchanged shall be determined by dividing (a) the aggregate per unit purchase price at which the Series C Units being exchanged were issued, by (b) the price per next financing security at which such securities were issued in the next financing. The requisite holders of the Series C Units waived such right with respect to the Company's recently completed equity financing. At any time after February 12, 2014, upon 30 days written notice, we have the right to redeem the outstanding shares of Series C Convertible Preferred Stock at a price equal to the Series C Unit purchase price, plus all accrued and unpaid dividends thereon. The redemption price may be paid in two annual installments. All holders of Series C Convertible Preferred Stock will be treated on an equivalent basis with respect to payments made in connection with redemption.

Series C Warrants

The Series C Warrants have an exercise price equal to $2.13 with a term expiring on the third anniversary of the deal closing. The Series C Warrants permit the holder to conduct a "cashless exercise" at any time the holder of the Series C Warrant is an "affiliate" (as defined in the Securities Purchase Agreement) of the Company.

The Series C Warrant exercise price and/or number of shares issuable upon exercise of the Series C Warrant will be subject to adjustment for stock dividends, stock splits or similar capital reorganizations, as set forth in the Series C Warrants.

Subject to the terms and conditions of the Series C Warrants, the Company has the right to call for cancellation the Series C Warrants if the volume weighted average price of our common stock on the NASDAQ Capital Market (or other primary trading market or exchange on which our common stock is then traded) equals or exceeds two times the per common share exercise price for either (i) 10 consecutive trading days or (ii) 15 out of 25 consecutive trading days.

Series D Convertible Preferred Stock

On November 11, 2011, we completed a registered direct offering, pursuant to which we sold an aggregate of 843 units for a purchase price of $1,000.00 per unit, resulting in gross proceeds to us of $843,000 (the "Series D Placement"). Each unit ("Series D Unit") consists of (i) one share of Series D Convertible Preferred Stock, $0.01 par value per share (the "Series D Convertible Preferred Stock") convertible into 1,538.46 shares of our Common Stock, (subject to adjustment for stock splits, stock dividends, recapitalization, etc.) and (ii) one five-year warrant to purchase approximately 614 shares of our Common Stock at a per share exercise price of $0.81, subject to adjustment as provided in the Warrants ("Series D Warrant"). The Series D Warrants will be exercisable beginning on May 11, 2012 and until the close of business on the fifth anniversary of the initial exercise date.

We engaged an investment banker to assist with the Series D Placement. In connection with the Series D Placement, we paid the investment banker a fee of approximately $67,000 cash.

The proceeds from the sale of each Series D Unit was allocated between the Series D Convertible Preferred Stock and the Series D Warrants based on the residual method. The estimated fair value of the Series D Warrants was determined using a binomial formula, resulting in an allocation of the gross proceeds of $283,725 to the total warrants issued. The allocation of the gross proceeds to the Series D Convertible Preferred Stock was $559,275. In accordance with the provisions of ASC 470-20, an additional adjustment between Additional Paid in Capital and Accumulated Deficit of $530,140 was recorded to reflect an implicit non-cash dividend related to the allocation of proceeds between the stock and warrants issued. The $530,140 represents the value of the adjustment to additional paid in capital related to the beneficial conversion feature of the Series D Convertible Preferred Stock. The value adjustment was calculated by subtracting the fair market value of the underlying common stock on November 10,

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2011 issuable upon conversion of the Series D Convertible Preferred Stock from the fair market value of the Series D Convertible Preferred Stock as determined when the Company performed a fair market value allocation of the proceeds to the Series D Convertible Preferred Stock and warrants. The warrants are recorded as a liability. See "Warrant Derivative Liability" below.

The Series D Convertible Preferred Stock will rank senior to the Company's Common Stock and Series C Convertible Preferred Stock with respect to payments made upon liquidation, winding up or dissolution. Upon any liquidation, dissolution or winding up of the Company, after payment of the Company's debts and liabilities, and before any payment is made to the holders of any junior securities, the holders of Series D Convertible Preferred Stock will first be entitled to be paid $1,000 per share subject to adjustment for accrued but unpaid dividends.

We may not pay any dividends on shares of common stock unless we also pay dividends on the Series D Convertible Preferred Stock in the same form and amount, on an as-if-converted basis, as dividends actually paid on shares of our common stock. Except for such dividends, no other dividends may be paid on the Series D Convertible Preferred Stock.

Each share of Series D Convertible Preferred Stock is convertible into 1,538.46 shares of common stock (based upon an initial conversion price of $0.65 per share) at any time at the option of the holder, subject to adjustment for stock splits, stock dividends, combinations, and similar recapitalization transactions (the "Series D Conversion Ratio"). Subject to certain exceptions, if the Company issues any shares of common stock or common stock equivalents at a per share price that is lower than the conversion price of the Series D Convertible Preferred Stock, the conversion price will be reduced to the per share price at which such shares of common stock or common stock equivalents are issued. Each share of Series D Convertible Preferred Stock will automatically be converted into shares of common stock at the Series D Conversion Ratio then in effect if, after six months from the closing of the Series D Placement, the common stock trades on the NASDAQ Capital Market (or other primary trading market or exchange on which the common stock is then traded) at a price equal to at least 300% of the then effective Series D Convertible Preferred Stock conversion price for 20 out of 30 consecutive trading days with each trading day having a volume of at least $50,000. Unless waived under certain circumstances by the holder of the Series D Convertible Preferred Stock, such holder's Series D Convertible Preferred Stock may not be converted if upon such conversion the holder's beneficial ownership would exceed certain thresholds.

In addition, in the event we consummate a merger or consolidation with or into another person or other reorganization event in which our shares of common stock are converted or exchanged for securities, cash or other property, or we sell, lease, license or otherwise dispose of all or substantially all of our assets or we or another person acquire 50% or more of our outstanding shares of common stock, then following such event, the holders of the Series D Convertible Preferred Stock will be entitled to receive upon conversion of the Series D Convertible Preferred Stock the same kind and amount of securities, cash or property which the holders of the Series D Convertible Preferred Stock would have received had they converted the Series D Convertible Preferred Stock immediately prior to such fundamental transaction.

