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In this issue

Life Extension Update Exclusive

Experimental research finds silibinin reduces the growth of liver cancer

Health Concern

Complementary alternative cancer therapies

Featured Products

Silibinin Plus

Mega Silymarin with Isosilybin B

Life Extension Events

Bio-Identical Hormone Replacement Therapy (BHRT) Seminar

Life Extension Update Exclusive

Experimental research finds silibinin reduces the growth of liver cancer

A report published in the October 28, 2007 issue of the *World Journal of Gastroenterology* described the finding of hepatologist Ke-Qin Hu, John J Lah and Wei Cui at the University of California, Irvine that silibinin, derived from milk thistle, significantly reduces the growth of several human liver cancer cell lines. The compound has previously demonstrated an inhibitory effect on prostate, colon, skin, bladder and lung cancer cell cultures.

Silibinin is a polyphenolic flavonoid and the major biologically active compound of the milk thistle plant. Milk thistle has long been used as an herbal remedy for liver disease and has been shown to have a protective effect on the organ against alcohol or drug related damage.

In the current study, Dr Hu's team treated four different human hepatocellular carcinoma (HCC) cell lines with varying doses of silibinin, and examined the compound's effect on cell growth and proliferation, apoptosis, cell cycle progression, histone acetylation, and other related processes.

The team found a dose-dependent inhibition of tumor growth associated with silibinin compared to untreated cells in all lines tested. They discovered that silibinin decreased cancer cell proliferation and cell cycle progression, enhanced apoptosis (programmed cell self-destruction), and altered the genetic structure of the cancerous cells. At a higher concentration, silibinin also showed an inhibitory effect on two markers of angiogenesis.

"Our results defined silibinin's in vitro anti-HCC effects and possible mechanisms, and provided a rationale to further test silibinin for HCC chemoprevention," the authors conclude.

Health Concern

Complementary alternative cancer therapies

Complementary alternative medical therapies (CAM) is a collective term for an array of remedies that lie outside what is traditionally considered conventional medical treatment for cancer. These include the use of herbal, vitamin, and nutritional supplements, as well as physical and psychological interventions such as exercise, relaxation, massage, prayer, hypnotherapy, and acupuncture (Deng G et al 2005; Hann D et al 2005; Molassiotis A et al 2005). The use of CAM as a component of integrated cancer treatment regimens may help patients reduce the side effects associated with conventional cancer treatments, alleviate symptoms, enhance immune function, and provide greater quality of (and control over) life (Deng G et al 2004, 2005).

Natural strategies known to prevent the development and progression of cancer include:

- Calcium
- Carotenoids
- Curcumin
- Garlic
- Green and black teas
- Folic acid
- Melatonin
- Selenium
- Silymarin
- Vitamin A
- Vitamin C
- Vitamin D
- Vitamin E
- Vitamin K.

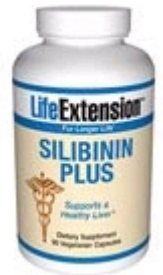
Silymarin, a milk thistle extract, demonstrates anti-cancer properties against prostate cancer cells and may be useful in preventing and treating prostate cancer (Singh RP et al 2004; vis-Searles PR et al 2005).

http://www.lef.org/protocols/cancer/alternative_cancer_therapies_01.htm

Featured Products

Silibinin Plus

Silibinin is of particular importance for those who may have concerns for the health of their liver. The most biologically active flavonolignan found in silymarin is silibinin. Standardized milk thistle extract usually consists of 60-70% silibinin. Silibinin's main hepatoprotective properties are that of free radical scavenger and membrane stabilizer. Other important antioxidant effects of silibinin are due to its influence on the superoxide dismutase and the enzyme system associated with glutathione. In addition, silymarin and silibinin actually help maintain a normal rate of protein synthesis in the liver, leading to more efficient cellular functions such as cell division. Silibinin's influence on the 5-lipoxygenase pathway can also account for its role in supporting healthy liver function.



<http://www.lef.org/newshop/items/item00503.html>

Mega Silymarin with Isosilybin B

The botanical extract in Mega Silymarin is a triple standardized milk thistle extract. In addition to an optimal 80% standardization of the main active compounds, silymarin flavonolignans, Mega Silymarin is further standardized to two highly active isomers - silibinin and isosilybin B. Most premium milk thistle extracts are void of or lack consistent amounts of the most active flavonolignan isomer isosilybin B.



<http://www.lef.org/newshop/items/item00702.html>

Life Extension Events

Bio-Identical Hormone Replacement Therapy (BHRT) Seminar

The International Hormone Society is proud to present the Bio-Identical Hormone Replacement Therapy (BHRT) Seminar for physicians, which will take place February 28 to March 2, 2008. Jonathan Wright, MD, Thierry Hertoghe, MD, and Ron Rothenberg, MD will share the stage for this four day BHRT symposium held at Harrah's Las Vegas. **To register call 1-866-444-**

If you have questions or comments concerning this issue or past issues of *Life Extension Update*, send them to ddye@lifeextension.com or call 954 202 7716.

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