

# Pressure BioSciences Announces Achievement of First Major Milestone in Development of Potential Breakthrough Processing Method for Higher Quality and Safer Food and Beverages

Proprietary, Custom Built UST-Based Instrument Delivered to Collaborators at The Ohio State University; OSU Scientists to Study Pressure and Shear Effects on Pathogen Inactivation, Stability, and Quality

SOUTH EASTON, MA / ACCESSWIRE / June 26, 2019 /Pressure BioSciences, Inc. (OTCQB: PBIO) ("PBI" or the "Company"), a leader in the development and sale of broadly enabling, pressure-based technology and products to the worldwide life sciences industry, today announced the achievement of the first major milestone in its collaboration with the College of Food, Agricultural, and Environmental Sciences ("CFAES") of The Ohio State University ("Ohio State"). The primary program goal is to develop and make available for commercialization a continuous-flow manufacturing process to prepare foods and beverages with superior sensory and nutritional qualities, while delivering long, room temperature shelf stability without requiring refrigeration or chemical additives. The Company believes it can achieve this highly sought-after consumer demand through scale-up of its innovative and patented Ultra Shear Technology ™("UST™") platform.

A four-year, \$891,000 grant awarded to scientists at CFAES by the U.S. Department of Agriculture's National Institute of Food and Agriculture ("NIFA") is supporting this collaborative program. PBI was granted a \$318,000 sub-contract to build a working benchtop instrument and a pilot plant floor model, both based on the Company's patented UST platform. The delivery of the working benchtop instrument was the first major milestone identified by the collaborators.

Dr. Edmund Y. Ting, Sr. VP of Engineering at PBI, said: "We are very excited to have met this first major milestone. We believe our proprietary UST platform can be used to make the higher quality, more nutritious, longer-lasting foods that consumers now demand. The UST-based bench-top instrument - together with the larger scale, floor model, higher capacity instrument we are now developing - will be used to generate the fundamental food science quality and safety validation data that we believe will enable future process adoption by industry and acceptance by the regulators."

Dr. V.M. "Bala" Balasubramaniam, a CFAES professor of food engineering who is leading the collaborative project, commented: "Today's consumers demand food that is nutritious, minimally processed, and pathogen safe. They also want food that tastes and looks good, while being free of synthetic ingredients. We believe the UST platform has the potential to

offer food manufacturers the ability to process safe wholesomebeverages, nutritional drinks, sauces, condiments and pumpable liquid foods."

The total "clean label" (no artificial ingredients or chemicals) food market is currently estimated at \$62 billion in the U.S. and \$165 billion worldwide (Nunes, 2016). This market is comprised of several unique food processing methods, including high pressure processing ("HPP"). The global HPP food market is estimated to reach \$27.4 billion in 2023 and \$51.1 billion by 2027 (<a href="https://foodsafetytech.com/feature\_article/hpp-keeps-food-safe-while-extending-shelf-life/">https://foodsafetytech.com/feature\_article/hpp-keeps-food-safe-while-extending-shelf-life/</a>).

Richard T. Schumacher, President and CEO of PBI, stated: "Food processors have been seeking new minimal heat processing technologies that can provide extended shelf-life, while meeting "clean label" requirements that also satisfy consumer expectations. Many clean label foods are currently processed using costly, batch oriented HPP techniques, including juices, seafood, meats, baby food, guacamole, fruits and vegetables. Unfortunately, these HPP food products all require refrigeration after processing. Commercializing a minimal heat processing technology that can produce shelf-stable (without refrigeration), high quality, ready-to-eat foods such as coffee, tea, broth, condiments, sauces, dairy products (e.g., milk, liquid cheese), and other such liquid foods would be a breakthrough. This is the primary goal of the project, which we believe can be attained through scale-up of our innovative, patented UST platform."

The OSU-PBI UST research team will be advised by an industry advisory board representing food processors and regulatory agencies. Food processors interested in joining this effort should contact Dr. Bala Balasubramaniam or Dr. Edmund Ting.

## **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 PCT-based products for biomarker and target discovery, drug design and development, biotherapeutics characterization and quality control, soil & plant biology, forensics, and counter-bioterror applications. Additionally, major new market opportunities have emerged in the use of our pressure-based technologies in the following areas: (1) the use of our recently acquired, patented technology from BaroFold, Inc. (the "BaroFold" technology) to allow entry into the bio-pharma contract 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., CBD Oil and water) and to (ii) prepare higher quality, homogenized, extended shelf-life or room temperature stable lowacid liquid foods that cannot be effectively preserved using existing 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, 2018, 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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