The holders of Series D Convertible Preferred Stock are not entitled to vote on any matters presented to the stockholders of the Company for their action or consideration at any meeting of stockholders of the Company (or by written consent of stockholders in lieu of meeting), except that the holders of Series D Convertible Preferred Stock may vote separately as a class on any matters that would (i) amend, our Restated Articles of Organization, as

amended, in a manner that adversely affects the rights of the Series D Convertible Preferred Stock, (ii) alter or change adversely the powers, preferences or rights of the Series D Convertible Preferred Stock or alter or amend the certificate of designation, (iii) authorize or create any class of shares ranking as to dividends, redemption or distribution of assets upon liquidation senior to, or otherwise pari passu with, the Series D Convertible Preferred Stock, or (iv) increase the number of authorized shares of Series D Convertible Preferred Stock.

If, within 12 months of the initial issuance of the Series D Convertible Preferred Stock, we issue any common stock, common stock equivalents, indebtedness or any combination thereof (a “Subsequent Financing”), the holders of Series D Convertible Preferred Stock will have the right to participate on a pro-rata basis in up to 50% of such Subsequent Financing.

Series D Warrants

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The Series D Warrants have an exercise price equal to $0.81 per share of Common Stock. The Series D Warrants will be exercisable beginning on the six month anniversary of the date of issuance and expire five years from the initial exercise date. The Series D Warrants permit the holder to conduct a "cashless exercise" at any time a registration statement registering, or the prospectus contained therein is not available for, the issuance of the shares of Common Stock issuable upon exercise of the Series D Warrant, and under certain circumstances at the expiration of the Series D Warrants. The exercise price and/or number of shares of Common Stock issuable upon exercise of the Series D Warrants will be subject to adjustment for certain stock dividends, stock splits or similar capital reorganizations, as set forth in the Warrants. The exercise price is also subject to adjustment in the event that we issue any shares of common stock or common stock equivalents at a per share price that is lower than the exercise price for the Series D Warrants then in effect. Upon any such issuance, subject to certain exceptions, the exercise price will be reduced to the per share price at which such shares of common stock or common stock equivalents are issued. Unless waived under certain circumstance by the holder of a Warrant, such holder may not exercise the Warrant if upon such exercise the holder's beneficial ownership of the Company's Common Stock would exceed certain thresholds. In the event we consummate a merger or consolidation with or into another person or other reorganization event in which our shares of common stock are converted or exchanged for securities, cash or other property, or we sell, lease, license or otherwise dispose of all or substantially all of our assets or we or another person acquire 50% or more of our outstanding shares of common stock, then following such event, the holders of the Series D Warrants will be entitled to receive upon exercise of the Series D Warrants the same kind and amount of securities, cash or property which the holders would have received had they exercised the Series D Warrants immediately prior to such fundamental transaction.

Common Stock

Shareholders Purchase Rights Plan

On March 3, 2003, our Board of Directors adopted a shareholder purchase rights plan ("the Rights Plan") and declared a distribution of one Right for each outstanding share of our common stock to shareholders of record at the close of business on March 21, 2003 (the "Rights"). Initially, the Rights will trade automatically with the common stock and separate Right Certificates will not be issued. The Rights Plan is designed to deter coercive or unfair takeover tactics and to ensure that all of our shareholders receive fair and equal treatment in the event of an unsolicited attempt to acquire the Company. The Rights Plan was not adopted in response to any effort to acquire the Company and the Board is not aware of any such effort. The Rights will expire on February 27, 2013 unless earlier redeemed or exchanged. Each Right entitles the registered holder, subject to the terms of a Rights Agreement, to purchase from the Company one one-thousandth of a share of the Company's Series A Junior Participating Preferred Stock at a purchase price of $45.00 per one one-thousandth of a share, subject to adjustment. In general, the Rights will not be exercisable until a subsequent distribution date which will only occur if a person or group acquires beneficial ownership of 15% or more of our common stock or announces a tender or exchange offer that would result in such person or group owning 15% or more of the common stock. With respect to any person or group who currently beneficially owns 15% or more of our common stock, the Rights will not become exercisable unless and until such person or group acquires beneficial ownership of additional shares of common stock.

Subject to certain limited exceptions, if a person or group acquires beneficial ownership of 15% or more of our outstanding common stock or if a current 15% beneficial owner acquires additional shares of common stock, each holder of a Right (other than the 15% holder whose Rights become void once such holder reaches the 15% threshold) will thereafter have a right to purchase, upon payment of the purchase price of the Right, that number of shares of our common stock which at the time of such transaction will have a market value equal to two times the purchase price of the Right In the event that, at any time after a person or group acquires 15% or more of our common stock, we are acquired in a merger or other business combination transaction or 50% or more of its consolidated assets or earning power are sold, each holder of a Right will thereafter have the right to purchase, upon payment of the purchase price of the Right, that number of shares of common stock of the acquiring company which at the time of such transaction will have a market value of two times the purchase price of the Right.

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, at an exchange ratio of one share of common stock per Right (subject to

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adjustment). At any time prior to the time any person or group acquires 15% or more of our common stock, the Board of Directors may redeem the Rights in whole, but not in part, at a price of $0.001 per Right.

Stock Options and Warrants

Our stockholders approved our amended 2005 Equity Incentive Plan (the "Plan") pursuant to which an aggregate of 1,800,000 shares of our common stock were reserved for issuance upon exercise of stock options or other equity awards made under the Plan. Under the Plan, we may award stock options, shares of common stock, and other equity interests in the Company to employees, officers, directors, consultants, and advisors, and to any other persons the Board of Directors deems appropriate. As of December 31, 2011, options to acquire 1,508,500 shares were outstanding under the Plan with 394,500 shares available for future grant under the Plan.

As of December 31, 2011, options to acquire 163,000 shares are outstanding under the 1999 Non-qualified Stock Option Plan. No additional options may be granted under the 1999 Non-qualified Stock Option Plan.

