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PharmaCyte Biotech and UTS Creating Advanced Version of Melligen Cells to Treat Diabetes

LAGUNA HILLS, Calif.--(BUSINESS WIRE)-- 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 announced it has entered into a new research agreement with the University of Technology Sydney (UTS) in Australia to create a new version of Melligen cells for the treatment of diabetes with the potential to express higher levels of insulin.

PharmaCyte's Chief Executive Officer, Kenneth L. Waggoner, stated, "We are pleased to have come to an agreement with UTS that allows us to take the Melligen cells to the next level in our development of a 'bioartificial pancreas' for the treatment of Type 1 and insulin-dependent Type 2 diabetes. If we are successful, it will bring to fruition the many years of research that have been conducted by Professor Ann Simpson and her colleagues at UTS as well as PharmaCyte in developing these remarkable insulin-producing cells."

Melligen cells are human liver cells that have been genetically engineered to produce, store and release insulin in response to the levels of blood sugar in the body. PharmaCyte has obtained the exclusive worldwide license rights from UTS to use these cells to develop a therapy for Type 1 and insulin-dependent Type 2 diabetes. PharmaCyte plans to encapsulate Melligen cells using the Cell-in-a-Box® technology to protect the Melligen cells from immune system attack in the body and thus function as a "bioartificial pancreas" for purposes of insulin production.

The work undertaken by PharmaCyte, UTS and PharmaCyte's International Diabetes Consortium over the last two years has resulted in an opportunity to re-engineer the Melligen cells with the aim of increasing their insulin production as well as the bioactivity of the produced insulin. With this new agreement in place, the research will be done in Australia under the leadership of Prof. Ann Simpson, the developer of the original Melligen cell line.

The unique properties that set the Melligen cells apart from all other available insulin-producing cell types, include their robustness, their ability to withstand an attack from cell-toxic molecules that typically lead to the destruction of insulin-producing cells and their suitability for cost-efficient pharmacological-grade large scale production. In contrast to primary beta islet cells of the pancreas, which normally produce insulin and stem-cell-derived insulin producing cells, Melligen cells are a scalable and a highly characterized cell line that can readily be expanded in a bioreactor to generate the amounts of cells needed for cell banking, testing and production.

Professor Simpson commented, "We are extremely pleased that we have come to an agreement with PharmaCyte to continue our work on the Melligen cells and advance them to

their full potential. Both UTS and PharmaCyte are investing in this important research because we believe in the significant health impact potential. This takes us a step closer to eliminating the need for diabetics to inject insulin daily and, more importantly, protects them from developing the debilitating complications of the disease such as blindness, neuropathy and possible amputations, kidney failure and cardiovascular problems. We look forward to working with PharmaCyte and its International Diabetes Consortium to improve the Melligen cells and to utilize them with the Cell-in-a-Box® encapsulation technology to create a potential cure for diabetes."

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 little to 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. PharmaCyte is exploring the use of genetically modified 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 will function as a "bio-artificial pancreas" for purposes of insulin production.

International Diabetes Consortium

PharmaCyte Biotech has established an International Diabetes Consortium (Diabetes Consortium) that consists of world-renowned physicians and scientists from several countries, all of whom share the same goal of developing a treatment for Type 1 and insulin-dependent Type 2 diabetes.

In addition to the Chief Executive Officer, Chief Operating Officer, Chief Scientific Officer and Chief Medical Officer of PharmaCyte, the Diabetes Consortium is made up of well-known physicians and scientists from leading Universities in Munich, Germany, Mannheim, Germany, Vienna, Austria, Barcelona, Spain, Copenhagen, Denmark, and Sydney, Australia. It also involves members from the Karolinska Institute in Stockholm, Sweden, the Vorarlberg Institute for Vascular Investigation and Treatment in Feldkirch, Austria and the biotech company Austrianova in Singapore.

Dr. Eva Maria Brandtner leads the Consortium and is PharmaCyte's Director of Diabetes Program Development. Dr. Brandtner, who is a consultant for PharmaCyte, previously served as the Chief Scientist with Austrianova. In that role, she conducted preclinical studies with the Melligen cells. Prof. Ann. M Simpson and her colleagues at the University of Technology Sydney developed the Melligen cells. Prof. Simpson is a member of the Consortium.

In addition to key personnel from PharmaCyte, Dr. Brandtner and Prof. Simpson, the Diabetes Consortium includes Prof. Dr. Walter H. Günzburg, the Chief Scientific Officer of PharmaCyte Biotech and the Chief Technical Officer of Austrianova, and Dr. Brian Salmons, the Chief Executive Officer of Austrianova and a member of PharmaCyte's Medical and Scientific Advisory Board. It also includes research scientists Prof. Dr. Eckhard Wolf and Prof. Dr. Rüdiger Wanke from the Ludwig-Maximillian University (LMU) in Munich, Germany. Both, together with their colleagues at LMU, have developed unique animal models for insulin-dependent diabetes. Other key members of the Diabetes Consortium include Prof. Dr. Hans-Peter Hammes, Professor of Internal Medicine and Endocrinology, Faculty of Clinical Medicine Mannheim of Heidelberg University and Section Leader for Endocrinology and Diabetology, Mannheim, Germany, Prof. Dr. Thomas Stratman of the University of Barcelona in Spain and Prof. Dr. Axel Kornerup Hanson of the University of Copenhagen in Denmark.

About University of Technology Sydney

UTS is a dynamic and innovative university in central Sydney. One of Australia's leading universities of technology, UTS has a distinct model of learning, strong research performance and a leading reputation for engagement with industry and the professions. Based in the vibrant creative and start-up precinct in Ultimo, it has more than 40,000 students and is rated No.1 'young' university in Australia in both the QS and Times Higher Education rankings.

More information about UTS can be found at www.uts.edu.au.

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 United States Securities and Exchange Commission.

More information about PharmaCyte can be found at www.PharmaCyte.com. It can also be obtained by contacting Investor Relations.

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