PRESS RELEASE

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Low Plasma Tocotrienols Levels are Associated with Increased Cognitive Impairment and Alzheimer’s Disease in Elderly

Jan 10th, 2012 – New Jersey, USA – Carotech, the largest and only GMP-certified full spectrum palm tocotrienol complex producer, is excited to share the latest human study that shows low plasma levels of mixed tocotrienols and tocopherols (full spectrum vitamin E) is directly linked to increased risk of developing mild cognitive impairment (MCI) and Alzheimer’s disease (AD) in elderly people.

In this cross-sectional multicenter study on elderly, researchers at the University of Perugia, Italy, and the Aging Research Center, Karolinska Institute, Stockholm, analyzed the relationship of all vitamin E forms plus markers of vitamin E damage, to MCI and AD. AD is often preceded by a symptomatic predementia phase, such as MCI.

The study population was derived from the AddNeuroMed Project, a multicenter European longitudinal study on the detection of biomarkers for AD. It is one of the largest cohorts of AD and MCI subjects, gathered from 6 European countries.

All vitamin E parameters and vitamin E damage markers were analyzed on 168 AD cases, 166 MCI and 187 cognitively normal people. The researchers reported that both AD and MCI cases reflected significantly lower vitamin E levels (especially tocotrienols). AD subjects showed reduced mean plasma levels of each vitamin E forms, total tocopherols, total tocotrienols and total vitamin E, as compared with cognitively normal subjects. Similar results were found for MCI cases. Both AD and MCI subjects have higher level of vitamin E damage markers compared to the cognitively normal group of subjects, suggesting a direct linkage of oxidative/nitrosative stress in early AD onset; and the role of vitamin E in neurodegeneration.

The same researchers had also reported in an earlier study published in the Journal of Alzheimers Disease (2010) that high plasma levels of full spectrum vitamin E (d-mixed tocopherols and d-mixed tocotrienols) are associated with reduced AD risk, with tocotrienols being more potent than tocopherols in preventing AD.

“Most of the vitamin E studies on cognitive benefit have been done on alpha-tocopherol with inconsistent outcomes. We now know that each and every vitamin E form, tocopherols and tocotrienols, are required for preserving cognitive functions, especially in older people. As one of the largest cohort studies on AD, it shows that subjects with MCI and AD have very low tocotrienol levels and thus further strengthening the association of tocotrienols with cognitive health,” says Mr. WH Leong, Vice President, Carotech Inc.

“We have always emphasized the need to take the 8 forms of vitamin E, as naturally found in our diet and as nature intended. It is not right to say that we only need one type of vitamin E (ie : alpha-tocopherol, the most commonly known form of vitamin E). Consumers should be taking a full spectrum vitamin E (d-mixed tocotrienols + d-mixed tocopherols or E-Complete) especially for improving/preserving cognitive health and performance,” adds Mr. Leong.
Sources:


“Tocopherols and tocotrienols plasma levels are associated with cognitive impairment”

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**About Carotech**

Carotech, incorporated in 1990, is a public listed company in Malaysia (ACE Market). It was the first producer in the world of natural full spectrum tocotrienol/tocopherol complex (Tocomin® & TocominSupraBio®), natural mixed carotene complex (Caromin®) and phytosterol complex (Stelessterol™) via its patented technology.

Besides being the largest producer of tocotrienol, Carotech is also the only GMP-Certified tocotrienol producer in the world.

**Tocomin SupraBio® is a patented (US Patent No. 6,596,306) self emulsifying palm tocotrienol complex that ensures optimal tocotrienols oral absorption.**

Carotech is a subsidiary of Hovid Ltd ([www.hovid.com](http://www.hovid.com)), one of the largest GMP-certified pharmaceutical companies in Malaysia.

Carotech manufactures these products under the tradenames: Tocomin®, TocominSupraBio®, Caromin® and Stelessterol™.

**Websites:** [www.carotech.net](http://www.carotech.net) and [www.tocotrienol.org](http://www.tocotrienol.org)

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