As of December 31, 2011, 1,569,800 of the 30-Month Common Stock Warrants were outstanding. On March 31, 2010, we issued warrants to an investor relations firm to purchase 50,000 shares of our common stock at an exercise price equal to $3.00 per share, with a term expiring on August 11, 2012, in exchange for consulting services provided to us by such firm. On October 15, 2010, we issued warrants to another investor relations firm to purchase 21,000 shares of our common stock at an exercise price equal to $2.38 per share, with a term expiring on October 14, 2013, in exchange for consulting services provided to us by such firm. On December 21, 2010, we issued warrants to an investment banker to purchase 100,000 shares of our common stock at an exercise price equal to $3.00 per share, with a term expiring on December 21, 2015, as payment of a retainer for investment banking services provided to us by such firm.

The following tables summarize information concerning options and warrants outstanding and exercisable:

	Stock Options		Warrants			
	Shares	Weighted Average price per share	Shares	Weighted Average price per share	Total Shares	Exercisable
Balance outstanding, 12/31/2009	1,564,500	$2.52	3,806,640	$1.77	5,371,140	4,905,152
Granted	60,000	1.43	404,510	$2.88	464,510	
Exercised	(18,897)	1.07	(1,529,800)	1.25	(1,548,697)	
Expired	-	-	-	-	-	
Forfeited	-	-	-	-	-	
Balance outstanding, 12/31/2010	1,605,603	$2.49	2,681,350	$2.24	4,286,953	4,114,792
Granted	180,000	1.00	2,094,151	1.44	2,274,151	
Exercised	(41,103)	1.07	-	-	(41,103)	
Expired	(161,000)	2.78	-	-	(161,000)	
Forfeited	(75,000)	2.57	-	-	(75,000)	

Balance outstanding, 12/31/2011	1,508,500	$2.33	4,775,501	$1.35	6,284,001	6,112,335

	Options Outstanding			Options Exercisable		
Range of Exercise Prices	Number of Options	Weighted Average Remaining Contractual Life	Exercise Price	Number of Options	Weighted Average Remaining Contractual Life	Exercise Price
$0.55 - $2.70	743,000	7.3	$1.12	571,334	6.6	$1.14
2.71 - 3.08	299,500	3.1	2.93	299,500	3.1	2.93
3.09 - 3.95	302,000	4.4	3.67	302,000	4.4	3.67
3.96 - 5.93	164,000	5.0	4.27	164,000	5.0	4.27
$0.55 - $5.93	1,508,500	5.6	$2.33	1,336,834	5.1	$2.50

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Convertible Debt

During 2011, we received loans in the aggregate amount of $412,000 from five individuals. The loans were made pursuant to Promissory Notes (the "Notes") with a term of six months, which may be extended with mutual consent of the parties. The interest rate under the Notes is 20% per annum. The Notes may be repaid, at the election of the respective lender (i) in cash, (ii) by conversion into that number of securities issued in the next financing completed by the Company 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 unregistered Common Stock of the Company at a conversion price of $1.00 per share.

Each of the lenders received warrants to purchase Common Stock as follows:

In connection with a loan received on August 3, 2011, we issued warrants to the lender to purchase 26,315 shares of the Company's Common Stock, at an exercise price of $0.76 per share, and warrants to purchase 211,765 shares of the Company's Common Stock, at an exercise price of $0.85 per share, both sets of warrants expire on August 3, 2014.

In connection with a loan received on September 7, 2011 from Richard T. Schumacher, the Company's Chief Executive Officer, we issued warrants to Mr. Schumacher to purchase 12,048 shares of the Company's Common Stock, at an exercise price of $0.83 per share, and warrants to purchase 105,882 shares of the Company's Common Stock, at an exercise price of $0.85 per share, both sets of Warrants expire on September 7, 2014.

In connection with loans received on September 29, 2011, we also issued warrants to the lenders to purchase an aggregate 131,766 shares of the Common Stock, at an exercise price of $0.85 per share, expiring on September 29, 2014.

ASC 470-20 states that the proceeds from the issuance of debt with detachable stock warrants should be allocated between the debt and warrants on the basis of their relative fair market values. The relative fair value of the warrants was calculated to be $155,035 and was recorded to debt discount against the total debt balance of $412,000. The debt discount will be amortized to interest expense over the six-month term of these loans. We amortized $109,000 of the debt discount to interest expense in 2011. The assumptions for the Black-Scholes pricing model are represented in the table below for the warrants issued with these loans reflected on a per share common stock equivalent basis.

Assumptions	August 3, 2011	August 3, 2011	September 7, 2011	September 7, 2011	September 29, 2011
Expected life (in months)	36.0	36.0	36.0	36.0	36.0
Expected volatility	97.5 %	97.5 %	97.5 %	97.5 %	97.5 %
Risk-free interest rate	2.000 %	2.000 %	2.000 %	2.000 %	2.000 %
Exercise price	$0.76	$0.85	$0.83	$0.85	$0.85
Fair value per warrant	$0.47	$0.52	$0.51	$0.52	$0.52

Amendment No. 1 to 30-Month Common Stock Warrants and Series B Warrants

The Company has calculated the fair value of the 30-Month Common Stock Warrants and Series B Preferred Stock Purchase Warrant amended on or about August 11, 2011, as described above within this footnote using the

Black-Scholes model with the below assumptions.

Assumptions	Series A		Series B Nov 09 tranche		Series B Mar 10 tranche	
Expected life (in months)	12		12		12	
Expected volatility	85.59	%	85.59	%	85.59	%
Risk-free interest rate	0.12	%	0.12	%	0.12	%
Exercise price	$2.00		$2.38		$2.88	
Fair value per warrant	$0.01		$0.001		$0.004	

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The Company has determined that, in each case, the fair value of the amended warrants increased as compared to the fair value of the original warrants immediately prior to amendment as a result of the applicable modifications including a market discount to factor liquidity of our common stock. We calculated the protective put option value of 43% as the discount to be applied to the fair value of the amended warrants.

A total of 1,569,800 original 30-Month Common Stock Warrants with a maturity date of August 11, 2011 were amended to provide for a maturity date of August 12, 2012; and a total of 887,110 original Series B Warrants with a maturity date of August 11, 2011 were amended to provide for a maturity date of August 12, 2012.

