

ADVANCED MATERIALS AND CHEMICALS PROGRAM HIGHLIGHTS

CEAPRO INC. AMC-11-021

Manufacturers of personal care products, nutraceuticals and developers of therapeutics are interested in adding bioactives to their products for the expanding multi-billion-dollar global cosmetic market. Edmonton-based Ceapro Inc, a publicly traded growth-stage biotechnology company, has developed several natural active ingredients for this market. These Ceapro ingredients are highly prized by well-known international healthcare and cosmetic manufacturers for adding to products like Aveeno[®], Dove[®], Neutrogena[®], Burt's Bees[®], The Body Shop[®] and Bath & Body.

Made from Alberta oats, Ceapro's ingredients—avenanthramides and beta glucans—are natural, cosmetic-grade and have a standardized therapeutic effect. In 2011, Ceapro received \$1.6 million in funding support from the Alberta Innovates Advanced Materials and Chemicals program, under Project AMC-11-021, to help build a commercial manufacturing plant in Edmonton with adjacent R&D lab. The \$17-million plant, which opened in 2016, received other provincial support from University of Alberta and the University of Alberta - Agri-Food Discovery Place, Alberta Agriculture and Forestry - Food Processing Development Centre and Olds College. "Starting up a new biotech company is a fragile and risky endeavour," said Gilles Gagnon, President and CEO, Ceapro Inc. "Without the patient support and financial assistance from Alberta Innovates, Ceapro might have floundered or built its new plant in one of the other eight national and international regions who offered us very attractive incentives to relocate."

The plant's unique manufacturing process is cost effective and environmentally friendly, while consistently producing high quality standardized products. Scientists at the University of Alberta and Olds College developed a process that extracts a higher concentration of bioactive ingredient from the oats than conventional methods. Oats that have been tested to have a high level of the active ingredients are purchased from local Alberta farmers. More than 90 people were needed for construction of the plant and 11 new full-time jobs were created.

As a result of the state-of-the art plant, Ceapro acquired a three-year distribution deal with a German multinational cosmeceutical company. This deal was recently renewed for another three years to 2019. In 2016, Ceapro received \$10 million in private funds for further R&D. This included development of a powdered form of beta glucan for the nutraceutical and botanical drug markets, and



Well-known personal care products like Aveeno[®] and Burt's Bees[®] use the bioactive ingredients produced at the Edmonton, AB plant

Source: Ceapro Inc.



Ceapro's 30,000 square foot commercial manufacturing plant in Edmonton, AB produces several bioactive ingredients from Alberta oats with therapeutic effects

Source: Ceapro Inc.

avenanthramides for treatment of exercise-induced muscle inflammation. Ceapro has the exclusive worldwide licence from the University of Alberta for commercial use of its pressurized gas expanded (PGX) technology. The PGX technology can dry and purify biopolymers like beta glucan so they are ultra light and highly porous. This makes the biopolymers good delivery systems in functional foods, natural health products, cosmetics, personal care products and pharmaceuticals. Currently, Ceapro is using the technology to load the antioxidant CoQ10 on oat beta glucan as a powerful additive in an energy drink. In 2017, Ceapro acquired JuventeDC, a retail cosmeceutical company based in Quebec. It will now start using Ceapro's bioactive ingredients in its new line of anti-aging skin care products--a \$5 billion global market.

To meet growing customer demand, Ceapro still manufactures product from its pilot plant in Leduc, in addition to the new commercial plant in Edmonton. All of this manufacturing capacity has steadily increased Ceapro sales to more than \$13 million per year.



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Gilles Gagnon

President and CEO, Ceapro Inc.



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