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

Form 10-K

(Mark One)

☒ Annual Report Pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934
For the fiscal year ended December 31, 2009 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	**04-2652826**
(State or Other Jurisdiction of Incorporation or Organization)	(I.R.S. Employer Identification No.)
14 Norfolk Avenue **South Easton, Massachusetts**	**02375**
(Address of Principal Executive Offices)	(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 ☒

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 ☒

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 ☒ 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 ☐ 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 ☒
(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 ☒

The aggregate market value of the voting and non-voting common stock held by non-affiliates of the registrant as of June 30, 2009 was $3,256,650 based on the closing price of the common stock as quoted on the NASDAQ Capital Market on that date.

As of March 26, 2010, there were 2,350,186 shares of the registrant's common stock outstanding.

Documents Incorporated by Reference

Part III of this Form 10-K incorporates information by reference from the issuer's definitive proxy statement which will be filed no later than 120 days after the end of the fiscal year covered by this report.

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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 Pressure BioSciences, Inc., a Massachusetts corporation, and, unless the context indicates otherwise, also includes our wholly-owned subsidiaries.

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 similar expressions intended to identify forward-looking statements. Such statements include, without limitation, statements regarding:

- our ability to raise additional equity or debt financing on acceptable terms, if at all;
- our belief that we have sufficient liquidity to finance operations into the first quarter of 2011;
- our need to take additional cost reduction measures, cease operations or sell our operating assets, if we are unable to obtain sufficient additional financing in the future;
- the amount of cash necessary to operate our business;
- the anticipated uses of grant revenue and 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 significant market acceptance in the mass spectrometry market;
- the expected development and success of new product offerings;
- the potential applications for PCT in, and the demonstration of proof-of-concept of PCT for, pathogen inactivation, protein purification, control of chemical reactions and immunodiagnostics, among others;
- the expected benefits and results from our research and development efforts;
- the expected benefits and results from our collaboration program, 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;
- general economic conditions; and
- the anticipated future financial performance and business operations of our company.
- our reasons for focusing our resources in the market for genomic, proteomic 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, including pathogen inactivation, protein purification, control of chemical reactions and immunodiagnostics;
- sample preparation may be an impediment to research and discovery;
- the capabilities and benefits of our PCT sample preparation system and consumable products;
- that other laboratory scientists will achieve results comparable to those reported to date by certain research scientists who have published or presented publicly on PCT; 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 Report. 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 the Report 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 Report 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 ProteoSolve™, ProteoSolve$_{LRS}$™, the Power of PCT™, the PCT Shredder™, all of which are unregistered trademarks of the Company.

Overview

We are a life sciences company focused on the development and commercialization of a novel, enabling, platform technology called pressure cycling technology ("PCT"). PCT uses cycles of hydrostatic pressure between ambient and ultra-high levels (up to 35,000 psi and greater) to control bio-molecular interactions.

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

We have experienced negative cash flows from operations with respect to our pressure cycling technology business since our inception. During 2008, we undertook a number of cost reduction measures including a comprehensive restructuring program, to significantly reduce costs, centralize core operations, and refocus business strategy in specific areas where our products have found significant initial market acceptance. The restructuring program included: a reduction in personnel of eight full-time employees (40% of the workforce), reduction in travel and meeting attendance for all personnel, decreases in the base salary of most of our employees and all of our executive officers, a shutdown of our R&D facility in Rockville, MD, a consolidation of our R&D activities in Massachusetts, and delay of several research & development and marketing programs. These initiatives have significantly decreased cash utilization, from just under $1 million per quarter in the second half of 2008 to an average of approximately $635,000 per quarter during 2009. As of December 31, 2009, we had a total cash balance of approximately $1,630,000. In March 2010, we closed on a second tranche of our private placement of units of Series B Convertible Preferred Stock and Series B Warrants to purchase shares of Series B Convertible Preferred Stock with gross proceeds of approximately $500,000. Based on our current projections, we believe our current cash resources, which includes the funds we received from the private placements we completed in 2009 and 2010, are sufficient to fund our normal operations into the first quarter of 2011. Depending upon the results of the Company's financing and partnering activities and sales efforts, we may make additional cost reductions as required to accomplish this goal.

Despite the difficulty in the capital markets and the necessity to implement a very challenging restructuring program, we are quite proud of the number of accomplishments that we realized during 2009. These activities included the following:

- *Sale of Series A Convertible Preferred Stock in a Private Placement* – On February 12, 2009, we received $1.8 million from the sale of 156,980 units, consisting of shares of Series A Convertible Preferred Stock and warrants, in a private placement to 35 accredited investors.

- *Sale of Series B Convertible Preferred Stock in a Private Placement* – On November 18, 2009, we received $1.2 million from the sale of 62,039 units, consisting of shares of Series B Convertible Preferred Stock and warrants, in a private placement to 20 accredited investors.

- *Collaboration with Protein Forest, a division of Cell BioSciences – On September 30, 2009,* we entered into a strategic co-marketing/selling and research & development agreement with Protein Forest, Inc., a division of Cell BioSciences. The companies intend to co-market their respective product lines, including in industry publications, at scientific meetings, on each company's website, through common collaborator studies, and at key industry trade shows. PBI and Protein Forest also intend to explore ways to co-develop new instrumentation, accessories/modules for existing instrumentation, and consumables that combine the protein fractionation/software products of Protein Forest with the extraction and protein digestion enhancement products of PBI.

- *Significant Improvements in DNA Yield From Challenging Forensic Samples Reported With Pressure Cycling Technology* – Scientists from the University of North Texas Health Science Center at Fort Worth, Texas ("UNTHSC") reported notable improvements in the yields of DNA from challenging forensic samples, such as human hair and bone samples, when the Company's pressure cycling technology was added to the DNA extraction workflow, as compared to the workflow without PCT.

- *PCT Highlighted at the American Phytopathological Society's 2009 Annual Meeting* - Scientists from three separate U.S. Department of Agriculture (USDA) laboratories presented data generated through the use of PCT. The presentations related to innovative, plant pathology studies of various pathogens that can significantly and adversely affect important food crops, such as strawberries, wheat, peas, lentil, barley, canola, and especially citrus.

- *Launch of New Products* –

    - 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 the Company's primary product, the PCT Sample Preparation System, as compared to three samples currently.
    - ProteoSolve-CE NATIVE and ProteoSolve-CE STRINGENT, two novel, pressure cycling technology dependent kits for the extraction of proteins from the nematode ("worm") Caenorhabditis elegans ("C. elegans"). C. elegans is one of the most widely used model organisms in laboratory research today.

- *Receipt of IRS tax refund* - We received $623,262 due to provisions in the American Recovery and Reinvestment Act of 2009 relating to net operating loss carry-backs.

In January 2010, we moved our research and development department to new state of the art laboratories at the Venture Development Center of the University of Massachusetts Boston. The Umass VDC offers us a number of advantages, including: the opportunity to work with other life science development stage companies, the opportunity to network with life science departments within the university of Massachusetts system, and access to part-time help from the students enrolled in the Biology program at Umass Boston.

Since we began operations as Pressure BioSciences in February 2005, we have installed 128 Barocycler instruments. Our customers include researchers at academic laboratories, government agencies and biotechnology, pharmaceutical and other life sciences companies in the United States, and six foreign distribution partners.

	2005	**2006**	**2007**	**2008**	**2009**
Installed units	5	8	20	41	54

We hold 13 United States and 6 foreign patents covering multiple applications of PCT in the life sciences field. Our pressure cycling technology employs a unique approach that we believe has the potential for broad use in a number of established and emerging life sciences areas, including;

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

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 pressure cycling technology. 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, this 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 Securities and Exchange Commission ("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 & 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 one of the most powerful laboratory tools used today, and is frequently used by research scientists to evaluate proteins and nucleic acids (DNA and RNA). It is playing an increasingly important role in the analysis of biological samples in life sciences research. A number of important 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.

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 usually 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 whom 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, we have placed Barocycler instruments in multiple sites, resulting in increasing number of publications and presentations by third party researchers. 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. Below is a list of selected publications that have been made by various researchers based on their experiences with PCT:

Title	Authors	Category	Affiliation	Reference
Pressure Cycling for Sample Preparation PCT System Provides Automated Alternative to Manual Methods	Richard T. Schumacher Vera Gross, Ph.D. Edmund Y. Ting, ScD. Alexander Lazarev, Ph.D.	Paper	Pressure BioSciences	Genetic Engineering News (GEN) Dec 1 2009 (Vol. 29, No. 21)
Pressure Cycling Technology (PCT) Applications for DNA Extractions from Challenging Forensic Samples	Suzanne Gonzalez, Elizabeth Feller, Dixie Peters, Bruce Budowle, and Arthur Eisenberg	Oral Presentation	University of North Texas Center for Human Identification	20th International Symposium on Human Identification
Phosphopeptide isolation from Caenorhabditis elegans using the CE PrEP, PCT, and PhosphoScan Technologies	Gabrielle E. Giese, Gary B. Smejkal. Feixia Chu3, John J. Collins1, and Winston P. Kuo	Poster	University of New Hampshire	Human Proteome Organization (HUPO) 2009 8th World Congress
Incidence and spatial distribution of Rhizoctonia and Pythium species determined with real-time PCR	K. L. Schroeder, T. C. Paulitz, and P. A. Okubara	Poster	USDA	American Phytopathological Society's 2009 Annual Meeting
High-pressure assisted in-gel tryptic digest: qualitative and quantitative aspects	Michail Alterman, Melkamu Getie-Kebtie; Alexander Lazarev; and Vera S. Gross	Poster	FDA, CBER	American Society for Mass Spectrometry (ASMS) Annual Meeting 2009
Proteomics Under Pressure: Rapid Extraction and Digestion in a Single Tube	Alexander V. Lazarev; Emily Freeman; Vera S. Gross; Greta Carlson; Edmund Ting; Alexander R. Ivanov	Poster	Pressure BioSciences	American Society for Mass Spectrometry (ASMS) Annual Meeting 2009
Searching for efficient and high throughput alternatives for essential sample preparation techniques in mass spectrometry-based functional proteomics	Emily Freeman; Yelena Margolin; and Alexander R. Ivanov	Poster	Harvard School of Public Health, Department of Genetics and Complex Disease	The Association of BioMolecular Resources Facilities (ABRF) 2009

Company Products

We believe our PCT products allow researchers to improve scientific research studies in the life sciences field. All of 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, an upper, user interface and a lower, 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 75 pounds, 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 currently being used by our sales directors as a demonstration instrument and is being marketed as a second instrument alternative to our PCT SPS.

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 the Company's primary product, the PCT SPS, as compared to three with the Barocycler NEP3229.

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.

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 about sixty 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 (the Ram) 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 about sixty 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-ND. The design change was based on strong 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. It is the result of more than a year of testing in several laboratories using various sample sizes and types. The FT500-ND offers variable sample volumes (5x the range of the existing FT500).

ProteoSolve - LRS – (ProteoSolve for Lipid Rich Samples) is a PCT-dependent method for the safe, rapid, efficient, and reproducible extraction of proteins from lipid-rich samples, including adipose and brain tissues, organelles, and membrane preparations. Proteomic analysis of these types of samples is widely used in the study of diabetes, cancer, ALS, heart disease, and a number of other serious human disorders related to obesity. We believe that this PCT-dependent method of protein extraction from lipid-rich samples offers significant advantages over current extraction techniques, primarily due to the ability to use certain organic solvents instead of harsh detergents in the extraction process. Harsh detergents are known to compromise the integrity of many proteins; therefore the use of these detergents requires a very careful and time consuming removal process. ProteoSolve-LRS includes 12 specially-designed PULSE Tubes, certain organic solvents, other reagents, and an instruction sheet on how to utilize this patent-pending process to enhance the extraction of proteins from lipid-rich samples.

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 the Company's patented PCT Sample Preparation System. The kit is based on the unique 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 all of 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.

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 or "RFPs" from the federal government through their Small Business Innovation Research ("SBIR") program. Initial grants ("SBIR I") are meant to fund approved research projects for six months, and generally have budgets of approximately $100,000 to $150,000. Additionally, our work in SBIR Phase I grants has been successful and we have applied, and may in the future apply, for larger 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 National Institutes of Health ("NIH") Small Business Innovation Research Phase I grants and one SBIR Phase II grant. Both of our Phase I grants have been completed. The data on one of the Phase I grants was the basis for the submission, and subsequent award, of our Phase II award of approximately $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. As of December 31, 2009, the amount of the Phase II SBIR grant available to fund future research was approximately $337,000.

