

## Ceapro Inc.

(V.CZO - TSXV)

### UPDATE

**CZO: Beats on Third Quarter Revenues & Earnings; Raising Price Target...**

On November 12, 2015, Ceapro Inc. (TSXV: CZO) reported financial results for the third quarter 2015. The company reported record revenues of \$3.1 million, and had a net income of \$1.0 million, or \$0.02 per share.

<b>Current Recommendation</b>	<b>Buy</b>
Prior Recommendation	N/A
Date of Last Change	10/05/2015
Current Price (11/13/15)	\$0.45
<b>Target Price</b>	<b>\$0.65</b>

Ceapro is a "green" growth-stage biotechnology company that develops and commercializes health and wellness products for the human and animal industries through its proprietary extraction technology platform and natural, renewable resources. Ceapro's core product base includes avenanthramides and beta glucan, two natural ingredients that are derived from oats that are currently being used in multiple household products around the globe such as Aveeno®, Burts Bees®, and Nexxus®.

We are maintaining our "Buy" rating and are increasing our price target to CAD \$0.65 per share.

## SUMMARY DATA

52-Week High	\$0.75
52-Week Low	\$0.17
One-Year Return (%)	50
Beta	2.95
Average Daily Volume (sh)	23,375

<b>Risk Level</b>	<b>Above Average</b>
<b>Type of Stock</b>	<b>Small-Growth</b>
<b>Industry</b>	<b>Med-Biomed/Health</b>

Shares Outstanding (mil)	62
Market Capitalization (\$mil)	\$27.97
Short Interest Ratio (days)	N/A
Institutional Ownership (%)	N/A
Insider Ownership (%)	N/A

Annual Cash Dividend	\$0.00
Dividend Yield (%)	0.00

5-Yr. Historical Growth Rates	
Sales (%)	N/A
Earnings Per Share (%)	N/A
Dividend (%)	N/A

P/E using TTM EPS	N/A
P/E using 2015 Estimate	N/A
P/E using 2016 Estimate	N/A

## ZACKS ESTIMATES

### Revenue

(In millions of \$)

	Q1	Q2	Q3	Q4	Year
	(Mar)	(Jun)	(Sep)	(Dec)	(Dec)
2014	\$2.0 A	\$2.4 A	\$2.4 A	\$2.1 A	\$8.9 A
2015	\$1.7 A	\$2.4 A	\$3.1 A	\$3.1 E	\$10.3 E
2016					\$12.4 E
2017					\$14.3 E

### Earnings per Share

(EPS is operating earnings before non-recurring items)

	Q1	Q2	Q3	Q4	Year
	(Mar)	(Jun)	(Sep)	(Dec)	(Dec)
2014	\$0.00 A	\$0.01 A	\$0.01 A	\$0.00 A	\$0.03 A
2015	-\$0.00 A	\$0.01 A	\$0.02 A	\$0.01 E	\$0.03 E
2016					\$0.00 E
2017					\$0.03 E

## WHAT'S NEW

Ceapro Inc. is a “green” growth-stage biotechnology company that focuses on the identification, isolation, extraction, purification, development and commercialization of natural, functionally active ingredients and extracts from oats, and other renewable botanical sources through the use of proprietary technology and sustainable resources.

We initiated coverage on Ceapro on October 5, 2015 with a “Buy” rating, and a price target of \$0.50 when the shares were trading at \$0.22. Since that time, the shares have more than doubled to \$0.45. Based on third quarter results and adjustments to our model, we are raising the price target to \$0.65 per share.

For the purpose of this report, in addition to offering a financial and business review for the quarter, we would also like to offer an update and some background on Ceapro's lead assets.

### **Financial Update**

On November 12, 2015, Ceapro Inc. (TSXV: CZO) [announced](#) financial results for the third quarter ended September 30, 2015. Ceapro reported revenues of \$3.1 million for the third quarter 2015 vs. revenues of \$2.4 million for the third quarter 2014, which represents an increase of 26% and the highest quarterly revenue performance in the history of the company. Product revenues were above our expectations, and the overall sales growth and revenue increase has been mainly driven by an increase in demand for beta glucan in Europe and Asia. It is important to point out that Ceapro's quarterly sales and results primarily fluctuate due to variations in the timing of customer orders, different product mixes, and changes in the capacity to manufacture products.

