September 6, 2011

Pressure BioSciences, Inc. Awarded NIH SBIR Phase I Grant for the Development of an Automated, Pressure-Enhanced System for the Routine Processing of Cancer and Other Tissue Samples

SOUTH EASTON, Mass., Sept. 6, 2011 (GLOBE NEWSWIRE) -- Pressure BioSciences, Inc. (Nasdaq:PBIO) ("PBI" and the "Company") today announced that it has been awarded a $160,978 SBIR Phase I grant (1R43GM090582-01A1) from the National Institute of General Medical Sciences ("NIGMS") of the National Institutes of Health ("NIH"). Entitled "Methods and Instrumentation for Hydrostatic Pressure-Enhanced Tissue Fixation", the grant will help fund the development of a high pressure system for the automated processing and preservation of tissue samples to facilitate, standardize, and improve the tissue fixation process independent of sample size and tissue type. If the Phase I development efforts are successful, the Company expects to submit a request for SBIR Phase II funding; such funding is usually for approximately $1 million and is billed over a two year period.

As announced in May of 2010, the Company has a Cooperative Research and Development Agreement ("CRADA") with the Armed Forces Institute of Pathology ("AFIP"), the American Registry of Pathology, and the Department of Veterans Affairs. One of the purposes of the CRADA is to develop pressure-based methods to improve the quality and speed of preparing formalin fixed, paraffin embedded ("FFPE") tissues. AFIP will provide PBI with laboratory analyses and histology services under the grant.

Formalin fixation followed by paraffin embedding is the most commonly used technique worldwide for the preservation of tissues for pathology evaluation. However, the quality and analysis of FFPE samples are highly problematic for a number of reasons, including a lack of standardization in both the times and methods currently used for tissue fixation, and the inconsistent penetration of formalin in various tissue types. Inconsistent formalin penetration can lead to uneven fixation and a subsequent "corruption" of the tissue sample.

Dr. Jeffrey T. Mason, Chairman of the Biophysics Department at AFIP, commented: "Formalin-based tissue histology has remained largely unchanged for nearly half a century. The slow rate of penetration of formalin into tissues results in uneven fixation and increases the time to diagnosis. Preliminary studies indicate that pressure-assisted histology has the potential to significantly decrease the time required for tissue processing and subsequent examination by a pathologist. Further, pressure-assisted histology results in more uniform chemical and antibody staining, both of which improve the ability of the pathologist to evaluate the cellular architecture of the tissue."

Dr. Alexander V. Lazarev, Vice President of R&D for PBI, said: "We believe that there are

over 35 million new FFPE tissue samples processed each year in the U.S. alone. In addition to their importance in pathology evaluation, an increasing number of these samples are being used for biomarker discovery, where the quality of fixation is crucial for the preservation of molecules vital to the understanding of disease mechanisms and drug development. We believe our pressure-enhanced fixation method can significantly increase the quality of the standard fixation process. Such improvement could lead to the generation of better data from FFPE samples, which could then lead to faster disease diagnosis, as well as the successful development of new diagnostics, therapeutics, and vaccines."

About Pressure BioSciences, Inc.

Pressure BioSciences, Inc. (PBI) is a NASDAQ Capital Market listed company focused on the development and sale of instrumentation and consumables based on a novel, enabling technology platform 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 24 issued patents covering multiple applications of PCT in the life sciences field, including genomic and proteomic sample preparation, pathogen inactivation, the control of chemical reactions, immunodiagnostics, and protein purification. PBI currently focuses its efforts on the development and sale of PCT-enhanced bio-molecule extraction and 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 PBI'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. Such forward looking statements include statements regarding the expectation that the Company's development efforts funded by the Phase I grant from the NIH will be successful and may lead to the submission of a Phase II grant, and the expectation that the Company will receive the Phase II grant and the expected amount of such Phase II funding; the expected benefits of the CRADA with AFIP, ARP, and the VA, including their collaboration with PBI in this grant, and the possibility of developing pressure-based methods to improve the quality and speed of FFPE tissue preparations; the potential benefits, improvements, and results of using pressure to enhance FFPE processing; the use of FFPE for the preservation of tissues for pathology evaluation; the problems associated with current methods for tissue fixation; the number of FFPE samples processed yearly; and that improved quality in the preparation of FFPE tissues could lead to better results, faster disease diagnosis, and the development of new diagnostics, therapeutics, and vaccines. 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-based product line; 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; that the Company may not be successful in raising the additional capital necessary to fund the Company's operations beyond early October; and if actual operating costs are higher than anticipated, or revenues from product sales are less than anticipated, the Company may need additional capital sooner than expected. Given the uncertainty in the capital markets and the current status of the Company's product development and commercialization activities, there can be no assurance that the Company will secure the additional capital necessary to fund its operations beyond early October on acceptable terms, if at all. 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, 2010, 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.

For more information about PBI and this press release, please click on the following links:
http://www.pressurebiosciences.com
http://bit.ly/pQRPCp

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