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.

Fee-for-Service – We will occasionally perform PCT services on a fee-for-service basis. We may enter into these types of arrangements if we believe that the customer has a high likelihood of purchasing a PCT Sample Preparation System or if we believe that the customer will publish or present results of the work performed in scientific journals or in scientific meetings.

Other Applications of Pressure Cycling Technology

PCT is an enabling, platform technology based on a bio-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 PBI began significant 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. 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, and the value of these markets to our company. 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 US 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 US 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 US 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 five foreign distribution partners. During 2009, we continued to commercialize PCT with sales, and/or leases of our instrumentation to customers in all of these categories. Our goal in 2010 is to continue our market penetration in these target groups. We also feel 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.

Competition

We compete with companies that have existing technologies for the extraction of nucleic acids, proteins, and small molecules from "hard-to-lyse" 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 the 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.

PCT Compared to Existing Technologies

There are several incumbent technologies that offer scientists varying degrees of success in sample preparation. For several years, PBI scientists have been performing comparative studies with hundreds of samples to better understand how pressure cycling technology compares with these competitive technologies. Depending on the area of research and the type of material a scientist may be working with, there is a different level of importance placed on each attribute. Below is an illustration of how pressure cycling technology, in our opinion, compares to several existing technologies across the key attributes that we have assessed (with a "-"denoting a negative attribute, and a "+" denoting a positive attribute, and "Min" denoting minimized or reduced).

	Incumbent Technologies					
Key Attributes	Sonication	Bead Beating	Tissue Homogenizer	Mortar Pestle	French Press	**PCT**
Closed System	-	+	-	-	-	+
Storage, Transport	-	+	-	-	-	+
Versatility	-	-	-	-	-	+
Reproducibility	-	-	-	-	-	+
Efficiency	-	-/+	-	-	-	+
Shearing Molecules	Yes	Yes	Yes	Min	Yes	**Min**

Manufacturing and Supply

Source Scientific, LLC currently provides all of the manufacturing and assembly services for our instrumentation products. We plan to continue to utilize Source Scientific, LLC as our primary assembler and contract manufacturer of our current, and future, Barocycler instruments. We have initiated several engineering initiatives to position us for greater independence from any one supplier, and we are in the process of developing a network of manufacturers and sub-contractors to reduce our reliance on any single supplier. 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 expenses were approximately $1.2 million and $1.8 million for the years ended December 31, 2009 and 2008, respectively. 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 PCT-dependent genomic, proteomic, and small molecule sample preparation methods that we believe will result in near-term commercial opportunities. Dr. Alexander Lazarev, our Vice President of Research & Development, and his team meet regularly with our sales, marketing, and engineering departments to discuss market needs and trends. Our applications research and development staff 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, and is supported by a full-time senior engineer and third parties. 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.

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 PCT SPS. 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 is led by our Vice President of Sales, Matthew B. Potter. Mr. Potter is responsible for directing the efforts of our two full-time sales directors, and for covering accounts in the Mid-West and New England regions. 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. Throughout 2010, we plan to monitor this strategy and 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

In April 2009, we signed a distribution agreement with TouchDown BioMarketing BV ("TouchDown"), of The Netherlands pursuant to which we granted TouchDown exclusive distribution rights to all of our products in The Netherlands. The agreement is effective from April 1, 2009 through September 30, 2010.

In June 2008, we signed 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. The agreement is effective from January 1, 2008 to December 31, 2010.

In December 2007, we signed a distribution agreement with Disruptive Technologies ("DT") of Villecresnes, France pursuant to which we granted DT exclusive distribution rights to all of our products in France, Belgium, and Switzerland. The agreement is effective from January 1, 2008 through December 31, 2010.

In September 2007, we signed a distribution agreement with CM Corporation ("CM"), of Seoul, South Korea pursuant to which we granted CM exclusive distribution rights to all of our products in South Korea. The agreement is effective from September 1, 2007 through August 31, 2010.

In May 2008, we signed a distribution agreement with the Ivorist Group ("Ivorist"), of Taipei, Taiwan pursuant to which we granted Ivorist exclusive distribution rights to all of our products in Taiwan. The agreement is effective from May 15, 2008 through June 30, 2010.

In May 2008, we signed a distribution agreement with Analyx Technology Corporation ("Analyx"), of Beijing, People's Republic of China, pursuant to which we granted Analyx exclusive distribution rights to all of our products in the People's Republic of China. The agreement is effective from May 15, 2008 through June 30, 2010.

Marketing

Our marketing function includes Dr. Nathan Lawrence, our Vice President of Marketing, and a limited amount of external support from independent service providers. Our marketing department 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. Our marketing team is also responsible for the continued coordination and support of our foreign, and domestic, distribution partners.

Domestic Co-Marketing Partner

In December 2008, we entered into a strategic marketing, distribution, and technology co-development Agreement with Omni International ("Omni") of Marietta, Georgia. Under the terms of the Agreement, we: (1) share market data, customer leads and technology assessments; (2) co-promote certain products at industry trade shows beginning in 2009; (3) license Omni to sell PBI's recently released, patent-pending PCT Shredder to laboratories worldwide; and (4) co-develop new instrumentation and consumables that combine the homogenization capabilities of Omni with our extraction capabilities in an effort to provide research scientists with a targeted approach to better solve certain sample preparation issues. Programs intended to be developed under this agreement have been delayed due to cost cutting measures incurred by both companies in 2009.

Intellectual Property

We believe that protection of our patents and other intellectual property is essential to our business. 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 thirteen United States patents, three European patents, one Australian patent, one Japanese patent, and one Canadian patent. 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 fiscal years ended December 31, 2009 and 2008, we incurred $30,548 and $29,553 in royalties.

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 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.

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. Nor do we 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.

Our Barocycler instrumentation received CE Marking, 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

As of March 26, 2010, we had thirteen (13) full-time employees.

Our 13 employees include four employees in the sales and marketing and technical support functions, three in general and administrative, three in applications research and development, and three in engineering research and development.

Our Executive Officers

The following table sets forth the names, ages and positions of our current executive officers as of March 26, 2010:

Name	Age	Position
Richard T. Schumacher	59	President, Chief Executive Officer, Chief Financial Officer, Treasurer, Secretary and Director
Edmund Ting, Ph.D.	56	Senior Vice President of Engineering
Nathan P. Lawrence, Ph.D.	55	Vice President of Marketing
Alexander Lazarev, Ph.D.	45	Vice President of Research and Development
Matthew B. Potter	46	Vice President of Sales

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

Mr. Richard T. Schumacher, the founder of our company, has served as one of our directors since 1978. He has served as our Chief Executive Officer since April 16, 2004 and President since September 14, 2004. He has served as our Chief Financial Officer and Treasurer since November 18, 2008. He previously served as Chief Executive Officer and Chairman of the Board of our company from 1992 to February 2003. From July 9, 2003 until April 14, 2004 he served as a consultant to our company pursuant to a consulting agreement. He served as President of our 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 as Senior Vice President of Engineering on April 24, 2006. Prior to joining, 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 VP 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 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 and Business Development 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 in product development. Prior to 454 Life Sciences, Dr. Lawrence was Director of Research and Development for Boston Biomedica, Inc. from 1998-2004. He was 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 was promoted to the position of Vice President of Research and Development, effective March 20, 2007. Prior to his promotion he served as our Director of Research and Development, since joining us on April 3, 2006. Prior to joining Pressure BioSciences, Inc., 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. Matthew B. Potter joined PBI as our Vice President of Sales on February 25, 2008 and was appointed an executive officer on March 6, 2008. Mr. Potter has worked in many different disciplines that include molecular biology, chromatography, personalized medicine, diagnostics, and biophysics. Prior to joining PBI Mr. Potter was the Vice President of Sales & Marketing at Abcam, Inc. from July 2007 to January 2008. Prior to Abcam, Mr. Potter was the National Sales Manager: Key Accounts Pharmaceutical at Qiagen, Inc. from July 2005 to May 2007. Prior to Qiagen, Mr. Potter was Director, Sales and Marketing at MicroCal, LLC from January 2000 to July 2005. Mr. Potter is also a former Treasurer of the New England Scientific Manufacturers Association and has been cited as a co-author and contributor on assorted scientific publications during his tenure working at the Worcester Foundation for Experimental Biology. Mr. Potter holds a BA in Biology from Clark University and an MBA from Assumption College, both located in Worcester, MA.

ITEM 1A. RISK FACTORS

This report contains forward-looking statements that involve risks and uncertainties, such as statements of our objectives, expectations and intentions. The cautionary statements made in this report 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.

We will require additional capital to further develop our pressure cycling technology products and services 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 December 31, 2009, we had available cash of approximately $1.6 million. In March 2010, we closed on a second tranche of our private placement of units of Series B Convertible Preferred Stock and warrants to purchase shares of Series B Convertible Preferred Stock with gross proceeds of approximately $500,000. Based on our current projections, we believe our current cash resources, which includes the funds we received from the private placements we completed in 2009 and 2010, are sufficient to fund our normal operations into the first quarter of 2011. We believe we will need substantial additional capital to fund our current operation beyond the first quarter of 2011.

We will need additional capital sooner than we currently expect if we experience unforeseen costs or expenses, unanticipated liabilities or delays in implementing our business plan, developing our products and achieving commercial sales. We also believe that we will need substantial capital to accelerate the growth and development of 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 the development and commercialization of our pressure cycling technology products and services relating to sample preparation and other life science applications, we expect 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:

- 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 stock;
- 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;
- implement additional cost reduction initiatives; or
- limit or cease our operations or otherwise reduce planned expenditures and forego other business opportunities, which could harm our business.

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 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 crisis in the credit markets and 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 pressure cycling technology in each period since we began investing resources in pressure cycling technology in 1998. These losses have resulted principally from research and development, sales and marketing, and general and administrative expenses associated with the development of our pressure cycling technology business. We expect to continue to incur operating losses until sales of our pressure cycling technology 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, which has a limited operating history, 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 only recently commercialized our pressure cycling technology products and services for sample preparation. Our limited sales and operating history may not be adequate to enable you to fully assess our ability to achieve market acceptance of our product offering. 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.

Our business may be harmed if we encounter problems, delays, expenses, and complications that often affect early-stage companies.

We are an early-stage company and our pressure cycling technology business have a relatively limited operating history. Early-stage companies may 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.

We cannot guarantee that we will successfully complete the transition from an early-stage company to the commercialization of our pressure cycling technology products and services.

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.

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.

We expect our operations to grow at a rapid pace as we further commercialize our pressure cycling technology in sample preparation and other areas of life sciences. Our failure to manage growth effectively could harm our business and prospects. Given our limited resources and personnel, growth of the 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, a third party contract manufacturer, to manufacture our products, 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 distribution partners, 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. To date, we have entered into five international distribution agreements, covering Belgium, France, Switzerland, Japan, China, Taiwan and South Korea. We have generated limited sales to date from international sales and cannot guarantee that we will be able to increase our sales. As we expand, our international operations may be subject to numerous risks and challenges, including:

- multiple, conflicting and changing governmental laws and regulations, including those that regulate high pressure equipment;
- reduced protection for intellectual property rights in some countries;
- protectionist laws and business practices that favor local companies;
- political and economic changes and disruptions;
- export/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 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 U.S. Food and Drug Administration, or 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 thirteen 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 one patent has been issued in Australia, one in Japan, and one 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 also 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. Nevertheless, these agreements may not 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 poison pill 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, 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, 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.

The holders of our common stock could suffer substantial dilution as the result of the private placements we completed in 2009 and 2010.

In connection with the private placements we completed in 2009 and 2010, we issued shares of Series A Convertible Preferred Stock and shares of Series B Convertible Preferred Stock, together with warrants to purchase shares of Series A Convertible Preferred Stock and common stock in our first private placement, and together with warrants to purchase shares of Series B Convertible Preferred Stock in our second private placement. Each share of Series A Convertible Preferred Stock and each share of Series B Convertible Preferred Stock is convertible into 10 shares of common stock. If all of the shares of Series A Convertible Preferred Stock and Series B Convertible Preferred Stock, together with the warrants to purchase Series A Convertible Preferred Stock and Series B Convertible Preferred Stock and common stock, were converted or exercised into shares of our common stock, an additional 6,483,620 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.