R&D expenses for the third quarter 2015 were \$0.1 million and G&A expenses were \$0.5 million in the quarter. Both R&D and G&A expenses were slightly below our expectations. Net income for the third quarter was roughly \$1 million, or \$0.02 per share, as compared to \$0.7 million, or \$0.01 per share, for the third quarter 2014. Year-over-year, net income was up 46%.

As a reminder, in January 2015, Ceapro received conditional TSX-V approval for and closed a \$650k first tranche private placement of eight percent unsecured convertible debentures due December 31, 2106, with interest payable on June 30 and December 31 of each year. The debentures are convertible into common shares of Ceapro at a price of \$0.64 per common share and may be called for redemption upon 60 days' notice. The debentures and any common shares issued upon conversion of the convertible debentures are subject to a four-month hold period from the date of issue of the debentures. Ceapro will use proceeds from the first tranche of the debentures transaction for capital expenditures, research and development, new product development, general corporate and working capital purposes. Subsequently, in February 2015, Ceapro closed a \$310k second tranche of this previously announced private placement under the same terms. In addition to raising the \$960 million in non-brokered private placement as mentioned above, Ceapro also signed a loan agreement with Agriculture Financial Services Corporation in December 2014 for a commercial financing of up to \$900k. The five-year term loan, with an interest rate of 3.84%, will be used for capital expenditures related to Ceapro's new GMP facility.

As of September 30, 2015, Ceapro had \$0.81 million in cash and cash equivalents, as compared to \$0.55 million as of June 30, 2015. We believe that Ceapro will have to go out and raise additional capital soon in order to support its upcoming clinical studies and the completion of its new manufacturing facility. We believe the company will need close to \$4.5 million to complete construction of the new facility.

### **Business Update**

Ceapro utilizes a proprietary plant extraction based manufacturing process to supply ingredients that are currently used in multiple household products in the personal care and cosmetics industries. We can find Ceapro ingredients inside well-known branded products like Aveeno®, Burts Bees®, and Nexxus®. Ceapro's active ingredients are manufactured from proprietary oat varieties and various natural sources grown in many regions around the globe, with extra focus being placed on Canadian crops. The company's flagship product, avenanthramides (AVA), in addition to its value driver, beta glucan, are two oat-derived compounds that make up the core of Ceapro's product base. Ceapro is the only worldwide commercial manufacturer of natural AVA.

Over the last ten years, the main priority of the company has been to provide novel, natural, environmentally friendly ingredients to cosmetic and personal care product manufacturers and developers of human and animal therapeutics. Ceapro extracts are currently used in the cosmeceutical (cosmetics that have medicinal or drug-like effects) market, with the hope for entry into the pharmaceutical and nutraceutical (derived from food sources that purport health benefits such as vitamins, minerals, herbals, and functional foods and beverages) sectors in the relative near term. The company has plans to involve a steady pipeline of innovative products for both the human and animal healthcare industries. We highlight updates to the Ceapro pipeline below.

### Update on Avenanthramides

In 2012, Ceapro entered into two technology agreements with Agriculture and Agri Food Canada (AAFC) and licensed a patented malting technology to increase concentrations of avenanthramides in oats and also gained access to a new variety of oat that should improve the productivity of manufacturing for the company. A commercial scale test was conducted at the ARGO facility where the concentration was increased by four to five times, and two additional commercial scale runs have been conducted in June-August 2015. As per Ceapro, it has now successfully produced three batches at the commercial level in its current facility for a next generation of AVA extracted from malted oat. Ceapro is currently preparing for this new product to be assessed from a safety and efficacy perspective, and expects to present it to customers in the near future. Ceapro has also recently been granted patents in Canada and China for avenanthramides resulting from the use of enabling malting technologies.

We understand that Ceapro's flagship product, avenanthramides, has applications in the cosmetics and personal care industries, but it has been suggested when taken orally, AVA could be beneficial in inflammatory conditions. These findings led to the idea that AVA could possibly be developed as an active pharmaceutical ingredient (API). Ceapro has initiated a bioavailability study with a U.S.-based university, comparing low-dose vs. high-dose AVA. If positive trends are observed, Ceapro expects to commence its clinical program as early as the second quarter of 2016. Management believes that this bioavailability study will pave the way for future clinical study protocols, and should provide efficacy information as an anti-inflammatory compound. We hope to have a better sense of the market opportunity here and the value of avenanthramides after the bioavailability study is completed, and once we see the IND filing down the road.

