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, 2008 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 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 June 30, 2008 was $6,830,497 based on the closing price of the common stock as quoted on the NASDAQ Capital Market on that date.

As of March 24, 2009, there were 2,195,283 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 second quarter of 2010;
- 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;
- potential growth in the market for our PCT products;
- our plans and expectations with respect to our pressure cycling technology (PCT) operations, including our expected amount of research and development, selling and marketing and general and administrative expense;
- market acceptance and the potential for commercial success of our PCT products;
- our belief that PCT provides a superior solution for sample preparation;
- 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;
- the expected benefits and results from our research and development efforts;
- the expected benefits and results from our collaboration program;
- our expectation of obtaining additional research grants from the government in the future;
- the expected tax benefits we may receive due to the American Recovery and Reinvestment Act of 2009;
- general economic conditions; and
- the anticipated future financial performance and business operations of our company.

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. As of December 31, 2008, we had a total cash balance of approximately $918,000. 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 our R&D facility in Rockville, MD, a consolidation of our R&D activities in Massachusetts, and delay of several research and development and marketing programs. We believe that these initiatives will significantly decrease our rate of cash utilization, from just under $1 million per quarter in 2008 to an average of just under $600,000 per quarter during 2009. We also believe that these actions, taken together with the proceeds we received from our $1.8 million equity financing completed in February 2009, will enable us to extend our cash resources into the second quarter of 2010.

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 2008, and early 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.

- *Patent license arrangement with Battelle Memorial Institute* – We entered into an exclusive patent license agreement with the Battelle Memorial Institute ("Battelle") in December 2008, pursuant to which we are licensing a method and system for improving the analysis of protein samples, including through an automated, in-line 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.

- *Collaboration with J. Craig Venter Institute ("JCVI")* – We entered into a collaboration agreement with JCVI pursuant to which JVCI and PBI will further develop PCT into JCVI's extraction protocols. In addition to JVCI's purchase of a Barocycler system, PBI will provide JCVI with two additional instruments for further studies as part of the collaboration. Among the projects for which PBI's technology will be used is JCVI's National Institutes of Health ("NIH")-funded human micro-biome project, where JCVI scientists are discovering and cataloging the microbes that live on and in the human body.

- *Omni International Marketing, Distribution and Technology Development Agreement* - Under the terms of this agreement, PBI and Omni International will: (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 the extraction capabilities of PBI, in an effort to provide research scientists with a targeted approach to better solve certain sample preparation issues.

- *PCT Highlighted at Five Podium Presentations at the Fifth International Conference on High Pressure* - Two of the presentations were made by our scientists and three others were made by independent collaborators and customers including: the U.S. Army Medical Research Institute of Infectious Diseases (USAMRIID), Pacific Northwest National Laboratories (PNNL), and the Southern California Water Research Project (SCWRP).

- *Launch of New Products –*

    - ProteoSolve-SB, a novel, pressure cycling technology-dependent kit 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.
    - PCT Shredder, a PCT-dependent product used 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.
    - *Proteolysis (Trypsin)–PrEP* - We released our PCT-enhanced trypsin digestion application for proteomics. "Proteolysis (Trypsin)-PrEP" is a new PCT-enhanced processing ("PrEP") application that was unveiled at the Drug Discovery & Development of Innovative Therapeutics Expo 2008 to accelerate and improve the time consuming step of trypsin digestion, prior to mass spectrometry.

- *Receipt of Award of $850,000 Phase II SBIR Grant* - This Phase II SBIR grant is funding continuing experiments directed towards the development and commercialization of novel, automated, and reproducible methods for the extraction of clinically important protein biomarkers, sub-cellular molecular complexes, and organelles (such as mitochondria) from cells and tissues using our pressure cycling technology.

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.

Since we began operations as Pressure BioSciences in February 2005, we have installed 74 Barocycler instruments, including 41 instruments in 2008, 20 instruments in 2007, 8 instruments in 2006, and 5 instruments in 2005. Our customers include researchers at academic laboratories, government agencies and biotechnology, pharmaceutical and other life sciences companies in the United States, and five foreign distribution partners.

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. According to the Emmes Group, a life sciences market research firm engaged by the Company, the mass spectrometry market is a multi-billion dollar business that should see annual growth of better than 8% through 2010. 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 have already have products;
- the demonstration of effectiveness and impact 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 approximately twenty sites, resulting in approximately forty 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	Reference
Soluble Forms of the Notch Ligands Delta1 and Jagged1 Promote in Vivo Tumorigenicity in NIH3T3 Fibroblasts with Distinct Phenotypes	Sumithra Urs, Alice Roudabush, Christine F. O'Neill, Ilka Pinz, Igor Prudovsky, Doreen Kacer, Yuefang Tang, Lucy Liaw, and Deena Small	Tumorigenesis and Neoplastic Progression	The American Journal of Pathology, Vol. 173, No. 3, September 2008 Copyright © American Society for Investigative Pathology DOI: 10.2353/ajpath.2008.080006
Pilot Proteomic Profile of Differentially Regulated Proteins in Right Atrial Cardiopulmonary Bypass Appendage Before and After Cardiac Surgery Using Cardioplegia and Cardiopulmonary Bypass	Kamal R. Khabbaz, Cesario Bianchi and Frank W. Sellke Asara, Jun Feng, Alexander Lazarev, Shiva Gautam, Venkatachalam Senthilnathan, Richard T. Clements, Gary Smejkal, Neel R. Sodha, Alexander R. Ivanov, John M.	Proteomics	.792747 Circulation 2008;118;S24-S31
Strategies to recover proteins from ocular tissues for proteomics	Nikhil Patel, Ekta Solanki, Renata Picciani, Valerie Cavett, Jennifer A. Caldwell-Busby, Sanjoy K. Bhattacharya, Dr.	Proteomics	Proteomics 2008, 8, 1055-1070
Improvedextraction of Rhizoctonia and Pythium DNA from wheat roots and soil samples using pressure cycling technology	P. Okubara	Genomics	Can. J. Plant Pathol. 29: 304-310 (2007)
The Daphnia Genomics Consortium Meeting: The Genome of the Model Crustacean Daphnia	Darren J. Bauer	Genomics	Expert Rev. Proteomics 4(5), 601-602 (2007)
An analysis of select pathogenic messages in lesional and non-lesional psoriatic skin using non-invasive tape harvesting.	Benson NR, Papenfuss J, Wong R, Motaal A, Tran V, Panko J, Krueger GG.	Transcriptomics	J Invest Dermatol. 2006 Oct;126(10):2234-41. Epub 2006

Company Products

Our PCT products have been developed to allow researchers to harness *the Power of PCT* 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 Sample Preparation System.

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 Sample Preparation System, 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 applied 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. 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.

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, would 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, biotechnology, pharmaceutical, and other life science companies in the United States. Our customers also include five foreign distribution partners. During 2008, we continued to commercialize PCT with sales, and/or leases of our instrumentation to customers in all of these categories. Our goal in 2009 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 significant 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, lipidomic, 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**
Safety						
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 $1.8 million and $2.0 million for the years ended December 31, 2008 and 2007, 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. Alex 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 Sample Preparation Systems. 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 2009, 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

We have 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. Nate Lawrence, our Vice President of Marketing, and a limited amount of external support. 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 R&D), 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 will: (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.

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, 2008 and 2007, we paid BioMolecular Assays, Inc. $29,553 and $19,596 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 related to a method and a system for improving the analysis of protein samples, including through an automated, in-line 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 $10,000 and we are obligated to make a second non-refundable payment in the amount of $25,000 on or before June 30, 2009. In addition to royalty payments of 3.8% of 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 ranging from $5,000 to $25,000 per year 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. The CE Mark is an important step toward our anticipated full-scale launch of our PCT product line in Europe during 2008. 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 20, 2009, 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 24, 2009:

Name	Age	Position
Richard T. Schumacher	58	President, Chief Executive Officer and Director
Edmund Ting, Ph.D.	54	Senior Vice President of Engineering
Nathan P. Lawrence, Ph.D.	54	Vice President of Marketing
Alexander Lazarev, Ph.D.	44	Vice President of Research and Development
Matthew B. Potter	43	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 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, 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, & 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 its inception. As of December 31, 2008, we had available cash of approximately $918,000. Based on our current projections, we believe our current cash resources, which includes the funds we received from the private placement we completed in February 2009, are sufficient to fund our normal operations into the second quarter of 2010.

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 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 our products in response to tighter 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 affect early-stage companies.