As a result, the aggregate fair value of the 1,569,800 original 30-Month Common Stock Warrants with a maturity date of August 11, 2011, amended to provide for a maturity date of August 12, 2012, increased incrementally by $18,285; and the aggregate fair value of the 887,110 original Series B Warrants with a maturity date of August 11, 2011, amended to provide for a maturity date of August 12, 2012, increased incrementally by $5,874.

We recorded an incremental value of $24,159 for these modifications.

Amendment No. 2 to 30-Month Common Stock Warrants and Series B Warrants

The Company has calculated the fair value of the 30-Month Common Stock Warrants and Series B Preferred Stock Purchase Warrant amended on or about September 30, 2011, as described above within this footnote, using the Black-Scholes model with the below assumptions.

Assumptions	Series A		Series A (Affiliates)		Series B Nov 09 tranche		Series B Mar 10 tranche	
Expected life (in months)	48		36		48		48	
Expected volatility	111.19	%	120.47	%	111.19	%	111.19	%
Risk-free interest rate	1.00	%	1.00	%	1.00	%	1.00	%
Exercise price	$0.90		$0.90		$1.43		$1.75	
Fair value per warrant	$0.33		$0.31		$0.29		$0.28	

The Company has determined that, in the case of the Series B Warrant Amendment, the fair value of the amended warrants increased as compared to the fair value of the original warrants immediately prior to amendment as a result of the applicable modifications including a market discount to factor liquidity of our common stock. We calculated the protective put option value of 43% as the discount to be applied to the fair value of the amended warrants.

A total of 1,513,180 original 30-Month Common Stock Warrants with a maturity date of August 12, 2012 were amended to provide for a maturity date of August 12, 2016 (August 12, 2015 for Affiliates) and a reduced price of $0.90; and a total of 887,110 original Series B Warrants with a maturity date of August 12, 2012 were amended to provide for a maturity date of August 12, 2016 (August 12, 2015 for Affiliates) and a reduced exercise price of $1.43 for Series B Warrants issued in November 2009, and $1.75 for Series B Warrants issued in March 2010.

As a result, the aggregate fair value of the 1,513,180 original 30-Month Common Stock Warrants with a maturity date of August 12, 2012, amended to provide for a maturity date of August 12, 2016 (August 12, 2015 for Affiliates) and a reduced price of $0.90, increased incrementally by $442,399; and the aggregate fair value of the 887,110 original Series B Warrants with a maturity date of August 12, 2012, amended to provide for a maturity date of August 12, 2016 (August 12, 2015 for Affiliates) and a reduced exercise price of $1.43 for Series B Warrants issued in November 2009, and $1.75 for Series B Warrants issued in March 2010, increased incrementally by $238,286.

We recorded an incremental value of $680,685 for these modifications. These warrants were originally issued as part of an equity unit in connection with a private placement completed by the Company. Accordingly, the warrants were recorded in equity for the private placement. Any modification for these warrants should be accounted for as an adjustment to Paid-in Capital.

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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 and B Convertible Preferred Stock. 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.

Warrant Derivative Liability

The Series C Warrants issued in connection with the Series C Convertible Preferred Stock private placement and the Series D Warrants issued in connection with the registered direct offering of Series D Convertible Preferred 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

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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.

The assumptions for the binomial pricing model are represented in the table below for the warrants issued in both tranches of the Series C private placement reflected on a per share common stock equivalent basis.

					Warrants revalued at December 31, 2011			
Assumptions	April 8, 2011		June 20, 2011		April 8, 2011		June 20, 2011	
Expected life (in months)	36.0		36.0		28.0		30.0	
Expected volatility	118.5	%	118.5	%	88.2	%	89.7	%
Risk-free interest rate	0.625	%	0.625	%	0.25	%	0.25	%
Exercise price	$2.13		$2.13		$2.13		$2.13	
Fair value per warrant	$0.70		$0.62		$0.12		$0.14	

The assumptions for the warrants issued to the investment banker show the range of values for both tranches. The investment banker received two sets of warrants in each tranche with half of the warrants assigned a different exercise price.

	Investment Banker Warrants							
	April 8, 2011				June 20, 2011			
Assumptions	$1.50		$2.38		$1.50		$2.38	
Expected life (in months)	60.0		60.0		60.0		60.0	
Expected volatility	99.1	%	99.1	%	99.9	%	99.9	%
Risk-free interest rate	1.500	%	1.500	%	1.500	%	1.500	%
Exercise price	$1.50		$2.38		$1.50		$2.38	
Fair value per warrant	$0.83		$0.75		$0.74		$0.67	

The assumptions for the binomial pricing model are represented in the table below for the warrants issued in the Series D private placement reflected on a per share common stock equivalent basis.

Assumptions	November 10, 2011	Warrants revalued at

			December 31, 2011	
Expected life (in months)	60.0		59.0	
Expected volatility	104.5	%	106.2	%
Risk-free interest rate	0.875	%	0.875	%
Exercise price	$0.81		$0.81	
Fair value per warrant	$0.54		$0.44	

As of December 31, 2011, the value of the Series C and D Warrants has decreased to $436,553.

(9) Subsequent Events

We performed a review of events subsequent to the balance sheet date through the date the financial statements were issued and determined, except as disclosed herein, that there were no other such events requiring recognition or disclosure in the financial statements.

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On January 31, 2012, we issued 100,000 shares of Common Stock to an investor relations firm for payment of services to be rendered over twelve months.

On February 7, 2012, we entered into a Securities Purchase Agreement with seven accredited investors, pursuant to which the Company sold an aggregate of 971,867 shares of common stock, $0.01 par value ("Shares"), resulting in gross proceeds to the Company of $800,000. 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 some of the convertible promissory notes issued by the Company in 2011.

Each unit consists of one share of restricted common stock and a warrant to purchase one-half share of common stock. The warrants are exercisable for a period of five years, commencing on August 7, 2012, at an exercise price of $0.74 per share for the purchasers of the 789,350 shares, and $0.85 per share for the purchasers of the 182,517 shares. In connection with the Securities Purchase Agreement, the Company paid its investment banker a fee of $35,000 for providing advisory services.

