

Chemical compound prevents cancer in lab

May 13 2008

While researching new ways to stop the progression of cancer, researchers at the University of Oklahoma Health Sciences Center, have discovered a compound that has shown to prevent cancer in the laboratory. The research appears in the journal *Gene Regulation and Systems Biology*.

The compound, which still faces several rounds of clinical trials, successfully stopped normal cells from turning into cancer cells and inhibited the ability of tumors to grow and form blood vessels. If successful tests continue, researchers plan to create a daily pill that would be taken as a cancer preventive.

“This compound was effective against the 12 types of cancers that it was tested on,” said Doris Benbrook, Ph.D., principal investigator and researcher at the OU Cancer Institute. “Even more promising for health care is that it prevents the transformation of normal cells into cancer cells and is therefore now being developed by the National Cancer Institute as a cancer prevention drug.”

The synthetic compound, SHetA2, a Flex-Het drug, directly targets abnormalities in cancer cell components without damaging normal cells. The disruption causes cancer cells to die and keeps tumors from forming.

Flex-Hets or flexible heteroarotinoids are synthetic compounds that can change certain parts of a cell and affect its growth. Among the diseases and conditions being studied for treatment with Flex-Hets are polycystic

kidney disease, kidney cancer and ovarian cancer.

Benbrook and her research team have patented the Flex-Het discovery and hope to start clinical trials for the compound within 5 years. If the compound is found to be safe, it would be developed into a pill to be taken daily like a multi-vitamin to prevent cancer.

The compound also could be used to prevent cancer from returning after traditional radiation and chemotherapy treatments, especially in cancers that are caught in later stages such as ovarian cancer where life expectancy can be as short as 6 months after treatment.

“It would be a significant advancement in health care if this pill is effective in preventing cancer, and we could avoid the severe toxicity and suffering that late stage cancer patients have to experience,” Benbrook said.

Source: University of Oklahoma

Citation: Chemical compound prevents cancer in lab (2008, May 13) retrieved 28 April 2024 from <https://medicalxpress.com/news/2008-05-chemical-compound-cancer-lab.html>

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