We are an early-stage company and our pressure cycling technology business has a 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, then we may 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 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 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, our growth may be limited. Our success also depends in particular on our ability to identify, hire, train and retain qualified engineering personnel with experience in design and development 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 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 as 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 placement we completed in February 2009.

In connection with the private placement we completed in February 2009, we issued Series A Convertible Preferred Stock, together with warrants to purchase shares of Series A Convertible Preferred Stock and common stock. Each share of Series A Convertible Preferred Stock is convertible into 10 shares of common stock. If all of the shares of Series A Convertible Preferred Stock, together with the warrants to purchase Series A Convertible Preferred Stock and common stock, were converted or exercised into shares of our common stock, an additional 4,709,400 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 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, commencing on June 30, 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. If we elect to pay the dividends in common stock, our common stockholders will suffer additional dilution.

The Series A Convertible Preferred Stock is 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 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.

ITEM 3. LEGAL PROCEEDINGS.

We are not currently involved in any legal proceedings.

ITEM 4. SUBMISSION OF MATTERS TO A VOTE OF SECURITY HOLDERS.

None.

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, 2007 through December 31, 2008.

	Common Stock Price	
Fiscal Year Ended December 31, 2007	**High**	**Low**
First Quarter	$ 4.35	$ 3.50
Second Quarter	5.70	4.00
Third Quarter	5.00	3.67
Fourth Quarter	7.78	3.98

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

As of March 20, 2009, there were 20,000,000 shares of common stock authorized of which 2,195,283 shares were issued and outstanding, and held by 93 stockholders of record. As of March 20, 2009, we had 1,000,000 shares of preferred stock authorized of which 156,980 shares of Series A Convertible Preferred Stock were issued and outstanding and held by 35 stockholders of record. Each share of Series A 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, commencing on June 30, 2009 (with the first payment to be 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.

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 for a purchase price of $11.50 per unit, resulting in gross proceeds to us of $1,805,270 (the "Private Placement"). The 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 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"); 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").

The sale of the units described in the Private Placement were issued and sold in the Private Placement without registration under the Securities Act, in reliance upon the exemption from registration set forth in Rule 506 of Regulation D ("Regulation D") promulgated under the Securities Act. The Company based such reliance upon representations made by each purchaser of 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 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 units or the shares of Series A Convertible Preferred Stock, 15 Month Common Stock Warrants, 15 Month Preferred Stock Warrants and 30 Month Preferred Stock Warrants comprising the 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 2008.

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 our inception. As of December 31, 2008, we had a total cash balance of approximately $918,000. 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 our R&D facility in Rockville, MD, a consolidation of our R&D activities in Massachusetts, and delay of several research and development and marketing programs. We believe that these initiatives will significantly decrease our rate of cash utilization, from just under $1 million per quarter in 2008 to an average of just under $600,000 per quarter during 2009. We also believe that these actions, taken together with the proceeds we received from our $1.8 million equity financing completed in February 2009, will enable us to extend our cash resources into the second quarter of 2010.

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.

In February 2009, we completed a private placement, pursuant to which we sold an aggregate of 156,980 shares of Series A Convertible Preferred Stock, together with warrants, resulting in aggregate gross proceeds to us of $1,805,270.

We believe we have sufficient cash resources to fund normal operations into the second quarter of 2010 due to the restructuring measures we have undertaken and the $1,805,270 we received in connection with our February 2009 private placement. We believe we will need substantial additional capital to fund our current operations beyond the second quarter of 2010. 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, 2008 as compared to 2007

Revenue

We had total revenue of $852,263 in the year ended December 31, 2008 as compared to $645,870 in the prior year.

PCT Products, Services, Other. Revenue from the sale of PCT products and services was $655,252 in 2008 as compared to $399,787 in 2007. This increase in revenue in 2008 was driven primarily by the installation of a total of 41 Barocycler instruments during 2008 as compared to 20 during 2007, and an increase in sales of consumable products and extended service contracts in 2008 compared to 2007. Although the number of instruments that we installed more than doubled in 2008 as compared to 2007, the increase in revenue was not as significant. This decrease in revenue per instrument installed is due to the fact that twelve of the instruments that we installed during 2008 were sold to our foreign distribution partners at discounted prices. Additionally, ten of our 2008 installations were made pursuant to lease and rental agreements. During 2007 four of our installations were made under lease and rental agreements. When we install instrumentation under lease or rental agreements, we record the revenue over the life of the agreement, generally 12 months or 36 months.

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 also 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 2008, we recorded $197,011 of grant revenue as compared to $246,083 in 2007. This decrease in grant revenue was due to a shift in resources from grant-related activities to other research and development projects when the remaining portion of the Phase I grant was completed in the second quarter of 2008. The 2008 revenue was earned in connection with our research and development efforts related to the completion of our SBIR Phase I grant and the commencement of our SBIR Phase II grant in August 2008. We expect that revenue related to the SBIR Phase II grant will increase in 2009, relative to the amount earned in 2008, as we continue to increase our efforts on this important project under an existing grant award. 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 $401,017 for the year ended December 31, 2008, compared to $209,050 in 2007. This increase in cost of PCT products and services was primarily due to our increase in sales of Barocycler units. Costs of PCT products and services as a percentage of revenue increased from 52% in 2007 to 61% for 2008. This increase in overall cost of goods sold as a percentage of revenue is due to the fact that we sold 12 Barocycler instruments to our foreign distributors at discounted prices during 2008. Additionally, our gross margins during 2007 were higher than expected due to the sale of several prototype NEP2320 Barocycler instruments during the period. These prototype instruments had been expensed, through the research and development line in the consolidated statement of operations, as they were built; therefore there was no cost of product sales recognized in connection with the sale of these units.

We believe that our cost of PCT Products and Services will improve as a percentage of revenue as we continue to install more instruments, 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 $1,810,590 during 2008 from $2,022,730 in 2007. This decrease was primarily due to the delay of several engineering projects during 2008. This reduction in project spending and a reduction in the total number of employees in our research and development function are steps that were taken as part of our overall cost cutting programs that we implemented during 2008.

Research and development expense included $162,421 and $141,115 of non-cash, stock-based compensation expense related to Statement of Financial Accounting Standards ("SFAS") 123R "*Share-Based Payment"* ("SFAS 123R") in 2008 and 2007, respectively.

Selling and Marketing

Selling and marketing expenses increased to $1,686,590 in 2008 from $1,386,519 for the year ended December 31, 2007. This increase in selling and marketing expense was primarily the result of our increase in the size of our domestic sales force in early 2008, the addition of our Vice President of Sales in February 2008, and the continued emphasis on strategic marketing programs. In the middle of 2008, we reduced our sales force from seven full time sales directors to three and in late 2008 we further reduced our sales force to two full time directors, as we implemented a full restructuring program to further reduce our rate of cash utilization. Despite these reductions in our sales force, we more than doubled the number of Barocycler instruments that we installed as compared to 2007.

Selling and marketing expense included $93,947 and $70,770 of non-cash, stock-based compensation expense related to SFAS 123R in 2008 and 2007, respectively.

General and Administrative

General and administrative costs totaled $1,920,465 in the year ended December 31, 2008, as compared to $2,174,739 in 2007. The decrease in general and administrative costs was due to a decrease in cash compensation paid to our independent directors, a moratorium on executive bonus payments and a decrease in investor relations spending, and Sarbanes-Oxley compliance costs. These decreases were partially offset by an increase in non-cash, stock-based compensation expense related to SFAS 123R. An increase in spending for patent and trademark work performed in 2008 and general SEC compliance also contributed to partially offset the overall decrease in general and administrative costs. In 2007, our SFAS 123R general and administrative expense was $150,479; in 2008, our general and administrative SFAS 123R expense was $252,827. The increase in general and administrative SFAS 123R expense was due to the fact that our four independent directors did not receive any stock options grants in 2007, but each received non-qualified, fully-vested stock options to purchase 10,000 shares of our common stock in April 2008, resulting in approximately $100,000 in SFAS 123R expense.

Operating Loss from Continuing Operations

The operating loss from continuing operations was $4,966,399 in 2008, as compared to $5,147,168 in the year ended December 31, 2007. This decrease in operating loss was due to an increase in revenue, and therefore gross profit partially offset by an increase in total operating expenses in 2008.

Included in our operating loss was $509,195 and $367,110 of non-cash, stock-based compensation expense related to SFAS 123R in 2008 and 2007, respectively.

