

# Pressure BioSciences Achieves Second Major Milestone in the Development of Its Ultra Shear Technology Platform

Company Announces Successful Development of Proprietary Method for High Quality, Water Soluble Oils, Opening Major New Opportunities in Multiple Markets;

Initial Focus to be in the CBD Oil and Cosmetics Markets

**SOUTH EASTON, MA / ACCESSWIRE / November 15, 2018 /**Pressure BioSciences, Inc. (OTCQB: PBIO) ("PBI" or the "Company"), a leader in the development and sale of broadly enabling, pressure-based instruments, consumables, and platform technology solutions to the worldwide life sciences and other industries, today announced it has achieved its second major milestone in the development of its proprietary Ultra Shear Technology ("UST") platform and commercialization program.

On November 9<sup>th</sup>, the Company announced it had completed development of the first working prototype for the UST System, thereby achieving its initial major milestone for the program. Concurrently, the Company disclosed that the second milestone would be the development of a method to make water soluble oils using the first working prototype system. Last night, during its quarterly investor conference call, management announced that PBI had successfully achieved this second significant milestone, by effectively dissolving an oil-based nutrient in water, using CBD Oil as the demonstration model.

Dr. Nathan Lawrence, VP of Marketing and Sales, said: "CBD has become extremely popular for its reported health benefits, including anti-anxiety, anti-inflammatory, and anti-convulsant properties. Because CBD is oil-based, it is not well absorbed by the body. It is believed that the majority of the CBD in CBD Oil is flushed from the body after ingestion, with very little of the compound absorbed to provide its beneficial properties. Conversely, for a truly water soluble preparation of CBD Oil, such as CBD Oil that has been processed through the UST platform, we expect that the vast majority of CBD would be absorbed by the body, solving this critical delivery issue."

A video entitled: "Revolution in Maximizing the Effectiveness of CBD Oil: How a World Leader in High Pressure Technology Made CBD Oil Truly Water Soluble" is available on the Company's website and can be accessed by clicking the following link: <a href="https://mailchi.mp/pressurebiosciences.com/cbdoilpr">https://mailchi.mp/pressurebiosciences.com/cbdoilpr</a>.

The video discusses and depicts the critical importance of water soluble nanoemulsions for optimal dosing, safety, cost-effectiveness and bioavailability of ingested or topically-applied oil-based nutrients. The video also shows a flow diagram of the UST process, including a depiction of the Company's two patented integral UST components: the Barolsolator™ and the BaroShear™ nano-gap valve. The UST process is demonstrated on CBD Oil, including

video of non-water soluble CBD Oil that was converted into water soluble CBD Oil through PBI's proprietary UST process.

Dr. Bradford A. Young, Sr. VP and Chief Commercial Officer of PBI, commented: "According to a recent report from the Brightfield Group, the overall Hemp CBD market is estimated to grow to \$22 billion by 2022. Expansion of this market depends on the ability to cost-effectively manufacture high quality CBD beverages and edibles, as the demand for these products is high. Such products require truly water soluble CBD Oil. PBI is uniquely positioned to successfully develop reliable and scalable processing technology for long shelf-life, high quality, and water soluble nanoemulsions of CBD Oil. Therefore, we have determined that the rapidly expanding CBD market is a high priority opportunity for us for early market development and accelerated commercialization."

Richard T. Schumacher, President and CEO remarked: "In addition to the CBD market, we believe our proprietary UST platform offers unique opportunities in many other important markets. We believe that high quality nanoemulsions will be invaluable in multi-billion dollar markets such as: cosmetics (for the controlled delivery and optimized dispersion of active ingredients), to pharmaceuticals (for improved drug solubility and more rapid and controlled absorption), to agriculture (for improved pesticide applications that are more efficiently absorbed by plants)."

Jeffrey N. Peterson, Chairman of the Board, added: "We are already diligently working on demonstration applications in the multi-trillion dollar food market, where long shelf-life, chemical-free, room temperature stable dairy and other products could be enormously valuable and disrupt the overall food market supply chain. Because of these opportunities, we expect to soon enter discussions with a wide variety of corporate leaders across multiple industries, with the goal of diversifying our revenue streams, strengthening our financial well-being, and looking to achieve profitability."

### **About Pressure BioSciences, Inc.**

Pressure BioSciences, Inc. (OTCQB: PBIO) is a leader in the development and sale of innovative, broadly enabling, pressure-based solutions for the worldwide life sciences industry. Our products are based on the unique properties of both constant (i.e., static) and alternating (i.e., pressure cycling technology, or "PCT") hydrostatic pressure. PCT is a patented enabling technology platform that uses alternating cycles of hydrostatic pressure between ambient and ultra-high levels to safely and reproducibly control bio-molecular interactions (e.g., cell lysis, biomolecule extraction). Our primary focus is in the development of high pressure-based products for biomarker and target discovery, drug design and development, biotherapeutics characterization and quality control, food science, soil & plant biology, forensics, and counter-bioterror applications. Additionally, PBIO is actively expanding the use of our pressure-based technologies in the following areas: (1) the use of our recently acquired PreEMT technology from BaroFold, Inc. to allow entry into the biologics manufacturing and contract research services sector, and (2) the use of our recently-patented, scalable, high-efficiency, pressure-based Ultra Shear Technology ("UST") platform to (i) create stable nanoemulsions of otherwise immiscible fluids (e.g., oils and water) and to (ii) prepare higher quality, homogenized, extended shelf-life or room temperature stable low-acid liquid foods that cannot be effectively preserved using existing non-thermal technologies.

## **Forward Looking Statements**

This press release contains forward-looking statements. These statements relate to future events or our future financial performance and involve known and unknown risks, uncertainties and other factors that may cause our or our industry's actual results, levels of activity, performance or achievements to be materially different from any future results, levels of activity, performance or achievements expressed, implied or inferred by these forwardlooking statements. In some cases, you can identify forward-looking statements by terminology such as "may," "will," "should," "could," "would," "expects," "plans," "intends," "anticipates," "believes," estimates," "predicts," "projects," "potential" or "continue" or the negative of such terms and other comparable terminology. These statements are only predictions based on our current expectations and projections about future events. You should not place undue reliance on these statements. In evaluating these statements, you should specifically consider various factors. Actual events or results may differ materially. These and other factors may cause our actual results to differ materially from any forwardlooking statement. 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, 2017, 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 website link:

# http://www.pressurebiosciences.com

Please visit us on Facebook, LinkedIn, and Twitter.

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**SOURCE:** Pressure BioSciences, Inc.