We continue to look forward to seeing where Ceapro can take AVA in the future. We hope that these strides will allow for Ceapro to continue producing larger quantities and higher concentrations of AVA, which will not only improve its current position in the cosmetics and personal care markets but will also allow for the potential penetration into other markets such as functional food, nutraceuticals, and pharmaceuticals.

### Update on Oat Beta Glucan

Beta glucan is well-known for its cholesterol lowering properties ([Othman, et al., 2011](#)), and Ceapro aims to develop beta glucan as a cholesterol reducer. Safety studies to assess high purity beta glucan when taken orally and a pilot clinical trial program on cholesterol reduction are both set to start at some point during the first half of 2016. As per Ceapro, there is existing data on safety and toxicology studies obtained many years ago by an industry partner who is currently commercializing beta glucan as a carrier in a urinary incontinence device that supports moving forward with the beta glucan program. We believe the safety study will take about 10 months to complete. Furthermore, the beta glucan pilot study will enroll approximately 300 patients and will take approximately 16-18 months to complete. Both studies will be conducted in parallel. We look forward to learning more about these study designs, and the Ceapro vision regarding the beta glucan story.

CP Oat Beta Glucan is currently formulated as a liquid, and in order to fully exploit the potential of the product, Ceapro began developing dry formulations of the substance back in 2012. Once again, Ceapro looked to the University of Alberta to utilize its **P**ressurized **G**as **e**Xpanded (PGX) technology that was developed there, which is based on supercritical conditions, which enabled the development of dry formulations of beta glucan at the lab scale (*right*).

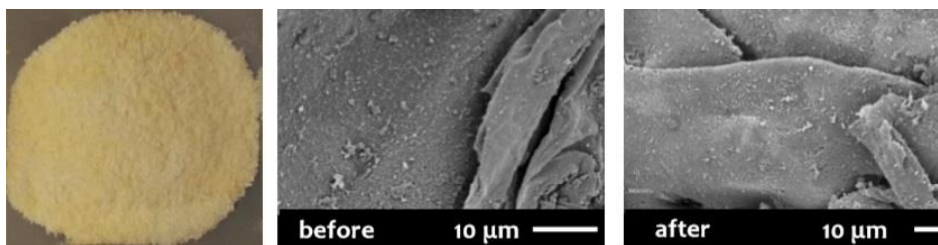


Highly Viscous 1% MW  $\beta$ -Glucan Solution

Fine PGX  $\beta$ -Glucan Microfibrils

Source: Ceapro, Inc.

In December 2014, Ceapro was awarded a \$198,000 [funding contribution](#) by Alberta Innovates Bio Solutions (AI Bio) for further development of a prototype functional food ingredient for an energy drink formulation using the company's dry beta glucan impregnated (iBG) with the well-known bioactive CoQ10. The high-purity dry form of beta glucan is produced via PGX technology. The beta glucan/CoQ10 study with University of Alberta has been initiated, and we believe that it will require at least 1 year to complete. The study builds on preliminary data obtained in a 2014 study conducted by Ceapro in partnership with Massachusetts Institute of Technology (MIT) that showed that CoQ10 was successfully impregnated into Ceapro's highly porous beta glucan powder (*below*). According to management, these findings suggest that its bioavailability may be significantly improved, thus opening up future applications for the nutraceutical market, while this novel iBG formulation could be the first potential commercial application of iBG in a functional food item. We see this as a step in the right direction towards Ceapro's transition into other sectors and potentially show the ability of translational research to go from the laboratory to the marketplace.



LEFT: Photograph of PGX-BG homogeneously impregnated with Coenzyme Q10

RIGHT: SEM images of PGX-BG before and after impregnation with CoQ10 showing no visible difference between BG and CoQ10 impregnated BG suggesting that the porous BG structure is not negatively affected by the impregnation step and that CoQ10 is deposited onto the matrix at submicron scale

Sources: Sarah Mayner, Chadd Kiggins, Alexander Kendrick, Prof. Clark Colton, Prof. William Dalzell; subject 10.27, Chemical Engineering Dept., MIT, 2014 & Ceapro, Inc.