Realized Gain on Sale on Securities Held for Sale

During 2007, we completed the liquidation of our investment in Panacos Pharmaceuticals and realized a gain on securities sold of $2,028,720. We did not hold any shares of Panacos Pharmaceuticals common stock in 2008 and therefore did not realize any such gains in 2008.

Interest Income

Interest income totaled $57,954 for the year ended December 31, 2008 as compared to $286,600 for the year ended December 31, 2007. The decrease in interest income from 2007 to 2008 was a result of lower average cash balances and lower yield on our cash during 2008.

Income Tax Benefit from Continuing Operations

For the year ended December 31, 2008 we did not record a benefit for income taxes. For the year ended December 31, 2007 we recorded a benefit for income taxes from continuing operations of $520,214. Despite our history of operating losses, we recorded this benefit due to our expected ability under federal income tax law to carry back current operating losses to offset taxable income that was recorded in 2005.

We expect to record an income tax benefit of approximately $623,000 during 2009 due to new legislation within the American Recovery and Reinvestment Act of 2009 relating to net operating loss carrybacks. The cash is expected to come in during the second half of 2009. Aside from the impact of the passage of this congressional act, we do not expect any other income tax benefit relating to carry backs from prior periods. If we are successful commercializing PCT and if we are able to generate operating income, then we may be able to utilize the net operating loss carry-forwards that we generate.

Gain on Sale of Net Assets Related to Discontinued Operations

During 2008, we did not realize any gain, or loss, in connection with discontinued operations. During 2007, we realized a gain on the sale of Source Scientific, LLC of $1,155,973. This gain is comprised of the $378,503 charge that we recorded in the first quarter of 2007 under the provisions of Staff Accounting Bulletin ("SAB") Topic 5E, *"Accounting for Divestiture of a Subsidiary or Other Business Operation* ("SAB Topic 5E") and the gain of $1,534,476, net of income taxes of $218,060, that we recorded during the second quarter of 2007, the period in which we completed the sale.

We recorded this gain in connection with the receipt on May 29, 2007 of $1,780,071 from Mr. Richard W. Henson and Mr. Bruce A. Sargeant, the principals of Source Scientific, LLC, as full payment for their purchase of our remaining interest in that business.

Upon completion of the transaction, we accounted for the total gain on the sale of our ownership interests in Source Scientific, LLC as discontinued operations. The charge that we recorded in 2007, under the provisions of SAB Topic 5E, was reclassified as discontinued operations to reflect this change.

Net Loss

Our net loss in 2008 was $4,908,445 as compared to a net loss of $1,155,661 in 2007. This increase in net loss was due to the fact that our operating losses were not partially offset by realized gains from the sale of securities held, and a gain on sale of assets related to discontinued operations during 2008 and benefit from income taxes, as was the case during 2007.

We expect that our net loss in 2009 will be lower than it was in 2008 due to the significant cost cutting measures that we implemented during 2008.

LIQUIDITY AND FINANCIAL CONDITION

As of December 31, 2008, our working capital position was $1,602,556, the primary components of which were cash and cash equivalents, accounts receivable, inventory, prepaid expenses, and deposits. Our working capital balance was partially offset by accounts payable, accrued employee compensation, and other accrued expenses. As of December 31, 2007, our working capital balance was $5,933,822, 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 R&D activities in Massachusetts and delay of several research and development and marketing programs. We believe that these initiatives significantly decreased our rate of cash utilization, from just under $1 million per quarter to an average of just under $600,000 per quarter during 2009.

On February 12, 2009, we completed a private placement, pursuant to which we sold an aggregate of 156,980 units for a purchase price of $11.50 per unit (the "Purchase Price"), resulting in gross proceeds to us of $1,805,270 (the "Private Placement"). Each 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"); 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"). 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, commencing on June 30, 2009. See Note 11 to our Consolidated Financial Statements for a further description of the Series A Convertible Preferred Stock and Warrants issued in the Private Placement.

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 will be recorded as deferred revenue in the first quarter of 2009.

We believe that because of the cost restructuring measures we have undertaken, together with the $1,805,270 we received in connection with our February 2009 private placement of units, consisting of Series A Convertible Preferred Stock and warrants, we have sufficient cash resources to fund normal operations into the second quarter of 2010. We believe we will need substantial additional capital to fund our current operations beyond the second quarter of 2010. 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.

In June 2008, we engaged Emerging Growth Equities, Ltd. (“EGE”), an investment banking firm, to assist us in raising equity financing to support our research and development activities, commercialization efforts, working capital requirements, and general corporate purposes. The engagement of EGE contemplates a private placement of our securities exempt from the registration requirements under Regulation D promulgated under the Securities Act of 1933, as amended (the "Act") of up to $8,000,000 or more at our discretion (the “Financing”). We have agreed to pay EGE a cash fee of 8% of the gross proceeds from the Financing and to issue EGE warrants to purchase 8% of the number of securities issued in the Financing. The warrants will have a five year term and an exercise price equal to the price of the securities issued in the Financing. However, EGE will receive a lower fee of 3% of the gross proceeds from the Financing and warrants to purchase 3% of the number of securities issued in the Financing with respect to all investors that they do not introduce to us. EGE is also entitled to a retainer of $7,500 per month for three months in 2008.

Either EGE or we may terminate the engagement in general with prior written notice. If during the 12 month period following termination of the engagement we sell securities to any investor introduced to us by EGE, we will pay a declining fee to EGE based upon the number of months elapsed since the date of termination, commencing with a cash fee of 8% of the gross proceeds received from such investors, plus warrants to purchase 8% of the number of securities issued to such investors in the first month following termination of the engagement and with such fees being reduced by 1/12 for each month following such termination. We have also agreed to customary indemnification of EGE in connection with the Financing. Notwithstanding our engagement of EGE, we can provide no assurance that any such equity offerings will occur, or that additional financing will be available to us of acceptable or affordable terms. To date, they have not been successful in raising any funds for us. In October 2008, we revised the terms of our engagement with EGE to eliminate any requirement to pay EGE any fees with respect to any funds we raise without the help of EGE.

Net cash used in continuing operations during 2008 was $4,420,209 as compared to net cash used in continuing operations of $3,896,422 during 2007. The cash used in operations in 2008 included our net loss, an increase in inventory and accounts receivable and a decrease in accrued compensation, partially offset by decreases in deposits, and prepaid expenses. We expect net cash used in continuing operations to decrease in 2009 as we decrease our overall rate of cash utilization.

Net cash used in investing activities during 2008 was $145,819 as compared to net cash provided by investing activities of $1,852,482 in the prior year. The cash generated in 2007 was entirely from the sale of 513,934 shares of Panacos Pharmaceuticals common stock, partially offset by purchases of fixed assets. The cash used in 2008 was related to purchases of fixed assets in connection with Barocyclers under lease. We expect that our investment in fixed assets will decrease in 2009 as we continue to conserve our cash resources.

Net cash generated from financing activities during 2007 was $571,133 and relates to the sale of 126,750 shares of our common stock to 8 non-affiliated investors pursuant to a private placement that we completed in November 2007. We had $9,750 of cash flows from financing activities during 2008.

Net cash provided by discontinued operations during 2007 of $1,562,011 was due to the completion of the divestiture of Source Scientific, LLC. We did not have any cash flows from discontinued operations during 2008.

CONTRACTUAL OBLIGATIONS

The following is a summary of our future contractual obligations as of December 31, 2008:

Contractual Obligations	Total	Less than 1 year	More than 1 year
Lease for Easton operating office (1)	$ 127,135	$ 78,572	$ 48,563
Total Contractual Obligations	$ 127,135	$ 78,572	$ 48,563

(1) In November 2007, we signed an 18-month lease agreement with Easton Norfolk Realty Trust, 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 pay approximately $6,500 per month for the use of these facilities.

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, 2008 and 2007, we incurred approximately $29,553 and $19,596, 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 September 18, 2008, we submitted a purchase order to Source Scientific, LLC, the manufacturer of the Company's PCT Barocycler instrumentation, for 50 Barocycler NEP2320 units. Pursuant to the terms of the purchase order, we placed a deposit with Source Scientific, LLC, of approximately $100,000, representing approximately 25% of the expected total value of the order, upon submission of the purchase order. On November 12, 2008, we placed an additional deposit of approximately $100,000 with Source Scientific, LLC to provide them with funds required to commence manufacturing of the NEP2320 units ordered. The purchase price for the 50 Barocycler NEP2320 units is based upon a fixed bill of materials. We expect that the NEP2320 units will be completed and ready for sale to our customers during the first quarter of 2009. We will be billed for the unpaid purchase price of each unit at the time each unit is completed and ready for sale.

