

Tocotrienols Shown to be Effective in Lowering Fat Levels in Blood

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Latest clinical trial found that **tocotrienols** lower triglyceride **levels in humans**

SINGAPORE, Oct. 18 /PRNewswire-Asia/ -- Scientists from Singapore found that **tocotrienols**, which are members of the Vitamin E family, are **effective in lowering the levels** of triglyceride, a form of **fat in the blood**. High **levels** of triglyceride are closely linked **to** an increased risk of cardiovascular and metabolic diseases.

The scientists found that gamma and delta **tocotrienols**, derived naturally from palm oil, are potent **in lowering triglyceride levels** by 28% **in the blood** of human subjects after two months of supplementation. **In** addition, tocotrienol-treated subjects **in** the double blind, placebo-controlled human trial showed decreasing trends **in** average weight, body **fat** mass, body **fat** percentage and waist measurement. The study hence points **to** the potential of **tocotrienols** as a natural remedy **in** fighting obesity.

This research study, which involves collaboration between scientists at Davos Life Science (Singapore), researchers at Malaysia Palm Oil Board (Malaysia) and Phytopharma Co. Ltd. (Japan), was reported **in** the October 2010 issue of Journal of Atherosclerosis and Thrombosis, the reputable publication of the Japan Atherosclerosis Society. The study involved twenty human subjects with borderline hypercholesterolemia and was conducted **in** Takara Clinic **in** Japan. The subjects were not receiving any cholesterol-**lowering** medications at baseline.

"Other studies have **shown** triglyceride-**lowering** effects of eicosapentaenoic acid (EPA), a polyunsaturated fatty acid found **in** oily fish, which is approved by Japan's Ministry of Health as a treatment for hyperlipidemia. This study reveals that **tocotrienols** have a more significant serum triglyceride-**lowering** effect than EPA. More importantly, tocotrienol did not have any observable side effects, suggesting that it could become a natural remedy **to** lower triglycerides effectively," said Dr. Daniel Yap, Head for Tocotrienol R&D, Davos Life Science.

An elevated triglyceride level is one of the risk factors for the identification of metabolic syndrome, which is linked **to** an increase risk of cardiovascular disease, diabetes and stroke. This study demonstrates -- for the first time -- that gamma and delta **tocotrienols** work **to** lower triglyceride **levels**, by directly suppressing genes that enable triglyceride production (SREBP1/2, DGAT2 and APOB100), suggesting that **tocotrienols** are able **to** directly regulate triglyceride synthesis **in** the body. At the same time, this down-regulation also translates into a reduction **in** the level of triglyceride transport lipoproteins (VLDL and chylomicron), which distribute fats around the body. The study supports its **in vitro** research findings, by demonstrating the triglyceride-**lowering** effect of **tocotrienols in** both mice models and human clinical studies.

Moreover, the study also showed that **tocotrienols** may inhibit the development of atherosclerosis, a medical condition **in** which fatty plaque, resulting from oxidation of LDL-cholesterol (also known as "bad" cholesterol), builds up inside the arteries. It was found that gamma tocotrienol can enhance the removal of LDL-cholesterol from the **blood**, by inducing the expression of LDL receptors. This is a key step **in** achieving healthy **blood lipid levels**.

"Our studies show that **tocotrienols** have the potential for the prevention or treatment of metabolic syndrome. This research contributes further evidence that natural **tocotrienols** is a far more powerful form of vitamin E with unique health-related benefits not shared by alpha-tocopherol, the common form of vitamin E," said Mr Arthur Ling, CEO of Davos Life Science Singapore, a company specialising **in** the research & development and production of **tocotrienols**.

About Davos Life Science

Davos Life Science Pte Ltd was set up **in** 2004 as a manufacturer that isolates and purifies natural **tocotrienols** for use **in** supplements, functional food, personal care, and pharmaceutical formulations. Davos Life Science markets its **tocotrienols** under the name "Natural e3", which has GRAS status, a food

safety standard administered in accordance with the regulations of the U.S. FDA. The company has established the world's largest R&D centre dedicated to **tocotrienols** and the world's largest manufacturing facility for the production of natural **tocotrienols**. For more information, visit <http://www.davoslife.com>

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