

Pressure BioSciences, Inc. Announces the Receipt of Over \$1.1 Million from the Initial Tranche of a Private Placement

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South Easton, MA, November 18, 2009 – Pressure BioSciences, Inc. (NASDAQ: PBIO) (“PBI” or the “Company”) today announced that it has closed on the sale of approximately \$1.16 million of units in the first tranche of a \$2.5 million private placement. Each unit was priced at \$18.80 and consists of (i) one share of non-voting Series B Convertible Preferred Stock, and (ii) one warrant to purchase a share of Series B Convertible Preferred Stock at an exercise price of \$23.80 per share, expiring on August 11, 2011. Each share of non-voting Series B Convertible Preferred Stock is convertible into ten shares of the Company’s common stock. The closing bid of PBI common stock as reported on the NASDAQ Capital Market as of the close of business on Tuesday, November 17, 2009 was \$1.43 per common share.

The units were issued in a 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 promulgated under the Securities Act. In connection with the private placement, the Company is paying a cash finder’s fee plus warrants to purchase shares of Series B Convertible Preferred Stock, expiring August 11, 2012.

Mr. R. Wayne Fritzsche, Chairman of the PBI Board of Directors commented: “The funds from this financing will support on-going efforts to increase sales of our Pressure Cycling Technology (“PCT”) products. To that end, we plan to add one full-time sales director, one full-time applications scientist, and several part-time support personnel. We also plan to finish the development of PCT-dependent consumables and instrumentation for the mass spectrometry, forensics, and biomarker discovery sample preparation markets.”

Continued on Page 2

Scientists from the
University of New Hampshire
and
Harvard University
Presented a Poster Entitled

Pressure enhanced processes (PrEP) enabling high quality two-dimensional gel electrophoresis of Frankia mycelia and vesicle structures

at the
2009 American Institute of Chemical Engineers
(AIChE) Annual Meeting



The PCT Shredder A Powerful and Inexpensive Stand-Alone Sample Preparation Device



Video/Data

- Gentle, mechanical homogenization system
- Safely and rapidly break apart tough, fibrous, and other difficult samples, such as:
 - Plant and animal tissue
 - Arthropod exoskeletons
 - Cuticle of nematodes
- Increased yields of high quality nucleic acids, proteins, lipids, and small molecules
- Single-use processing container
 - Inexpensive
 - Self-contained
 - No sample transfer required
- Excellent for collection, storage, transport, and processing
- Use less aggressive buffers & reagents

Patent Pending

See The PCT Shredder in Action: www.pctshredder.com

CALENDAR OF EVENTS

<u>PLANT AND ANIMAL GENOMIC PAG XVIII</u>	<u>INTERNATIONAL WORKSHOP ON ENVIRONMENTAL PROTEOMICS</u>
San Diego, CA	Keystone, CO
January 9-13, 2010	January 18-22, 2010

Pressure BioSciences, Inc. Announces the Receipt of Over \$1.1 Million from the Initial Tranche of a Private Placement: Continued

This press release is not an offer to sell or a solicitation of offers to buy units, Series B Convertible Preferred Stock, or warrants. The units, shares of Series B Convertible Preferred Stock, and warrants have not been registered under the Securities Act and may not be sold in the United States absent registration under the Securities Act or an applicable exemption from registration requirements.

About Pressure BioSciences, Inc.

Pressure BioSciences, Inc. (PBI) is a publicly traded company focused on the development of a novel, enabling 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. PBI currently holds 13 US and 6 foreign patents covering multiple applications of PCT in the life sciences field, including genomic and proteomic sample preparation, pathogen inactivation, the control of chemical (primarily enzymatic) reactions, immunodiagnostics, and protein purification. PBI currently focuses its efforts on the development and sale of PCT-enhanced enzymatic digestion products designed specifically for the mass spectrometry marketplace, as well as sample preparation products for biomarker discovery, soil and plant biology, forensics, histology, and counter-bioterror applications.

