PharmaCyte Biotech Reports on Progress in Its Medical Cannabis Program

LAGUNA HILLS, Calif., Sept. 01, 2016 (GLOBE NEWSWIRE) -- PharmaCyte Biotech, Inc. (OTCQB:PMCB), a clinical stage biotechnology company focused on developing targeted treatments for cancer and diabetes using its signature live-cell encapsulation technology, Cell-in-a-Box[®], today provided an update on its program for developing treatments for serious brain cancers that involve constituents of the *Cannabis* plant. These *Cannabis*-based cancer therapies, like PharmaCyte's pancreatic cancer therapy, will involve the use of its Cell-in-a-Box[®] technology. The cancer "prodrug" that will be activated (converted to their cancer-killing forms) by the cells inside the Cell-in-a-Box[®] capsules are constituents of the *Cannabis* plant known as cannabinoids. PharmaCyte has contracted with the University of Northern Colorado (UNCO), led by Dr. Richard M. Hyslop, to conduct the research related to PharmaCyte's medical *Cannabis* program. UNCO has obtained all of the necessary approvals and has now received research *Cannabis* to enable it to advance PharmaCyte's program.

The Chief Executive Officer of PharmaCyte, Kenneth L. Waggoner, commented on the progress being made by UNCO, "Obtaining permission to perform *Cannabis*-related research has been a rigorous and time-consuming process. First, a detailed research plan had to be submitted to, and approved by, the U.S. Drug Enforcement Agency (DEA) before a Schedule 1 license could be issued. Then the research plan and a request for *Cannabis* plant material had to be submitted to the National Institute on Drug Abuse (NIDA), the only federally approved source of *Cannabis*, which is grown at a facility at the University of Mississippi. Only after NIDA approved the research plan was *Cannabis* for research issued to UNCO. Now that all of these governmental approvals have been obtained and UNCO has received the research *Cannabis*, we are finally able to build upon the firm foundation that had been laid in our quest to develop targeted cannabinoid cancer chemotherapies that utilize the Cell-in-a-Box® technology."

The process being used to develop cannabinoid-based treatments involves three basic steps. First, suitable cannabinoid prodrugs or their precursors that are safe and possess few, if any, side effects must be identified. Second, a unique human cell line that manufactures an enzyme that "activates" the cannabinoid prodrug must be developed. This involves identification of the specific gene that encodes for the production of the enzyme and then "transfecting" or inserting the gene into human cells as was done for PharmaCyte's pancreatic cancer therapy. Third, the engineered cells must be encapsulated utilizing the Cell-in-a-Box[®] technology. The product will then be ready for testing in various cancer cell lines, animal models and ultimately humans.

UNCO researchers have developed and standardized systems and protocols for isolating and utilizing "model" cannabinoid compounds. Further, various types of cells have been cultured and then screened for the appropriate prodrug-activating enzymatic activity, some "target" genes have been amplified, and preliminary dosing and pharmacokinetic studies have been performed. Current and future research is focused on: (i) the synthesis and amplification of specific genes that produce the cannabinoid prodrug-activating enzymes; (ii) transfection of human cells with these genes; and (iii) testing of the ability of these transfected cells to activate cannabinoid prodrugs. Candidates for cannabinoid prodrugs to be studied include the "acidic" forms of the cannabinoids cannabidiol (CBDA) and tetrahydrocannabinol (THCA).

About PharmaCyte Biotech

PharmaCyte Biotech is a clinical stage biotechnology company developing and preparing to commercialize treatments 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 treatments for several types of cancer and diabetes are being developed. PharmaCyte's treatment for cancer involves encapsulating genetically modified live cells that convert an inactive chemotherapy drug into its active or "cancer-killing" form. These encapsulated live cells are placed as close to a cancerous tumor as possible. Once implanted in a patient, a chemotherapy drug which needs to be activated in the body (ifosfamide) is then given intravenously at one-third the normal dose. The ifosfamide is carried by the circulatory system to where the encapsulated cells have been placed. When the ifosfamide, which is normally activated in the liver, comes in contact with the encapsulated live cells, activation of the chemotherapy drug takes place at the source of the cancer without any side effects from the chemotherapy. This "targeted chemotherapy" has proven remarkably effective and safe to use in past clinical trials.

In addition to developing a novel treatment for cancer, PharmaCyte is developing a treatment for Type 1 diabetes and insulin-dependent Type 2 diabetes. PharmaCyte plans to encapsulate 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 encapsulation will be done using the Cell-in-a-Box[®] technology.

Safe Harbor

This press release may contain forward-looking statements regarding PharmaCyte Biotech and its future events and results that involve inherent risks and uncertainties. The words "anticipate", "believe", "estimate", "expect", "intend", "plan" and similar expressions, as they relate to PharmaCyte or its management, are intended to identify forward-looking statements. Important factors, many of which are beyond the control of PharmaCyte, could cause actual results to differ materially from those set forth in the forward-looking statements. They include PharmaCyte's ability to continue as a going concern, delays or unsuccessful results in preclinical and clinical trials, flaws or defects regarding its product candidates, changes in relevant legislation or regulatory requirements, uncertainty of protection of PharmaCyte's intellectual property and PharmaCyte's continued ability to raise capital. PharmaCyte does not assume any obligation to update any of these forward-looking statements.

More information about PharmaCyte Biotech can be found at<u>www.PharmaCyte.com</u>. It can also be obtained by contacting Investor Relations.

Telephone: 917.595.2856 Email: Info@PharmaCyte.com



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