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Beyond ORAC in an overcrowded antioxidant market: The evolution of Oligonol

By Elaine Watson, 29-May-2012

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While Maypro Industries can reel off impressive ORAC scores for its polyphenol-packed ingredient Oligonol, its true potential has started to emerge in more specific areas such as sports recovery and weight management as bosses have moved beyond positioning it as a 'super-absorbed antioxidant', says the firm.

Oligonol - a combination of extracts from lychee fruit (85%) and green tea (15%) developed in Japan by Amino Up Chemical Co and distributed in the US by Maypro - is unusual in that it contains lower molecular weight polyphenols that are more easily absorbed by the body.

The antioxidant category is really overcrowded

However, while its superior absorption creates a strong USP for Oligonol in a market where many firms still compete by comparing in-vitro ORAC scores, the antioxidant market is very overcrowded, said Maypro vice president Dan Lifton.

"Oligonol does really well in ORAC tests even though we think the results can be pretty meaningless [anything can be an antioxidant in vitro - but what happens in the human body?] and we originally launched it as a superabsorbed antioxidant.

"However, the antioxidant category is really overcrowded, so we decided to focus on more specific benefits such as cardiovascular health, skin health and sports recovery."

This is a longer term strategy, but one that makes commercial as well as scientific sense, given that consumers are finally starting to grasp what researchers have been saying for years: that what really matters is what oligonol et al actually do in the human body and not in a test tube, he said.

There is now a growing body of human clinical data showing that Oligonol could have potential in cardiovascular applications, sports recovery, beauty-from-within, weight control, and tackling the inflammation at the root of many chronic diseases, he added.

Tackling visceral body fat... and metabolic syndrome

One of the most exciting studies on Oligonol was published in the *Journal of Functional Foods* in 2009, and demonstrated that people taking 100mg/day over 10 weeks saw a marked reduction in visceral fat and body weight, he said.

They also had higher levels of serum adiponectin (low levels of which are associated with insulin resistance and metabolic syndrome) vs placebo, he said.

Sports recovery and beauty-from-within

But Oligonol also has potential in sports recovery as it has been shown to reduce fatigue after exercise, increase endurance and reduce levels of pro-inflammatory markers such as C-Reactive protein, he said.

The beauty-from-within market represents another opportunity as several human trials have shown that Oligonol can reduce brown spots and fine lines and improve skin elasticity, he added.

Cardiovascular health

Finally cardiovascular health is also an exciting growth opportunity, said Lifton.

"Oligonol increases nitricoxide in the blood, which causes blood vessels to expand, improves peripheral circulation [tackles cold hands and feet], and reduces platelet aggregation [platelets clumped together can form the blood clots leading to heart attacks/strokes]."

From supplements to foods

Why Amino Up has had success in the functional food, beverage and cosmetics markets in Japan, launches in the US have been primarily in the supplements arena, said Lifton.

However, Maypro has developed prototype products from sachets, ready-to-drink beverages and energy shots to chocolate and dissolvable strips to show customers how Oligonol can be incorporated into new formats, he said.

"We've worked with formulators to create concepts that successfully mask the bitterness of Oligonol - which like anything high in polyphenols - tastes pretty terrible on its own."

He added: "We think that the most potential for us is in the health practitioner and multi-level marketing channels at the moment. There are a lot of superfruits out there, but this one really has some science behind it."

Why is Oligonol better absorbed?

By using a patented process that chops up longer chain polymers from lychee fruit into shorter chain molecules, Amino Up has been able to increase the percentage of lower molecular weight (more bioavailable) monomers, dimers and trimers from around 10% to almost 40%, claims Maypro.

Tests show that after six hours, the blood concentration of polyphenols in human subjects taking 100mg of Oligonol is significantly higher than that of those taking 100mg of a regular lychee extract, said Lifton.

Three times zero is still zero

"Some people think they can just user higher amounts of cheaper extracts and get the same effect. But it doesn't work like that. If they are not absorbed, they are not absorbed. Three times zero is still zero."

Oligonol, which recently received Kosher certification from Kof-K, gained NDI (new dietary ingredient) status for use in supplements in 2007 and is also self-affirmed GRAS (generally recognized as safe) for use in foods and beverages.

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