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# Key Advantages of Pressure Cycling Technology (PCT) in the Analysis of Glycoprotein-based Drugs and Drug Candidates Reported in Major Scientific Journal

SOUTH EASTON, Mass., March 5, 2010 (GLOBE NEWSWIRE) -- Pressure BioSciences, Inc. (Nasdaq:PBIO) ("PBI" and the "Company") today announced that a scientific article entitled "Rapid Release of N-Linked Glycans from Glycoproteins by Pressure Cycling Technology" has been published online in the journal, *Analytical Chemistry*. The article's authors, from the Barnett Institute at Northeastern University (Boston, MA), reported on the ability of PCT to rapidly, effectively, and efficiently release sugar molecules (N-linked glycans) from certain proteins (glycoproteins) that are used in the development of biotherapeutic drugs.

Biotherapeutic drugs are viewed by many as the best current hope for the development of more effective treatments for acute, chronic, and life-threatening diseases, such as cancer, arthritis, and diabetes. The majority of these drugs - whether approved, in early development, or in clinical trials, are glycoproteins. In order to ensure quality, efficacy, safety, and biological function, a number of important tests are performed on glycoprotein-based biotherapeutic drugs and drug candidates, at every step of the development and approval process.

"Glycan (carbohydrate) analysis of biotherapeutic drugs provides essential information on quality, efficacy and safety; therefore, the biotech industry places great emphasis on these analyses," commented Professor Barry Karger, Director of the Barnett Institute and one of the authors of the article. "Given the biological and therapeutic significance, rapid, robust, and accurate glycan analysis methods are of high interest."

Professor Karger continued: "We demonstrated that pressure cycling technology (PCT) can significantly improve the speed required for carbohydrate analysis, reducing the standard two hour/overnight enzymatic reaction to twenty minutes or less. PCT also required significantly less of an expensive enzyme needed in the analysis, reducing consumption by about 90%. In addition, PCT did not appear to lead to any apparent loss of sialic acid residues (a potential problem observed with other methods), and also offered the possibility of simultaneous processing of multiple samples, important for high throughput screening."

Dr. Nate Lawrence, Vice President of Marketing for PBI, commented: "We believe there are approximately 4,000 biotechnology companies worldwide and that many are investigating or developing glycoprotein-based drugs. We also believe that many of these companies are evaluating dozens to hundreds of different molecules as drug candidates, and that these

molecules are tested multiple times throughout the development and approval process. We further believe that PCT can significantly improve the standard analysis protocol for these glycoprotein-based products, while concomitantly offering substantial financial savings due to a significantly reduced cost per test. Consequently, we are developing a focused plan to quickly and effectively reach these new potential customers of PCT."

Dr. Alexander Lazarev, Vice President of R&D for PBI, said, "We believe these data are another important example of how enzymatic activity can be controlled by PCT. We also believe these results, together with previously reported data on the acceleration of enzymatic action in protein digestion, suggest that PCT may enhance the activity of other commercially important enzymes as well. Therefore, we believe that PCT may play a significant role in improving enzyme-based methods in other large and potentially lucrative fields of use within the biotechnology and pharmaceutical industries."

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 U.S. 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 in 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. Such forward-looking statements include statements regarding the advantages of PCT in glycoprotein analysis, including the rapid, effective, and efficient release of sugar molecules; that biotherapeutic drugs are the best current hope for more effective treatments for cancer, arthritis, diabetes, and other diseases; that tests are run on glycoprotein-based drugs and drug candidates to ensure quality, efficacy, safety, and function, and that the biotech industry places great emphasis on such tests; that PCT can significantly improve the speed and decrease the cost of carbohydrate analysis, does not lead to sialic acid residue loss, and offers the potential for high throughput screening; that there are an estimated 4,000 biotech companies worldwide and many are developing glycoprotein-based drugs; that the article's data indicate that PCT can control and enhance enzymatic action and the activity of other enzymes, and may improve enzyme-based methods in other fields within the biotech/pharma industries. 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, delays and additional costs in the implementation of the Company's strategies that may adversely affect the Company's commercialization of PCT and PCT-

dependent products, including a plan to attract customers for glycoprotein analysis; changes in customer's needs and technological innovations; other scientists may not achieve the same PCT results reported by the Barnett Institute; the Company's sales force may not successfully sell the PCT product line because scientists may not perceive the advantages of PCT for glycoprotein analysis; the potential market for PCT for glycoprotein analysis may be substantially smaller than anticipated by Dr. Karger and the Company; and due to unforeseen costs or delays, the Company may require additional working capital to fund its operations before 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.

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CONTACT: Pressure BioSciences, Inc.  
Investor Contacts:  
Richard T. Schumacher, President & CEO  
R. Wayne Fritzsche, Chairman  
(508) 230-1828