As of December 31, 2008 we had $163,006 on deposit with Source Scientific, LLC for 40 remaining units pursuant to open purchase orders. In addition, in December 2008, we put the remaining $203,758 amount of the purchase order in an escrow account, which funds will be released to pay the remaining balance due when units are completed. As of December 31, 2007 we had $379,000 on deposit with Source Scientific, LLC for 54 remaining units pursuant to these purchase orders.

Indemnification

In connection with our sale of substantially all of the assets of Boston Biomedica, Inc. ("BBI Core Businesses") to SeraCare Life Sciences, Inc. in September 2004, we continue to be exposed to possible indemnification claims in amounts up to the purchase price of approximately $29 million. Our indemnification obligations for breaches of some representations and warranties relating to compliance with environmental laws extend until September 14, 2009, representations and warranties relating to tax matters extend for the applicable statute of limitations period (which varies depending on the nature of claim), and representations and warranties relating to our due organization, subsidiaries, authorization to enter into and perform the transactions contemplated by the Asset Purchase Agreement, and brokers fees, extend indefinitely.

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.

CRITICAL ACCOUNTING POLICIES

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 the Securities and Exchange Commission's ("SEC") Staff Accounting Bulletin ("SAB") No. 104, *Revenue Recognition* ("SAB 104"). 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 collectibility 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 representative to the customer site to install every Barocycler that we sell through our domestic sales force. The installation process includes uncrating and setting up the instrument and conducting introductory user training. Product revenue related to current Barocycler instrumentation is recognized upon the installation of our instrumentation at the customer location. Product revenue related to sales of PCT products 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 and application specific kits is recorded upon shipment through a common carrier. Shipping costs are included in the costs of sales. Any shipping costs billed to customers are recognized as revenue.

In accordance with the Financial Accounting Standards Board ("FASB") Statement of Financial Accounting Standards ("SFAS") No. 13, *"Accounting for 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 rental 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 element arrangements (i.e., products and services). Revenue under multiple element arrangements is recognized in accordance with Emerging Issues Task Force ("EITF") Issue No. 00-21, *"Accounting for Revenue Arrangements with Multiple Deliverables"*. 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 which is generally one to four years.

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, 2008 concluded they were not impaired.

Long-Lived Assets and Deferred Costs

In accordance with SFAS No. 144, *"Accounting for the Impairment or Disposal of Long-Lived Assets"*, 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, 2008 and determined that our long-lived assets were not impaired.

RECENT ACCOUNTING STANDARDS

On January 1, 2008, the Company adopted Statement of Financial Accounting Standards No. 157, "Fair Value Measurements" ("SFAS 157"). SFAS 157 defines fair value, establishes a framework for measuring the fair value of assets and liabilities, and expands disclosure requirements regarding the fair value measurement. SFAS 157 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. FASB Staff Position (FSP) FAS No. 157-2 was issued in February 2008 and deferred the effective date of SFAS 157 for nonfinancial assets and liabilities to fiscal years beginning after November 2008. As such, the Company adopted SFAS 157 as of January 1, 2008 for financial assets and liabilities only. There was no significant effect on the Company's financial statements. The Company does not believe that the adoption of SFAS 157 to non-financial assets and liabilities will significantly effect its financial statements.

In December 2007, the FASB issued SFAS 141 (revised 2007), "Business *Combinations"* ("SFAS 141(R)") and SFAS No. 160, *"Non-controlling Interests in Consolidated Financial Statements – an amendment of ARB No. 51"* ("SFAS 160").

SFAS 141(R) significantly changes the accounting for business combinations. Under SFAS 141(R), 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. SFAS 141(R) further changes the accounting treatment for certain specific items, including:

- Acquisition costs will be generally expensed as incurred;

- Noncontrolling interests (formerly known as "minority interests" – see SFAS 160 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.

SFAS 141(R) includes a substantial number of new disclosure requirements. FAS 141(R) applies prospectively to business combinations for which the acquisition date is on or after January 1, 2009.

In April 2008, the FASB issued FASB Staff Position ("FSP") No. FAS 142-3, Determination of the Useful Life of Intangible Assets ("FSP 142-3"). FSP 142-3 removes the requirement under Statement of Financial Accounting Standards (SFAS) No. 142, Goodwill and Other Intangible Assets to consider whether an intangible asset can be renewed without substantial cost or material modifications to the existing terms and conditions, and replaces it with a requirement 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. FSP 142-3 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 are required to adopt FSP 142-3 effective January 1, 2009 on a prospective basis. The adoption of this statement is not expected to have any impact to our financial statements.

SFAS 160 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. SFAS 160 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. SFAS 160 also includes expanded disclosure requirements regarding the interests of the parent and its non-controlling interest.

SFAS 160 is effective for fiscal years, and interim periods within such year, beginning January 1, 2009. Early adoption of both SFAS 141(R) and SFAS 160 is prohibited. We do not expect that either SFAS 141(R) or SFAS 160 is not expected to have a material affect on our consolidated results of operations and financial condition.

In March 2008, the FASB issued Statement of Financial Accounting Standards No. 161, "Disclosures about Derivative Instruments and Hedging Activities ("SFAS 161"), – an amendment of FASB Statement No. 133", which requires additional disclosures about the objectives of derivative instruments and hedging activities, the method of accounting for such instruments under SFAS No. 133 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. SFAS No. 161 is effective for us beginning January 1, 2009. We believe the adoption of SFAS No. 161 will not have a material impact on our financial statements.

In May 2008, the FASB issued Statement of Financial Accounting Standards No. 162, "The Hierarchy of Generally Accepted Accounting Principles" ("SFAS 162"). SFAS 162 identifies the sources of accounting principles and the framework for selecting the principles to be used in the preparation of financial statements of nongovernmental entities that are presented in conformity with generally accepted accounting principles. SFAS 162 directs the hierarchy to the entity, rather than the independent auditors, as the entity is responsible for selecting accounting principles for financial statements that are presented in conformity with generally accepted accounting principles. SFAS 162 is effective 60 days following SEC approval of the Public Company Accounting Oversight Board amendments to remove the hierarchy of generally accepted accounting principles from the auditing standards. SFAS 162 is not expected to have an impact on our financial condition, results of operations or cash flows.

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

Not Applicable

ITEM 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA.

PRESSURE BIOSCIENCES, INC. AND SUBSIDIARIES
CONSOLIDATED BALANCE SHEETS
DECEMBER 31, 2008 and 2007

	2008	2007
ASSETS		
CURRENT ASSETS		
Cash and cash equivalents	$ 868,208	$ 5,424,486
Restricted cash	50,000	-
Accounts receivable	209,117	118,471
Inventories	571,831	172,548
Deposits	382,236	553,483
Prepaid income taxes	6,600	56,863
Income tax receivable	-	249,541
Prepaid expenses and other current assets	235,111	94,783
Total current assets	2,323,103	6,670,175
PROPERTY AND EQUIPMENT, NET	252,249	257,797
OTHER ASSETS		
Intangible assets, net	279,658	328,290
TOTAL ASSETS	$ 2,855,010	$ 7,256,262
LIABILITIES AND STOCKHOLDERS' EQUITY		
CURRENT LIABILITIES		
Accounts payable	$ 263,486	$ 152,729
Accrued employee compensation	161,374	377,190
Accrued professional fees and other expenses	278,982	191,359
Deferred revenue	16,705	15,075
Total current liabilities	720,547	736,353
LONG TERM LIABILITIES		
Deferred revenue	10,821	6,767
TOTAL LIABILITIES	731,368	743,120
COMMITMENTS AND CONTINGENCIES (Note 9)		
STOCKHOLDERS' EQUITY		
Preferred stock; 1,000,000 shares authorized; 0 outstanding	-	-
Common stock, $.01 par value; 20,000,000 shares authorized; 2,195,283 shares issued and outstanding on December 31, 2008 and 2,192,175 shares issued and outstanding on December 31, 2007	21,953	21,922
Additional paid-in capital	6,803,530	6,284,616
Retained (deficit) earnings	(4,701,841)	206,604
Total stockholders' equity	2,123,642	6,513,142
TOTAL LIABILITIES AND STOCKHOLDERS' EQUITY	$ 2,855,010	$ 7,256,262