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

None

ITEM 9A. CONTROLS AND PROCEDURES.

Evaluation of Disclosure Controls and Procedures

We maintain disclosure controls and procedures that are designed to ensure that information required to be disclosed in our Securities Exchange Act of 1934 filings are 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 President and Chief Executive Officer (Principal Executive Officer) and Chief Financial Officer (Principal Financial Officer), as appropriate, to allow timely decisions regarding required disclosure. In designing and evaluating the disclosure controls and procedures, management recognized that any controls and procedures, no matter how well designed and operated, can provide only reasonable assurance of achieving the desired control objectives, as ours are designed to do, and management was necessarily required to apply its judgment in evaluating the cost-benefit relationship of possible controls and procedures.

As of December 31, 2011, we carried out an evaluation, under the supervision and with the participation of our management, including our Principal Executive Officer and Principal Financial Officer, of the effectiveness of the design and operation of our disclosure controls and procedures, as defined in Rules 13a-15(e) and 15d-15(e) under the Securities Exchange Act of 1934. Based upon that evaluation, our Principal Executive Officer and Principal Financial Officer concluded that our disclosure controls and procedures were not effective as of December 31, 2011 due to material weaknesses in our internal control over financial reporting relating to our accounting for complex equity transactions as described below under the heading "Report of Management on Internal Control over Financial Reporting. Management plans to remediate this weakness by taking the actions described below.

Report of Management on Internal Control over Financial Reporting

We are responsible for establishing and maintaining adequate internal control over financial reporting. Internal control over financial reporting is defined in Rule 13a-15(f) and 15d-15(f) under the Exchange Act, as a process designed by, or under the supervision of our principal executive and principal financial officers and effected by our board of directors, management and other personnel to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles and includes those policies and procedures that:

- pertain to the maintenance of records that in reasonable detail accurately and fairly reflect the transactions and disposition of our assets;

- provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that our receipts and expenditures are being made only in accordance with authorization of our management and directors; and

-

provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use or disposition of our assets that could have a material effect on the financial statements.

Our internal control system is designed to provide reasonable assurance to our management and board of directors regarding the preparation and fair presentation of published financial statements. Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Projections of any evaluation of effectiveness to future periods are subject to the risks that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

We have assessed the effectiveness of our internal control over financial reporting as of December 31, 2011. In making this assessment, we used the criteria set forth by the Committee of Sponsoring Organizations of the Treadway Commission (COSO) in Internal Control-Integrated Framework.

Based on this assessment management believes that, as of December 31, 2011, the Company did not maintain effective internal control over financial reporting because of the effect of a material weakness in our internal control over financial reporting discussed below.

Public Company Accounting Oversight Board Auditing Standard No. 2 defines a material weakness as a significant deficiency, or combination of significant deficiencies, that results in there being a more than remote likelihood that a material misstatement of the annual or interim financial statements will not be prevented or detected. Based upon this definition, our management concluded that, as of December 31, 2011, a material weakness existed in our internal control over financial reporting related to accounting for complex equity transactions.

Specifically, we identified material weaknesses in our internal control over financial reporting related to the following matters:

- We identified a lack of sufficient segregation of duties. Specifically, this material weakness is such that the design over these areas relies primarily on detective controls and could be strengthened by adding preventative controls to properly safeguard company assets.
- Management has identified a lack of sufficient personnel in the accounting function due to our limited resources with appropriate skills, training and experience to perform the review processes to ensure the complete and proper application of generally accepted accounting principles, particularly as it relates to valuation of warrants and other complex debt /equity transactions. Specifically, this material weakness led to segregation of duties issues and resulted in audit adjustments to the annual consolidated financial statements and revisions to related disclosures, valuation of warrants and other equity transactions.

Our plan to remediate those material weaknesses is as follows:

- Improve the effectiveness of the accounting group by continuing to augment our existing resources with additional consultants or employees to improve segregation procedures and to assist in the analysis and recording of complex accounting transactions. We plan to mitigate the segregation of duties issues by hiring an independent consultant once we generate significantly more revenue or raise significant additional working capital.
- Improve segregation procedures by strengthening cross approval of various functions including quarterly internal audit procedures where appropriate.

Changes in Internal Control Over Financial Reporting

There have been no changes in our internal control over financial reporting that occurred during the fourth quarter of 2011 that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

ITEM 9B. OTHER INFORMATION.

None.

PART III

ITEM 10. DIRECTORS, EXECUTIVE OFFICERS AND CORPORATE GOVERNANCE.

Directors

The following table sets forth information about the individuals who serve as our directors as of February 15, 2012.

Name	Age	Position	Board Committees	Term of office
Richard T. Schumacher	61	President, Chief Executive Officer, Chief Financial Officer, Treasurer, Clerk and Director		2014
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. 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.

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 served on school and charity Boards and remains active in local charities. 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.

Executive Officers

The information under the heading "Executive Officers of the Registrant" in Item 1 of Part I of this Annual Report on Form 10-K is incorporated herein by this reference.

Section 16(a) Beneficial Ownership Reporting Compliance

Section 16(a) of the Exchange Act requires the Company's executive officers and directors, and persons who own more than 10% of the Company's Common Stock, to file reports of ownership and changes in ownership on Forms 3, 4 and 5 with the SEC.

Based solely on the Company's review of the copies of such Forms and written representations from certain reporting persons, the Company believes that all filings required to be made by the Company's Section 16(a) reporting persons during the Company's fiscal year ended December 31, 2011 were made on a timely basis, except as follows: Each of Messrs. Rosenson, Fritzsche, Freitag, Goldberg, Lawrence, Lazarev, Damasio, Schumacher and Ting did not timely file one Form 4 with respect to one transaction.

Code of Ethics

Pursuant to Section 406 of the Sarbanes-Oxley Act of 2002, we have adopted a Code of Ethics for Senior Financial Officers that applies to our principal executive officer, principal financial officer, principal accounting officer, controller, and other persons performing similar functions. A copy of the code of ethics is posted on, and may be obtained free of charge from our Internet website at http://www.pressurebiosciences.com. If we make any amendments to this Code of Ethics or grant any waiver, including any implicit waiver, from a provision of this Code of Ethics to our principal executive officer, principal financial officer, principal accounting officer, controller, or other persons performing similar functions, we will disclose the nature of such amendment or waiver, the name of the person to whom the waiver was granted and the date of waiver in a Current Report on Form 8-K.