Our shares of Series A Convertible Preferred Stock and Series B Convertible Preferred Stock are entitled to certain rights, privileges and preferences over our common stock, including the right to receive dividends and a preference upon a liquidation of the company, which could reduce amounts available for distribution to our common stockholders.

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 holders of our shares of Series A Convertible Preferred Stock, however, are entitled to receive a cumulative dividend at the rate of 5% per annum of the purchase price paid for the Series A Convertible Preferred Stock, payable semi-annually on June 30 and December 31, which commenced on June 30, 2009. The holders of our shares of Series B 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 B Convertible Preferred Stock, payable semi-annually on June 30 and December 31, which commenced on December 31, 2009. Dividends may be paid in cash or in shares of common stock at our option, subject to certain conditions. 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 the company. For the dividend payments on June 30, 2009 and December 31, 2009, we elected to pay the dividends in common stock. This had a dilutive effect on our common stockholders. If we continue to elect to pay the dividends in common stock, our common stockholders will suffer additional dilution.

The Series A Convertible Preferred Stock and Series B Convertible Preferred Stock are also entitled to receive preferential treatment in the event of liquidation, dissolution or winding up of our company, which could leave significantly less assets, if any, available for distribution to our common stockholders upon a liquidation, dissolution or winding up of our company.

There is no guarantee that we will continue to meet the standards for continued listing on the NASDAQ Capital Market. The value of your investment in our company may substantially decrease if we were delisted from NASDAQ.

As of the date of this Annual Report on Form 10-K, we are in compliance with the continued listing standards of the NASDAQ Capital Market. However, we cannot guarantee that we will continue to meet the standards for listing in the future. Upon delisting from the NASDAQ Capital Market, our common stock would be traded on the over-the-counter bulletin board ("OTC"). OTC transactions involve risks in addition to those associated with transactions in securities traded on the NASDAQ Capital Market. Many OTC stocks trade less frequently and in smaller volumes than NASDAQ listed stocks. Accordingly, delisting from the NASDAQ Capital Market could adversely affect the trading price of our common stock, significantly limit the liquidity of our common stock and impair our ability to raise additional funds.

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 an 18 month lease agreement commencing in February 2008 pursuant to which we lease approximately 5,500 square feet of office space, with an option for an additional 12 months. We exercised the renewal option to extend the lease term until July 14, 2010. We pay approximately $6,500 per month for the use of these facilities.

Effective January 1, 2010, we entered into a three-year lease agreement with the University of Massachusetts, pursuant to which we are leasing laboratory and office space on campus at the university for research and development activities. We will pay $5,000 per month for the use of these facilities.

ITEM 3. LEGAL PROCEEDINGS.

We are not currently involved in any legal proceedings.

ITEM 4. RESERVED.

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, 2008 through December 31, 2009.

	Common Stock Price	
Fiscal Year Ended December 31, 2008	**High**	**Low**
First Quarter	$ 5.72	$ 3.80
Second Quarter	5.09	3.14
Third Quarter	3.75	2.25
Fourth Quarter	2.37	0.55
Fiscal Year Ended December 31, 2009	**High**	**Low**
First Quarter	$ 1.23	$ 0.55
Second Quarter	2.10	0.80
Third Quarter	1.85	1.31
Fourth Quarter	1.80	1.32

As of March 26, 2010, there were 20,000,000 shares of common stock authorized of which 2,350,186 shares were issued and outstanding, and held by 108 stockholders of record. As of March 26, 2010, we had 1,000,000 shares of preferred stock authorized of which 171,864 shares of Series A Convertible Preferred Stock and 88,711 shares of Series B Convertible Preferred Stock were issued and outstanding and held by 68 stockholders of record. Each share of Series A Convertible Preferred Stock and Series B Convertible Preferred Stock is convertible into 10 shares of common stock.

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. As part of the private placement completed in February 2009, the holders of the Series A Convertible Preferred Stock are entitled to receive a cumulative dividend at the rate of 5% per annum of $11.50 (the "Purchase Price"), payable semi-annually on June 30 and December 31, which commenced on June 30, 2009 (with the first payment pro-rated based on the number of days occurring between the date of issuance and June 30, 2009). The Series B Convertible Preferred Stock issued in the November 18, 2009 and March 18, 2010 private placements will pay a cumulative dividend at the rate of 5% per annum of the Purchase Price, payable semi-annually within 45 days of June 30th and December 31st, which commenced on December 31, 2009 (with the first payment pro-rated based on the number of days occurring between the date of issuance and December 31, 2009 for the November 18, 2009 private placement or June 30, 2010 for the March 18, 2010 private placement). Dividends may be paid in cash or in shares of common stock at our option, subject to certain conditions. We issued 29,473 shares of common stock for the six month period ending June 30, 2009. The Board of Directors approved the issuance of stock for the six month period ending June 30, 2009 and for the six month period ending December 31, 2009. The Series A holders will receive 39,098 shares of common stock for the six month period ending December 31, 2009 and the Series B holders will receive 5,027 shares of common stock for the prorated period ending December 31, 2009.

Recent Sales of Unregistered Securities

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, resulting in gross proceeds to us of $1,805,270 (the "Series A Private Placement"). The Series A Units were issued and sold to a total of 35 accredited investors pursuant to a Securities Purchase Agreement entered into as of February 12, 2009 (the "Securities Purchase Agreement"). Each Series A Unit consists of (i) one share of a newly created series of preferred stock, designated "Series A Convertible Preferred Stock," par value $0.01 per share (the "Series A Convertible Preferred Stock") convertible into 10 shares of our common stock, (ii) a warrant to purchase, at the purchaser's election to be made within 7 days of the closing, either 10 shares of our common stock, at an exercise price equal to $1.25 per share, with a term expiring 15 months after the date of closing ("15 Month Common Stock Warrant"), or 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 Preferred Stock Warrant") (all purchasers elected to receive the 15 Month 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").

On November 18, 2009, we sold an aggregate of 62,039 units (the "Series B Units") of Series B Convertible Preferred Stock, par value $0.01 per share (the "Series B Convertible Preferred Stock") and warrants for a purchase price of $18.80 per Series B Unit (the "Series B Purchase Price"), resulting in gross proceeds to us of $1,166,333. This is the first tranche of a $2.5 million private placement (the "Series B Private Placement"). We closed on the second tranche of the Series B Private Placement on March 18, 2010 with the sale of an additional 26,672 Series B Units with gross proceeds of $501,434. Each Series B Unit consists of (i) one share of a newly created 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 the warrants issued in November 2009 and at an exercise price of $28.80 for the warrants issued in March 2010, in each case with a term expiring on August 11, 2011 ("Series B Warrant").

In connection with the Series B Private Placement, the Company 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.

In connection with each of the Series A Private Placement and the Series B Private Placement, the Company agreed that if it completes a subsequent equity financing within one year from the initial closing of the Series A Private Placement and the Series B Private Placement, respectively, it will offer each purchaser the opportunity to exchange the Series A Units or the Series B Units, as the case may be, purchased for the equity securities issued in such subsequent financing, subject to compliance with applicable rules and regulations.

The sale of the units in the Series A Private Placement and the Series B Private Placement were issued and sold 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. The Company based such reliance upon representations made by each purchaser of Series A Units and Series B Units, 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 Series A Units and the Series B Units 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 Series A Units and the shares of Series A Convertible Preferred Stock, 15 Month Preferred Stock Warrants and 30 Month Common Stock Warrants comprising the Series A Units, and the Series B Units and the shares of Series B Convertible Preferred Stock and the Series B Warrants comprising the Series B Units may not be re-offered or sold 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 the fourth quarter of 2009.

ITEM 6. SELECTED FINANCIAL DATA.

Not Applicable.

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

OVERVIEW

We are a life sciences company focused on the development and commercialization of a novel, enabling, platform technology called pressure cycling technology ("PCT"). PCT uses cycles of hydrostatic pressure between ambient and ultra-high levels (up to 35,000 psi and greater) to control bio-molecular interactions.

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

We have experienced negative cash flows from operations with respect to our pressure cycling technology business since we commenced our pressure cycling operations. During 2008, we undertook a number of cost reduction measures including a comprehensive restructuring program, to significantly reduce costs, centralize core operations, and refocus business strategy in specific areas where our products have found significant initial market acceptance. The restructuring program included: a reduction in personnel of eight full-time employees (40% of the workforce), reduction in travel and meeting attendance for all personnel, decreases in the base salary of most of our employees and all of our executive officers, a shutdown of our research and development facility in Rockville, MD, a consolidation of our research and development activities in Massachusetts, and delay of several research and development and marketing programs. These initiatives have significantly decreased cash utilization, from just under $1 million per quarter in the second half of 2008 to an average of approximately $635,000 per quarter during 2009. As of December 31, 2009, we had a total cash balance of approximately $1,630,000. In March 2010, we closed on a second tranche of our private placement of units of Series B Convertible Preferred Stock and warrants to purchase shares of Series B Convertible Preferred Stock with gross proceeds of approximately $500,000. Based on our current projections, we believe our current cash resources, which includes the funds we received from the private placements we completed in 2009 and 2010, are sufficient to fund our normal operations into the first quarter of 2011. Depending upon the results of the Company's financing and partnering activities and sales efforts, we may make additional cost reductions as required to accomplish this goal.

Our pressure cycling technology employs a unique approach that we believe has the potential for broad applications in a number of established and emerging life sciences areas, including:

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

Since we began operations as Pressure BioSciences in 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.

Our business strategy is to commercialize pressure cycling technology in the area of sample preparation for genomic, proteomic, and small molecule studies ("sample preparation"). We also plan to pursue the further development and commercialization of PCT in other life sciences applications, which could include working with various strategic partners that have greater scientific, and regulatory, expertise in the respective applications than we do. We plan 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.

To support our current strategy, our primary focus is the execution of our commercialization plan for PCT in sample preparation. We remain focused on projects that we feel represent near-term revenue opportunities. If we are successful commercializing our technology in the sample preparation market, we believe that our financial results will be positively affected by a combination of the revenue from the sale, lease, and rental of the Barocycler instruments, the sale of other PCT equipment, such as the PCT Shredder, and by the recurring revenue streams that we hope to realize from the sale of the single-use PULSE Tubes, PCT-dependent kits, and extended service contracts on our instrumentation. We believe the recurring revenue streams that could be generated from our instruments in the field is a very important component of our future financial success. Therefore, we believe that it is important for us to continue to focus on increasing the number of installed Barocyclers in the field. To this end, we have offered our prospective customers the opportunity to lease or rent the Barocycler instruments, and in some cases we have engaged in short-term reagent rental agreements. Under a reagent rental agreement we provide the customer with a Barocycler instrument in exchange for a minimum purchase commitment of consumable products. While these arrangements do not provide us with the immediate revenue of a sale, they do serve to expand the utilization of PCT and they provide a stream of revenue in the form of rental payments and consumable purchases. We define sales, leases, and rentals of Barocycler instruments as revenue-generating installations.

We also derive revenues from Small Business Innovation Research ("SBIR") grants awarded to us by the National Institutes of Health. 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. Additionally, if our work in SBIR Phase I grants is successful, then we expect to apply for larger NIH SBIR Phase II grants. To date we have been awarded two National Institutes of Health ("NIH") Small Business Innovation Research ("SBIR") Phase I Grants and one SBIR Phase II Grant. Both of our Phase I Grants have been completed. The data on one of the Phase I grants was the basis for the submission, and subsequent award, of our Phase II award of approximately $850,000. The Phase II Grant is for work in the area of the use of 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. As of December 31, 2009, the amount of the Phase II SBIR grant available to fund future research was $336,957.

We completed our Series A Private Placement and the first tranche of our Series B Private Placement in 2009, pursuant to which we sold an aggregate of 156,980 shares of Series A Convertible Preferred Stock and 62,039 shares of Series B Convertible Preferred Stock, together with warrants, resulting in aggregate gross proceeds to us of $2,971,603. We also closed the sale of a second tranche of 26,672 shares of Series B Convertible Preferred Stock and warrants in the Series B Private Placement on March 18, 2010 with gross proceeds of $501,434.

