

June 27, 2019



Pressure BioSciences Enters CBD Market with Launch of Novel Instrument System to Revolutionize Manufacturing of High Quality, Water-Soluble CBD

Purchase Deposits for the New BaroShear K45 System Will be Accepted Immediately; Company Believes Sales into the CBD Market Could Double Current Revenue by Q2 2020

SOUTH EASTON, MA / ACCESSWIRE / June 27, 2019 /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 the launch of its BaroShear™ K45 system based on the Company's proprietary Ultra Shear Technology™ (UST™) platform. The BaroShear K45 system is a unique and powerful next generation nanoemulsification system designed to fix one of the most critical problems facing CBD manufacturers today: the extremely poor water solubility of CBD oil.

CBD, a non-psychoactive compound believed to offer powerful health benefits, is extracted from the cannabis plant in an oil. After ingestion, because oils are not well absorbed, most of the CBD is flushed from the body, leaving little of the product to provide its beneficial properties. Because of these solubility issues, many CBD products on the market today contain an inefficient over-abundance of CBD and/or undesirable chemicals to try and improve its solubility in water.

For most oil-based products, the ability to prepare them as nanoemulsions can improve the product's absorption, medicinal benefits, visual appearance, and sensory presentation. Unfortunately, traditional processing methods struggle with this challenge. PBI's patented UST platform uses ultra-high pressure to create extreme shearing forces to make highly stable, homogenized nanoemulsions of materials that normally do not mix, such as CBD Oil and water. To view PBI's UST-processed CBD oil being added to a soft drink, a sports drink, and a beer, please use the following link: [PBI UST CBD Video 040219](#).

Dr. Nathan Lawrence, Senior Advisor to PBI, said: "The unique concept of the BaroShear K45 system is based on PBI's proprietary UST platform. It was designed for the efficient and affordable manufacture of limited quantity oil-based material into high quality, water-soluble nanoemulsions. The BaroShear K45 system uses a custom-designed, highly responsive ultra-high pressure generating subsystem, matched to our patented BaroSolulator™ device and NanoGap™ valve. This allows for the highest effectiveness possible at working pressures up to 45,000 psi. The BaroShear K45 system is ideally suited for processing small amounts (e.g., 50 mL - 2 L) of high value product, such as CBD oil, into nanoemulsions with high yield."

Dr. Bradford A. Young, Chief Commercial Officer of PBI, commented: "Over the past several months, we have spoken with dozens of CBD companies. A common theme has been their desire to develop new and improved delivery methods for CBD and their concern with how best to make stable nanoemulsion mixtures of CBD oil and water. Our new UST platform, the BaroShear K45 system, can help companies make high quality, CBD-based products using physics (e.g. ultra-high pressure) instead of chemistry (e.g. lots of strong detergents). We look forward to helping our customers address the large and growing market for CBD infused foods, beverages, cosmetics and topicals."

The total cannabinoid 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 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 other oil-based supplements.

Dr. Keith Warriner, Professor of Food Science at the University of Guelph (Toronto), and a recognized expert in the cannabis industry, commented: "The data I have reviewed to date on UST-generated nanoemulsions of CBD oil are very impressive. Creating nanoemulsions of CBD oil with full preservation of CBD throughout the process, while not generating impurities, remains a significant challenge in the industry. These data indicate that UST can achieve that goal, thereby offering great promise to the future."

Richard T. Schumacher, President and CEO of PBI, said: "The BaroShear K45 system will list for \$195,000; we believe that sales of these Systems will become a major revenue-generating part of our business. We will be accepting purchase deposits on pre-sale orders immediately. Based on feedback from potential customers, we believe purchase deposits on instruments from the initial build could start being received by mid-July. We plan to stop accepting purchase deposits on September 30th; however, we will stop earlier if demand exceeds reasonable manufacturing limits."

Mr. Schumacher continued: "We are looking forward to working with the early adopters of this exciting technology platform. Early adopters will be the first to use the UST platform in the CBD field, thus giving them a significant head-start over companies who choose to wait or use other methods. They will always be the first to get full access to new instruments, technologies, and applications that can positively impact the UST platform (a commitment to early adopters). They will also have "most favored nation" pricing for subsequent UST platform systems. Finally, because there is much to learn about CBD formulations and their benefits for various factors, we will be offering collaboration opportunities to the first three groups who submit purchase deposits. This is a very exciting time for the entire PBI Team, and for all stakeholders in PBIO."

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.

Investor Contacts

Richard T. Schumacher, President and CEO (508) 230-1828 (T)
Bradford A. Young, PhD., MBA, Sr. VP and CCO (508) 230-1829 (F)

SOURCE: Pressure BioSciences, Inc.

View source version on accesswire.com:

<https://www.accesswire.com/550110/Pressure-BioSciences-Enters-CBD-Market-with-Launch-of-Novel-Instrument-System-to-Revolutionize-Manufacturing-of-High-Quality-Water-Soluble-CBD>