Audit Committee.

Messrs. Payne, Rosenson, Goldberg and Freitag are currently the members of the Audit Committee.

The Board of Directors has determined that Mr. Payne qualifies as an "audit committee financial expert" as defined in Item 407(d)(5) of Regulation S-K.

The Audit Committee operates pursuant to a written charter (the "Audit Committee Charter"), a current copy of which is publicly available on the investor relations portion of the Company's website at www.pressurebiosciences.com. Under the provisions of the Audit Committee Charter, the primary functions of the Audit Committee are to assist the Board of Directors with the oversight of (i) the Company's financial reporting process, accounting functions, and internal controls, and (ii) the qualifications, independence, appointment, retention, compensation, and performance of the Company's independent registered public accounting firm. The Audit Committee is also responsible for the establishment of "whistle-blowing" procedures, and the oversight of other compliance matters.

ITEM 11. EXECUTIVE COMPENSATION.

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	-	$3.08	2/11/2012
President, Chief Executive Officer and				
Chief Financial Officer	30,000	-	$2.70	12/2/2012
	75,000	-	$2.92	6/17/2015
	30,000	-	$3.86	3/30/2016
	70,000	-	$3.51	2/12/2017
	75,000	-	$0.77	3/12/2019
		15,000	(2) $1.05	9/09/2021
Edmund Y. Ting, Ph.D	60,000	-	$3.87	4/24/2016
Senior Vice President of Engineering	12,000	-	$2.75	9/25/2018
	42,000	-	$0.77	3/12/2019
				9/09/2021
		15,000	(2) $1.05	
Alexander V. Lazarev, Ph.D	50,000	-	$3.88	3/02/2016
Vice President of Research & Development	10,000	-	$2.75	9/25/2018
	35,000	-	$0.77	3/12/2019
		15,000	(2) $1.05	9/9/2021

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(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 each of Mr. Schumacher, Dr. Ting, Dr. Lazarev and Dr. Lawrence, each such executive officers, 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, his 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 an aggregate of 124,996 shares of the Company's 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 as of December 31, 2011 that have been issued as director compensation.

Name	Aggregate Number of Stock Options Outstanding
R. Wayne Fritzsche	135,000
Calvin A. Saravis, Ph.D	110,000
J. Donald Payne	88,000
Alan D. Rosenson	25,000
Alan I. Goldberg	25,000
Gregory G. Freitag	25,000
Jeffrey N. Peterson	25,000

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

Beneficial Ownership Information

The following table sets forth certain information as of January 31, 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” above, (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. 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 6,925,531 shares of our common stock issued and outstanding as of January 31, 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 January 31, 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	Percent of Class

	Common Stock Beneficially Owned (1)	
Richard T. Schumacher (2)	844,937	11.1%
R. Wayne Fritzsche (3)	695,277	9.5%
Alan D. Rosenson (4)	289,274	4.0%
Alan I. Goldberg (5)	249,027	3.5%
J. Donald Payne (6)	159,800	2.2%
Calvin A. Saravis, Ph.D (7)	133,809	1.9%
Edmund Y. Ting, Ph.D (8)	128,938	1.8%
Alexander V. Lazarev, Ph.D (9)	105,701	1.5%
Gregory G. Freitag (10)	94,303	1.3%
Jeffrey N. Peterson (11)	17,976	0.3%
All Executive Officers and Directors as a Group (twelve persons) (12)	2,870,660	32.4%

1) The terms of our Series C Convertible Preferred Stock and warrants issued in connection with our Series A Convertible Preferred Stock, Series B Convertible Preferred Stock and Series C Convertible Preferred Stock contain a limitation on conversion which prevents the holder from converting shares of Series C Convertible 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%, 14.99% or 19.99%, upon not less than 61 days prior written notice to us. With respect to Mr. Schumacher, because he beneficially owned more than 19.99% of the outstanding shares of common stock prior to his acquisition of shares of Series C Convertible Preferred Stock, the conversion limitation does not apply to him.

2) Includes (i) 340,000 shares of common stock issuable upon exercise of options; (ii) 60,210 shares of common stock issuable upon conversion of Series C Convertible Preferred Stock; (iii) 81,950 shares of common stock issuable upon the exercise of warrants; and (iv) 104,000 shares of common stock issuable upon conversion of an outstanding convertible debenture. 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.

3) 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 110,000 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.

Equity Compensation Plan Information

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.

ITEM 13. CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS; AND DIRECTOR INDEPENDENCE.

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, the Board of Directors extended the engagement of Mr. Wayne Fritzsche, the Company’s Chairman, as an investor relations consultant to the Company, with an increase of annual cash compensation to $110,000. In connection with this engagement, Mr. Fritzsche has not been on the Company’s Audit Committee since April 1, 2009. As of December 31, 2011, 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 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 (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 to reduce the exercise price to $2.13. Mr. Richard T. Schumacher, the Company's Chief Executive Officer, 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 September 7, 2011, the Company received a loan in the amount of $100,000 from the Company's Chief Executive Officer, Richard T. Schumacher. The loan was made pursuant to a convertible promissory note (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 annum. The Note may be repaid, at the election of the holder (i) in cash, (ii) by conversion into that number of securities issued in the next financing completed by the Company 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 Common Stock of the Company at a conversion price of $1.00 per share. In connection with the loan, the Company issued warrants to Mr. Schumacher to purchase 12,048 shares of the Company's Common Stock, at an exercise price of $0.83 per share, and warrants to purchase 105,882 shares of the Company's 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 only of the Note in the Company's 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 in return 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.