We believe we have sufficient cash resources to fund normal operations into the first quarter of 2011 due to the restructuring measures we have undertaken and the $3,473,037 we received in connection with our 2009 and 2010 private placements. We believe we will need substantial additional capital to fund our current operations beyond the first quarter of 2011. 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 may be required to limit or 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.

RESULTS OF OPERATIONS

Years Ended December 31, 2009 as compared to 2008

Revenue

We had total revenue of $1,244,910 in the year ended December 31, 2009 as compared to $852,263 in the prior year.

PCT Products, Services, Other. Revenue from the sale of PCT products and services was $831,602 in 2009 as compared to $655,252 in 2008. This increase in revenue in 2009 was driven primarily by the installation of a total of 54 Barocycler instruments during 2009 as compared to 41 during 2008, and the launch of the PCT MicroTube Adapter Kit. When we install instrumentation under lease or rental agreements, we record the revenue over the life of the agreement.

Unit Installations

	2009	2008
Domestic	47	26
International	7	15
Total Installations	54	41

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

Grant Revenue. During 2009, we recorded $413,308 of grant revenue as compared to $197,011 in 2008. Grant revenue recorded during 2009 was related to the $850,000 SBIR Phase II grant that we were awarded in June 2008 and to an SBIR Phase I grant of approximately $110,000 awarded in January 2009. The amount of grant revenue that we recognize in any given period is dependent upon the level of resources we devote to grant-related work in the period under existing grant awards.

Cost of PCT Products and Services

The cost of PCT products and services was $402,340 for the year ended December 31, 2009, compared to $401,017 in 2008. The increase in cost of PCT products and services was due primarily to the increase in the number of units installed under sale, lease, or rental arrangements during the period and, to a lesser extent, costs associated with our June 2009 launch of our PCT MicroTube Adapter Kits. Costs of PCT products and services as a percentage of PCT revenue decreased to 48% for the year ended December 31, 2009, as compared to 61% for the year ended December 31, 2008. The decrease in the cost of PCT products and services as a percentage of PCT revenue was due primarily to the sale of Barocycler units that were demonstration models that had been previously expensed resulting in a lower cost of PCT products in the current year. The Company also recovered four units from the field that were previously expensed to costs of PCT products and services. The prior year cost of PCT products and services as a percentage of PCT revenue reflected our sale of 12 Barocycler instruments to our foreign distributors at discounted prices during 2008.

We believe that our cost of PCT products and services will decrease as a percentage of revenue as we continue to install more instruments, convert short-term rentals to direct sales, and sell more consumable products, such as PULSE Tubes and ProteoSolve kits. However, we expect our gross margin may fluctuate from period to period as we continue to sell, lease, or rent a varying mix of Barocycler instrumentation and consumable products.

Research and Development

Research and development expenditures decreased to $1,175,136 during 2009 from $1,810,590 in 2008. This decline in R&D expenses was primarily due to the significant restructuring and cost-reduction programs that we initiated in the second half of 2008, including the termination of seven R&D employees. The headcount in R&D during the year ended December 31, 2009 was three, compared to ten during the same period in 2008. The decline in expenses was also due to a significant decrease in the number of R&D projects we funded during 2009.

Research and development expense included $137,161 and $162,421 of non-cash, stock-based compensation in 2009 and 2008, respectively.

Selling and Marketing

Selling and marketing expenses decreased to $1,054,869 in 2009 from $1,686,590 for the year ended December 31, 2009. This decline in selling and marketing expense was primarily due to the significant restructuring and cost-reduction programs that we initiated in the second half of 2008, including the termination of four sales directors and one marketing assistant. The headcount in selling and marketing during the year ended December 31, 2009 was five, compared to ten during 2008. A significant decrease in advertising, exhibit booth rental, and travel expense also contributed to the reduction in overall selling and marketing expense incurred.

Selling and marketing expense included $73,689 and $93,947 of non-cash, stock-based compensation expense in 2009 and 2008, respectively.

General and Administrative

General and administrative costs totaled $1,809,133 in the year ended December 31, 2009, as compared to $1,920,465 in 2008. The decline in expenses was due to compensation savings from reduced headcount and reduced Board member fees offset by increases in investor relations activities.

During the years ended December 31, 2009 and 2008, general and administrative expense included $218,155 and $252,827 of non-cash, stock-based compensation expense, respectively. The year ended December 31, 2009 includes a grant of stock options to purchase an aggregate of 485,000 shares of our common stock in total to our employees and our four independent directors, resulting in a charge of $112,943 during 2009. The year ended December 31, 2009 also includes a one-time charge of $15,675 of non-cash stock-based compensation expense in connection with the grant of a non-qualified, fully-vested option to purchase 15,000 shares of our common stock to our new independent director. The same period in 2008 includes a one-time charge of $100,556 of non-cash stock-based compensation expense in connection with the grant of non-qualified, fully-vested stock options to purchase 10,000 shares of our common stock to each of our four independent directors.

Operating Loss

Our operating loss was $3,196,568 for the year ended December 31, 2009 as compared to $4,966,399 for the comparable period in 2008, a decrease of $1,769,831 or 36%. During the second half of 2008, we initiated a number of cost reduction measures, including a comprehensive restructuring program to significantly reduce costs, centralize core operations, and refocus our business strategy in specific areas where our products had found significant initial market acceptance. The restructuring program included: a reduction in personnel of twelve full-time employees, reduction in travel and meeting attendance for all personnel, reduced Board of Directors fees, decreases in the base salary of most of our employees and all of our executive officers, a shutdown of our R&D facility in Rockville, MD, a consolidation of our research and development activities in Massachusetts, and delay or cancellation of several research and development and marketing programs.

These initiatives have significantly decreased our rate of cash utilization, from just under $1 million per quarter in the second half of 2008 to an average of approximately $635,000 per quarter for 2009.

Interest Income

Interest income totaled $4,990 for the year ended December 31, 2009 as compared to $57,954 for the year ended December 31, 2008. The decrease is due to lower average cash balances and lower yields on these balances during the year ended December 31, 2009, as compared to the same period in 2008. Several high-yield CDs matured in 2008.

Income Taxes

In the year ended December 31, 2009, we recorded a refund of income taxes of $623,262 due to provisions in the American Recovery and Reinvestment Act of 2009 relating to net operating loss carry-backs. The cash was received in August 2009. There was no provision for an income tax benefit during the same period in 2008. Aside from the impact of the passage of this law, we do not expect any additional income tax benefits relating to carry-backs to prior periods. If we are successful in commercializing PCT and in generating operating income, then we may be able to utilize certain net operating losses we may have at the time against such future operating profits.

Net Loss

During the year ended December 31, 2009, we recorded a net loss applicable to common shareholders of $3,284,779 or $(1.42) per share, as compared to $4,908,445 or $(2.24) per share in the same period of 2008. Our net loss in the year ended December 31, 2009 was lower than the corresponding net loss in the same period in 2008 as the result of increased revenue, the income tax benefit, and lower operating costs, as described above. For 2009, the difference between net loss applicable to common shareholders and net loss relates to the beneficial conversion associated with the intrinsic value of the Series A Convertible Preferred Stock and Series B Convertible Preferred Stock.

LIQUIDITY AND FINANCIAL CONDITION

As of December 31, 2009, our working capital position was $2,209,205, the primary components of which were cash and cash equivalents, accounts receivable, inventory, prepaid expenses, and deposits, partially offset by accounts payable, accrued employee compensation, and other accrued expenses. As of December 31, 2008, our working capital balance was $1,602,556, the primary components of which were cash and cash equivalents, income taxes receivable, prepaid expenses, and deposits. We expect to continue to fund our operations from our working capital balance.

During 2008, we took a number of cost reduction measures, including a comprehensive restructuring program to significantly reduce costs, centralize core operations, and refocus our business strategy in specific areas where our products have found significant market acceptance. The restructuring program included: a reduction in personnel of eight full-time employees (40% of the workforce), reduction in travel and meeting attendance for all personnel, continued reduction in investor relations activities, decreases in the base salary of most of our employees and all of our executive officers, a shutdown of the our R&D facility in Rockville, MD, a consolidation of our research and development activities in Massachusetts and delay of several research and development and marketing programs. These initiatives significantly decreased our rate of cash utilization, from just under $1 million per quarter to an average of just under $635,000 per quarter during 2009.

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 gross proceeds to us of $1,805,270 (the “Series A Private Placement”). See Note 8 to our Consolidated Financial Statements for a further description of the Series A Convertible Preferred Stock and Warrants issued in the Series A Private Placement.

On November 18, 2009, we sold an aggregate of 62,039 units (the “Series B Units”) of Series B Convertible Preferred Stock, par value $0.01 per share (the “Series B Convertible Preferred Stock”) and warrants for a purchase price of $18.80 per Series B Unit (the “Series B Purchase Price”), resulting in gross proceeds to us of $1,166,333.20. This is the first tranche of a $2.5 million private placement (the “Series B Private Placement”). We closed on the second tranche of the Series B Private Placement on March 18, 2010 with the sale of an additional 26,672 Series B Units with gross proceeds of $501,434. Each Series B Unit consists of (i) one share of a newly created 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 share for the warrants issued in November 2009 and at an exercise price of $28.80 per share for the warrants issued in March 2010, in each case with a term expiring on August 11, 2011 (“Series B Warrant”).

In connection with the Series B Private Placement, 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 December 19, 2008, we received $200,000 from one of our distributors in the escrow account for the private placement. Prior to February 12, 2009, the distributor requested that the $200,000 be used as payment for anticipated future purchases of our PCT instrument and consumable products, and not for an investment in the private placement. This amount was recorded as deferred revenue in 2009. As of December 31, 2009, the remaining unused balance of $132,808 was returned to our distributor.

We believe that because of the cost restructuring measures we have undertaken, together with the $3,473,037 we received in connection with our 2009 and 2010 private placements of units, consisting of Series A Convertible Preferred Stock and Series B Convertible Preferred Stock and warrants, we have sufficient cash resources to fund normal operations into the first quarter of 2011. Depending upon the results of the Company's financing and partnering activities and sales efforts, we may make additional cost reductions as required to accomplish this goal. We believe we will need substantial additional capital to fund our current operations beyond the first quarter of 2011. 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 may be required to limit or cease our operations, pursue a plan to sell our operating assets, or otherwise modify our business strategy, which could materially harm our future business prospects.

Net cash used in operations during 2009 was $1,809,261 as compared to net cash used in operations of $4,420,209 during 2008. The decrease in cash used in operations in 2009 as compared to 2008 is principally the result of the increased revenues and lower operating expenses in 2009.

Net cash used in investing activities during 2009 was $152,925 as compared to net cash used in investing activities of $145,819 in the prior year. During year ended December 31, 2009, we installed 26 Barocycler instruments under collaboration or lease agreements while selling six demonstration units. Cash used in investing activities during the year ended December 31, 2008 was for the purchase of furniture and fixtures associated with our move to new corporate offices, and for Barocycler instruments that we purchased and installed under collaboration or lease agreements.

Net cash provided by financing activities during 2009 was $2,703,756. As noted above, during 2009 we received the proceeds from the Series A Private Placement and the first tranche of the Series B Private Placement. The expenses related to the Series A Private Placement totaled approximately $233,000 and the expenses related to Series B Private Placement totaled approximately $117,000, including the finder's fees in the Series B Private Placement. In connection with the Series B Private Placement, 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.

Net cash provided by financing activities for the year ended December 31, 2009 also included a stock warrant exercise. Net cash provided by financing activities for the year ended December 31, 2008 was due to an exercise of employee stock options to purchase shares of our 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, 2009 and 2008, we incurred approximately $30,548 and $29,553, 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.

Purchase Commitments

On December 14, 2009, we submitted a purchase order to Source Scientific, LLC, the manufacturer of the Company's PCT Barocycler instrumentation, for 50 Barocycler NEP2320 units and 12 Barocycler NEP3229 units with various spare parts. Pursuant to the terms of the purchase order, we placed a deposit with Source Scientific, LLC, of approximately $169,000 representing approximately 25% of the expected total value of the order. The purchase price for the 50 NEP2320 units and 12 NEP3229 units is based upon a fixed bill of materials. We will be billed for the unpaid purchase price of each unit at the time each unit is completed and ready for sale.

