



## **Ceapro Inc. Confirms Excellent Bioavailability of its New Water Soluble Chemical Complex Coenzyme Q10-Beta Glucan**

- *Positive results obtained from a unique research protocol and surgical methodology*
- *Potential for development of a first-in-class slow-release formulation*
- *Results enable Ceapro's transition to nutraceutical sector by year end*

**EDMONTON, ALBERTA – May 29, 2018 – [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, today announced positive results from a bioavailability study for its Pressurized Gas eXpanded liquid (PGX) processed new water soluble chemical complex Coenzyme Q10 (CoQ10) beta glucan.

While a comprehensive data package will be submitted for publication, top-line results confirmed in a dose response manner excellent bioavailability of Ceapro's unique CoQ10-BG formulation at concentrations of 3 to 8% CoQ10. Comparisons were made against two positive controls: a food grade marketed lipid-based formulation and one of the best commercially available 20% CoQ10 dry powder complex-based formulation. From a physicochemical perspective, Ceapro's unique water soluble CoQ10-BG formulation remained stable in aqueous dispersion for more than two months compared to the commercially available 20% CoQ10 formulation, which precipitated in less than 18 hours.

“This is the most exciting milestone achieved so far with a product obtained from the use of our disruptive PGX technology. Not only will we be able to support a claim with solid science for many potential applications, we believe that we might have developed a novel first in-class slow release formulation of CoQ10, a characteristic that could bring several potential health benefits like the alleviation of side effects induced by some drugs known to deplete CoQ10 in the body. Also, this observation further confirms our hypothesis that beta glucan acts as a carrier and importantly, is in line with our corporate strategy to develop delivery systems for various bioactive compounds,” stated [Gilles Gagnon, M.Sc., MBA, President and CEO](#) of Ceapro.

“We firmly believe this achievement will be very attractive to potential key partners and allow us to transition into the high-value nutraceuticals market by year end. Interestingly, this new complex could also be added to our Juvente line of cosmeceuticals,” added Mr. Gagnon.



## **About the study**

### **Background:**

A novel ingredient (CoQ10-BG complex) composed of CoQ10 impregnated on beta-glucan powder (BG) was developed successfully using the PGX technology in a previous project where it was demonstrated that new Ceapro's complex could be dispersed in water in a uniform manner. However, since current water dispersible commercial products are poorly bioavailable, due to the crystalline nature of CoQ10 and the poor solubility of CoQ10 in water, it was necessary to demonstrate that Ceapro's innovative water dispersible CoQ10-BG complex would reach targeted cells and tissues.

Ceapro and researchers from University of Alberta initiated a bioavailability study using a rodent model. The specific objective of the study was to determine the direct *in-vivo* intestinal bioavailability of the CoQ10-BG complex compared to standard crystalline and commercial CoQ10 formulations.

### **Design and Methodology:**

Intestinal bioavailability of CoQ10-BG complex and standard formulations were evaluated using a procedure for surgical cannulation of the intestinal mesenteric lymphatic vessel, which is a measure of direct absorption of lipophilic nutrients. This procedure was pioneered by University of Alberta researchers. Four formulations of CoQ10 were used with animals to assess the bioavailability of each formulation. New standards had to be developed by the researchers to analyze data using a High Pressure Liquid Chromatography (HPLC) methodology and determine the mg/ml and % absorption of CoQ10 from each formulation.

### **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](http://www.ceapro.com).

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