Forward Looking Statements

Statements contained in this press release regarding the Company's intentions, hopes, beliefs, expectations, or predictions of the future are "forward-looking" statements within the meaning of the Private Securities Litigation Reform Act of 1995. Forward looking statements include statements that the funds raised in the first tranche of the private placement will allow the Company to hire additional personnel and finish several key projects in target application areas; or the implication that the Company will sell any additional securities in subsequent closings of the private placement. These statements are based upon the Company's current expectations, forecasts, and assumptions that are subject to risks, uncertainties, and other factors that could cause actual outcomes and results to differ materially from those indicated by these forward-looking statements. These risks, uncertainties, and other factors include, but are not limited to: possible difficulties or delays in the implementation of the Company's strategies that may adversely affect the Company's continued commercialization of its PCT Sample Preparation System; changes in customer's needs and technological innovations; the Company's sales force may not be successful in selling the Company's PCT product line because scientists may not perceive the advantages of PCT over other sample preparation methods, particularly in the mass spectrometry, biomarker discovery, and forensics markets; that the Company may not be successful in raising additional funds beyond the first tranche of approximately \$1.16 million; and if actual operating costs are higher than anticipated, or revenues from product sales are less than anticipated, the Company will need additional capital sooner than the beginning of calendar year 2011. Additional risks and uncertainties that could cause actual results to differ materially from those indicated by these forward-looking statements are discussed under the heading "Risk Factors" in the Company's Annual Report on Form 10-K for the year ended December 31, 2008, and other reports filed by the Company from time to time with the SEC. The Company undertakes no obligation to update any of the information included in this release, except as otherwise required by law.



Pressure Enhanced Processes (PrEP) Enabling High Quality Two-Dimensional Gel Electrophoresis of Frankia Mycelia and Vesicle Structures

Louis S. Tisa, Department of Cellular, Molecular and Biomedical Sciences, University of New Hampshire, Durham, NH
Gary B. Smejkal, Laboratory for Innovative Translational Technologies, Harvard Clinical and Translational Science Center, Boston, MA
Tom Berkelman, Bio-Rad Laboratories, Hercules, CA
Winston Kuo, Laboratory for Innovative Translational Technologies, Harvard Clinical and Translational Science Center, Boston, MA

The actinobacteria, *Frankia*, are particularly challenging in terms of sample preparation, isoelectric focusing (IEF) and two-dimensional gel electrophoresis (2DE). While French Press is typically used for the disruption of *Frankia* mycelia, protein yields are typically very low and potentially biased toward cytoplasmic proteins. Operating at a maximum pressure of 20,000 psi, the French press fails to disrupt vesicles such that this recalcitrant organelle has remained largely uncharacterized in terms of its protein constituency. Alternatively, pressure cycling technology (PCT) recycles the sample at 45,000 psi maximum pressure and effectively disrupts both mycelia and the resilient vesicles. However, increased protein yield from *Frankia* strain EAN1pec corresponds to increased contamination by an indigenous red pigment which interferes with protein assay and IEF. The pigment is lessened, but not removed by acetone precipitation and concentrates with proteins in ultrafiltrative retentates, suggesting the pigment exists as high molecular weight aggregates which are not dissociated by chaotropes or detergents. If not removed, the pigment precipitates on the surface of the immobilized pH gradient (IPG) and prevents proteins from being imbibed into the strip. This is evidenced by the preponderance of horizontal streaking in second dimension gels. Pigment that is imbibed in the IPG rapidly focuses in the pH 4-5 region of the gradient, creating a highly conductive zone where a localized voltage drop prevents proteins from properly focusing. Hence, it is ambiguous as to whether proteins that are aligned with this zone are due to their association with the pigment or as an electrophoretic phenomenon. Ultrafiltration of mycelia and vesicle homogenates with porous membranes of 100 kDa nominal molecular weight limit partitioned 80% of the initial sample volume containing approximately 60% of the protein mass into the filtrate, whereas most of the offending pigment was accumulated in the retentate. Consequently, over 500 proteins were resolved in two-dimensional gels of vesicle filtrates.

RESULTS AND DISCUSSION

Pressure Cycling Technology (PCT) yielded more total protein from *Frankia* mycelia than the French Press, which failed to isolate proteins from the more recalcitrant vesicles in isotonic buffers. The ProteoSOLVE IEF reagent yielded three times more protein from mycelia and six times more protein from purified vesicle fractions than the ProteoSOLVE SB Reagent. The increased protein yields corresponded to increased recoveries of a red pigment intrinsic to *Frankia* EAN1pec which interferes with protein assay and IEF. The pigment was effectively removed by ultrafiltration enabling high quality 2DE.