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Ceapro Announces Research Funding Award from the Canadian Institutes of Health Research and the Natural Sciences and Engineering Research Council of Canada for Joint Projects with McMaster University

- Collaboration to develop innovative drug delivery systems using disruptive PGX Technology to optimize drug formulations used in areas of high unmet medical needs such as idiopathic lung fibrosis and antibiotic-resistant wound infections -

EDMONTON, Alberta, Aug. 27, 2019 (GLOBE NEWSWIRE) -- [Ceapro Inc. \(TSX-V: CZO\)](#) (“**Ceapro**” or the “**Company**”), a growth-stage biotechnology company focused on the development and commercialization of active ingredients for healthcare and cosmetic industries, announced today that the Canadian Institutes of Health Research (CIHR) in partnership with the Natural Sciences and Engineering Research Council of Canada (NSERC) has awarded a \$670,315 Collaborative Health Research Projects (CHRP) Initiative grant for a three-year collaborative project with Dr. Todd Hoare, Dr. Brian Coombes and Dr. Kjetil Ask at McMaster University.

This project marks the beginning of the second phase of an extensive research program initiated in March 2016 with researchers at McMaster University under Dr. Hoare’s leadership. The focus of the study is on the development and application of highly tunable porous biopolymer and smart polymer scaffolds using Ceapro’s [Pressurized Gas eXpanded \(PGX\) Technology](#).

Positive results were obtained from the first phase of this research program resulting in new methods being developed to convert biopolymer networks to hydrogels with the potential to load them with a wide range of drugs. These results, coupled with the capabilities of PGX Technology to develop new chemical entities with potential new applications, bolster Ceapro’s belief in the next applied research phase of this project aimed at developing optimal drug formulations to address key challenges in treating idiopathic pulmonary fibrosis (IPF) and antibiotic-resistant infected wounds.

IPF alone causes about 5,000 deaths each year in Canada while wound care costs Canadians almost \$4.0 billion per year with a 2.5% rate of post-surgical infections particularly costly to treat. Success in this work thus offers potential to address health challenges as well as reduce healthcare costs.

“Our team at McMaster is very excited to continue our collaboration with the team at Ceapro, which has already led to some important technical advances in making highly porous hydrogels with multiple applications. We are particularly excited about our opportunity to combine the impressive capacity of the PGX process to create pores with our knowledge of how to create hydrogels using fast-gelling chemistries compatible with the process, as we believe this combination can lead to the fabrication of truly novel materials with highly adaptable properties. In particular, by bringing in the world-leading expertise of Dr. Coombes in the discovery of new therapies to treat antibiotic-resistant infections and Dr. Ask in treating lung fibrosis, as well as the partnerships they have established in these areas, we look forward to helping Ceapro advance new products to meet existing and emerging therapeutic needs,” stated Dr. Hoare, Professor at the Department of Chemical Engineering at McMaster University.

“This PGX research project with McMaster University is perfectly aligned with our expressed vision to strategically transition Ceapro to a new business model from a contract manufacturer to a biopharmaceutical company. Working with world-renowned experts like Dr. Hoare and his team at McMaster University has been a strong and fruitful relationship over the last couple of years as we’ve collaborated on various research projects. We are incredibly grateful for this research grant and to continue our work with them,” stated, [Gilles Gagnon, M.Sc., MBA, President and CEO of Ceapro](#). “Our PGX Technology has demonstrated encouraging potential in its ability to produce highly porous materials that will become innovative delivery systems capable of boosting the efficacy of drug therapy. We look forward to expanding the applications of this potentially game-changing technology into pharmaceuticals and biomedical industries for unmet needs such as the treatment of IPF as well as antibiotic-resistant infections.”

About Pressurized Gas eXpanded Liquid Technology (PGX)

The Company's patented Pressurized Gas eXpanded (PGX) is a unique and disruptive technology with several key advantages over conventional drying and purification technologies that can be used to process biopolymers into high-value, fine-structured, open-porous polymer structures and novel biocomposites. PGX is ideally suited for processing challenging high-molecular-weight, water-soluble biopolymers. It has the ability to make ultra-light, highly porous polymer structures on a continuous basis, which is not possible using today's conventional technologies. PGX was invented by Dr. Feral Temelli from the Department of Agricultural, Food & Nutritional Science of the University of Alberta (U of A) along with Dr. Bernhard Seifried, now Senior Director of Engineering Research and Technology at Ceapro. The license from U of A provides Ceapro with exclusive worldwide rights in all industrial applications.

About McMaster University

McMaster University, one of four Canadian universities listed among the Top 100 universities in the world, is renowned for its innovation in both learning and discovery. It has a student population of 23,000 and more than 175,000 alumni in 140 countries.

About Canadian Institutes of Health Research (CIHR)

CIHR is the major federal agency responsible for funding health and medical research in Canada. It aims to excel, according to internationally accepted standards of scientific

excellence, in the creation of new knowledge and its translation into improved health for Canadians, more effective health services and products and a strengthened Canadian health care system. CIHR's annual budget is approximately \$1 billion.

About the National Sciences and Engineering Council of Canada (NSERC)

NSERC invests over \$1 billion each year in natural sciences and engineering research in Canada. Our investments deliver discoveries, valuable world-firsts in knowledge claimed by a brain trust of over 11,000 professors, world-leading researchers in their fields. Our investments enable partnerships and collaborations that connect industry with discoveries and the people behind them. Researcher-industry partnerships established by NSERC help inform R&D, solve scale-up challenges and reduce the risks of developing high potential technology. Our investments provide scholarships and hands-on training experience for the next generation of science and engineering leaders in Canada, more than 30,000 postsecondary students and post-doctoral fellows.

About Ceapro Inc.

Ceapro Inc. is a Canadian biotechnology company involved in the development of proprietary extraction technology and the application of this technology to the production of extracts and “active ingredients” from oats and other renewable plant resources. Ceapro adds further value to its extracts by supporting their use in cosmeceutical, nutraceutical, and therapeutics products for humans and animals. The Company has a broad range of expertise in natural product chemistry, microbiology, biochemistry, immunology and process engineering. These skills merge in the fields of active ingredients, biopharmaceuticals and drug-delivery solutions. For more information on Ceapro, please visit the Company’s website at www.ceapro.com.

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