



THIS IS BIOTECH

BEYOND MOOSE AND MOUNTAINS: BUILDING CANADA'S BIO-BASED ECONOMY.



Animal Immune Systems Get a Boost from Biotechnology

Chemaphor Inc., Ottawa, Ontario & PEI

“Eat your carrots, they are good for you.” It’s one of mother’s most beloved phrases, heard all across the world at dinnertime. But just how good the carrot and other beta carotene-rich foods like leafy green vegetables are for you is being uncovered in the Canadian labs of Chemaphor Inc.

While many of the health benefits of beta-carotene have been recognized by scientists (and mothers), the real secret to beta-carotene’s goodness is the compounds it is capable of producing *after* it undergoes the natural process of oxidation, says Dr. Graham Burton, president of Chemaphor.

In the company’s research and development labs in Ottawa and Prince Edward Island, scientists are revealing for the first time that compounds derived from beta-carotene are novel immune enhancers that have significant impact on the health of animals and potentially in humans. Young pigs, for example, have been shown to benefit from the company’s flagship product OxBC added to their daily feed, helping them gain weight without eating more feed.

For pigs, poultry and other food animals, putting on the pounds is a good thing as it indicates excellent health. By putting the animal’s immune system into a hyper ready state, common infectious ailments are kept at bay. Weight gain means more meat and when that happens from less feed, there is extra good news for the income of farmers.

With antibiotics added to feed already banned in the European Union, and today’s knowledgeable consumer increasingly interested in what goes into their food, Chemaphor’s product potentially provides pig and poultry producers another weighty alternative. With OxBC included in an animal’s diet, it naturally stimulates the animal’s immune system into being more capable of fighting off opportunistic infections, according to Dr. Burton. “What we discovered is our products prime the immune system to be prepared for something coming down the road – it’s a heads up or a stitch in time,” says Dr. Burton. And, it’s that stitch that is keeping animals healthy and increasing production profitability.



But pigs and poultry aren’t the only ones that will benefit from these compounds. Dr. Burton’s labs are busy creating food additives to help older dogs with mobility problems. Older dogs often don’t like to move around because of joint and body pain, but OxBC has shown to have significant anti-inflammatory properties that have encouraged these dogs to move more, and seemingly enjoy it. Companion pet health is big business. The global animal health market will reach approximately US\$21.7 billion in 2010, according to the Pet Products Manufacturers Association and many of the products bought are for aged animals.

“We’re helping the body to help itself,” says Dr. Burton, noting that many compounds derived from carotene oxidation are found pre-formed in plants and many are likely to have beneficial biological effects.

The carotene oxidation compounds also have great potential for human health benefits including skin care products that offer skin cell protection and regeneration to reduce the effects of skin damage caused by the sun or wrinkles from ageing, according to Dr. Burton.

It seems your mom was right about eating your vegetables.

