

## Pressure BioSciences' Patented PCT Platform Shown to Significantly Improve Protein and DNA Detection in Multiple Studies

Advantages of the PCT Platform Could Potentially Enhance Development of New Products in the Forensic, Environmental, and Biodefense Areas, and in the Discovery of Biomarkers of Disease

SOUTH EASTON, Mass., July 18, 2012 /PRNewswire/ -- Pressure BioSciences, Inc. (OTCQB: PBIO) ("PBI" or the "Company") today announced that multiple research reports have cited the ability of the Company's Pressure Cycling Technology ("PCT") Platform to improve the detection of RNA, DNA, and/or protein in forensic, environmental, and biodefense applications, and in research studies focused on the discovery of biomarkers of disease. These studies were conducted in laboratories worldwide, including:

- Institute of Forensic Sciences (Beijing, China) where scientists concluded that PCT
  was one of the most effective methods available for extracting DNA from bone in
  forensic applications. These findings extend earlier studies by other forensic scientists
  that PCT could lead to better methods of identification of crime victims and bodies of
  missing persons.
- Lawrence Berkeley National Laboratory (Berkeley, CA) where scientists studying the Deepwater Horizon oil spill in the Gulf of Mexico used PCT to increase cell lysis efficiency. Studies such as this are important in the assessment of the impact of oil spills on the environment.
- Cernomics Solutions (Frederick, MD) where scientists concluded that PCT sterilized and extracted complex, mixed matrix biological samples better than other preanalytical sample preparation methods available today. Improved methods for safe and effective sample preparation are essential for rapid and robust identification of highly infectious potential bioterror agents, and also to enable better basic research underlying solutions discovery and development.
- Harvard School of Public Health (Boston, MA) where scientists demonstrated that PCT could achieve superior recovery of membrane-associated proteins with more than a 20-fold increase in throughput and with improved reproducibility. The improvement in the recovery of membrane proteins is believed to be critical to the understanding of diseases and disorders such as cancer and Alzheimer's, and to the discovery of new drug therapies.

The Company believes these findings, together with those from approximately 100 PCT publications already referenced on the Company's website, strongly support the importance of the PCT Platform in the life sciences field, including its growing role in forensics,

environmental analyses, biodefense, and biomarker discovery applications. The Company further believes that this growing role is a primary reason it has experienced increased interest in its PCT Platform during the first half of 2012 and that this increased interest will result in increased revenue for 2012 compared to 2011.

Dr. Brad Powell, President of Cernomics Solutions, said: "The preferential extraction of RNA, DNA, and protein is essential to the development of next generation diagnostics and therapeutics vital to the detection, prevention, treatment, and cure of devastating medical disorders, including infectious diseases, cancer, stroke, and heart disease. Thus, the data generated at Harvard is of particular importance, especially the ability of PCT to recover as much as 3-times the number of certain membrane proteins as other methods. Since membrane proteins are difficult to recover, and since an estimated 80% of all new biological drugs are directed against membrane proteins, any method that can recover significantly more membrane proteins has the potential to be widely used in research laboratories worldwide. Based on my years of experience with PCT, and on the many study results to date, I believe that the PCT Platform has the potential to be transformational in scientific research and development."

## **About Cernomics Solutions**

Cernomics Solutions is a small business providing contract services to the pharmaceutical, biotechnology, biodefense, and medical and scientific instruments sectors. Consultation services include project management, quality assurance, technical research, and advisory to help clients meet programmatic and business development goals and regulatory requirements. Our staff has extensive experience and expertise in basic and translational research in biotechnology, including vaccine, therapeutics, and diagnostics development for infectious and other diseases.

## About Pressure BioSciences, Inc.

Pressure BioSciences, Inc. ("PBI") (OTCQB: PBIO) is focused on the development, marketing, and sale of proprietary laboratory instrumentation and associated consumables based on Pressure Cycling Technology ("PCT"). PCT is a patented, enabling technology platform with multiple applications in the estimated \$6 billion life sciences sample preparation market. PCT uses cycles of hydrostatic pressure between ambient and ultrahigh levels to control bio-molecular interactions. PBI currently focuses its efforts on the development and sale of PCT-enhanced sample preparation systems (instruments and consumables) for mass spectrometry, biomarker discovery, bio-therapeutics characterization, vaccine development, 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. Such statements include, without limitation, statements regarding the significant improvement in the detection of RNA, DNA, and proteins with the use of the PCT Platform over other extraction methods; that the PCT Platform could potentially enhance development of new products in the forensic, environmental, biodefense, and human disease areas; the conclusions related to the

advantages of the PCT Platform reported by the Institute of Forensic Sciences, Lawrence Berkeley National Laboratory, Cernomics Solutions, and the Harvard School of Public Health: that PCT could lead to better methods of identification of crime victims and bodies of missing persons; the importance of these studies in the assessment of the impact of oil spills on the environment; that improved methods for sample preparation are essential for identification of infectious bioterror agents; that the improvement in the recovery of membrane proteins is critical to the understanding of diseases and disorders and the discovery of potential drug therapies; that the reported findings support the importance of PCT in the life sciences field, including its growing role in forensic, environmental, biodefense, and biomarker discovery applications; that this growing role has resulted in increased interest in the PCT Platform; that this increased interest will result in increased revenue in 2012 compared to 2011; the importance of the Harvard data; that an estimated 80% of all new biological drugs are directed against membrane proteins; that any sample preparation method that can preferentially extract more membrane proteins will be widely used; that PCT has the potential to be a widely used pre-analytical method worldwide; and the size of the life sciences sample preparation market. 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 and its strategic partners/distributors sales forces 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 other researchers may not be able to replicate the data reported in the studies mentioned; and if actual operating costs are higher than anticipated, or revenues from product sales are less than anticipated, the Company may need additional capital beyond August 2012. Further, 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 August 2012 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, 2011, 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.

PBI filed a registration statement (including a prospectus) with the SEC for an offering to which this communication may relate. Before you invest, you should read the prospectus in that registration statement for the offering and other documents PBI has filed with the SEC for more complete information about PBI and the offering. You may get these documents for free by visiting EDGAR on the SEC Web site at <a href="https://www.sec.gov">www.sec.gov</a>. Alternatively, PBI can arrange to send you the prospectus, when available, upon request.

For more information about PBI and this press release, please click on the following link: <a href="http://www.pressurebiosciences.com">http://www.pressurebiosciences.com</a>

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