

# **Role of Lipid Supplements from Fish and Plant Sources in Combating Effects of the Global Nutrition Transition**

SAN DIEGO--(BUSINESS WIRE)-- Physicians and nutrition scientists from around the world gathered today in San Diego for a scientific symposium on the Global Nutrition Transition: The Role of Lipid Supplementation, a satellite symposium which focused on the essential role of fatty acids in human health, held in conjunction with the American Society for Nutrition's Scientific Sessions & annual meeting.

The Global Nutrition Transition refers to the worldwide spread of modern industrialized dietary patterns to countries where these diets were previously unknown. In the last 30 years, there has been a U.S. and worldwide increase in hidden fat intake, largely from vegetable oils rich in omega-6 fatty acids which lead to imbalances in the concentrations of fats in cells within the heart, the brain, and immune system.

While the body needs small amounts of both types of fats, "the proper proportions are key in supporting brain function, immune function and cardiovascular health," noted Dr. William Lands, one of the symposium speakers.

Researchers from the University of California San Diego reviewed the recent findings of specialized proteins called receptors for omega-3 fatty acids on the surface of immune cells.

"Vegetable oils are full of omega-6 fatty acids," said Lands, "and our diet is overloaded with them." Fried foods, baked goods, snack foods and sweets dump an abundance of omega-6 fatty acids into the body, said Lands, and at the same time, "we're not eating nearly enough omega-3's," he added. "As a result, the ideal balance of omega-6 to omega-3 fats has been thrown way off – and this imbalance may have widespread impact on human health across the globe."

"We are seeing tremendous increases in partially hydrogenated vegetable oil high in trans fatty acid and imbalanced omega 6 and omega 3 fatty acid profile intake in South Asia," said Dr. Anoop Misra of the Fortis Hospital in Delhi, "which is leading to an alarming rise in obesity and obesity-related diseases."

Since fatty foods are the primary sources of omega-6 fats in the diet, reducing total fat intake is one way to shift the balance. However, it is also important to supplement omega-3 fatty acids by eating fish or taking omega-3 supplements from fish, krill, or algae sources. The benefits of a total nutrition solution - which encompasses the inclusion of a range of plant foods, with an emphasis on low fat proteins and the rebalancing of healthy fats – is a cornerstone in correcting the nutritional imbalances caused by the modern diet.

Conference speakers noted that supplements may play a role in improving the fatty acid

balance in the diet when combined with lower total fat intake which can balance omega-3 and omega-6 concentrations in tissues.

The session was organized and supported by the Herbalife Nutrition Institute and DSM Nutritional Products. Dr. Misra is a member of the Herbalife Nutrition Institute Editorial Board. Among other products, Herbalife markets dietary supplements containing omega-3 fatty acids, as well as foods composed largely of low-fat proteins.

#### About Herbalife

[Herbalife Ltd.](#) (NYSE:HLF) is a global nutrition company that sells weight-management, nutrition, and personal care products intended to support a healthy lifestyle. Herbalife products are sold in 81 countries through a network of independent distributors. The company supports the [Herbalife Family Foundation](#) and its Casa Herbalife program to help bring good nutrition to children. Herbalife's website contains a significant amount of information about Herbalife, including financial and other information for investors at <http://ir.Herbalife.com>. The company encourages investors to visit its website from time to time, as information is updated and new information is posted.

#### About DSM

Royal DSM N.V. is a global science-based company active in health, nutrition and materials. By connecting its unique competences in Life Sciences and Materials Sciences DSM is driving economic prosperity, environmental progress and social advances to create sustainable value for all stakeholders. DSM delivers innovative solutions that nourish, protect and improve performance in global markets such as food and dietary supplements, personal care, feed, pharmaceuticals, medical devices, automotive, paints, electrical and electronics, life protection, alternative energy and bio-based materials. DSM's 22,000 employees deliver annual net sales of about € 9 billion. The company is listed on NYSE Euronext. More information can be found at [www.dsm.com](http://www.dsm.com).

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