



## **Ceapro Inc. Presents PGX Enabling Technology Case Study at the 12th International Symposium on Supercritical Fluids**

– *Ceapro receives issued European Patent for PGX Technology* –

– *Poster presentation on a new PGX-dried chemical complex gum Arabic/CoQ10* –

**EDMONTON, ALBERTA – April 25, 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, announced today that Bernhard Seifried, Ph.D., Ceapro’s Director of Engineering Research and Technology, and Feral Temelli, Ph.D., from the Department of Agricultural, Food & Nutritional Science of the University of Alberta, presented the case study titled, “*PGX Technology: A Case of University – Industry Partnership for Innovation*,” in an oral presentation at the [12th International Symposium on Supercritical Fluids](#) (ISSF 2018) held April 22-25, 2018 in Antibes, France.

The case study outlined the development of Ceapro’s [Pressurized Gas eXpansion \(PGX\) platform technology](#) that is used to convert biopolymers into high-value materials overcoming the challenges associated with the drying of high molecular weight biopolymers using conventional technologies. Also included in the case study is information regarding the supercritical fluid technology research program of Dr. Temelli at the University of Alberta. A comprehensive article has been included in the conference proceedings and is available on Ceapro’s website ([www.ceapro.com](http://www.ceapro.com)).

Additionally, during the presentation, Drs. Temelli and Seifried announced that Ceapro has received issuance from the European Patent Office (EPO) of patent No. 2553000 titled, “*Supercritical Fluid Treatment of High Molecular Weight Biopolymers*,” related to the Company’s enabling PGX Technology. The issued European patent claims cover methods related to the production, impregnation and microencapsulation of micro- and nano-particles, agglomerates and fibers from high molecular weight water-soluble biopolymers applying supercritical fluid technology utilizing PGX. Ceapro’s PGX Technology was issued U.S. and Canada patents in 2016.

“We are pleased to receive the issuance of this patent from the European Patent Office for our PGX technology, which is another significant addition to our robust intellectual property portfolio surrounding our unique and disruptive enabling technology. With our PGX Technology now protected in North America and Europe, we feel more comfortable for open partnering discussions. We firmly believe that the PGX platform technology has tremendous value as we continue to utilize it towards the commercialization of our development projects into new products in the cosmeceutical, nutraceutical and pharmaceutical markets,” commented [Gilles Gagnon, M.Sc., MBA, President and CEO](#) of Ceapro.



Ceapro is developing its PGX enabling technology at various scale levels for all industries and all applications. The Company's PGX technology is a novel spray drying technique for processing water-soluble biopolymers and can produce numerous morphologies of biopolymers ranging from fine fibers to granular powder, which are highly water soluble. Because PGX operates at lower temperatures than conventional spray drying, it also enables the incorporation of thermosensitive bioactives.

PGX processing of biopolymers results in powders with large specific surface area facilitating easier handling, dispersion, and dissolution in water much faster than powders of the same biopolymers prepared by prior art techniques, which is key to high molecular weight biopolymers used in cosmetic industries and the successful commercial scale production of Ceapro's pharmaceutical grade powder formulation of beta glucan. In 2017, the Company successfully developed a new water soluble chemical complex composed of Co-Enzyme Q10 and beta glucan, as well as a new tablet of beta glucan that will be assessed as a cholesterol reducer utilizing its PGX Technology. This impregnated beta glucan has the potential for use in nutraceuticals, functional food ingredients, and even as a drug delivery vehicle.

Ceapro has conducted research on a number of various biopolymer samples from different sources. Given the unique properties obtained with processed compounds and especially the increased surface area allowing for inclusion of other biomaterial, PGX becomes a unique enabling technology to potentially produce innovative delivery systems and become a game-changing technology. As an additional example of development of delivery system, Drs. Temelli and Seifried also presented a poster titled, "*Preparation of PGX-dried gum arabic (GA) and its loading with Co-Q10 by adsorptive precipitation,*" demonstrating that PGX drying of GA solutions resulted in particles with sizes as small as tens of nm, low bulk density and large surface area.

"At the end of the day, the "PGX journey" is a great example of translational research from lab to market. We expect this innovative technology to be a key enabler in implementing our business model as a full fledge biopharmaceutical company," concluded Mr. Gagnon.

### **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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