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# Ceapro Inc. Announces Publication of Positive Data from Functional Beverage Formulation Study in Journal of Functional Foods

**Study successfully demonstrated the potential use of beta glucan and coenzyme Q10 as nutraceutical ingredients in functional beverages**

EDMONTON, Alberta, June 27, 2018 (GLOBE NEWSWIRE) -- [Ceapro Inc.](#) (TSXV: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 the publication of data from its functional beverage formulation study in the *Journal of Functional Foods* in a an article titled, “*Development of an orange-flavoured functional beverage formulated with beta-glucan (BG) and coenzyme Q10-impregnated beta-glucan (iBG).*”

The coenzyme Q10-impregnated beta glucan functional beverage project was conducted in collaboration with Dr. Feral Temelli’s team at the University of Alberta, along with Ceapro researchers and was co-funded by Alberta Innovates (formerly Alberta Innovates Bio Solutions) and Ceapro Inc. Dr. Temelli presented positive data from the first phase of this project in May 2017 at the 16<sup>th</sup> European Meeting on Supercritical Fluid Technologies held in Lisbon, Portugal.

“We remain very encouraged by the data from this study and are pleased that it has been selected for publication in the prestigious *Journal of Functional Foods*. With the increased awareness of the link between diet and health, we believe that the functional foods market represents a huge opportunity,” commented [Gilles Gagnon, M.Sc., MBA, President and CEO](#) of Ceapro. “Given the well-known health claims of beta glucan and coenzyme Q10, the ongoing stability study with the iBG formulation and the recently announced excellent bioavailability results obtained with this new chemical complex (iBG), we believe that the prototype beverage we have developed exhibits the potential of iBG as a functional ingredient for incorporation into beverages and may inspire new applications in food products or natural health products. We look forward to continuing the development of this product and plan to pursue commercialization into this large market in partnership with a multinational company.”

The objectives of the study were to: (a) develop a formulation of a functional beverage incorporating beta glucan (BG) or coenzyme Q10 impregnated beta glucan (iBG) and evaluate its physicochemical properties, (b) to determine if there is an overall sensory difference between beverages prepared with BG and iBG, (c) to evaluate the sensory quality

and acceptability of the beverage formulated with iBG in comparison to a commercial product using a consumer panel, and (d) to evaluate the effect of health information on the overall acceptance of the beverage by consumers.

The Company formulated an orange-flavored functional beverage with its value driver, oat BG powder or with iBG, sweetened with stevia extract, to demonstrate the potential use of BG or iBG as a functional ingredient in beverage formulations. The BG and iBG (CoQ10 loading 3.3%) were obtained utilizing Ceapro's proprietary [pressurized gas-expanded \(PGX\) liquid technology](#).

The beverage was successfully developed and was evaluated by a consumer sensory panel. Ideal profile method was applied to evaluate the overall consumer acceptance of the beverages prepared with 0.2% iBG. Principal component analysis was performed to evaluate the product space among 0% iBG beverage, 0.2% iBG beverage, Vitaminwater® and ideal product. The addition of citric acid had no effect on the viscosity of beverages prepared with either iBG or BG. There was no detectable difference between iBG and BG beverages, indicating that the presence of 3.3% (w/w) CoQ10 did not introduce any effect on the sensory attributes of the functional beverages. Also, the addition of 0.2% iBG had no effect on any of the sensory attributes evaluated other than thickness when compared with the 0% iBG beverage. Providing health information regarding the ingredients yielded a positive overall acceptance for the 0.2% iBG beverage.

The Company plans to further improve the formulation by assessing the use of other sweeteners and flavors and optimizing the concentration of citric acid in the future to satisfy the sensory expectations of the target group of consumers. Overall, the potential use of both PGX-processed BG and iBG as nutraceutical ingredients in functional beverages was demonstrated in this study.

### **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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