## **PGX Research Programs Update**

Ceapro has conducted research with PGX at lab scale since it has in-licensed this enabling technology for all industries and all applications and has analyzed samples from different companies across a broad range of industries. As per the company, it has obtained encouraging results in producing the end products from these samples at lab scale. The next step is for Ceapro to collaborate with these companies as well as and discuss potential alliance opportunities.

On November 12, 2015, Ceapro [announced](#) that the National Research Council of Canada (NRC) through its Industrial Research Assistance Program (IRAP) made a contribution of up to \$350,000 for the development, demonstration and testing of Ceapro's PGX technology, which will support salaries of researchers dedicated to the building of a fully functional skid in Alberta for processing a wide range of feedstock using PGX equipment. Ceapro's researchers will focus efforts on completing the design of process equipment, fabricating and commissioning the demonstration skid, testing of biopolymer samples, assessing and determining the biopolymers with the best value proposition for further development and commercialization. In addition to in-house applications that have been developed with beta glucan using PGX technology, the other expected deliverable will be a system that will allow assessment of various materials originating from different companies or organizations on a worldwide basis.

### ***A Review of PGX Technology: Taking Liquids to Dry Powder Formulations...***

On May 20, 2014, Ceapro signed a [Development and Licensing Agreement](#) with the University of Alberta for the use of its **P**ressurized **G**as **e**Xpanded (PGX) technology. Ceapro intends to utilize PGX technology to develop dry powder formulations of active ingredients in order to enable the transition to other sectors that mostly require the production of dry formulations in the form of tablets and capsules, such as cosmeceuticals, functional food, nutraceutical and pharmaceutical industries. Subsequently, on February 11, 2015, Ceapro announced an [expansion to the license agreement](#) with the University of Alberta, granting worldwide rights to the company to develop and commercialize PGX Technology in all industrial fields.

PGX technology was co-invented by Dr. Bernhard Seifried, Senior Researcher at Ceapro, and [Dr. Feral Temelli](#) from the Department of Agricultural, Food & Nutritional Science of the University of Alberta. PGX technology is a novel, heat-free, drying technique that utilizes properties of pressurized gas expanded liquids to produce a wide variety of highly porous, preservative free, sterile morphologies of water-soluble biopolymers, such as oat beta

glucan, that have large specific surface areas and tunable surface properties. These morphologies include granular powders, fine fibers, granules, aerogels, purified bioactives and exfoliated bio-nanocomposites and, according to management, are similar to those obtained by freeze-drying but at a fraction of the required time and cost.

As per management, standard drying methods (like traditional freeze-drying or spray drying) are not the best options when dealing with oat beta glucan and other biopolymers because they tend to be quite expensive and are not capable of removing all impurities. Management believes that a major advantage of PGX over traditional spray drying technologies is the capability of increasing surface area, thus enabling impregnation studies. If this is the case, we see the licensing of PGX technology as a critical step to significantly expand Ceapro's business.

For example, a dry formulation of oat beta glucan allows Ceapro to pursue the large nutraceutical and functional food/drink markets where oat beta glucan has a well-established health claim for LDL and total cholesterol reduction. PGX technology can also be applied to drug delivery, hydrogels, absorbants, biomedical devices, wound healing/scaffolding, paints and biocomposites.

PGX technology works at lower temperatures than the traditional spray drying technique, and thus thermo-sensitive (temperature sensitive) bioactives as well as highly viscous solutions and high molecular weight biopolymers (MW = 600 to 1500 kDa) can be processed. Through this technology, a spray chamber is used in which the polymer matrix is formed in fractions of seconds out of aqueous solutions, thus leading to shortened drying times and the decreased need for large bulky equipment. Ceapro's PGX technology uses a highly tunable pressurized gas expanded liquid as drying fluid, which consists of CO<sub>2</sub> and anhydrous ethanol recyclable natural food grade solvents "Generally Recognized As Safe" (GRAS). Other advantages of PGX technology include the elimination of issues related to surface or interfacial tension that sometimes lead to clumping of biopolymers during the traditional drying processes.

