



Does a New Pill Contain the Fountain of Youth?

Protandim May Slow Aging Process by Increasing Enzymes That Fight Free Radicals

Jun. 2, 2005 - Dr. Joe McCord's latest research may unravel the mystery of aging. And if he succeeds, the answer could come in the form of a little yellow pill called Protandim.

The University of Colorado at Denver biochemistry professor has conducted decades of experiments into a special class of enzymes in the cell that some hope have the potential of extending lives and possibly preventing chronic diseases like cancer, diabetes and heart disease.

Much of his work has centered on oxidative stress -- which increases with age. TBARS, which are a measure of oxidative stress, can also be a rough indicator of a person's actual age.

But, McCord has found that the ingredients in Protandim lowered the test subject's level of oxidative stress.

"They all are reduced to the level of oxidative stress that one would expect, frankly, in a newborn. Or a very young child," he said.

Dangerous Radicals

To be sure, there have been other supposed "miracle" drugs and treatments that never delivered on their promise to delay or even stop human aging. But McCord, research director in the company that makes Protandim, believes this pill might be different.

To understand how Protandim works, you have to first understand how aging occurs.

Aging is "a slow progression of oxidative stress," McCord said. Much of oxidative stress comes from the basic function of eating.

As cells burn food, they also release toxic chemicals known as "free radicals" which cause cell damage and consequently -- oxidative stress.

The body fights back by making two anti-oxidant enzymes -- Catalase and SOD. But as people get older, those enzymes can get overwhelmed.

For a long time, scientists thought that anti-oxidant vitamins like C and E could lower oxidation, but many experts now believe they aren't effective.

Protandim, McCord said, is much more powerful. Tests on both mice and humans have already shown that it revs up the body's manufacture of those enzymes -- thereby reducing the presence of those harmful free radicals.

However, McCord cannot say at this point whether or not Protandim could lead to a longer life. Experiments to see if mice live longer are about to get under way.

Studies have not yet been conducted to determine whether Protandim can prevent disease.

"Right now, all we know is that this preparation decreases oxidative stress. Oxidative stress is not a disease, just like aging is not, in itself, a disease," he said. "But it's something that accompanies, and is attached to, many disease processes."

The Power of Enzymes

McCord said Protandim could be "something that will tell us a lot more about how we age, what happens biochemically. And maybe how we can slow it down."

And there is some other promising independent evidence that seems to back him up.

Dr. Douglas Wallace of the University of California at Irvine conducted an experiment and found that mice that have been genetically engineered to produce more catalase, one of the enzymes that Protandim increases, lived about 20 percent longer.

Wallace believes that with better techniques the lifespan for humans can eventually be extended too. "We might be able to increase the lifespan by 50 percent. And of course if that was a human being, then that might be in the order of 130 to 150 years," he said.

Dr. Michael Brownlee, who heads the Center for Research on Diabetic Complications at Albert Einstein Medical College, conducted another experiment involving another enzyme boosted by Protandim called SOD.

He tested diabetic mice and found their wounds simply don't heal -- a problem common for diabetics. But when another diabetic mouse that was genetically engineered to have more SOD was wounded, it healed much better.

"Even though they were diabetic, they healed, just like the normal," he said. "It is a breakthrough."

Secret Formula

Protandim may seem to have incredible potential, but its roots are actually very humble.

It is a combination of five plant ingredients. Two of them are pretty commonplace -- green tea and turmeric, a spice used in Indian cooking. The others, among them withania somnifera and silybum marianum, are more exotic.

"There's a huge human experience with each of these ingredients," McCord said. "They've been used often in traditional medicine in India and China and many other cultures in some cases for centuries and centuries."

And that experience, plus his tests on human subjects so far, indicates that the ingredients are safe.

And so, ancient Eastern healing and modern Western medicine may soon be working together.

High oxidative stress is associated with more than aging. It's been linked to hundreds of illnesses, from cancer to heart disease to Parkinson's and even depression.

But McCord said: "We make no claims about curing any disease, or preventing any disease. We hope that when enough studies are done, perhaps such claims might be made in the future."

Because Protandim is composed of herbal ingredients with a long history of use, it is being marketed as a nutraceutical,

and does not require FDA approval.

However, the company is planning further clinical studies in three to four months to assess Protandim in both diabetes and heart disease, which will be submitted for substantiation.

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