ITEM 14. PRINCIPAL ACCOUNTING FEES AND SERVICES

Independent Registered Public Accounting Fees

The following is a summary of the fees billed to the Company by Marcum LLP, the Company's current independent registered public accounting firm, for the fiscal year ended December 31, 2011 and 2010:

	Fiscal 2011 Fees	Fiscal 2010 Fees
Audit Fees	$105,570	$111,696
Audit-Related Fees	51,500	3,500
Tax and Other Fees	-	-
	$157,070	$115,196

Audit Fees. Consists of aggregate fees billed for professional services rendered for the audit of the Company's consolidated financial statements and review of the interim consolidated financial statements included in quarterly reports, as well as services that are normally provided by the independent registered public accounting firm in

connection with statutory and regulatory filings or engagements.

Audit-Related Fees. Consists of aggregate fees billed for assurance and related services that are reasonably related to the performance of the audit or review of the Company's consolidated financial statements and are not reported under "Audit Fees." Fees billed by Marcum for 2011 were fees associated with derivative valuations and a consent delivered in connection with the Company's Registration Statement on Form S-3 and Registration Statement on Form S-1. Fees billed by Marcum for 2010 were fees associated with a consent delivered in connection with the Company's Registration Statement on Form S-8.

Audit Committee Policy on Pre-Approval of Services

The Audit Committee's policy is to pre-approve all audit and permissible non-audit services provided by the independent registered public accounting firm. These services may include audit services, audit-related services, tax services, and other services. Pre-approval is generally provided for up to one year. The Audit Committee may also pre-approve particular services on a case-by-case basis.

PART IV

Item 15. Exhibits and Financial Statement Schedules.

Exhibit No.		Reference
3.1	Restated Articles of Organization of the Company	A-3.1**
3.2	Articles of Amendment to Restated Articles of Organization of the Company	B-3.1**
3.3	Articles of Amendment to Restated Articles of Organization of the Company, as amended	O-3.1**
3.4	Articles of Amendment to Restated Articles of Organization of the Company, as amended	L-3.1**
3.5	Articles of Amendment to Restated Articles of Organization of the Company, as amended	P-3.1**
3.6	Articles of Amendment to Restated Articles of Organization of the Company, as amended	U-3.1**
3.7	Amended and Restated By-Laws of the Company	A-3.2**
3.8	Amendment to Amended and Restated By-Laws of the Company	C-3.3**
4.1	Specimen Certificate for Shares of the Company's Common Stock	D-4.1**
4.2	Description of Capital Stock (contained in the Amended and Restated Articles of Organization, as amended, of the Company filed as Exhibits 3.1, 3.2, 3.3, 3.4, 3.5, 3.6 and 3.7)	A-3.1 & 3.2, B-31, O-31, L-31, P-31 and U.31**
4.3	Rights Agreement dated as of February 27, 2003 between the Company and Computershare Trust Company, Inc.	E-4**
4.4	Amendment No. 1 to Rights Agreement dated April 16, 2004 between the Company and Computershare Trust Company, Inc.	F-4**
4.5	Amendment No. 2 to Rights Agreement dated November 8, 2011 between the Company and Computershare Trust N.A.	U-4.2**
4.6	Securities Purchase Agreement dated November 21, 2007 between the Company and the purchasers named therein	G-4.9**
4.7	Registration Rights Agreement dated November 21, 2007 between the Company and the purchasers named therein	G-4.10**
4.8	Securities Purchase Agreement dated February 12, 2009 between the Company and the purchasers named therein	L-4.1**
4.9	Form of 15-Month Preferred Stock Warrant	L-4.3**
4.10	Form of 30-Month Common Stock Purchase Warrant	L-4.4**
4.11	Amendment No. 1 to 30-Month Common Stock Purchase	Q-4.2**
4.12	Warrant	S-4.1**
4.13		L-4.5**

	Amendment No. 2 to 30-Month Common Stock Purchase Warrant	
	Registration Rights Agreement dated February 12, 2009 between the Company and the purchasers named therein	
4.14	Securities Purchase Agreement dated November 18, 2009 between the company and the purchasers named therein	O-4.1**
4.15	Registration Rights Agreement dated November 18, 2009 between the Company and the purchasers named therein	O-4.3**
4.16	Series B Preferred Stock Warrant	O-4.2**

Exhibit No.		Reference
4.17	Amendment No. 1 to Series B Convertible Preferred Stock	Q-4.1**
4.18	Purchase Warrant	S-4.2**
4.19	Amendment No. 2 to Series B Convertible Preferred Stock Purchase Warrant	P-4.1**
4.20	Securities Purchase Agreement dated April 8, 2011 between the Company and the Purchasers Named Therein	P-4.3**
4.21	Registration Rights Agreement dated April 8, 2011 between the Company and the Purchasers Named Therein	R-4.1**
4.22	Amendment No. 1 to Securities Purchase Agreement dated June 21, 2011, amending Securities Purchase Agreement	P-4.2**
4.23	dated April 8, 2011 between the Company and the Purchasers	T-4.1**
4.24	Named Therein	T-4.2**
4.25	Form of Common Stock Purchase Warrant	U-4.1**
4.26	Form of Warrant Issued to Lenders	V-4.1**
10.1	Form of Promissory Note Issued to Lenders Form of Common Stock Purchase Warrant Form of Warrant 1999 Non-Qualified Stock Option Plan*	H**
10.2	1999 Employee Stock Purchase Plan*	H**
10.3	2005 Equity Incentive Plan.*	I-99.1**
10.4	Amendment No. 1 to 2005 Equity Incentive Plan*	M-10.1**
10.5	Description of Compensation for Certain Directors*	N-10.7**
10.6	Severance Agreement between the registrant and Richard T. Schumacher*	N-10.6**
10.7	Form of Severance Agreement including list of officers to whom provided*	N-10.7**
10.8	Consent Agreement, dated May 29, 2007, by and among the registrant, PBI Source Scientific, Inc., Source Scientific, LLC, BIT Analytical Instruments, Inc., Richard W. Henson and Bruce A. Sargeant.	J-10.1**
10.9	Asset Purchase Agreement dated April 16, 2004 between the Company, BBI Biotech Research Laboratories, Inc. and SeraCare Life Sciences, Inc.	F-1**
10.10	Technology Transfer and Patent Assignment Agreement dated October 7, 1996, between Bioseq, Inc. and BioMolecular Assays, Inc.	N-10.11**
10.11	Amendment to Technology Transfer and Patent Assignment Agreement dated October 8, 1998 between Bioseq, Inc. and BioMolecular Assays, Inc.	N-10.12**
10.12	Nonexclusive License Agreement dated September 30, 1998 between Bioseq, Inc. and BioMolecular Assays, Inc.	N-10.13**
10.13	Agreement for Research Services dated February 1, 2006 by and between the registrant and the University of New Hampshire	K-10.1**
10.14	Placement Agency Agreement between the Placement agent and the Company, dated November 8, 2011	U-10.1**
10.15	Form of Securities Purchase Agreement	U-10.2**
10.16	Form of Escrow Agreement, as amended	U-10.3**
10.17	Form of Securities Purchase Agreement	V-3.1**