Severance and Change of Control Agreements

Each of our executive officers is entitled to receive a severance payment if terminated by the Company without cause. The severance benefits would include a payment in an amount equal to one year of each executive officer's annualized base salary compensation plus accrued paid time off. Additionally, each executive officer will be entitled to receive medical and dental insurance coverage for one year following the date of termination. The total commitment related to these agreements in the aggregate is approximately $1.0 million.

Each of our executive officers, other than Mr. Richard T. Schumacher, our President and Chief Executive Officer, 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 total commitment related to these agreements in the aggregate is approximately $1.3 million. 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.

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, 2009:

Year ending December 31:	
2010	$133,914
2011	105,304
2012	60,000
Thereafter	-
Total minimum payments required	$299,218

CRITICAL ACCOUNTING POLICIES

FASB Codification

We follow accounting standards set by the Financial Accounting Standards Board, ("FASB"). The FASB sets GAAP that we follow to ensure we consistently report our financial condition, results of operations, and cash flows. References to GAAP issued by the FASB in this Report are to the FASB Accounting Standards Codification, sometimes referred to as the Codification or ASC. The FASB finalized the Codification effective for periods ending on or after September 15, 2009. Prior FASB standards like FASB Statement No. 13, Accounting for Leases, are no longer being issued by the FASB.

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 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*. Under this method, if an element is determined to be a separate unit of accounting, the revenue for the element is based on fair value and determined by vendor specific objective evidence ("VSOE"), and recognized at the time of delivery. 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 and, to the extent VSOE is established, these service revenues are 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, 2009 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, 2009 and determined that our long-lived assets were not impaired.

RECENT ACCOUNTING STANDARDS

In June 2009, the FASB issued FASB ASC 105, *Generally Accepted Accounting Principles*, which establishes the FASB Accounting Standards Codification as the sole source of authoritative generally accepted accounting principles. Pursuant to the provisions of FASB ASC 105, the Company has updated references to GAAP in its financial statements issued for the period ended December 31, 2009. The adoption of FASB ASC 105 did not impact the Company's financial position or results of operations.

On January 1, 2008, the Company adopted FASB ASC 820, *Fair Value Measurements and Disclosures*. FASB ASC 820 defines fair value, establishes a framework for measuring the fair value of assets and liabilities, and expands disclosure requirements regarding the fair value measurement. FASB ASC 820 does not expand the use of fair value measurements. This statement, as issued, is effective for financial statements issued for fiscal years beginning after November 15, 2007, and interim periods within those fiscal years. There was no significant effect on our financial statements. We do not believe that the adoption of FASB ASC 820 to non-financial assets and liabilities will significantly affect our financial statements.

In December 2007, the FASB issued FASB ASC 805, *Business Combinations* and FASB ASC 810, *Consolidations*.

FASB ASC 805 significantly changes the accounting for business combinations. Under FASB ASC 805, an acquiring entity will be required to recognize all the assets acquired and liabilities assumed in a transaction at the acquisition-date at fair value with limited exceptions. FASB ASC 805 further changes the accounting treatment for certain specific items, including:

- Acquisition costs will be generally expensed as incurred;

- Non-controlling interests (formerly known as "minority interests" – see FASB ASC 810 discussion below) will be valued at fair value at the acquisition date;

- Acquired contingent liabilities will be recorded at fair value at the acquisition date and subsequently measured at either the higher of such amount or the amount determined under existing guidance for non-acquired contingencies;

- In-process research and development will be recorded at fair value as an indefinite-lived intangible asset at the acquisition date;

- Restructuring costs associated with a business combination will be generally expensed subsequent to the acquisition date; and

- Changes in deferred tax asset valuation allowances and income tax uncertainties after the acquisition date generally will affect income tax expense.

In April 2008, the FASB issued FASB ASC 350-30, *Intangibles Other Than Goodwill* which requires that an entity consider its own historical experience in renewing similar arrangements, or a consideration of market participant assumptions in the absence of historical experience. FASB ASC 350-30 also requires entities to disclose information that enables users of financial statements to assess the extent to which the expected future cash flows associated with the asset are affected by the entity's intent and/or ability to renew or extend the arrangement. We have adopted FASB ASC 350-30. The adoption of this statement does not have any impact to our financial statements.

FASB ASC 810 establishes new accounting and reporting standards for the non-controlling interest in a subsidiary and for the deconsolidation of a subsidiary. Specifically, this statement requires the recognition of non-controlling interests (minority interests) as equity in the consolidated financial statements and separate from the parent's equity. The amount of net income attributable to non-controlling interests will be included in consolidated net income on the face of the income statement. FASB ASC 810 clarifies that changes in a parent's ownership interest in a subsidiary that does not result in deconsolidation are treated as equity transactions if the parent retains its controlling financial interest. In addition, this statement requires that a parent recognize a gain or loss in net income when a subsidiary is deconsolidated. Such gain or loss will be measured using the fair value of the non-controlling equity investment on the deconsolidation date. FASB ASC 810 also includes expanded disclosure requirements regarding the interests of the parent and its non-controlling interest.

We have adopted FASB ASC 810 and the statement does not have a material affect on our consolidated results of operations and financial condition.

In March 2008, the FASB issued FASB ASC 815, *Derivatives and Hedging*, which requires additional disclosures about the objectives of derivative instruments and hedging activities, the method of accounting for such instruments under FASB ASC 815 and its related interpretations, and a tabular disclosure of the effects of such instruments and related hedged items on our financial position, financial performance, and cash flows. We adopted FASB ASC 815 and our adoption of FASB ASC 815 did not have a material impact on our financial statements.

On June 30, 2009, the Company adopted FASB ASC 855, *Subsequent Events*, which requires disclosure of the period after the balance sheet date during which management of a reporting entity should evaluate events or transactions that may occur for potential recognition or disclosure in the financial statements. The adoption of FASB ASC 855 did not have a material impact on our financial statements.

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, 2009 and 2008, and the related consolidated statements of operations, changes in stockholders' equity, 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, 2009 and 2008, 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.

/s/ UHY LLP

Boston, Massachusetts
March 31, 2010

ITEM 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA.

PRESSURE BIOSCIENCES, INC. AND SUBSIDIARIES
CONSOLIDATED BALANCE SHEETS
DECEMBER 31, 2009 AND 2008

	December 31, 2009	December 31, 2008
ASSETS		
CURRENT ASSETS		
Cash and cash equivalents	$ 1,609,778	$ 868,208
Restricted cash	20,012	50,000
Accounts receivable, net of allowances of $8,400 at December 31, 2009 and $0 at December 31, 2008	203,211	209,117
Inventories	638,350	571,831
Deposits	182,010	382,236
Prepaid income taxes	3,176	6,600
Prepaid expenses and other current assets	86,563	235,111
Total current assets	2,743,100	2,323,103
PROPERTY AND EQUIPMENT, NET	249,465	252,249
OTHER ASSETS		
Intangible assets, net	231,026	279,658
TOTAL ASSETS	$ 3,223,591	$ 2,855,010
LIABILITIES AND STOCKHOLDERS' EQUITY		
CURRENT LIABILITIES		
Accounts payable	$ 148,087	$ 263,486
Accrued employee compensation	105,824	161,374
Accrued professional fees and other	271,926	278,982
Deferred revenue	8,058	16,705
Total current liabilities	533,895	720,547
LONG TERM LIABILITIES		
Deferred revenue	1,609	10,821
TOTAL LIABILITIES	535,504	731,368
COMMITMENTS AND CONTINGENCIES (Note 7)		
STOCKHOLDERS' EQUITY		
Series A convertible preferred stock, $.01 par value; 1,000,000 shares authorized; 152,213 shares issued and outstanding on December 31, 2009 and 0 shares on December 31, 2008 (Liquidation value of $1,750,450)	1,523	-
Series B convertible preferred stock, $.01 par value; 1,000,000 shares authorized; 62,039 shares issued and outstanding on December 31, 2009 and 0 shares on December 31, 2008 (Liquidation value of $1,166,333)	620	-
Common stock, $.01 par value; 20,000,000 shares authorized; 2,328,426 shares issued and outstanding on December 31, 2009 and 2,195,283 shares issued and outstanding on December 31, 2008	23,284	21,953
Warrants to acquire preferred stock and common stock	1,352,165	-
Additional paid-in capital	9,297,115	6,803,530
Accumulated deficit	(7,986,620)	(4,701,841)
Total stockholders' equity	2,688,087	2,123,642
TOTAL LIABILITIES AND STOCKHOLDERS' EQUITY	$ 3,223,591	$ 2,855,010

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

PRESSURE BIOSCIENCES, INC. AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF OPERATIONS
FOR THE YEARS ENDED DECEMBER 31, 2009 AND 2008

	For the Year Ended December 31,	
	2009	**2008**
REVENUE:		
PCT Products, services, other	$ 831,602	$ 655,252
Grant revenue	413,308	197,011
Total revenue	1,244,910	852,263
COSTS AND EXPENSES:		
Cost of PCT products and services	402,340	401,017
Research and development	1,175,136	1,810,590
Selling and marketing	1,054,869	1,686,590
General and administrative	1,809,133	1,920,465
Total operating costs and expenses	4,441,478	5,818,662
Operating loss	(3,196,568)	(4,966,399)
Interest income	4,990	57,954
Loss before income taxes	(3,191,578)	(4,908,445)
Income tax refund	623,262	-
Net loss	(2,568,316)	(4,908,445)
Accrued and deemed dividends on convertible preferred stock	(716,463)	-
Net loss applicable to common shareholders	$ (3,284,779)	$ (4,908,445)
Net loss per share attributable to common stockholders - basic and diluted	$ (1.42)	$ (2.24)
Weighted average common stock shares outstanding used in the basic and diluted net loss per share calculation	2,314,316	2,194,093

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

PRESSURE BIOSCIENCES, INC. AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF CHANGES IN STOCKHOLDERS' EQUITY
FOR THE YEARS ENDED DECEMBER 31, 2009 AND 2008

	Series A Preferred Stock		Series B Preferred Stock		Total Preferred Stock		Common Stock			Additional Paid-In	Retained Earnings/ (Accumulated	Total Stockholders'
	Shares	Amount	Shares	Amount	Shares	Amount	Shares	Amount	Stock Warrants	Capital	Deficit)	Equity
BALANCE, December 31, 2007	-	$ -	-	$ -	-	$ -	2,192,175	$ 21,922	$ -	$ 6,284,616	$ 206,604	$ 6,513,142
Stock-based compensation										509,195		509,195
Issuance of common stock							3,108	31		9,719		9,750
Net loss											(4,908,445)	(4,908,445)
BALANCE, December 31, 2008	-	$ -	-	$ -	-	$ -	2,195,283	$ 21,953	$ -	$ 6,803,530	$ (4,701,841)	$ 2,123,642
Stock-based compensation										429,004		429,004
Issuance of convertible preferred stock	156,980	1,570	62,039	620	219,019	2,190				1,667,535		1,669,725
Issuance of common stock							16,000	160		26,400		26,560
Offering costs										(354,177)		(354,177)
Issuance of warrants									1,363,967			1,363,967
Stock warrant exercise	4,000	40			4,000	40			(11,802)	61,762		50,000
Beneficial conversion of preferred stock										630,252	(630,252)	-
Conversion of preferred stock to common stock	(8,767)	(87)			(8,767)	(87)	87,670	877		(790)		-
Common stock paid-in-kind dividends earned											(86,211)	(86,211)
Issuance of common stock for dividends paid-in-kind							29,473	294		33,599		33,893
Net loss											(2,568,316)	(2,568,316)
BALANCE, December 31, 2009	152,213	$ 1,523	62,039	$ 620	214,252	$ 2,143	2,328,426	$ 23,284	$ 1,352,165	$ 9,297,115	$ (7,986,620)	$ 2,688,087

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

PRESSURE BIOSCIENCES, INC. AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF CASH FLOWS
FOR THE YEARS ENDED DECEMBER 31, 2009 AND 2008

	For the Year Ended December 31,	
	2009	**2008**
CASH FLOWS FROM OPERATING ACTIVITIES:		
Net loss	$ (2,568,316)	$ (4,908,445)
Adjustments to reconcile net loss to operating cash flows:		
Depreciation and amortization	204,341	199,999
Stock-based compensation expense	429,005	509,195
Bad debt expense	53,680	-
Changes in operating assets and liabilities:		
Restricted cash	29,988	(50,000)
Accounts receivable	(47,774)	(90,646)
Inventories	(66,519)	(399,283)
Deposits	200,226	171,247
Accounts payable	(115,399)	110,757
Accrued employee compensation	(55,550)	(215,816)
Deferred revenue and other accrued expenses	(24,915)	93,307
Prepaid expenses and other current assets	151,972	159,476
Net cash used in operating activities	(1,809,261)	(4,420,209)
CASH FLOWS FROM INVESTING ACTIVITIES:		
Additions to property and equipment	(152,925)	(145,819)
Net cash used in investing activities	(152,925)	(145,819)
CASH FLOWS FROM FINANCING ACTIVITIES:		
Net proceeds from the issuance of common stock	-	9,750
Proceeds from stock warrant exercise	50,000	-
Net proceeds from the issuance of preferred stock	2,653,756	-
Net cash provided by financing activities	2,703,756	9,750
Change in cash and cash equivalents	741,570	(4,556,278)
Cash and cash equivalents, beginning of period	868,208	5,424,486
Cash and cash equivalents, end of period	$ 1,609,778	$ 868,208
SUPPLEMENTAL INFORMATION:		
Income taxes paid	$ -	$ 6,177
Income tax refund received	623,262	301,060
Beneficial conversion feature on convertible preferred stock	630,252	-

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

PRESSURE BIOSCIENCES, INC. AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
As of December 31, 2009

(1) Business Overview and Management Plans

We are a life sciences company focused on the development and commercialization of a novel, enabling, platform technology called pressure cycling technology ("PCT"). PCT uses cycles of hydrostatic pressure between ambient and ultra-high levels (up to 35,000 psi and greater) to control bio-molecular interactions.

