



**BioNeutra Inc.**  
*Transforming Natural Products into Better Health*

## How sweet it is: U of A spinoff rolls out healthful sugar substitute

David Finlayson,

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EDMONTON - They started with a sweet idea and no money.

Now a U of A spinoff has a pilot manufacturing plant that produces 180 tonnes a year of artificial sweetener from Alberta wheat, barley and potatoes.

And under a deal with Red Deer grain processor Permolex, BioNeutra could be producing 18,000 tonnes a year of the valuable compound, called VitaSugar.

"It hasn't been easy. We had good science but not a single dollar when we decided to start the company two years ago," CEO Jianhua Zhu said Tuesday at the opening of the pilot plant.

But with the help of the provincial and federal governments, and some private investors, BioNeutra is already selling VitaSugar to a Las Vegas company that makes breakfast bars.

The icing on the cake is that not only is VitaSugar a viable sugar replacement, it's also good for you, Zhu said.

It has probiotic properties, which means it promotes the growth of "friendly" bacteria in the large intestine.

This change in gastrointestinal micro flora helps reduce constipation, blood lipids, blood cholesterol and intestinal toxins. "It has a lot of health benefits, especially for seniors with digestive problems," Zhu said.

The North American market for probiotics alone is estimated at \$180 million US and growing rapidly, he added.

The Edmonton Research Park plant, the first of its kind in North America, is a mini version of what BioNeutra expects to have operating in Red Deer, he said.

It's a fully automated array of stainless steel vessels and pipes that produces a low-calorie syrup that can be converted to a powder.

It can be used in any product that currently contains sugar or sugar substitutes, such as drinks and baked goods.

BioNeutra has an exclusive licence to two patents, and will continue research and development in collaboration with the U of A to perfect the production process and create other agriculture value-added products, Zhu said.

"We still have a lot of work to do to optimize the process, but the gross margins look good."

The starch used in the process sells for \$200 a tonne, while the VitaSugar made from it sells for \$5,000 a tonne in the U.S., he said.

Edmonton Economic Development Corp. president Allan Scott said a company like BioNeutra solidifies Edmonton's position as Canada's fourth-largest biotech cluster. It's essential to develop that next generation of knowledge-based companies, he said.

dfinlayson@thejournal.canwest.com



CREDIT: Bruce Edwards, The Journal

Jianhua Zhu, CEO of BioNeutra Inc., displays a flask of oligosaccharides in front of the vats where it is made. Tuesday was the official opening of the state-of-the-art oligosaccharides pilot plant.