According to Ceapro, the technology is scaleable and has been successfully scaled-up from the laboratory to pilot plant, which is capable of processing 300 kg/hr of aqueous solution. PGX Technology has some distinctive characteristics and properties such as purifying biopolymers by removing contaminants and impurities and extracting valuable bioactives at mild conditions.

Additionally, on May 28, 2015, Ceapro [announced](#) that it will embark on a scale-up of its PGX technology to commercial and demonstration levels. The scale-up is estimated to cost around \$2 million, and the company has received additional funding from AI Bio, this time in the amount of an \$800K funding contribution, in order to help support the project. Similarly, as mentioned above, Ceapro was also awarded a research contribution from the National Research Council of Canada (NRC) through its Industrial Research Assistance Program (IRAP) of up to \$350k for the project. Management believes that the implementation of PGX at a commercial scale has the potential to generate many novel bio-based products with improved functionality and purity.

### **Update on Bio-Processing Extraction Facility**

Ceapro's original plan was to construct a new 21,000 square foot GMP bio-processing extraction facility in Edmonton. The scope of the original planned manufacturing facility was recently redefined to take advantage of new manufacturing process design opportunities and to house a commercial and demonstration scale PGX skid and ethanol recycling system, and as a result, Ceapro is adding an additional 10,000 square feet to the facility. The goal is to be able to host all of Ceapro's enabling technologies under one roof, and management believes the facility will be completed by mid-2016.

The original facility was estimated to cost around \$12 million, but with the expansion, we believe the project will now cost close to \$14 million to complete. Ceapro has completed and recorded about \$9.2 million as of September 30, 2015. The new facility will hold a Natural Health Products license from Health Canada, and will allow for Ceapro to leverage its bio-processing technique to hopefully generate additional revenue from custom bio-processing for third party customers that have their own products and extraction processes. The company will need to raise close to \$4.5 million to complete the project, and we believe Ceapro intends to raise additional cash through some or all of the following methods: public or private equity or debt financing, income offerings, capital leases, collaborative and licensing agreements, and government funding programs. Currently, Ceapro has the ability to manufacture 3-4 tonnes per week (approximately 100-200 tonnes per year) of product using batch mode processes. Ceapro's plan is to implement a more efficient process at the new facility, with a semi-continuous and continuous manufacturing processes which will allow for the simultaneous production of multiple products, and the production of five to six times more material than the current setup. We believe that the first validation batch trials will still be conducted during the first quarter of calendar year 2016, and that the facility should be functional later in the year assuming Ceapro is able to get the financing that it needs to complete the project. Ceapro has graduated from lab scale to

having pilot scale capability. In this new facility, Ceapro hopes to continue developing new processes to complement its existing platform in order to develop and commercialize the next generation of products.

### **Conclusion & Valuation**

We view the Ceapro strategy as being promising, and believe there is significant potential to expand into the functional food/nutraceutical markets. We also find the ability of PGX to cross over into other industries to be very appealing and, in our opinion, could provide significant upside potential in the near future. We think that Ceapro may have the opportunity to sub-license PGX technology to third parties and/or serve as a contract manufacturer. As per management, several multinational organizations in a variety of different industries have already executed confidentially agreements with Ceapro to assess their material with the proprietary PGX technology.

Ceapro is in the process of evaluating financing options to complete its facility to provide a growing revenue stream as the company explores other areas and to fund future trials. We believe the company will need to raise approximately \$4.5 million to complete facility construction by mid-2016 and will need additional funding for its upcoming clinical trials. Although Ceapro has yet to pre-sell the new capacity of the manufacturing facility, we believe the company has an opportunity to expand its relationship with Symrise and other distributors. Although the company does have significant customer concentration, we believe its partnership with Symrise in particular, will assist them in selling the additional manufacturing capacity once the project is completed. We have not assumed any new sales in our model from the completion of the additional manufacturing capacity, and so this represents potential upside to the model.

Our valuation model does not yet take into account commercialization of Ceapro's avenanthramides and/or beta glucan as pharmaceutical products. In the near future, we hope to learn more about the path forward for Ceapro's AVA and beta glucan products, and the potential indications and applications of these candidates in future clinical trial settings. If these potential candidates are eventually approved, we believe that there may be significant upside to our Ceapro valuation, and the overall Ceapro story.

