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Pressure BioSciences Achieves Critical Milestone in Revolutionary Nanoemulsification Technology Development; Enters Production Era for Commercial System Development

Company Locks-in Final Design Specifications, Begins Initial Build of Proprietary Ultra Shear Technology System, & Remains on Target for Commercial Release by Early 2021

SOUTH EASTON, Mass., Oct. 6, 2020 /PRNewswire/ -- 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 biotechnology, biotherapeutics, and other industries, today announced the achievement of a critical milestone: the lock-in of final design specifications for the commercial production model of its proprietary, next-generation Ultra Shear Technology™ ("UST™")-based nanoemulsification system. Following achievement of this milestone, the Company has begun to build the initial "Alpha" unit of the commercial model. Once built, tested, and approved, the Company will immediately proceed to build an additional 15 ready-for-sale systems, thus enabling PBI to meet its goal of shipping the BaroShear K45 UST System in early (Q1/Q2) 2021.

Based on the Company's patented UST platform, the BaroShear K45 is a unique breakthrough nanoemulsification system designed to resolve one of the most substantive problems facing manufacturers of biotherapeutic drugs, nutraceuticals (including hemp-derived CBD products), and other products containing oil-based active ingredients that are at best poorly soluble in water. As with any oil-based product, it is difficult for the water-based biochemistry of humans and other animals to access and absorb the active ingredients hidden within oil drops. Poor water solubility leads to lower absorption and bioavailability of active ingredients, which makes it particularly difficult to design and deliver proper dosing of the desired compound. More recently, growing science around nanoemulsion development has shown that oil-based active ingredients manufactured into high quality nanoemulsions have delivered dramatically increased absorption and bioavailability, resulting in higher quality finished products for the consumer.

Mr. Kenneth F. Micciche, PBI's Director of Marketing and Sales, commented: "We are elated to have achieved this pivotal milestone in production readiness in just three short years. Since the start of UST program in 2018, several note-worthy milestones have been achieved: from the development of the first prototype unit and its use in processing hemp-derived CBD Oil into highly stable and effective nanoemulsions; to the development of a

larger scale, floor model "test bed" prototype used to generate important data on flow rates, particle sizes, novel valve designs, temperature controllers, material properties on performance and durability of system components; and finally to the determination of the final design specifications of the ready-to-sell system."

Mr. Micciche continued: "Our commercialization plan for the BaroShear K45 system is initially focused on the rapidly growing hemp-derived CBD market, which is projected to reach $20 billion by 2020. Three months ago, we announced that we had secured purchase orders for twelve (12) BaroShear K45 nanoemulsification systems. We plan to install these systems during the first half of 2021, which we believe will generate up to $3 million in revenue. Once these initial units are installed and in commercial use, we believe they will propel the close of multiple sales of additional BaroShear K45 systems during the latter half of 2021 and thereafter."

It is estimated that more than 40% of all new chemical compounds developed by the pharma industry are highly insoluble in water. To be effective as potential new drugs, most such molecules need to be processed into highly water-soluble solutions. The Company believes the UST platform can play a pivotal role in fulfilling this need. For example, PBI scientists evaluated the UST nanoemulsification platform on Prednisone, a widely prescribed corticosteroid with systemic anti-inflammatory and immunosuppressant properties. Prednisone is sparingly soluble in water and ethanol. When processed by the UST platform, Prednisone solutions became optically clear (signifying achievement of nanoemulsion status) and remained stable for many weeks at room temperature. Other nanoemulsions using this same formulation and UST processing have been shown by PBI scientists to remain stable at room temperature for six months and longer.

Mr. Richard T. Schumacher, President and CEO of PBI, commented: "The data generated over the past 18 months with both our bench-top and floor model prototypes have validated the ability of our revolutionary UST platform to create high quality, highly stable nanoemulsions of oil and water. These exciting results support our belief that our revolutionary UST platform can help a diverse range of customers develop a vast array of new and beneficial products across many multi-million and multi-billion dollar markets, including hemp-derived CBD and other nutraceuticals, cosmetics and topical treatments, food and beverages, and biotherapeutic drugs – such as in the example of Prednisone above. We look forward with excitement to the upcoming commercial release of our revolutionary UST-based BaroShear K45 nanoemulsification system by early (Q1/Q2) 2021."

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 and other industries. 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., 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 forward-looking 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 forward-looking 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, 2019, 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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