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

We have experienced negative cash flows from operations with respect to our pressure cycling technology business since our inception. During 2008, we undertook a number of cost reduction measures including a comprehensive restructuring program, to significantly reduce costs, centralize core operations, and refocus business strategy in specific areas where our products have found significant initial market acceptance. The restructuring program included: a reduction in personnel of eight full-time employees (40% of the workforce), reduction in travel and meeting attendance for all personnel, decreases in the base salary of most of our employees and all of our executive officers, a shutdown of our research and development facility in Rockville, MD, a consolidation of our R&D activities in Massachusetts, and delay of several research & development and marketing programs. These initiatives have significantly decreased cash utilization, from just under $1 million per quarter in the second half of 2008 to an average of approximately $635,000 per quarter during 2009. Based on our current projections, we believe our current cash resources, which includes the funds we received from the private placements we completed in 2009 and 2010, are sufficient to fund our normal operations into the first quarter of 2011. Depending upon the results of the Company's financing and partnering activities and sales efforts, we may make additional cost reductions as required to accomplish this goal.

On February 12, 2009, we completed a private placement, pursuant to which we sold an aggregate of 156,980 units, consisting of Series A Convertible Preferred Stock and warrants, for a purchase price of $11.50 per unit, resulting in gross proceeds to us of $1,805,270 (the "Series A Private Placement"). See Note 8 to our Consolidated Financial Statement for a further description of the Series A Convertible Preferred Stock and Warrants issued in the Series A Private Placement.

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, resulting in gross proceeds to us of $1,166,333.20. This is the first tranche of a $2.5 million private placement (the "Series B Private Placement"). We closed the second tranche of the Series B Private Placement on March 18, 2010 with the sale of an additional 26,672 Series B Units with gross proceeds of $501,434. Each Series B Unit consists of (i) one share of a newly created 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 the warrants issued in November 18, 2009 and at an exercise price equal to $28.80 per share for the warrants issued in March 2010, in each case with a term expiring on August 11, 2011 ("Series B Warrant"). See Note 8 to our Consolidated Financial Statement for a further description of the Series B Convertible Preferred Stock and Series B Warrants issued in the Series B Private Placement.

In connection with the first tranche closing of the Series B Private Placement, we paid a finder's fee of $68,907, plus warrants to purchase 3,665 shares of Series B Convertible Preferred Stock at $28.80 per share, expiring August 11, 2012.

We believe we have sufficient cash resources to fund normal operations into the first quarter of 2011 due to the restructuring measures we have undertaken and the $2,971,603 we received in connection with our Series A Private Placement and Series B Private Placement. We believe we will need substantial additional capital to fund our current operations beyond the first quarter of 2011. 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 may be required to limit or 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.

(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.

(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. 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.

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 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*. Under this method, if an element is determined to be a separate unit of accounting, the revenue for the element is based on fair value and determined by vendor specific objective evidence ("VSOE"), and recognized at the time of delivery. 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 and, to the extent VSOE is established, these service revenues are 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 market value, and are classified as cash equivalents. As of December 31, 2009, we held $20,000 in a restricted account as collateral for our corporate credit card and therefore classified this balance as restricted cash on our consolidated balance sheet.

(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

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. As of December 31, 2009, the recorded cost of all categories was less than the recent sales price. The composition of inventory as of December 31, 2009 and 2008 is as follows:

	December 31,	
	2009	2008
Raw materials	$ 92,453	$ 83,451
Finished goods	545,897	488,380
Total	$638,350	$571,831

(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 a quarterly 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, 2009. 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, 2009, 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, 2009 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, 2009 and 2008:

	For the Year Ended December 31,	
	2009	2008
Top Five Customers	48%	52%
Federal Agencies	37%	33%

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, 2009 and 2008:

	December 31,	
	2009	2008
Top Five Customers	62%	81%
Federal Agencies	12%	1%

Product Supply

Source Scientific, LLC has been our sole contract manufacturer for all of our PCT instrumentation. During 2008, however, we initiated several engineering initiatives to position us for greater independence from any one supplier, and we are in the process of developing a network of manufacturers and sub-contractors to reduce our reliance on any single supplier. 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, 2009 and 2008.

	For the Year Ended December 31,	
	2009	2008
Numerator:		
Net loss	$ (2,568,316)	$(4,908,445)
Accrued preferred stock dividend	(52,318)	-
Beneficial conversion feature for Series A Preferred Stock	(489,803)	-
Beneficial conversion feature for Series B Preferred Stock	(140,449)	
Series A Preferred dividends paid-in-kind	(33,893)	
Net loss applicable to common shareholders	$ (3,284,779)	$(4,908,445)
Denominator for basic and diluted loss per share:		
Weighted average common stock shares outstanding	2,314,316	2,194,093
Loss per common share - basic and diluted	$ (1.42)	$ (2.24)

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.

	December 31,	
	2009	2008
Stock options	157,402	82,659
Common stock warrants	1,619,800	-
Preferred stock warrants	2,186,840	-
Convertible preferred stock:		
Series A Convertible Preferred	1,522,130	-
Series B Convertible Preferred	620,390	-
	6,106,562	82,659

(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. 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 sufficient limitations on the amount of net loss carry forwards that could be used to offset future taxable income.

In the first half of 2009, we recorded a benefit for income taxes of $623,262 due to provisions in the American Recovery and Reinvestment Act of 2009 relating to net operating loss carry-backs. We received the cash during the second half of 2009. There was no provision for an income tax benefit during the same period in 2008. Aside from the impact of the passage of this congressional act, we do not expect any additional income tax benefits relating to carry-backs to prior periods. If we are successful in commercializing PCT and in generating operating income, then we may be able to utilize certain net operating losses we may have at the time against such future operating profits.

(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.

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, 2009 and 2008:

Assumptions	Outside Consultants	Outside Board Members and Consultants	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% - 92.53%
Risk-free interest rate	1.27%	2.60% - 4.94%	2.76% - 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 $429,005 and $509,195 for the years ended December 31, 2009 and 2008, 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,	
	2009	2008
Research and development	$ 137,161	$ 162,421
Selling and marketing	73,689	93,947
General and administrative	218,155	252,827
Total stock-based compensation expense	$ 429,005	$ 509,195

During the years ended December 31, 2009 and 2008, the total fair value of stock options awarded was $284,745 and $403,711, respectively.

As of December 31, 2009, the total estimated fair value of unvested stock options to be amortized over their remaining vesting period was $225,149. The non-cash, stock based compensation expense associated with the vesting of these options will be $184,585 in 2010 and $40,564 in 2011.

(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. 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.

(xvi) Recent Accounting Standards

In June 2009, the FASB issued FASB ASC 105, *Generally Accepted Accounting Principles*, which establishes the FASB Accounting Standards Codification as the sole source of authoritative generally accepted accounting principles. Pursuant to the provisions of FASB ASC 105, the Company has updated references to GAAP in its financial statements issued for the period ended December 31, 2009. The adoption of FASB ASC 105 did not impact the Company's financial position or results of operations.

On January 1, 2008, the Company adopted FASB ASC 820, *Fair Value Measurements and Disclosures*. FASB ASC 820 defines fair value, establishes a framework for measuring the fair value of assets and liabilities, and expands disclosure requirements regarding the fair value measurement. FASB ASC 820 does not expand the use of fair value measurements. This statement, as issued, is effective for financial statements issued for fiscal years beginning after November 15, 2007, and interim periods within those fiscal years. There was no significant effect on our financial statements. We do not believe that the adoption of FASB ASC 820 to non-financial assets and liabilities will significantly affect our financial statements.

In December 2007, the FASB issued FASB ASC 805, *Business Combinations* and FASB ASC 810, *Consolidations*.

FASB ASC 805 significantly changes the accounting for business combinations. Under FASB ASC 805, an acquiring entity will be required to recognize all the assets acquired and liabilities assumed in a transaction at the acquisition-date at fair value with limited exceptions. FASB ASC 805 further changes the accounting treatment for certain specific items, including:

- Acquisition costs will be generally expensed as incurred;

- Non-controlling interests (formerly known as "minority interests" – see FASB ASC 810 discussion below) will be valued at fair value at the acquisition date;

- Acquired contingent liabilities will be recorded at fair value at the acquisition date and subsequently measured at either the higher of such amount or the amount determined under existing guidance for non-acquired contingencies;

- In-process research and development will be recorded at fair value as an indefinite-lived intangible asset at the acquisition date;

- Restructuring costs associated with a business combination will be generally expensed subsequent to the acquisition date; and

- Changes in deferred tax asset valuation allowances and income tax uncertainties after the acquisition date generally will affect income tax expense.

In April 2008, the FASB issued FASB ASC 350-30, *Intangibles Other Than Goodwill* which requires that an entity consider its own historical experience in renewing similar arrangements, or a consideration of market participant assumptions in the absence of historical experience. FASB ASC 350-30 also requires entities to disclose information that enables users of financial statements to assess the extent to which the expected future cash flows associated with the asset are affected by the entity's intent and/or ability to renew or extend the arrangement. We have adopted FASB ASC 350-30. The adoption of this statement does not have any impact to our financial statements.

FASB ASC 810 establishes new accounting and reporting standards for the non-controlling interest in a subsidiary and for the deconsolidation of a subsidiary. Specifically, this statement requires the recognition of non-controlling interests (minority interests) as equity in the consolidated financial statements and separate from the parent's equity. The amount of net income attributable to non-controlling interests will be included in consolidated net income on the face of the income statement. FASB ASC 810 clarifies that changes in a parent's ownership interest in a subsidiary that does not result in deconsolidation are treated as equity transactions if the parent retains its controlling financial interest. In addition, this statement requires that a parent recognize a gain or loss in net income when a subsidiary is deconsolidated. Such gain or loss will be measured using the fair value of the non-controlling equity investment on the deconsolidation date. FASB ASC 810 also includes expanded disclosure requirements regarding the interests of the parent and its non-controlling interest.

We have adopted FASB ASC 810 and the statement does not have a material affect on our consolidated results of operations and financial condition.

In March 2008, the FASB issued FASB ASC 815, *Derivatives and Hedging*, which requires additional disclosures about the objectives of derivative instruments and hedging activities, the method of accounting for such instruments under FASB ASC 815 and its related interpretations, and a tabular disclosure of the effects of such instruments and related hedged items on our financial position, financial performance, and cash flows. We adopted FASB ASC 815 and our adoption of FASB ASC 815 did not have a material impact on our financial statements.

On June 30, 2009, the Company adopted FASB ASC 855, *Subsequent Events*, which requires disclosure of the period after the balance sheet date during which management of a reporting entity should evaluate events or transactions that may occur for potential recognition or disclosure in the financial statements. The adoption of FASB ASC 855 did not have a material impact on our financial statements.

