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# Novel Use of Pressure BioSciences' Patented PCT Platform Offers New Insights into Protein Structure and Function, New Tool for Biomarker Discovery and Rational Drug Design

## Advanced Pressure-based Method Unveiled at International Scientific Symposium; Supports Company's Decision to Focus Marketing and Sales Efforts in Spectroscopy Area

SOUTH EASTON, Mass., Aug. 1, 2013 /PRNewswire/ -- Pressure BioSciences, Inc. (OTCQB: PBIO) ("PBI" and the "Company") today announced that data supporting important advantages of PBI's powerful and enabling Pressure Cycling Technology ("PCT") platform were presented at the 27th Annual Symposium of the Protein Society held July 20-23, 2013 in Boston, Massachusetts.

The use of highly sophisticated analytical instrument systems by research scientists worldwide has resulted in a greater understanding of complex biological molecules, including proteins - the "building blocks of life." One such instrument system, Electron Paramagnetic Resonance ("EPR") spectroscopy, has been shown to provide key information on the structure, flexibility, and function of proteins. This information is crucial to the development of new and better diagnostics, therapeutics, and vaccines.

At this year's annual Protein Society symposium, researchers from UCLA reported on the development of an improved EPR system based on the use of high pressure. This novel system combined (for the first time ever) two cutting-edge EPR methods: site directed spin labeling ("SDSL") and double electron-electron resonance ("DEER"). This strategy allowed the investigation of dynamic events in proteins that would be difficult or even impossible to study by conventional EPR technology.

Dr. Wayne L. Hubbell, Distinguished Professor of Chemistry and Biochemistry and Jules Stein Professor of Ophthalmology at UCLA, and senior author of the study, commented: "The study of proteins under pressure by EPR and other spectroscopic techniques, such as Nuclear Magnetic Resonance ("NMR"), has the potential to greatly improve our understanding of the structure and function of proteins. This information could subsequently provide new insights into such important areas as biomarker discovery and rational drug design, and play an important role in the discovery process that lies ahead in the exciting field of protein science."

Richard T. Schumacher, President and CEO of PBI, said: "We believe these and other data

reported by researchers using pressure-based EPR and NMR systems strongly indicate that PCT can enhance the recovery, detection, and measurement of proteins from a wide variety of samples. In turn, this information has the potential to help accelerate the design and manufacture of new and better diagnostics, therapeutics, and vaccines. We further believe that the advantages of pressure-based spectroscopic methods are just now beginning to be realized by scientists, and that as the body of data continues to grow from high pressure-based spectroscopic studies, that PBI has the potential to become a major provider of high pressure equipment into the exciting and growing spectroscopy area."

**About the Protein Society**

The Protein Society is a not-for-profit scientific and educational membership organization. It was founded to encourage the development and dissemination of knowledge in all aspects of the study of protein molecules, the "building blocks of life". It does so through its many programs, including its meetings, awards, publications, and committee outreach programs. The Society's members work in academia, foundations, institutes, industry, and in government agencies around the world.

**About Pressure BioSciences, Inc.**

Pressure BioSciences, Inc. ("PBI") (NASDAQ: 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 ultra-high 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 forensics, biomarker discovery, bio-therapeutics characterization, vaccine development, soil and plant biology, 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 presentation by Dr. Hubbell and his team at the 27$^{th}$ Annual Symposium of the Protein Society; the reported benefits of high pressure-based spectroscopic techniques, including EPR (including SDSL combined with DEER), NMR, and other spectroscopic methods; that the new pressure-based EPR data support the Company's decision to focus its marketing and sales efforts in the spectroscopy area; that the use of highly sophisticated analytical instrument systems by research scientists worldwide has resulted in a greater understanding of complex biological molecules, including proteins; that this greater understanding of proteins could provide new insights into such important areas as biomarker discovery and rational drug design, and play an important role in the discovery process that lies ahead in the exciting field of protein science; that pressure-based EPR and NMR can offer new insights into protein structure and function; that data reported by researchers using pressure-based EPR and NMR systems strongly indicate that PCT can enhance the recovery, detection, and measurement of proteins from a wide variety of samples, and that this information has the potential to help accelerate the design and manufacture of new and better diagnostics, therapeutics, and vaccines; that the advantages

of pressure-based spectroscopic methods are just now beginning to be realized by scientists, and that as the body of data continues to grow from high pressure-based spectroscopic studies, that PBI has the potential to become a major provider of high pressure equipment into the exciting and growing spectroscopy area; and the estimated 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 or see the advantages of using the Company's PCT platform 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 2013. 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 2013 on acceptable terms, if at all. 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, the risks and uncertainties discussed under the heading "Risk Factors" in the Company's Annual Report on Form 10-K for the year ended December 31, 2012, 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 link: www.pressurebiosciences.com

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