October 9, 2018

PharmaCyte Biotech Announces Publication of PCT Patent Application for Cancer Therapies

LAGUNA HILLS, Calif.--(BUSINESS WIRE)-- PharmaCyte Biotech, Inc. (OTCQB: PMCB), a clinical stage biotechnology company focused on developing targeted cellular therapies for cancer and diabetes using its signature live-cell encapsulation technology, Cell-in-a-Box®, announced today that its PCT patent application covering a targeted therapy to treat solid cancerous tumors was published on September 27, 2018 (Publication No. WO 2018/175576). It was titled “Encapsulated Cells Producing Cytochrome P450 and Methods of Use Thereof.” This PCT application allows PharmaCyte to file patent applications and seek protection in most major market countries throughout the world. These patent applications, if granted, will provide protection for PharmaCyte’s technology for 20 years without a gap in patent protection - until March 2038.

Kenneth L. Waggoner, PharmaCyte Biotech’s Chief Executive Officer, commented “The publication of this PCT patent application is a significant step in being able to protect our unique cancer therapy for many years to come. It is particularly important now as we get closer to beginning our clinical trial in patients with locally advanced pancreatic cancer (LAPC). However, in addition to pancreatic cancer, the Cell-in-a-Box® live cell encapsulation technology also gives us opportunities to develop unique therapies for other forms of cancer where new treatment modalities are needed.”

The PCT application also specifically includes methods of treating other cancerous tumors, such as those of the liver, breast and colon, using the live-cell encapsulation of genetically modified human cells that overexpress a form of the cytochrome P450 enzyme system normally found in the liver. These cells are encapsulated using the proprietary Cell-in-a-Box® technology. Together with low doses of a drug of the oxazaphosphorine class, ifosfamide, the encapsulated cells comprise PharmaCyte’s therapy for pancreatic cancer. The patent application also includes using PharmaCyte’s platform technology with cyclophosphamide, another chemotherapy drug of the oxazaphosphorine class that is activated by the cytochrome P450 enzyme system. In the case of pancreatic cancer, it is hoped that the Cell-in-a-Box® plus low dose ifosfamide combination will be beneficial to patients whose pancreatic tumors become resistant to standard chemotherapies such as the combination of the anticancer drugs gemcitabine and Abraxane® or FOLFIRINOX. The use of Cell-in-a-Box® encapsulation with other drugs against other forms of cancer remains to be investigated.

The PCT patent application originated from a provisional patent application by the same title that was filed with the U.S. Patent and Trademark Office (USPTO) on March 21, 2017 and a patent application by the same title that was filed with the USPTO on March 21, 2018.

About PharmaCyte Biotech

PharmaCyte Biotech is a clinical stage biotechnology company developing cellular therapies for cancer and diabetes based upon a proprietary cellulose-based live cell encapsulation technology known as “Cell-in-a-Box®.” This technology will be used as a platform upon which therapies for several types of cancer and diabetes are being developed.

PharmaCyte’s therapy for cancer involves encapsulating genetically engineered human cells that convert an inactive chemotherapy drug into its active or “cancer-killing” form. For pancreatic cancer, these encapsulated cells are implanted in the blood supply to the patient’s tumor as close as possible to the site of the tumor. Once implanted, a chemotherapy drug that is normally activated in the liver (ifosfamide) is given intravenously at one-third the normal dose. The ifosfamide is carried by the circulatory system to where the encapsulated cells have been implanted. When the ifosfamide flows through pores in the capsules, the live cells inside act as a “bio-artificial liver” and activate the chemotherapy drug at the site of the cancer. This “targeted chemotherapy” has proven effective and safe to use in past clinical trials and results in no treatment related side effects.

PharmaCyte’s therapy for Type 1 diabetes and insulin-dependent Type 2 diabetes involves encapsulating a human cell line that has been genetically engineered to produce, store and release insulin in response to the levels of blood sugar in the human body. The cell lines being studied and developed are human liver cells, stem cells and beta islet cells. The encapsulation will be done using the Cell-in-a-Box® technology. Once the encapsulated cells are implanted in a diabetic patient, they are designed to function as a “bio-artificial pancreas” for purposes of insulin production.

Safe Harbor

This press release contains forward-looking statements, which are generally statements that are not historical facts. Forward-looking statements can be identified by the words "expects," "anticipates," "believes," "intends," "estimates," "plans," "will," "outlook" and similar expressions. Forward-looking statements are based on management's current plans, estimates, assumptions and projections, and speak only as of the date they are made. We undertake no obligation to update any forward-looking statement because of new information or future events, except as otherwise required by law. Forward-looking statements involve inherent risks and uncertainties, most of which are difficult to predict and are generally beyond our control. Actual results or outcomes may differ materially from those implied by the forward-looking statements due to the impact of numerous risk factors, many of which are discussed in more detail in our Annual Report on Form 10-K and our other reports filed with the Securities and Exchange Commission.

More information about PharmaCyte Biotech can be found at www.PharmaCyte.com. Information may also be obtained by contacting PharmaCyte’s Investor Relations Department.

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