

**Sent: Monday, June 26, 2006 9:30 PM**

**Subject: GLA Blocks Breast Cancer Gene AND so much more.**

**GLA Cuts Levels of Cancer Gene**

CHICAGO --- Gamma-linolenic acid (GLA), a substance in evening primrose oil and several other plant oils used in herbal medicine, inhibits action of Her-2/neu, a cancer gene that is responsible for almost 30 percent of all breast cancers, Northwestern University researchers report.

"Breast cancer patients with Her-2/neu-positive tumors have an aggressive form of the disease and a poor prognosis," said Ruth Lupu, director of Evanston Northwestern Healthcare Breast Cancer Translational Research Program, who led the study, published in the Nov. 2 [2005] issue of the Journal of the National Cancer Institute.

Lupu is professor of medicine at Northwestern University Feinberg School of Medicine and a researcher at The Robert H. Lurie Comprehensive Cancer Center of Northwestern University.

Lupu and co-investigator Javier Menendez showed that treating cancer cells that overexpressed Her-2/neu with GLA suppressed protein levels of the oncogene. . . .

Menendez is research assistant professor of medicine at Feinberg and a scientist at Evanston Northwestern Healthcare Research Institute.

"In our tests, . . . these findings may reveal a previously unrecognized way of influencing the poor outcome of Her-2/neu-positive cancer patients," Lupu said.

"GLA's inhibition of Her-2/neu works in a different manner from that of Herceptin [a drug commonly used in breast cancer treatment]," Menendez said.

"While Herceptin attempts to neutralize thousands of Her-2/neu molecules commonly found in the surface of overexpressing cancer cells, GLA would be more efficient to reduce Her-2/neu levels by preventing the transcription of few Her-2/neu gene copies," Menendez said.

"Considering that activation and overexpression of the Her-2/neu oncogene are crucial events in the cause, progression and cell sensitivity to various treatments in breast cancer, results of the study reveal a valuable means by which an inexpensive herbal medicine might regulate breast cancer cell growth, metastasis formation and response to chemotherapies and endocrine

therapies," Lupu said. [emphasis mine]

**GLA exerts selective toxic effects on cancer cells without affecting normal cells. . . .**

GLA is one of two essential fatty acids - fats that are necessary for maintaining normal functioning and growth of cells, nerves, muscles and organs. Besides evening primrose oil, other sources of GLAs include borage oil and black currant seed oil.

Besides Menendez, other authors on the study were Luciano Vellon, Evanston Northwestern Healthcare Research Institute; and Ramon Colomer, head of the medical oncology division at the Institut Catala d'Oncologia, Girona, Spain.

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Excerpted from source: Northwestern University News and Information press release, November 2, 2005

## **Phyto-Bytes**

**by Rusty Ost, RPh & Member of Association of Natural Medicine Pharmacists**

### **GLA Plus**

**Gamma Linoleic Acid.** This was one of the first natural products embraced by the traditional medical community in modern times. I remember being asked by a local gynecologist to find a "reputable" supply of evening primrose. That was a difficult task because of the limited number of manufacturers at that time. And no supplier that I could find was using the borage plant as a source of gamma linoleic acid. All suppliers were using evening primrose. The best part of this story is that the patients were getting results!

In addition to its use in alleviating the symptoms of PMS, GLA is licensed in the United Kingdom to treat atopic eczema, cyclical and non-cyclical mastalgia (breast tenderness) and the aforementioned PMS. It is also commonly used for psoriasis, multiple sclerosis (MS), chronic fatigue syndrome, diabetic neuropathy, alcoholism, and to reduce blood cholesterol and blood pressure. GLA has also been shown to be a potent treatment for auto-immune disorders.

On a personal note, my cardiologist attributes my survival from coronary artery disease (CAD) to my program of supplementation, especially the GLA. Because my coronary arteries were clogged between 93% and 100%, the only reason I hadn't dropped over dead according to him was the fact that GLA causes coronary arteries to dilate; and that because of the amount of essential fatty acids in my blood, my blood cells were "slick" and wouldn't stick together.

It has been found that an increase of GLA assists more efficient incorporation of other important essential fatty acids into cell membranes and tends to decrease inflammation and cramping of smooth muscles. Why then would Shaklee choose to use the borage plant for its source of GLA rather than evening primrose? The answer is simple. It appears that the concentration of GLA in the borage plant is twice that of evening primrose! Imagine that?

And in addition, Shaklee adds vitamin E, which acts as an antioxidant. Should you choose to add GLA to your daily regimen of supplementation? Only you can answer that. I'm here telling you that without GLA Plus in my diet, I wouldn't be here offering you that choice!