

Arcadia Biosciences, Inc. Achieves high levels of GLA in Safflower

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- Higher Concentrations of Gamma Linolenic Acid Shows Promise For a Less Expensive Source of Health-Promoting Omega-6 Fatty Acid -

DAVIS, Calif. (November 14, 2005) – Arcadia Biosciences today announced that it has developed safflower plants with seeds containing more than 35 percent gamma linolenic acid (GLA) oil. The company is now in the process of validating these results in the field.

Gamma linolenic acid is an omega-6 fatty acid with health benefits that are similar and complementary to the benefits of omega-3 fatty acids. Among its benefits, GLA and its metabolic derivatives have been shown to have significant anti-inflammatory effects. Health issues where supplemental GLA may be beneficial include atopic eczema, dermatitis, diabetic neuropathy, breast pain, infant nutrition, premenstrual syndrome symptoms, rheumatoid arthritis, high blood pressure, skin health and general inflammation.

A study released by Northwestern University researchers on November 1, 2005 also indicates that GLA inhibits action of Her-2/neu, a gene that is responsible for almost 30 percent of all breast cancers. Dr. Ruth Lupu and co-investigator Javier Menendez showed that treating cancer cells that overexpressed Her-2/neu with GLA not only suppressed protein levels of the oncogene, but also caused a 30 to 40-fold increased response in breast cancer cells to the drug Herceptin® (trastuzumab), a monoclonal antibody that is used for the treatment of many women with breast cancer.

The two main sources of dietary GLA are evening primrose oil and borage oil, which contain approximately 10 percent and 20 percent GLA, respectively. Because evening primrose and borage plants are difficult to cultivate commercially, these oils are expensive to produce and supplies can be erratic. As a result, widespread and economical use of GLA and GLA-enriched products is hampered by high cost and limited availability.

Based upon results of numerous studies, daily consumption of 10 to 40 capsules of evening primrose oil may be necessary to achieve therapeutic benefits from GLA. The use of Arcadia's GLA safflower oil, with nearly two to four times the concentration of current sources, would significantly reduce daily capsule consumption and the associated cost.

"A significant body of published, peer-reviewed research suggests that GLA can have a measurable benefit on human health and quality of life, but current concentration and cost issues have constrained widespread use," said Eric Rey, president of Arcadia. "By developing safflower plants that produce seeds that contain high levels of GLA, we can make the health-promoting benefits of the omega-6 fatty acid more available to the people who need them."

Arcadia expects to broadly commercialize GLA-enriched safflower oil in 2008.

Arcadia's current product pipeline includes technologies that either benefit the environment or improve human health. In addition to GLA-enriched safflower oil, the company is developing higher-yielding plants that use less nitrogen fertilizer, salt-tolerant plants, and longer-lasting fresh produce. These products are being developed using the latest biotechnology and advanced breeding techniques.

For more information about the recently released Northwestern University study on the effects of GLA on the Her-2/neu gene, contact Elizabeth Crown at e-crown@northwestern.edu or call 312-503-8928.

About Arcadia Biosciences, Inc.

Based in Davis, Calif., with additional facilities in Seattle, Wash. and Phoenix, Ariz., Arcadia Biosciences is an agricultural biotechnology company focused on the development of agricultural products that improve the environment and enhance human health. For more information visit www.arcadiabio.com.