(xvii) Advertising

Advertising costs are expensed as incurred. During 2009 and 2008 we incurred $8,853 and $68,716, respectively in advertising expense.

(xviii) Rent Expense

Rental costs are expensed as incurred. During 2009 and 2008 we incurred $82,821 and $148,982, respectively in rent expense for the use of our corporate office and research and development facilities.

(3) Property and Equipment

Property and equipment as of December 31, 2009 and 2008 consisted of the following components:

	December 31, 2009	December 31, 2008
Laboratory and manufacturing equipment	$ 151,451	$ 127,355
Office equipment	132,101	129,101
Leasehold improvements	8,117	8,117
PCT collaboration, demonstration and leased systems	486,393	398,352
Total property and equipment	778,062	662,925
Less accumulated depreciation	(528,597)	(410,676)
Net book value	$ 249,465	$ 252,249

Depreciation expense for the years ended December 31, 2009 and 2008 was $155,709 and $169,359, respectively.

(4) Intangible Assets

Intangible assets as of December 31, 2009 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, 2009. We have concluded that there is no impairment of intangible assets. Intangible assets at December 31, 2009 and 2008 consisted of the following:

	December 31, 2009	December 31, 2008
PCT Patents	$ 778,156	$ 778,156
Less accumulated amortization	(547,130)	(498,498)
Net book value	$ 231,026	$ 279,658

Amortization expense for each of the years ended December 31, 2009 and 2008 was $48,632.

(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 2009 and 2008 we contributed $10,098 and $19,238, 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,	
	2009	2008
Current benefit: federal	$ 623,262	$ -
Current benefit: state	-	-
Total current benefit	623,262	-
Deferred provision: federal	-	-
Deferred provision: state	-	-
Total deferred provision	-	-
Total benefit for income taxes	$ 623,262	$ -

Significant items making up the deferred tax assets and deferred tax liabilities as of December 31, 2009 and 2008 are as follows:

	December 31,	
	2009	2008
Current deferred taxes:		
Other accruals	$ 39,121	$ 83,467
Less: valuation allowance	(39,121)	(83,467)
Total current deferred tax assets (liabilities)	$ -	$ -
Long term deferred taxes:		
Accelerated tax depreciation	$ (4,893)	$ 13,672
Non-cash, stock-based compensation, NQ	345,987	276,152
Goodwill and intangibles	(93,034)	(112,618)
Operating loss carryforwards and tax credits	4,951,236	4,216,958
Less: valuation allowance	(5,199,296)	(4,394,164)
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 2009 and 2008 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, 2009. We released approximately $623,000 of the valuation allowance during 2009 due to new legislation within the American Recovery and Reinvestment Act of 2009 relating to net operating loss carrybacks.

We had net operating loss carry-forwards for federal income tax purposes of $5,110,998 as of December 31, 2009. 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 2011 through 2028.

In February of 2009, we sold approximately 156,000 Series A Units of equity consisting of one share of Series A Convertible Preferred Stock, a warrant to purchase shares of common stock and a warrant to purchase a share of Series A Convertible Preferred Stock. In November of 2009, we sold approximately 62,000 Series B Units of equity consisting of one share of Series B Convertible Preferred Stock and a warrant to purchase a share of Series B Convertible Preferred Stock. We are considering whether the sale of the equity units 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 $24,237,587 at December 31, 2009. These net operating loss carry-forwards expire at various dates from 2010 through 2028.

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,	
	2009	2008
Federal tax benefit (provision) rate	34%	34%
Permanent differences	(3)%	(2)%
State tax expense	0%	0%
Net operating loss carryback	19%	0%
Valuation allowance	(31)%	(32)%
Effective income tax benefit rate from continuing operations	19%	0%

(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 an 18 month lease agreement commencing in February 2008 pursuant to which we leased approximately 5,500 square feet of office space, with an option for an additional 12 months. We exercised the renewal option to extend the lease term until July 14, 2010. We pay approximately $6,500 per month for the use of these facilities.

Effective January 1, 2009, we terminated our lease agreement with Scheer Partners and the Maryland Economic Development Corporation, pursuant to which we leased laboratory and office space in Rockville, MD. We paid approximately $3,300 per month for the use of these facilities through December 31, 2008 with no further obligation.

Effective January 31, 2009, we terminated our sub-lease agreement with Proteome Systems, pursuant to which we leased approximately 650 square feet of laboratory space plus 100 square feet of office space from Proteome Systems in Woburn, Massachusetts. We paid approximately $3,200 per month for the use of these facilities through January 31, 2009 with no further obligation.

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, 2009 and 2008, we incurred $30,548 and $29,553 in royalties.

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. 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.

Purchase Commitments

On December 14, 2009, we submitted a purchase order to Source Scientific, LLC, the manufacturer of the Company's PCT Barocycler instrumentation, for 50 Barocycler NEP2320 units and 12 Barocycler NEP3229 units with various spare parts. Pursuant to the terms of the purchase order, we placed a deposit with Source Scientific, LLC, of approximately $169,000 representing approximately 25% of the expected total value of the order. The purchase price for the 50 NEP2320 units and 12 NEP3229 units is based upon a fixed bill of materials. We will be billed for the unpaid purchase price of each unit at the time each unit is completed and ready for sale.

Severance and Change of Control Agreements

Each of our executive officers; Mr. Schumacher, Dr. Ting, Dr. Lazarev, Dr. Lawrence and Mr. Potter 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. The total commitment related to these agreements in the aggregate is approximately $1.0 million.

Each of our 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 total commitment related to these agreements in the aggregate is approximately $1.3 million. 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.

(8) Stockholders' Equity

Preferred Stock

In 1996, our Board of Directors authorized the issuance of 1,000,000 shares of preferred stock with a par value of $0.01. As of December 31, 2009, 20,000 shares of preferred stock have been designated as Series A Junior Participating Preferred Stock, none of which are issued and outstanding, 313,960 shares of preferred stock have been designated as Series A Convertible Preferred Stock, par value $0.01 per share ("Series A Convertible Preferred Stock"), of which 156,980 shares are issued and outstanding, and. 279,256 shares of preferred stock have been designated as Series B Convertible Preferred Stock, par value $0.01 per share ("Series B Convertible Preferred Stock"), of which 62,039 shares are 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 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.

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 relative estimated fair value of each security. 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 FASB ASC 470-20, *Debt with Conversion and Other Options*, 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.

Each share of Series A Convertible Preferred Stock will receive 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). Dividends may be paid in cash or in shares of common stock at our option, subject to certain conditions. The shares of Series A 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 A 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 A Purchase Price, plus accrued and unpaid dividends. The Series A Convertible Preferred Stock and the Series B Convertible Preferred Stock (as described below) will be treated on an equivalent basis 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 June 30, 2009 dividend and the December 31, 2009 dividend.

Each share of Series A 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 A Conversion Ratio"). Unless waived under certain circumstances by the holder of Series A Convertible Preferred Stock, such holder's shares of Series A Convertible Preferred Stock may not be converted if upon such conversion the holder's beneficial ownership would exceed certain thresholds. Each share of Series A Convertible Preferred Stock will automatically be 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 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 $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 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 A 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 A Convertible Preferred Stock and such holders may also vote on any matters required by law.

At any time after February 11, 2014, upon 30 days written notice, we have 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 may be paid in two annual installments.

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

The warrants have the following exercise prices and terms: (i) the 15 Month Series A Preferred Stock Warrants have an exercise price equal to $12.50 per share, with a term expiring on May 12, 2010; and (ii) the 30 Month Common Stock Warrants have an exercise price equal to $2.00 per share, with a term expiring on August 12, 2011. 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 and 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 Securities Purchase Agreement) of the Company.

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

Subject to the terms and conditions of the applicable warrants, the Company has 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) equals or exceeds $1.75 for either (i) 10 consecutive trading days or (ii) 15 out of 25 consecutive trading days. 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.

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 $1.25 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 a non-cash charge of $1.8 million 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.

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

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 is the first tranche of a $2.5 million private placement (the "Series B 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. Each Series B Unit consists 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.

The proceeds from the sale of each Series B Unit was allocated between the Series B Convertible Preferred Stock and the Series B Warrant based on the relative estimated fair value of each security. 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 $419,624 to the total warrants issued for the first tranche closed in 2009. The allocation of the gross proceeds to the Series B Convertible Preferred Stock was $746,709 for the first tranche closed in 2009. In accordance with the provisions of FASB ASC 470-20, *Debt with Conversion and Other Options*, an additional adjustment between Additional Paid in Capital and Accumulated Deficit of $140,449 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 the first tranche closing. The $140,449 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 on November 17, 2009 issuable upon conversion of the Series B Convertible Preferred Stock 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.

Each share of Series B Convertible Preferred Stock will receive 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). Dividends may be paid in cash or in shares of common stock at our option, subject to certain conditions. The shares of Series B 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 B 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 B Purchase Price, plus accrued and unpaid dividends. The Series B Convertible Preferred Stock and the Series A Convertible Preferred Stock will be treated on an equivalent basis 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 December 31, 2009 dividend.

Each share of Series B 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 B Conversion Ratio"). Each share of Series B Convertible Preferred Stock will automatically be 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 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 3/10 of the Series B Purchase Price, or $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 3/10 of the Series B Purchase Price, or $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 may not be converted if upon such conversion the holder's beneficial ownership would exceed certain thresholds.

The holders of Series B 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 B 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 B Convertible Preferred Stock and such holders may also vote on any matters required by law.

At any time after February 12, 2014, upon 30 days written notice, we have 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 may be paid in two annual installments. The Series B Convertible Preferred Stock and the Series A Convertible Preferred Stock will be 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 have an exercise price equal to $23.80 and the Series B Warrants issued in March 2010 have an exercise price equal to $28.80, in each case with a term expiring on August 11, 2011. 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 dividends, stock splits or similar capital reorganizations, as set forth in the Series B Warrants.

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 5/20 of the Series B Purchase Price, or $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 Placement on November 18, 2009, we issued warrants to our placement agent to purchase 3,665 shares of Series B Convertible Preferred Stock at $28.80 per share, expiring August 11, 2012. The Series B Warrants and placement agent warrants issued in November 2009 were valued based on a Black-Scholes pricing model at the date of the grant. The Series B warrants issued in November 2009 were granted with an exercise price of $2.38 per share of common stock and the placement agent warrants issued in November 2009 were granted with an exercise price of $2.88 per share of common stock. The Series B Warrants and placement agent warrants vested immediately. The relative fair value of the Series B Warrants was calculated to be $419,624 and a non-cash charge of $1.1 million was recorded to Stockholders’ Equity in the fourth quarter of 2009. The assumptions for the Black-Scholes pricing model are represented in the table below for both warrants.

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	$ 0.80	$ 0.80

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 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

On June 16, 2005, our stockholders approved our 2005 Equity Incentive Plan (the "Plan"), pursuant to which an aggregate of 1,000,000 shares of our common stock was reserved for issuance upon exercise of stock options or other equity awards made under the Plan. On September 25, 2008, our stockholders approved an amendment to the Plan pursuant to which the number of shares reserved for issuance upon exercise of stock options or other equity awards made under the Plan was increased from 1,000,000 shares to 1,500,000 shares. 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, 2009, options to acquire 1,325,500 shares are outstanding under the Plan.

As of December 31, 2009, options to acquire 239,000 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.