We initiated coverage on Ceapro on October 5, 2015 with a "Buy" rating, and a price target of \$0.50 when the shares were trading at \$0.22. Since that time, the shares have more than doubled to \$0.45. In order to arrive at our target price, we chose a universe of comparable companies that include some larger, more mature chemicals and additives companies and some smaller, faster growing companies with more upside potential. After updating the model, the median trading range of the comparable company analysis is around 3.3x forward sales and the mean is around 3.9x. We split the difference and value the company on a blended basis of approximately 3.6x sales. Using our full year 2016 estimate of \$12.4 million in total revenues, we calculate an enterprise value of \$45 million which translates to an equity value of \$41 million after taking into account the current debt and cash positions. Based on a fully diluted share count of 64 million, we are increasing our price target to CAD \$0.65 per share and maintaining a "Buy" rating.

## PROJECTED FINANCIALS

### Ceapro Inc. - Income Statement

Ceapro Inc.	2014 A	Q1 A	Q2 A	Q3 A	Q4 E	2015 E	2016 E	2017 E
AVA, Beta Glucan & Others	\$8.9	\$1.7	\$2.4	\$3.1	\$3.1	\$10.3	\$12.4	\$14.3
<i>YOY Growth</i>	36%	-12%	0%	26%	51%	16%	20%	15%
<b>Total Revenues</b>	<b>\$8.9</b>	<b>\$1.7</b>	<b>\$2.4</b>	<b>\$3.1</b>	<b>\$3.1</b>	<b>\$10.3</b>	<b>\$12.4</b>	<b>\$14.3</b>
<i>YOY Growth</i>	36%	-12%	0%	26%	51%	16%	20%	15%
Cost of goods sold	\$4.1	\$0.9	\$0.7	\$1.2	\$1.6	\$4.4	\$6.2	\$6.4
<i>Product Gross Margin</i>	54%	46%	72%	61%	50%	58%	52%	55%
R&D	\$0.6	\$0.1	\$0.2	\$0.1	\$0.2	\$0.7	\$1.6	\$2.1
G&A	\$2.0	\$0.8	\$0.6	\$0.5	\$0.7	\$2.7	\$2.7	\$2.8
S&M	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
Finance costs	\$0.2	\$0.1	\$0.0	\$0.1	\$0.1	\$0.2	\$0.3	\$0.3
Income from operations	\$2.0	(\$0.2)	\$0.8	\$1.2	\$0.6	\$2.4	\$1.6	\$2.7
<i>Operating Margin</i>	22%	-13%	35%	38%	19%	23%	13%	19%
Other operating loss	(\$0.4)	(\$0.0)	(\$0.2)	(\$0.2)	(\$0.1)	(\$0.5)	(\$0.5)	(\$0.5)
Pre-Tax Income	\$1.6	(\$0.2)	\$0.7	\$1.0	\$0.5	\$1.9	\$1.1	\$2.2
Income Taxes Paid	\$0.0	(\$0.0)	\$0.0	\$0.0	\$0.0	(\$0.0)	\$0.0	\$0.0
<i>Tax Rate</i>	0%	0%	0%	0%	0%	0%	0%	0%
<b>Net Income</b>	<b>\$1.6</b>	<b>(\$0.2)</b>	<b>\$0.7</b>	<b>\$1.0</b>	<b>\$0.5</b>	<b>\$1.9</b>	<b>\$1.1</b>	<b>\$2.2</b>
<i>Net Margin</i>	18%	-11%	27%	33%	15%	19%	9%	15%
<b>Reported EPS</b>	<b>\$0.03</b>	<b>(\$0.00)</b>	<b>\$0.01</b>	<b>\$0.02</b>	<b>\$0.01</b>	<b>\$0.03</b>	<b>\$0.0</b>	<b>\$0.03</b>
<i>YOY Growth</i>	893%	-207%	3%	45%	352%	18%	-39%	80%
Basic Shares Outstanding	60.9	61.5	61.7	61.8	65.8	62.7	70.0	75.0

Source: Company Filing // Zacks Investment Research, Inc. Estimates

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