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, 2008 AND 2007

	For the Year Ended December 31,	
	2008	**2007**
REVENUE:		
PCT Products, services, other	$ 655,252	$ 399,787
Grant revenue	197,011	246,083
Total revenue	852,263	645,870
COSTS AND EXPENSES:		
Cost of PCT products and services	401,017	209,050
Research and development	1,810,590	2,022,730
Selling and marketing	1,686,590	1,386,519
General and administrative	1,920,465	2,174,739
Total operating costs and expenses	5,818,662	5,793,038
Operating loss from continuing operations	(4,966,399)	(5,147,168)
OTHER INCOME:		
Realized gain on securities available for sale	-	2,028,720
Interest income	57,954	286,600
Total other income	57,954	2,315,320
Loss from continuing operations before income taxes	(4,908,445)	(2,831,848)
Income tax benefit from continuing operations	-	520,214
Loss from continuing operations	(4,908,445)	(2,311,634)
DISCONTINUED OPREATIONS		
Gain on sale of net assets related to discontinued operations (net of income tax of $218,060)	-	1,155,661
Net loss	$ (4,908,445)	$ (1,155,661)
Loss per share from continuing operations - basic and diluted	$ (2.24)	$ (1.11)
Income per share from discontinued operations - basic and diluted	-	0.55
Net loss per share - basic and diluted	$ (2.24)	$ (0.56)
Weighted average number of shares used to calculate (loss) income per share - basic and diluted	2,194,093	2,078,657

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

PRESSURE BIOSCIENCES, INC. AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF COMPREHENSIVE LOSS
FOR THE YEARS ENDED DECEMBER 31, 2008 AND 2007

	For the Year Ended December 31,	
	2008	**2007**
Net loss	$ (4,908,445)	$ (1,155,661)
Holding gain	-	(27,479)
Reclassification of unrealized gain to realized gain on securities during the period	-	(2,028,720)
Unrealized loss on marketable securities	-	(2,056,199)
Income tax benefit related to items of other comprehensive loss	-	671,323
Total other comprehensive loss, net of taxes	-	(1,384,876)
Comprehensive loss	$ (4,908,445)	$ (2,540,537)

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, 2008 AND 2007

	Common Stock		Additional	Accumulated Other		Total
	Shares	$.01 Par Value	Paid-In Capital	Comprehensive Income	Retained Earnings	Stockholders' Equity
BALANCE, December 31, 2006	2,065,425	$ 20,654	$ 5,347,641	$ 1,384,876	$ 1,362,265	$ 8,115,436
Issuance costs relating to private placement		-	(62,617)			(62,617)
Stock issued in private placement	126,750	1,268	632,482			633,750
Stock-based compensation			367,110			367,110
Net loss					(1,155,661)	(1,155,661)
Unrealized loss on investments (net of tax)				(1,384,876)		(1,384,876)
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

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, 2008 AND 2007

	For the Year Ended December 31,	
	2008	**2007**
CASH FLOWS FROM OPERATING ACTIVITIES:		
Net loss	$ (4,908,445)	$ (1,155,661)
Less gain on sale of discontinued operations	-	(1,155,973)
Loss from continuing operations	$ (4,908,445)	$ (2,311,634)
Adjustments to reconcile net loss to net cash used in operating activities:		
Depreciation and amortization	199,999	179,446
Stock-based compensation expense	509,195	367,110
Realized gain on sale of marketable securities	-	(2,028,720)
Changes in operating assets and liabilities:		
Restricted cash	(50,000)	-
Accounts receivable	(90,646)	(80,976)
Inventories	(399,283)	(152,890)
Deposits	171,247	(378,183)
Accounts payable	110,757	(21,560)
Accrued employee compensation	(215,816)	134,693
Deferred revenue and other accrued expenses	93,307	18,746
Prepaid expenses and other current assets and other current liabilities	159,476	377,546
Net cash used in operating activities from continuing operations	(4,420,209)	(3,896,422)
CASH FLOWS FROM INVESTING ACTIVITIES:		
Additions to property and equipment	(145,819)	(180,915)
Proceeds from sale of marketable securities	-	2,033,397
Net cash (used in) provided by investing activities from continuing operations	(145,819)	1,852,482
CASH FLOWS FROM FINANCING ACTIVITIES:		
Proceeds from the issuance of common stock	9,750	571,133
Net cash provided by financing activities from continuing operations	9,750	571,133
CASH FLOWS FROM DISCONTINUED OPERATIONS:		
Operating cash flows		(218,060)
Cash flows from investing activities	-	1,780,071
Net cash provided by discontinued operations	-	1,562,011
CHANGE IN CASH AND CASH EQUIVALENTS:	(4,556,278)	89,204
Cash and cash equivalents, beginning of period	5,424,486	5,335,282
Cash and cash equivalents, end of period	$ 868,208	$ 5,424,486
SUPPLEMENTAL INFORMATION:		
Income taxes paid	$ 6,177	$ 20,800
Income taxes received	301,060	723,801

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, 2008

(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. As of December 31, 2008, we had a total cash balance of approximately $918,000. 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 our R&D facility in Rockville, MD, a consolidation of our R&D activities in Massachusetts, and delay of several research and development and marketing programs. We believe that these initiatives will significantly decrease our rate of cash utilization, from just under $1 million per quarter in 2008 to an average of just under $600,000 per quarter during 2009. We also believe that these actions, taken together with the proceeds we received from our $1.8 million equity financing completed in February 2009, will enable us to extend our cash resources into the second quarter of 2010.

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 "Private Placement"). See Note 11 to our Consolidated Financial Statement for a further description of the Series A Convertible Preferred Stock and Warrants issued in the Private Placement.

We believe we have sufficient cash resources to fund normal operations into the second quarter of 2010 due to the restructuring measures we have undertaken and the $1,805,270 we received in connection with our Private Placement. We believe we will need substantial additional capital to fund our current operations beyond the second quarter of 2010. 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

We recognize revenue in accordance with the Securities and Exchange Commission's ("SEC") Staff Accounting Bulletin ("SAB") No. 104, *Revenue Recognition* ("SAB 104"). 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 collectibility 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 representative to the customer site to install every Barocycler that we sell through our domestic sales force. The installation process includes uncrating and setting up the instrument and conducting introductory user training. Product revenue related to current Barocycler instrumentation is recognized upon the installation of our instrumentation at the customer location. Product revenue related to sales of PCT products 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 and application specific kits is recorded upon shipment through a common carrier. Shipping costs are included in the costs of sales. Any shipping costs billed to customers are recognized as revenue.

In accordance with the Financial Accounting Standards Board ("FASB") Statement of Financial Accounting Standards ("SFAS") No. 13, *"Accounting for 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 rental 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 element arrangements (i.e., products and services). Revenue under multiple element arrangements is recognized in accordance with Emerging Issues Task Force ("EITF") Issue No. 00-21, *"Accounting for Revenue Arrangements with Multiple Deliverables"*. 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 which is generally one to four years.

(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, 2008, we held $50,000 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 or market. The composition of inventory as of December 31, 2008 and 2007 is as follows:

	December 31,	
	2008	2007
Raw materials	$ 83,451	$ 28,115
Finished goods	488,380	144,433
Total	$571,831	$172,548

(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, 2008. Based on this analysis, we have concluded that no impairment of intangible assets had occurred.

(ix) Long-Lived Assets and Deferred Costs

In accordance with the Financial Accounting Standards Board ("FASB") Statements of Financial Accounting Standards ("SFAS") No. 144, *"Accounting for the Impairment or Disposal of Long-Lived Assets"*, 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. 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 test at December 31, 2008 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, 2008 and 2007:

	For the Year Ended December 31,			
	2008		2007	
Top Five Customers	52	%	66	%
Federal Agencies	33	%	55	%

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, 2008 and 2007:

	December 31,			
	2008		2007	
Top Five Customers	81	%	94	%
Federal Agencies	1	%	41	%

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, stock options are considered common stock equivalents in periods in which they have a dilutive effect. Stock options that are anti-dilutive are excluded from this calculation. The following table illustrates our computation of loss per share for the years ended December 31, 2008 and 2007.