The following tables summarize information concerning options outstanding and exercisable:

	Stock Options		Warrants			
	Shares	Weighted Average price per share	Shares	Weighted Average price per share	Total Shares	Exercisable
Balance outstanding, 12/31/2007	1,120,500	$ 3.45	-		1,120,500	691,166
Granted	231,500	2.94	-	-	231,500	
Exercised	(3,000)	3.25	-	-	(3,000)	
Expired	(1,500)	3.25	-	-	(1,500)	
Forfeited	(125,001)	4.01	-	-	(125,001)	
Balance outstanding, 12/31/2008	1,222,499	$ 3.30	-		1,222,499	932,334
Granted	485,000	0.82	3,846,640	$ 1.78	4,331,640	
Exercised	-		(40,000)	1.25	(40,000)	
Expired	(5,000)	4.25	-	-	(5,000)	
Forfeited	(137,999)	3.40	-	-	(137,999)	
Balance outstanding, 12/31/2009	1,564,500	$ 2.52	3,806,640	$ 1.78	5,371,140	4,955,152

	Options Outstanding			Options Exercisable		
		Weighted Average			Weighted Average	
Range of Exercise Prices	Number of Options	Remaining Contractual Life	Exercise Price	Number of Options	Remaining Contractual Life	Exercise Price
$0.77 - $2.70	704,000	6.9	$ 1.25	392,346	5.2	$ 1.61
2.71 - 3.08	319,500	5.2	2.93	283,166	4.7	2.95
3.09 - 3.95	302,000	6.4	3.67	276,000	6.3	3.69
3.96 - 5.93	239,000	7.1	4.24	197,000	6.9	4.21
$0.77 - $5.93	1,564,500	6.5	$ 2.52	1,148,512	5.7	$ 2.89

Sale of Common Stock

In connection with a private placement of 126,750 shares of common stock (the "Shares") at a price of $5.00 per share in November 2007, we agreed to prepare and file a Registration Statement on Form S-3 (the "Registration Statement") covering the resale of the Shares, and to use our commercially reasonable efforts to cause such Registration Statement to be declared effective as promptly as possible after the filing thereof and to keep the Registration Statement continuously effective under the Securities Act until all shares covered by such Registration Statement have been sold, or may be sold without volume restrictions pursuant to Rule 144 (or any successor Rule under the Securities Act). The Registration Statement was declared effective by the SEC on January 22, 2008.

(9) Subsequent Events

We performed a review of events subsequent to the balance sheet date through March 31, 2010, the date the financial statements were issued.

Commitments

Effective January 1, 2010, we entered into a three-year lease agreement with the University of Massachusetts, pursuant to which we are leasing laboratory and office space on campus at the university. We will pay $5,000 per month for the use of these facilities.

Series B Convertible Preferred Stock

On March 18, 2010, we sold an aggregate of 26,672 Series B Units for a purchase price of $18.80 per unit, resulting in gross proceeds to us of $501,434. This is the second tranche of the $2.5 million Series B Private Placement.

In connection with the closing of the second tranche of the Series B Private Placement, we paid a finder's fee of $31,571, plus warrants to purchase 1,679 shares of Series B Convertible Preferred Stock at $28.80 per share, expiring August 11, 2012.

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

None

ITEM 9A(T). 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, 2009, 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 are effective at the reasonable assurance level.

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, 2009. 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 our assessment, we believe that, as of December 31, 2009, our internal control over financial reporting is effective at a reasonable assurance level based on these criteria.

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

Changes in Internal Control Over Financial Reporting

There have been no changes in our internal control over financial reporting that occurred during the fourth quarter of 2009 that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

ITEM 9B. OTHER INFORMATION.

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. The investor relations firm provided us consulting on general corporate financial matters. The warrants were issued and sold without registration under the Securities Act, in reliance upon the exemption from registration set forth in Rule 506 of Regulation D promulgated under the Securities Act. The Company based such reliance upon representations made to it by the investor relations firm, including, but not limited to, representations as to such firm's status as an "accredited investor" (as defined in Rule 501(a) under Regulation D) and such firm'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) and may not be re-offered or sold in the United States absent an effective registration statement or an exemption from the registration requirements under applicable federal and state securities laws.

Also on November 18, 2009, we issued 16,000 shares of our common stock and on or about March 31, 2010, we issued 12,000 shares of our common stock, to another investor relations firm, in each case in exchange for consulting services provided to us by such firm. The investor relations firm provided us consulting on general corporate financial matters. The shares of common stock issued in November 2009 were issued and sold without registration under Section 4(2) of the Securities Act, for transactions not involving a public offering. The shares of common stock issued in March 2010 were issued and sold without registration under the Securities Act, in reliance upon the exemption from registration set forth in Rule 506 of Regulation D promulgated under the Securities Act. The Company based such reliance upon representations made to it by the investor relations firm, including, but not limited to, representations as to such firm's status as an "accredited investor" (as defined in Rule 501(a) under Regulation D) and such firm'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) and may not be re-offered or sold in the United States absent an effective registration statement or an exemption from the registration requirements under applicable federal and state securities laws.

PART III

ITEM 10. DIRECTORS, EXECUTIVE OFFICERS AND CORPORATE GOVERNANCE.

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.

The information regarding our executive officer is under Item 1, "Our Executive Officers", of this Form 10-K. The additional information required by this Item 10 is hereby incorporated by reference to our definitive proxy statement to be filed within 120 days after the close of our fiscal year.

ITEM 11. EXECUTIVE COMPENSATION.

The information required by this Item 11 is hereby incorporated by reference to our definitive proxy statement to be filed within 120 days after the close of our fiscal year.

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

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, 2009 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	1,564,500	$ 2.52	174,500

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

The additional information required by this Item 12 is hereby incorporated by reference to our definitive proxy statement to be filed within 120 days after the close of our fiscal year.

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

The information required by this Item 13 is hereby incorporated by reference to our definitive proxy statement to be filed within 120 days after the close of our fiscal year.

ITEM 14. PRINCIPAL ACCOUNTANT FEES AND SERVICES

The information required by this Item 14 is hereby incorporated by reference to our definitive proxy statement to be filed within 120 days after the close of our fiscal year.

PART IV
ITEM 15. EXHIBITS.

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	Amended and Restated Bylaws of the Company	A-3.2**
3.5	Amendment to Amended and Restated Bylaws 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 and 3.2)	A-3.1 & 3.2**
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	Securities Purchase Agreement dated November 21, 2007 between the Company and the purchasers named therein	G-4.9**
4.6	Registration Rights Agreement dated November 21, 2007 between the Company and the purchasers named therein	G-4.10**
4.7	Securities Purchase Agreement dated February 12, 2009 between the Company and the purchasers named therein	L-4.1**
4.8	Form of 15 Month Preferred Stock Warrant	L-4.2**
4.9	Form of 30 Month Common Stock Warrant	L-4.4**
4.10	Registration Rights Agreement dated February 12, 2009 between the Company and the purchasers named therein	L-4.5**
4.11	Securities Purchase Agreement dated November 18, 2009 between the company and the purchasers named therein	O-4.1
4.12	Registration Rights Agreement dated November 18, 2009 between the Company and the purchasers named therein	O-4.2
4.13	Series B Preferred Stock Warrant	O-4.3

Exhibit No.		Reference
10.2	1999 Non-Qualified Stock Option Plan*	H**
10.3	1999 Employee Stock Purchase Plan*	H**
10.4	2005 Equity Incentive Plan.*	I-99.1**
10.5	Amendment No. 1 to 2005 Equity Incentive Plan*	M-10.1**
10.6	Description of Compensation for Certain Directors*	N-10.7**
10.7	Severance Agreement between the registrant and Richard T. Schumacher*	N-10.6**
10.8	Form of Severance Agreement including list of officers to whom provided*	N-10.7**
10.10	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**
10.11	Asset Purchase Agreement dated April 16, 2004 between the Company, BBI Biotech Research Laboratories, Inc. and SeraCare Life Sciences, Inc.	F-1**
10.12	Technology Transfer and Patent Assignment Agreement dated October 7, 1996, between Bioseq, Inc. and BioMolecular Assays, Inc.	N-10.11**
10.13	Amendment to Technology Transfer and Patent Assignment Agreement dated October 8, 1998 between Bioseq, Inc. and BioMolecular Assays, Inc.	N-10.12**
10.14	Nonexclusive License Agreement dated September 30, 1998 between Bioseq, Inc. and BioMolecular Assays, Inc.	N-10.13**
10.16	Agreement for Research Services dated February 1, 2006 by and between the registrant and the University of New Hampshire	K-10.1**
23.1	Consent of Independent Registered Public Accounting Firm	Filed herewith
31.1	Principal Executive 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
31.2	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 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
32.2	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

*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..

SIGNATURES

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

Date: March 31, 2010

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.

SIGNATURES	TITLES	DATE
/s/ Richard T. Schumacher Richard T. Schumacher	President, Chief Executive Officer (Principal Executive Officer, Principal Financial Officer and Principal Accounting Officer)	March 31, 2010
/s/ R. Wayne Fritzsche R. Wayne Fritzsche	Director and Chairman of the Board	March 31, 2010
/s/ J. Donald Payne J. Donald Payne	Director	March 31, 2010
/s/ Calvin A. Saravis, Ph.D. Calvin A. Saravis, Ph. D.	Director	March 31, 2010
/s/ Alan D. Rosenson Alan D. Rosenson	Director	March 31, 2010

EXHIBIT 23.1

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We hereby consent to the incorporation by reference in the Registration Statements on Forms S-8 (File Nos. 333-30320, 333-24749, 333-128594, and 333-155405) and Form S-3 (File No. 333-148227) of Pressure BioSciences, Inc. (formerly Boston Biomedica, Inc.) of our report dated March 31, 2010, relating to the consolidated financial statements which appears in the Annual Report to Shareholders, which is included in this Annual Report on Form 10-K of Pressure BioSciences, Inc., for the year ended December 31, 2009.

/s/ UHY LLP

Boston, Massachusetts
March 31, 2010

EXHIBIT 31.1

CERTIFICATION PURSUANT TO SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002

I, Richard T. Schumacher, certify that:

1. I have reviewed this report on Form 10-K of Pressure BioSciences, Inc.;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rule 13a-15(f) and 15d-15(f)) for the registrant and have:

a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, 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;

c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):

a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial data; and

b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: March 31, 2010

/s/ Richard T. Schumacher

Name: Richard T. Schumacher
Title: President and Chief Executive Officer
(Principal Executive Officer)

EXHIBIT 31.2

CERTIFICATION PURSUANT TO SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002

I, Richard T. Schumacher, certify that:

1. I have reviewed this report on Form 10-K of Pressure BioSciences, Inc

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rule 13a-15(f) and 15d-15(f)) for the registrant and have:

a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, 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;

c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant issuer's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):

a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: March 31, 2010

/s/ Richard T. Schumacher

Name: Richard T. Schumacher
Title: President and Chief Executive Officer
(Principal Financial Officer)

EXHIBIT 32.1

Certification
Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002
(Subsections (a) and (b) of Section 1350, Chapter 63 of Title 18, United States Code)

In connection with the Annual Report on Form 10-K of Pressure BioSciences, Inc., a Massachusetts corporation (the "Company") for the period ended December 31, 2009 as filed with the Securities and Exchange Commission on the date hereof (the "Report"), Richard T. Schumacher, President and Chief Executive Officer and Principal Executive Officer, of Pressure BioSciences, Inc., a Massachusetts corporation (the "Company"), do hereby certify, pursuant to Section 906 of the Sarbanes-Oxley Act of 2002 (subsections (a) and (b) of Section 1350, Chapter 63 of Title 18, United States Code) that:

(1) The Report of the Company fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934; and

(2) The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

Dated: March 31, 2010

/s/ Richard T. Schumacher
Richard T. Schumacher
President and Chief Executive Officer
(Principal Executive Officer)

A signed original of this written statement required by Section 906 has been provided to Pressure BioSciences, Inc., and will be retained by Pressure BioSciences, Inc. and furnished to the Securities and Exchange Commission or its staff upon request.

EXHIBIT 32.2

Certification
Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002
(Subsections (a) and (b) of Section 1350, Chapter 63 of Title 18, United States Code)

In connection with the Annual Report on Form 10-K of Pressure BioSciences, Inc., a Massachusetts corporation (the "Company") for the period ended December 31, 2009 as filed with the Securities and Exchange Commission on the date hereof (the "Report"), Richard T. Schumacher, President and Chief Executive Officer and Principal Financial Officer, of Pressure BioSciences, Inc., a Massachusetts corporation (the "Company"), do hereby certify, pursuant to Section 906 of the Sarbanes-Oxley Act of 2002 (subsections (a) and (b) of Section 1350, Chapter 63 of Title 18, United States Code) that:

(1) The Report of the Company fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934; and

(2) The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

Dated: March 31, 2010

/s/ Richard T. Schumacher
Richard T. Schumacher
President and Chief Executive Officer
(Principal Financial Officer)

A signed original of this written statement required by Section 906 has been provided to Pressure BioSciences, Inc., and will be retained by Pressure BioSciences, Inc. and furnished to the Securities and Exchange Commission or its staff upon request.