

Clinical Study shows Consumer-friendly Measurement Tool Accurately Provides Personalized Nutrition and Antioxidant Assessment

Clinical study presented at Experimental Biology 2006

PROVO, Utah - April 4, 2006 - Your mother was right; All that solid advice mixed with hours of nervous nagging—eat your vegetables, don't smoke, don't eat junk, wear sunscreen, don't stress. What if your mother had a "did-you-follow-your-mother's-advice" lie detector test? How would you have fared as a child? How would you fare as an adult?

A landmark study conducted in collaboration with three major US universities to test skin carotenoid levels as an indicator of the overall antioxidant network was presented at the annual meeting of the Federation of American Societies for Experimental Biology (FASEB) in San Francisco, California this week. Pharmanex® scientists collaborated with researchers from the University of Utah, Tufts University, and Vanderbilt University on this groundbreaking research which studied over 300 healthy subjects. The study results show that a consumer-friendly tool called the BioPhotonic Scanner provides a good indicator of fruit and vegetable intake, antioxidant nutrition, and oxidative stress, making it an accurate way to measure overall antioxidant health in the body. This easy-to-use tool gives instant results and is non-invasive—requiring neither bodily fluids, tissue samples, nor a laboratory.

The Pharmanex® BioPhotonic Scanner provides a personalized, scientifically validated measurement of how diet and supplementation is protecting a person's cells and overall nutritional health. This portable instrument measures carotenoids as a biomarker for antioxidant health. Carotenoids are powerful antioxidants found in abundance in many fruits and vegetables, and they protect the body at the cellular level against the effects of aging and the environment. The Pharmanex® BioPhotonic Scanner non-invasively measures the carotenoid level in the skin of your palm using a safe blue light and a technology called Raman spectroscopy. By consistently tracking carotenoid antioxidant levels in the body, consumers are equipped with the knowledge to maintain a lifestyle and nutrition habits that will help boost antioxidant levels and maintain proper nutrition and health.

The Science Behind the Study

The study presented at FASEB showed highly significant correlations between skin carotenoids (with the BioPhotonic Scanner) and other blood antioxidants such as vitamins C and E. In addition, a highly significant inverse correlation between skin carotenoids and oxidative stress (free radical damage) was observed. Together these results confirm that the Pharmanex® BioPhotonic Scanner is the best non-invasive indicator of overall antioxidant status in the body, as well as a good indicator of overall oxidative stress.

In addition, the study demonstrated that skin carotenoids as measured by the Scanner are a convenient non-invasive indicator of average fruit and vegetable consumption. Previously, blood carotenoids had been viewed as the gold standard indicator of fruit and vegetable intake. The results also confirmed prior research showing strong correlations between skin and blood carotenoids and that the BioPhotonic Scanner test is as reliable as blood measurements.

"In my career in science, it is not often that a study produces such spectacular and astounding results," said Pharmanex President and CSO, Dr. Joe Chang. "We have proven that the BioPhotonic Scanner is the best non-invasive indicator of your body's overall antioxidant protection and not just carotenoid status. This technology shows that skin carotenoids correlate with overall antioxidant status, oxidative stress, and fruit and vegetable intake."

Measurement of blood antioxidants typically involves invasive blood sampling, extraction and analysis of carotenoids, vitamin E and/or vitamin C by high performance liquid chromatography (HPLC). Blood antioxidant analysis is not practical for use outside the clinic since it is invasive, time-consuming, expensive, and the blood levels are confounded by multiple factors, such as antioxidant consumption from recent meals.

"This is the paramount scientific validation study we have all been anticipating and the results are even better than expected," said Vice President of Global Research and Development, Carsten Smidt, Ph.D., FACN.

FASEB

FASEB is a multi-society, interdisciplinary, scientific meeting featuring plenary and award lectures, symposia, oral and poster sessions, career services, and exhibits of scientific equipment, supplies, and publications. More than 12,000 independent scientists representing the sponsoring and guest societies attended the event in San Francisco. This year's event, held Saturday, April 1 through Wednesday, April 5, 2006, was sponsored by The American Association of Anatomists (AAA); The American Physiological Society (APS); American Society for Biochemistry and Molecular Biology (ASBMB); American Society for Investigative Pathology (ASIP); American Society for Nutrition (ASN); American Society for Pharmacology and Experimental Therapeutics (ASPET).

About the Pharmanex® BioPhotonic Scanner

Currently, over 4,000 Scanners are in operation throughout the world and over three million people have been scanned. Visit www.pharmanexscanner.com for more information.

The Company

Pharmanex®, a Nu Skin Enterprises company, applies pharmaceutical processes and scientific measurement to create nutritional supplements for more than 40 markets worldwide. Pharmanex® products are sold direct to the consumer through the Internet and a network of independent distributors. For more information, go to www.pharmanex.com.