	For the Year Ended December 31,	
	2008	2007
Numerator:		
Loss from continuing operations - basic and diluted	$ (4,908,445)	$ (2,311,634)
Denominator:		
Weighted average shares outstanding - basic and diluted	2,194,093	2,078,657
Loss per share from continuing operations - basic and diluted	$ (2.24)	$ (1.11)
Shares excluded from calculations	82,659	211,796

(xii) Accounting for Income Taxes

Effective January 1, 2007, we adopted the provisions of FASB Interpretation No. 48, "*Accounting for Uncertainty in Income Taxes - an Interpretation of FASB Statement No. 109"* (FIN 48). FIN 48 clarifies the accounting for uncertainty in income taxes recognized in an enterprise's financial statements in accordance with SFAS No. 109, *"Accounting for Income Taxes"*. This interpretation prescribes a recognition threshold and measurement attribute for the financial statement recognition and measurement of a tax position taken or expected to be taken in a tax return. FIN 48 also provides guidance on de-recognition of tax benefits, classification on the balance sheet, interest and penalties, accounting in interim periods, disclosure, and transition. We adopted FIN 48 effective January 1, 2007. FIN 48 requires significant judgment in determining what constitutes an individual tax position as well as assessing the outcome of each tax position. Changes in judgment as to recognition or measurement of tax positions can materially affect the estimate of the effective tax rate and consequently, affect our operating results. Prior to the adoption of FIN 48, we recorded liabilities related to uncertain tax positions based upon Statement of Financial Accounting Standards No. 5, "Accounting for Contingencies".

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 asset 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.

(xiii) Accounting for Stock-Based Compensation

On January 1, 2006, we adopted SFAS No. 123 (revised 2004), *"Share-Based Payment"* , or SFAS 123R, and its related implementation guidance as promulgated by both the FASB, and the SEC SAB 107, associated with the accounting for stock-based compensation arrangements of our employees and directors. These pronouncements require that equity-based compensation cost be measured at the grant date (based upon an estimate of the fair value of the compensation granted) and recorded to expense over the requisite service period, which generally is the vesting period. We adopted SFAS 123R using the modified prospective method in the first quarter of 2006.

We estimate the fair value of equity-based compensation utilizing the Black-Scholes option pricing model. This model requires the input of several factors such as the expected option term, expected volatility of our stock price over the expected term, expected risk-free interest rate over the expected option term, expected dividend yield rate over the expected option term, and an estimate of expected forfeiture rates, and is subject to various assumptions. We believe this valuation methodology is appropriate for estimating the fair value of stock options granted to employees and directors which are subject to SFAS 123R requirements. These amounts are estimates and thus may not be reflective of actual future results, nor amounts ultimately realized by recipients of these grants. These amounts, and the amounts applicable to future quarters, are also subject to future quarterly adjustments based upon a variety of factors. 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, 2008 and 2007:

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 $509,195 and $367,110 for the years ended December 31, 2008 and 2007, 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,	
	2008	2007
Cost of PCT products and services	$ -	$ 4,746
Research and development	162,421	141,115
Selling and marketing	93,947	70,770
General and administrative	252,827	150,479
Total stock-based compensation expense	$ 509,195	$ 367,110

The provisions of SFAS 123R require that we make an estimate of our forfeiture rate and adjust the expense that we recognize to reflect the estimated number of stock options that will go unexercised. Our historical forfeiture rate has been approximately 5%. We used this historical rate as our assumption in calculating future stock-based compensation expense.

During the years ended December 31, 2008 and 2007, the total fair value of stock options awarded was $403,711 and $590,912, respectively.

As of December 31, 2008, the total estimated fair value of unvested stock options to be amortized over their remaining vesting period was $319,632. The non-cash, stock based compensation expense associated with the vesting of these options will be $210,166 in 2009, $84,860 in 2010 and $24,606 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

On January 1, 2008, the Company adopted SFAS 157, *"Fair Value Measurements"*. SFAS No. 157 establishes a formal framework for measuring fair value under GAAP and expands on disclosure of fair value measurements. Although SFAS No. 157 applies to and amends the provisions of existing FASB and AICPA pronouncements, it does not, of itself, require any new fair value measurements, nor does it establish valuation standards. SFAS No. 157 applies to all other accounting pronouncements requiring or permitting fair value measurements, except for: SFAS No. 123R, *"Share-Based Payment"* and related pronouncements, the practicability exceptions to fair value determinations allowed by various other authoritative pronouncements, and AICPA Statements of Position 97-2 and 98-9 that deal with software revenue recognition. This statement is effective for financial statements issued for fiscal years beginning after November 15, 2007, and interim periods within those fiscal years. We do not expect the adoption of SFAS 157 to have a material impact on our consolidated financial statements.

In December 2007, the FASB issued SFAS 141 (revised 2007), *"Business Combinations"* ("SFAS 141(R)") and SFAS No. 160, *"Non-controlling Interests in Consolidated Financial Statements – an amendment of ARB No. 51"* ("SFAS 160").

SFAS 141(R) significantly changes the accounting for business combinations. Under SFAS 141(R), 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. SFAS 141(R) further changes the accounting treatment for certain specific items, including:

- Acquisition costs will be generally expensed as incurred;
- Noncontrolling interests (formerly known as "minority interests" – see SFAS 160 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.

SFAS 141(R) includes a substantial number of new disclosure requirements. FAS 141(R) applies prospectively to business combinations for which the acquisition date is on or after January 1, 2009.

In April 2008, the Financial Accounting Standards Board (FASB) issued FASB Staff Position (FSP) No. FAS 142-3, Determination of the Useful Life of Intangible Assets (FSP 142-3). FSP 142-3 removes the requirement under Statement of Financial Accounting Standards (SFAS) No. 142, Goodwill and Other Intangible Assets to consider whether an intangible asset can be renewed without substantial cost or material modifications to the existing terms and conditions, and replaces it with a requirement 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. FSP 142-3 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 are required to adopt FSP 142-3 effective January 1, 2009 on a prospective basis. The adoption of this statement is not expected to have any impact to our financial statements.

SFAS 160 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. SFAS 160 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. SFAS 160 also includes expanded disclosure requirements regarding the interests of the parent and its non-controlling interest.

SFAS 160 is effective for fiscal years, and interim periods within such year, beginning January 1, 2009. Early adoption of both SFAS 141(R) and SFAS 160 is prohibited. We do not expect that either SFAS 141(R) or SFAS 160 is not expected to have a material affect on our consolidated results of operations and financial condition.

In March 2008, the FASB issued SFAS No. 161, Disclosures about Derivative Instruments and Hedging Activities – an amendment of FASB Statement No. 133, which requires additional disclosures about the objectives of derivative instruments and hedging activities, the method of accounting for such instruments under SFAS No. 133 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. SFAS No. 161 is effective for us beginning January 1, 2009. We believe the adoption of SFAS No. 161 will not have a material impact on our financial statements.

In May 2008, the FASB issued Statement of Financial Accounting Standards No. 162, "The Hierarchy of Generally Accepted Accounting Principles" ("SFAS 162"). SFAS 162 identifies the sources of accounting principles and the framework for selecting the principles to be used in the preparation of financial statements of nongovernmental entities that are presented in conformity with generally accepted accounting principles. SFAS 162 directs the hierarchy to the entity, rather than the independent auditors, as the entity is responsible for selecting accounting principles for financial statements that are presented in conformity with generally accepted accounting principles. SFAS 162 is effective 60 days following SEC approval of the Public Company Accounting Oversight Board amendments to remove the hierarchy of generally accepted accounting principles from the auditing standards. SFAS 162 is not expected to have an impact on our financial condition, results of operations or cash flows.

(xvii) Investment in Marketable Securities

As of December 31, 2008 and 2007, we held no shares of common stock of Panacos Pharmaceuticals, Inc. During 2007, we completed the liquidation of our investment in Panacos Pharmaceuticals and realized a gain on securities sold of $2,028,720.

(xviii) Advertising

Advertising costs are expensed as incurred. During 2008 and 2007 we incurred $68,716 and $30,572, respectively in advertising expense.

(xvix) Rent Expense

Rental costs are expensed as incurred. During 2008 and 2007 we incurred $148,982 and $85,555, respectively in rent expense for the use of our corporate office and research and development facilities.

(3) Discontinued Operations

Source Scientific, LLC

In June 2004, we transferred certain assets and liabilities of our PBI Source Scientific, Inc. subsidiary to a newly formed limited liability company known as Source Scientific, LLC. At the time of the transfer, we owned 100% of the ownership interests of Source Scientific, LLC. We subsequently sold 70% of our ownership interests of Source Scientific, LLC to Mr. Richard Henson and Mr. Bruce A. Sargeant pursuant to a purchase agreement (the "Source Scientific Agreement"). As a result of the sale of 70% of our ownership interests, Mr. Henson and Mr. Sargeant each owned 35% and we owned the remaining 30% of Source Scientific, LLC. Under the Source Scientific Agreement, we received notes receivable in the aggregate amount of $900,000 (the "Notes") payable at the end of three years bearing 8% interest. The Source Scientific Agreement offered Mr. Henson and Mr. Sargeant the option ("the Option") to purchase our 30% ownership interest in Source Scientific, LLC until May 31, 2007, at an escalating premium (10-50%) over our initial ownership value, provided that they first paid off the Notes in their entirety.

