

Nutrition Society Abuzz About Tocotrienol

Research on the vitamin E component over the last 10 years shows incredible promise.

The fascinating impact of the tocotrienol component of vitamin E was the hot topic at this year's Ocular Wellness and Nutrition Society (OWNS) meeting, which took place on Tuesday evening.

Guest lecturer Barrie Tan, PhD, president of American River Nutrition, has spent the last 30 years researching the component and has successfully found a plant-based form of vitamin E, derived from annatto, that was more potent than any other vitamin E on the planet. He talked on the uses and benefits of tocotrienol over tocopherol, the other component under the umbrella term of vitamin E, which is the focus of most of the papers on Vitamin E.

In his talk, Dr. Tan made clear that studies show any presence of alpha-tocopherol prevents absorption and interferes with the beneficial functions of tocotrienol: compromising cholesterol and triglyceride reduction, actuating cancer inhibition, exacerbating stroke injury and preventing adipose storage.

Dr. Tan said he was initially interested in studying tocotri-



Drs. Richer and Poteet welcomed Dr. Tan, who detailed the outstanding benefits of tocotrienol in patients with chronic conditions at the OWNS Dinner Lecture.

enol's effect on metabolism as a nutritional supplement, but its surprising effects on managing chronic diseases made him more curious to see how his product and research on delta-tocotrienol could provide the most benefits. Tocotrienol could attenuate atherosclerotic lesions and reduce the chemotaxis of atherosclerosis. Researchers saw improvements in non-alcoholic fatty liver disease patients who took 300mg of delta-tocotrienol daily for three months.

Delta- and gamma-tocotrienol have an unambiguous role in cancer control, such as managing pancreatic tumors more effectively as part of a combination with gemcitabine, specifically targeting cancer stem cells and reducing viability of the most severe breast cancer, HER-2, and being extremely potent to induce apoptosis in breast cancer studies.

Dr. Tan said that he was shocked to see that a study found that delta-tocotrienol made a remarkable fit into the estrogen receptor protein and inhibit growth of breast cancer cells. "It's as good as it could ever get," he

said. "I can't even imagine a pharmaceutical company giving you things like this."

Dr. Tan's annatto tocotrienol supplement helped prevent bone deterioration in males and contribute to increased bone building and decreased bone resorption and oxidative stress in post-menopausal women with no adverse effects on liver, kidney function and quality of life. Another study saw that tocotrienol could impede cataractogenesis and provide better lens clarity in mice, with a dramatic reduction of inflammation and lens aldose reductase and sorbitol. "It's almost like a reversal of the aging process of the eye," Dr. Tan said.

The suggested dosages of lipid-soluble tocotrienol supplements are 50mg to 100mg a day as an antioxidant, 200mg to 300mg a day to treat mild chronic conditions and 400mg to 600mg a day for advanced chronic conditions.

After the lecture, Stuart Richer, OD, president of the OWNS, asked Dr. Tan if he could possibly work to determine the dosage considerations for early macular degeneration before it becomes aggressive in size, given that tocotrienol is a potent anti-angiogenic agent. Dr. Tan responded by suggesting cutting the 300mg dose in half. Any higher than that could cause oxidative damage to the back of the eye. ●

Stuart Richer Honored at Nutrition SIG



At the conclusion of Yesterday's Nutrition, Disease Prevention & Wellness SIG meeting, there was a surprise in store for Stuart Richer, OD, PhD, president of the Ocular Wellness & Nutrition Society (OWNS)—he was given a lifetime achievement award by fellow OWNS board member Dorothy Hitchmoth, OD, who described his contributions as follows:

"Stuart is a brilliant, widely respected visionary who has changed the way we think about taking care of patients. Long before the importance of good nutrition on ocular health and function became mainstream, Stewart focused on this both in his research and practice, and has ultimately impacted the lives of thousands of students and colleagues—and, thereby, millions of patients. He has been a career-long mentor to me and many others in this room through his work in the Department of Veterans Affairs, the American Academy of Optometry, the Ocular Wellness & Nutrition Society, this SIG and the Optometric Retina Society. Dr. Richer selflessly and enthusiastically shares his knowledge with doctors across the country and around the world. Most importantly, he is a passionate patient advocate. I cannot think of an optometrist who has had a bigger impact on our patients."

Expressing his thanks and appreciation while accepting the unexpected award, Dr. Richer said, "This is why I go to work every day. It's not about money, and it's not about anything but taking care of people. Thank you very much."

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