Oat Beta Glucan

Last year in our annual report, we included a story about our Supercritical Fluid Drying Technology (SFD). We believe this technology is ideally suited for drying water soluble polysaccharides, gums, and biopolymers which require mild processing conditions to preserve the therapeutic properties of the active ingredients. Our work to date leads us to believe this can be developed into a platform novel drying technology and we would like to update you on the work we have done with our own oat beta glucan (OBG).

Functional Food & Drinks/Nutraceuticals

The therapeutic value of OBG in reducing cholesterol and attenuating blood sugar levels is well documented. Ceapro's liquid OBG product is recognized as the highest quality product available today. Produced with our proprietary process, its superior quality is primarily due to its high purity, high molecular weight, and high viscosity. The absence of colour and very little odour is also making this product very attractive. During 2012, Ceapro showed that it could dry its OBG to a purity level in excess of 90% using SFD. Most importantly, the dried product retained its high molecular weight and viscosity, and was able to solubilize without clumping or agglomerating when placed in a liquid solution. These findings appear to make a strong case for producing an active ingredient to target high cholesterol and other conditions involved in metabolic diseases. Ceapro having shown it can make the product in a variety of formats including micro fibrils, fine powders, and granules, will take the next step in our research program to determine which format (powder for a drink, a tablet, or a capsule) will be the most suitable to provide the best therapeutic effect.

In 2013, work will be conducted to scale up and automate the process and decrease the cost of production to the maximum extent possible. It is expected that the drink and nutraceutical markets are large and a large multi-national partner will be sought to capitalize globally on this opportunity. This is expected to be a truly unique product that requires Ceapro's proprietary wet process and its SFD under development.

Medical Biopolymers, a huge potential

Studies done by Ceapro have shown that its OBG is highly effective in stimulating collagen synthesis and can play a prominent role in skin restructuring and wound healing products. Ceapro OBG has also shown the unusual ability to penetrate skin deeply despite its large molecular weight. As a result, the use of OBG as a potential delivery system has attracted interest from multiple parties looking to improve the delivery of their therapeutic products. The potential to impregnate or encapsulate bioactives with the SFD has increased the interest in determining the potential of this delivery vehicle.

Ceapro intends to complete the development work of OBG and its feasibility models before the end of 2013. To date, the project has exceeded our expectations and the equipment designed and tested has performed as expected.

Once again, this project exemplifies Ceapro's high level of innovation capacity and the potential of Ceapro's products to penetrate new market opportunities that are very large.