On May 29, 2007, we executed a consent agreement with Mr. Henson and Mr. Sargeant, Source Scientific LLC, and BIT Analytical Instruments, Inc. ("the Consent Agreement") pursuant to which the Notes were repaid in full in the aggregate amount of $1,201,534 in principal and interest, and Mr. Henson and Mr. Sargeant exercised their Option through BIT Analytical Instruments, Inc. to purchase our remaining 30% ownership interest in Source Scientific, LLC for an aggregate price of $578,573. As a result of these transactions, we no longer retain any direct or indirect ownership interest in Source Scientific, LLC.

The execution of these transactions, and receipt of the funds, triggered our recognition of a gain on the sale of assets related to discontinued operations of $1,534,476, net of income taxes of $218,060, during the twelve months ended December 31, 2007. There was no such gain during 2008.

(4) Property and Equipment

Property and equipment as of December 31, 2008 and 2007 consisted of the following components:

	December 31,	
	2008	2007
Laboratory and manufacturing equipment	$ 127,355	$ 59,361
Office equipment	129,101	105,906
Leasehold improvements	8,117	-
PCT collaboration, demonstration and leased systems	398,352	351,838
Total property and equipment	662,925	517,105
Less accumulated depreciation	(410,676)	(259,308)
Net book value	$ 252,249	$ 257,797

Depreciation expense for the years ended December 31, 2008 and 2007 was $169,359 and $130,814, respectively.

(5) Intangible Assets

Intangible assets as of December 31, 2008 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, 2008. We have concluded that there is no impairment of intangible assets. Intangible assets at December 31, 2008 and 2007 consisted of the following:

	December 31,	
	2008	2007
PCT Patents	$ 778,156	$ 778,156
Less accumulated amortization	(498,498)	(449,866)
Net book value	$ 279,658	$ 328,290

Amortization expense for each of the years ended December 31, 2008 and 2007 was $48,632.

(6) 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 2008 and 2007 we contributed $19,238 and $15,708, respectively, in the form of discretionary company matching contributions.

(7) Income Taxes

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

	For the Year Ended December 31,	
	2008	2007
Current benefit: federal	$ -	$ 481,394
Current benefit: state	-	38,820
Total current benefit	-	520,214
Deferred provision: federal	-	-
Deferred provision: state	-	-
Total deferred provision	-	-
Total benefit for income taxes from continuing operations	$ -	$ 520,214

Significant items making up the deferred tax assets and deferred tax liabilities as of December 31, 2008 and 2007 are as follows:

	December 31,	
Current deferred taxes:	2008	2007
Other accruals	$ 83,467	$ 82,748
Less: valuation allowance	(83,467)	(82,748)
Total current deferred tax assets (liabilities)	$ -	$ -
Long term deferred taxes:		
Accelerated tax depreciation	$ 13,672	$ 373
Non-cash, stock-based compensation, NQ	276,152	194,300
Goodwill and intangibles	(112,618)	(132,203)
Operating loss carryforwards and tax credits	4,216,958	1,648,542
Less: valuation allowance	(4,394,164)	(1,711,012)
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 2008 and 2007 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, 2008. We expect to release 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 approximately $6,735,761 as of December 31, 2008. 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 2027. We had net operating loss carry-forwards for state income tax purposes of $20,249,305 at December 31, 2008. These net operating loss carry-forwards expire at various dates from 2010 through 2025.

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

	For the Year Ended December 31,	
	2008	2007
Federal tax benefit rate	34%	34%
Permanent differences	-2%	5%
State tax expense	0%	3%
Valuation allowance	-32%	-21%
Effective income tax benefit rate from continuing operations	0%	21%

(9) 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 lease approximately 5,500 square feet of office space, with an option for an additional 12 months. 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, 2008 and 2007, we paid BioMolecular Assays, Inc. $29,553 and $19,596 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, in-line 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 $10,000 and we are obligated to make a second non-refundable payment in the amount of $25,000 in June 2009. In addition to royalty payments of 3.8% of 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 ranging from $5,000 to $25,000 per year and we are required to have our first commercial sale of the licensed products within one year following the issuance of the patent covered by the licensed technology. The following is a schedule of future minimum royalty payments required under the Battelle licensing agreement.

Calendar Year	Minimum Royalties $U.S. per Calender Year
2008	$ -
2009	$ 5,000
2010	$ 5,000
2011	$ 7,500
2012	$ 10,000
2013	$ 12,500
2014	$ 15,000
2015	$ 17,500
2016	$ 20,000
2017	$ 22,500
2018 and each calendar year thereafter during the term of this agreement	$ 25,000

Purchase Commitments

On September 18, 2008, we submitted a purchase order to Source Scientific, LLC, the manufacturer of the Company's PCT Barocycler instrumentation, for 50 Barocycler NEP2320 units. Pursuant to the terms of the purchase order, we placed a deposit with Source Scientific, LLC, of approximately $100,000, representing approximately 25% of the expected total value of the order, upon submission of the purchase order. On November 12, 2008, we placed an additional deposit of approximately $100,000 with Source Scientific, LLC to provide them with funds required to commence manufacturing of the NEP2320 units ordered. The purchase price for the 50 Barocycler NEP2320 units is based upon a fixed bill of materials. We expect that the NEP2320 units will be completed and ready for sale to our customers during the first quarter of 2009. We will be billed for the unpaid purchase price of each unit at the time each unit is completed and ready for sale.

As of December 31, 2008 we had $163,006 on deposit with Source Scientific, LLC for 40 remaining units pursuant to open purchase orders. In addition, in December 2008, we put the remaining $203,758 amount of the purchase order in an escrow account, which funds will be released to pay the remaining balance due when units are completed. The amount held in escrow is included as a component within the line item Deposits on the Balance Sheet. As of December 31, 2007 we had $379,000 on deposit with Source Scientific, LLC for 54 remaining units pursuant to these purchase orders. These units have since been completed and are either in inventory, sold or used actively.

Indemnification

In connection with our sale of substantially all of the assets of Boston Biomedica, Inc., ("BBI Core Businesses") to SeraCare Life Sciences, Inc. in September 2004, we continue to be exposed to possible indemnification claims in amounts up to the purchase price of approximately $29 million. Our indemnification obligations for breaches of some representations and warranties relating to compliance with environmental laws extend until September 14, 2009, representations and warranties relating to tax matters extend for the applicable statute of limitations period (which varies depending on the nature of claim), and representations and warranties relating to our due organization, subsidiaries, authorization to enter into and perform the transactions contemplated by the Asset Purchase Agreement and brokers fees, extend indefinitely.

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.

(10) 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. See Subsequent Event in Note 11 to these Consolidated Financial Statements.

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 our 2005 Equity Incentive 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, 2008, options to acquire 973,499 shares are outstanding under the Plan.

We also have 244,000 stock options outstanding under our 1999 Non-qualified Plan and 5,000 stock options outstanding under our 1994 Incentive Stock Option Plan. As of December 31, 2008, the shares under the 1999 Non-qualified Plan have been fully issued. The 1994 Incentive Stock Option Plan expired; therefore, there are no shares available for future grants under this plan.

The following tables summarize information concerning options outstanding and exercisable:

	Shares	Weighted Average price per share	Exercisable	Weighted Average price per share
Balance outstanding, 12/31/2006	945,500	$ 3.32	524,000	$ 3.17
Granted	200,000	4.09		
Exercised	-			
Expired	-			
Forfeited	(25,000)	3.58		
Balance outstanding, 12/31/2007	1,120,500	$ 3.45	691,166	$ 3.23
Granted	231,500	2.94		
Exercised	(3,000)	3.25		
Expired	(1,500)	3.25		
Forfeited	(125,001)	4.01		
Balance outstanding, 12/31/2008	1,222,499	$ 3.30	932,334	$ 3.35

	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
$ 1.07 - $ 2.70	219,000	3.2	$ 2.21	159,000	3.7	$ 2.64
2.71 - 3.08	397,500	6.2	2.93	343,000	5.7	2.96
3.09 - 3.95	351,333	7.4	3.70	244,000	7.3	3.71
3.96 - 5.93	254,666	7.9	4.26	186,334	7.6	4.21
$ 1.07 - $ 5.93	1,222,499	6.4	$ 3.30	932,334	6.1	$ 3.35

The aggregate intrinsic value of options outstanding and exercisable as of December 31, 2008 and 2007 is illustrated in the table below:

	December 31,	
	2008	2007
Stock options, outstanding	$ -	$ 2,162,565
Stock options, exercisable	-	1,486,007

Sale of Common Stock

On November 21, 2007, we completed a private placement, pursuant to which we sold an aggregate of 126,750 shares of common stock, $0.01 par value (the "Shares"), for a purchase price of $5.00 per share, resulting in gross proceeds to us of approximately $633,750 (the "Private Placement"). The Shares were issued and sold to a total of 8 accredited investors pursuant to a Securities Purchase Agreement entered into as of November 21, 2007 (the "Securities Purchase Agreement").