23.1	Consent of Independent Registered Public Accounting Firm (Marcum LLP)	Filed herewith
31.1	Principal Executive Officer and Principal Financial Officer Certification Pursuant to Item 601(b)(31) of Regulation S-K, as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002	Filed herewith
32.1	Principal Executive Officer and Principal Financial Officer Certification Pursuant to Item 601(b)(32) of Regulation S-K, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002	Filed herewith
101	Interactive Data File	Filed herewith

*Management contract or compensatory plan or arrangement.
**Previously filed as follows.

A We previously filed this exhibit with the referenced exhibit number as an exhibit to the registrant's Registration Statement on Form S-1 (Registration No. 333-10759) filed with the Commission on August 23, 1996.

B We previously filed this exhibit with the referenced exhibit number as an exhibit to the registrant's Quarterly Report on Form 10-Q for the fiscal quarter ended September 30, 2004.

C We previously filed this exhibit with the referenced exhibit number as an exhibit to the registrant's Annual Report on Form 10-K for the fiscal year ended December 31, 2002.

D We previously filed this exhibit with the referenced exhibit number as an exhibit to the registrant's Annual Report on Form 10-KSB for the fiscal year ended December 31, 2004.

E We previously filed this exhibit with the referenced exhibit number as an exhibit to the registrant's Current Report on Form 8-K filed with the Commission March 12, 2003.

F We previously filed this exhibit with the referenced exhibit number as an exhibit to the registrant's Current Report on Form 8-K filed with the Commission April 16, 2004.

G We previously filed this exhibit with the referenced exhibit number as an exhibit to the registrant's Registration Statement on Form S-3 (Registration No. 333-148227) filed with the Commission on December 20, 2007.

H We previously filed this exhibit as an appendix to the registrant's proxy statement filed June 14, 1999.

I We previously filed this exhibit with the referenced exhibit number as an exhibit to the registrant's Registration Statement on Form S-8 (Reg. No. 333-128594) filed with the Commission on September 26, 2005.

J We previously filed this exhibit with the referenced exhibit number as an exhibit to the registrant's Current Report on Form 8-K filed with the Commission on June 1, 2007.

K We previously filed this exhibit with the referenced exhibit number as an exhibit to the registrant's Current Report on Form 8-K filed with the Commission on February 7, 2006.

L We previously filed this exhibit with the referenced exhibit number as an exhibit to the registrant's Current Report on Form 8-K filed with the Commission on February 18, 2009.

M We previously filed this exhibit with the referenced exhibit number as an exhibit to the registrant's Current Report on Form 8-K filed with the Commission on

September 29, 2008.

N We previously filed this exhibit with the referenced exhibit number as an exhibit to the registrant's Annual Report on Form 10-K filed with the Commission on March 27, 2008.

O We previously filed this exhibit with the referenced exhibit number as an exhibit to the registrant's Current Report on Form 8-K filed with the Commission on November 19, 2009.

P We previously filed this exhibit with the referenced exhibit number as an exhibit to the registrant's Current Report on Form 8-K filed with the Commission on April 12, 2011.

Q We previously filed this exhibit with the referenced exhibit number as an exhibit to the registrant's Current Report on Form 8-K filed with the Commission on August 11, 2011.

R We previously filed this exhibit with the referenced exhibit number as an exhibit to the registrant's Current Report on Form 8-K filed with the Commission on June 21, 2011.

S We previously filed this exhibit with the referenced exhibit number as an exhibit to the registrant's Current Report on Form 8-K filed with the Commission on October 6, 2011.

T We previously filed this exhibit with the referenced exhibit number as an exhibit to the registrant's Quarterly Report on Form 10-Q for the fiscal quarter ended September 30, 2011.

U We previously filed this exhibit with the referenced exhibit number as an exhibit to the registrant's Current Report on Form 8-K filed with the Commission on November 10, 2011.

V We previously filed this exhibit with the referenced exhibit number as an exhibit to the registrant's Current Report on Form 8-K filed with the Commission on February 9, 2012.

SIGNATURES

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

Date: February 27, 2012

Pressure BioSciences, Inc.

By: /s/ Richard T. Schumacher
Richard T. Schumacher
President and Chief Executive Officer

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

Name	Capacity	Date
/s/ Richard T. Schumacher Richard T. Schumacher	President, Chief Executive Officer, Treasurer, Clerk and Director(Principal Executive Officer and Principal Financial Officer)	February 27, 2012
/s/ Joseph L. Damasio, Jr. Joseph L. Damasio, Jr.	Vice President of Finance and Administration (Principal Accounting Officer)	February 27, 2012
/s/ R. Wayne Fritzsche R. Wayne Fritzsche	Director and Chairman of the Board	February 27, 2012
/s/ J. Donald Payne J. Donald Payne	Director	February 27, 2012
/s/ Calvin A. Saravis, Ph.D. Calvin A. Saravis, Ph.D.	Director	February 27, 2012
/s/ Alan D. Rosenson Alan D. Rosenson	Director	February 27, 2012
/s/ Alan I. Goldberg Alan I. Goldberg	Director	February 27, 2012
/s/ Gregory G. Freitag Gregory G. Freitag	Director	February 27, 2012
/s/ Jeffrey N. Peterson Jeffrey N. Peterson	Director	February 27, 2012