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**Donald Brown, N.D. Discusses the Key Roles of Enterolactone in Women's Health at SupplySide West**

**LAS VEGAS, NV – October 19, 2006** – Of the numerous biomarkers that indicate health status in women, the human lignan enterolactone is becoming known in the medical research community for its potential health benefits and prevention of certain diseases in women, most notably breast cancer.

During a session at SupplySide West, Donald J. Brown, N.D., provided details of recent compelling research about the influence of 7-hydroxymatairesinol (HMRLignan™) on circulating enterolactone levels and discussed how enterolactone has been associated with decreased risk for female-specific illnesses and cardiovascular disease. Also discussed were the antioxidant and anti-inflammatory mechanisms of action of HMRLignan™.

“It is clear that lignans play an important role in sustainable women’s health support and provide health benefits in the different phases of a woman’s life,” said Dr. Brown. “And 7-hydroxymatairesinol (HMRLignan™) is a researched, bioavailable and cost-effective way to increase enterolactone in women.”

In a woman’s body, enterolactone binds to estrogen receptors found on sex hormone-binding globulin (SHBG). When enterolactone attaches to these receptors, estrogen (and testosterone) cannot. Research has shown that SHBG is present in breast cancer cells, and estrogen is known to activate the pathways of cancer progression. Therefore, researchers believe that higher circulating enterolactone may play a key role in

prevention of breast cancer. A recent study has confirmed the association between enterolactone and pre-menopausal breast cancer risk; the authors concluded that the study results support the practice of raising levels of enterolactone as one potential way to prevent breast cancer.<sup>1</sup>

This trial supports an earlier case-control study showing that serum enterolactone had a significant inverse correlation with breast cancer risk in both pre-and post-menopausal women.<sup>2</sup> And, in 2003, researchers showed that premenopausal women with the highest quartile of lignan intake had a decreased risk of breast cancer.<sup>3</sup>

Enterolactone is a human lignan made in the body from ingested food and plant lignans. The most direct precursors of enterolactone from plants is hydroxymatairesinol. Other plants lignans, such as secoisolariciresinol in flax, must go through an extra step to be converted to enterolactone. Additionally, due to the presence of sugar conjugates, these plant lignans must undergo a cleaving process, and thus, women need to consume more of them to attain significant levels of enterolactone. 7-hydroxymatairesinol (HMRLignan™) is not bound to any sugars and provides efficient conversion to enterolactone.

In addition, due to the common condition of gut dysbiosis, many women have impaired ability to convert foods into nutrients due to sustained insufficient diet and antibiotic therapy. This elevates the need for a dietary supplement solution such as HMRLignan™ that does not rely on the multi-step conversion process. Studies have shown it to be rapidly absorbed and efficiently converted to enterolactone. This affords the manufacturer a significant economy – as doses as low as 10 mg of HMRLignan™ produced a marked elevation in enterolactone concentrations.

A brand new study demonstrates for the first time that 7-hydroxymatairesinol is naturally occurring in specific cereal grasses, nuts and seeds, supporting the concept that the human body recognizes the compound.<sup>4</sup> HMRLignan™ is derived from Norway Spruce (*Picea abies*), which has the highest sustainable concentration of 7-hydroxymatairesinol, and is therefore the most economical and qualitative source for dietary supplements and functional foods. HMRLignan™ is available exclusively from Linnea.

## **About Linnea**

From its headquarters and manufacturing facility in Locarno, Switzerland, Linnea specializes in the manufacture of botanical extracts and phytochemicals, and is a leading supplier to the pharmaceutical, dietary supplement and cosmetic industries. HMRLignan™ is a proprietary, patent protected, product manufactured by Linnea SA. The company's U.S. office, Linnea Inc., is located in Easton, Pennsylvania. For more information about HMRLignan™, visit our Web site at [www.hmrlignan.com](http://www.hmrlignan.com) or call 1-888-253-0044.

## **References**

1. Eur J Cancer Prev. 2006 Jun;15(3):225-32.
2. Cancer Epidemiol Biom Prev. 2001;10:339-44.
3. Breast Cancer Res Treat 2003;79:17-23.
4. Smeds, AI, et al. Department of Biochemistry and Pharmacy, Abo Akademi University.

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