The Shares were issued in the Private Placement without registration under the Securities Act of 1933, as amended (the "Securities Act"), in reliance upon the exemption from registration set forth in Rule 506 of Regulation D ("Regulation D") promulgated under the Securities Act. We based such reliance upon representations made by each purchaser of Shares, including, but not limited to, representations as to the purchaser's status as an "accredited investor" (as defined in Rule 501(a) under Regulation D) and the purchaser's investment intent. The Shares 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 Shares may not be 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.

In connection with the Private Placement, we agreed to prepare and file a Registration Statement on Form S-3 (the "Registration Statement") covering the resale of the Shares purchased in the Private Placement, and to use its 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.

(11) Subsequent Events

Private Placement

On February 12, 2009, we completed a private placement, pursuant to which we sold an aggregate of 156,980 units for a purchase price of $11.50 per unit (the "Purchase Price"), resulting in gross proceeds to us of $1,805,270 (the "Private Placement"). Each 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"); 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.

Series A Convertible Preferred Stock

Each share of Series A Convertible Preferred Stock will receive a cumulative dividend at the rate of 5% per annum of the Purchase Price, payable semi-annually on June 30 and December 31, commencing on June 30, 2009 (with the first payment to be 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 the our stockholders before any payment shall be paid to the holders of common stock, an amount per share equal to the Purchase Price, plus accrued and unpaid dividends.

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 "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 Conversion Ratio then in effect: (i) if, after 12 months from the closing of the 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. Unless waived under certain circumstances by the holder of the Series A Preferred Stock, such holder's Series A Convertible Preferred Stock may not be converted if upon such conversion the holder's beneficial ownership would exceed certain thresholds.

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 Purchase Price, plus all accrued and unpaid dividends thereon. The redemption price may be paid in two annual installments.

Warrants

The warrants have the following exercise prices and terms: (i) the 15 Month Common Stock Warrants have an exercise price equal to $1.25 per share, with a term expiring 15 months after the date of closing; (ii) the 15 Month Preferred Stock Warrants have an exercise price equal to $12.50 per share, with a term expiring 15 months after the date of closing; and (iii) the 30 Month Common Stock Warrants have an exercise price equal to $2.00 per share, with a term expiring 30 months after the date of closing. Unless waived under certain circumstances by the holder of the warrant, such holder's warrant may not be exercised if upon such exercise the holder's beneficial ownership would exceed certain thresholds.

The 15 Month Common Stock Warrants permit the holder to conduct a "cashless exercise" at any time after six months from the date of issuance of the warrant if (i) there is no effective registration statement for the resale of the underlying common stock at the time of exercise and (ii) the underlying shares of common stock may not be resold without restriction under Rule 144 of the Securities Act of 1933, as amended (the "Securities Act"). Each of the 15 Month Preferred Stock Warrants, 15 Month Common Stock Warrants and the 30 Month Common Stock Warrants also permit the holder to conduct a "cashless exercise" at any time after the holder of the warrant becomes 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 the 15 Month Common Stock Warrants and the 15 Month 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.

Net Operating Loss Refund

We expect to file a Form 1139, Corporation Application for Tentative Refund, to request a refund of federal taxes paid for the 2004 calendar year. The five-year carry back of 2008 net operating losses ("NOLs") for eligible small businesses is available under the American Recovery and Reinvestment Act ("ARRA") of 2009, passed by Congress and signed into law by President Obama in February 2009. The Company expects to record an income tax receivable of approximately $623,000 in the first quarter of 2009 due to the change in the tax law.

Stockholders' Equity as of February 28, 2009

On March 30, 2009, we announced that after the February 12, 2009 closing of the $1.8 million private placement and, assuming the filing of a tax refund return for approximately $623,000, our unaudited total stockholders' equity as of February 28, 2009 exceeded $3.5 million.

Report of Independent Registered Public Accounting Firm

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

We have audited the consolidated balance sheets of Pressure BioSciences, Inc. and Subsidiaries (the "Company") as of December 31, 2008 and 2007, and the related consolidated statements of operations, comprehensive income (loss), 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 Subsidiaries as of December 31, 2008 and 2007, 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, 2009

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 the reports we file under the Exchange Act is recorded, processed, summarized and reported, within the time periods specified in the SEC's rules and forms, and that such information is accumulated and communicated to our management, including our Principal Executive Officer and 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 necessarily was required to apply its judgment in evaluating the cost-benefit relationship of possible controls and procedures.

As of December 31, 2008, 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 Exchange Act. Based upon that evaluation, our Principal Executive Officer and Principal Financial Officer concluded that our disclosure controls and procedures are effective in enabling us to record, process, summarize, and report information required to be included in our periodic SEC filings within the required time period.

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, 2008. 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, 2008, 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 2008 that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

ITEM 9B. OTHER INFORMATION.

None.

PART III

ITEM 10. DIRECTORS, EXECUTIVE OFFICERS AND CORPORATE GOVERNANCE.

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 charged 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, 2008 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	1,222,499	$ 3.30	526,501

Includes the following plans: 1994 ISO Stock Option Plan, 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**
3.3	Amended and Restated Bylaws of the Company	A-3.2**
3.4	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	O-4.1**
4.8	Form of 15 Month Common Stock Warrant	O-4.2**
4.9	Form of 15 Month Preferred Stock Warrant	O-4.3**
4.10	Form of 30 Month Preferred Stock Warrant	O-4.4**
4.11	Registration Rights Agreement dated February 12, 2009 between the Company and the purchasers named therein	O-4.5**
10.1	1994 Employee Stock Option Plan*	A-10.16**
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*	P-10.1**
10.6	Description of Compensation for Certain Directors*	Q-10.7**
10.7	Severance Agreement between the registrant and Richard T. Schumacher*	Q-10.6**
10.8	Form of Severance Agreement including list of officers to whom provided*	Q-10.7**
10.9	LLC Membership Interest Purchase Agreement dated June 8, 2004 by and between BBI Source Scientific Inc., Boston Biomedica, Inc., and Source Scientific, LLC.	J-2.1**
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.	K-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.	Q-10.11**
10.13	Amendment to Technology Transfer and Patent Assignment Agreement dated October 8, 1998 between Bioseq, Inc. and BioMolecular Assays, Inc.	Q-10.12**
10.14	Nonexclusive License Agreement dated September 30, 1998 between Bioseq, Inc. and BioMolecular Assays, Inc.	Q-10.13**
10.16	Agreement for Research Services dated February 1, 2006 by and between the registrant and the University of New Hampshire	M-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

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 June 16, 2004.
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 June 1, 2007.
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 May 11, 2005.
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 February 7, 2006.
N	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 December 29, 2006.
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 February 18, 2009.
P	We previously filed this exhibit with the referenced exhibit number as an exhibit to the registrant's Current Report on Form 8-K filed with the Commission on September 29, 2008.
Q	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.

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, 2009

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, 2009
/s/ R. Wayne Fritzsche R. Wayne Fritzsche	Director and Chairman of the Board	March 31, 2009
/s/ J. Donald Payne J. Donald Payne	Director	March 31, 2009
/s/ Calvin A. Saravis, Ph.D. Calvin A. Saravis, Ph. D.	Director	March 31, 2009
/s/ P. Thomas Vogel P. Thomas Vogel	Director	March 31, 2009

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, 2009, 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, 2008.

/s/ UHY LLP

Boston, Massachusetts
March 31, 2009

EXHIBIT 31.1

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

I, Richard T. Schumacher, President and Chief Executive Officer (Principal Executive Officer) of Pressure BioSciences, Inc., 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, 2009

/s/ Richard T. Schumacher
Name: Richard T. Schumacher
Title: President 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, Principal Financial Officer of Pressure BioSciences, Inc., 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)) 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 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, 2009

/s/ Richard T. Schumacher
Name: Richard T. Schumacher
Title: President 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, 2008 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, 2009

/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, 2008 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, 2009

/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.