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Pressure BioSciences Announces Two More Purchase Orders for its Revolutionary BaroShear K45 Processing System for Manufacturing Water-Soluble CBD

Company Forecasts All 12 Systems in Current Build Cycle Will Be Sold by September 30, 2019 and Reiterates Previous Guidance for More Than Doubling of Annual Revenue in 2020

SOUTH EASTON, MA, Aug. 22, 2019 (GLOBE NEWSWIRE) -- via NEWMEDIAWIRE – 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 industry, today announced it has received two additional purchase orders for its revolutionary BaroShear™ K45 processing system. This novel processing system is based on the Company’s proprietary Ultra Shear Technology™ (UST™) platform. The BaroShear K45 is a unique and powerful nanoemulsification system designed to resolve one of the most critical problems facing the CBD industry today: the extremely poor solubility of CBD Oil in water.

CBD has been broadly demonstrated to offer powerful health benefits, addressing a variety of challenging medical conditions. CBD is a non-psychoactive compound that is extracted from the cannabis plant in an oil form. After ingestion of CBD, because oils are not well absorbed into the water-based bodies of humans and other animals, most of the CBD is flushed from the system, leaving little of the product absorbed and circulating to provide its beneficial properties. Because of these solubility issues, many CBD products on the market today contain a costly and inefficient over-abundance of CBD, and/or undesirable chemicals that may have been added to try and improve the CBD Oil’s solubility in water.

Processing most oil-based products into nanometer-size droplets in emulsions with water (“nanoemulsions”) often improves their absorption, medicinal benefits, visual appearance, and sensory presentation. Unfortunately, traditional processing methods used to make nanoemulsions struggle with this challenge. PBI’s patented UST platform uses ultra-high pressure to create extreme shearing forces that create highly stable, homogenized nanoemulsions of materials that normally do not mix, such as CBD Oil and water. To learn more about PBI’s proprietary UST process and to watch UST-processed CBD Oil fully dissolve in water, please use the following link: [How a World Leader in Pressure Technology Made CBD Oil Truly Water Soluble.](#)

PBI announced its initial production commitment for 12 BaroShear K45 systems, and the sale of its first system in late July. The two new purchase orders announced today (and

included in an August 16, 2019 Form 8k filing) were received from NanoPeak Solutions, Inc., a private company located in Vancouver, BC, and from a private company located in Las Vegas, NV.

Mr. Bruce Leitch, President of NanoPeak Solutions, Inc., said: “We fully appreciate both the challenges and the significant emerging market opportunity of having the ability to deliver CBD in a form that allows for greater absorption and enhanced bioavailability. Multiple scientific studies have indicated that CBD should be processed via nanoemulsion technology in order to be truly water soluble and resulting in consumer products possessing both shelf stability and consistent dosages. NanoPeak has spent significant time reviewing and assessing various nanoemulsification platforms and the Company has great confidence that PBI’s BaroShear K45 System will be instrumental in NanoPeak having the ability to offer the highest quality ingredients to be utilized in CBD products of all types.”

The total cannabinoids market is expected to hit \$89 billion by 2024 (<https://mordorintelligence.com/industry-reports/cannabis-market>), with CBD Oil-based products being the cornerstone of the non-psychoactive portion of this exploding market. For CBD products commonly consumed orally - including CBD Oils in edibles and beverages – absorption into the body is typically below 10% (ERTH 8/28/2018: Water Soluble CBD – The Science of Nanoemulsions and Bioavailability). PBI believes that processing with the UST-based BaroShear K45 system will deliver greatly improved absorption results (potentially as high as 90%) for CBD and a universe of other oil-based supplements.

Richard T. Schumacher, President and CEO of PBI, said: “The number of reports that focus on the poor absorption of CBD in current CBD Oil-based products continues to increase, and the message they are sending is very clear: CBD Oil needs to be processed into a nanoemulsion to make it truly water-soluble, which is necessary to increase the absorption and bioavailability of the CBD Oil within the body. The critical issue of poor water-solubility/bioavailability of current CBD infused products was addressed in a recent World Health Organization critical review report on CBD (<http://nnw.fm/m9l2B>), which stated: “Probably due to its poor aqueous solubility, the absorption of CBD from the gastrointestinal tract is erratic, and the resulting pharmacokinetic profile is variable. Bioavailability from oral delivery was estimated to be 6% due to significant first-pass metabolism.”

Mr. Schumacher continued: “We are very pleased that the NanoPeak Solutions Team has purchased one of the initial BaroShear K45 systems. We are further pleased that NanoPeak and PBI have agreed in principal to a long-term collaboration that both companies believe will be mutually-beneficial; to that end, the companies have agreed that payment for the BaroShear K45 system will be made to PBI in a combination of cash and common stock in NanoPeak Solutions, Inc., thus binding the companies together in a way that will go well beyond the typical customer-vendor relationship. NanoPeak Solutions intends to engage with various research institutions in furthering the shared technology platform knowledge base and undertaking clinical trials along with ongoing new product development and innovation. We look forward to working closely with NanoPeak as they grow into a strong manufacturing partner and manufacturer of CBD infused products.”

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 low-acid 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 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, 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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