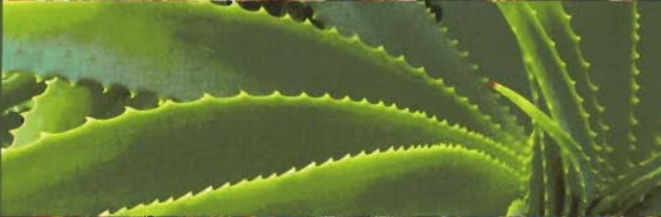


NCI's Annual Report on Complementary and Alternative Medicine

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DEVELOPING EFFECTIVE AND EFFICIENT TREATMENTS

Noni Juice Studied for Prevention of Breast Cancer

Division of Cancer Prevention

The development of cancer (carcinogenesis) is recognized to be a multistage process. The occurrence of DNA adducts represents an early biomarker of exposure to cancer-causing agents and the likelihood that the cancer process has been initiated. A clinical trial with *Morinda citrifolia*, better known as “noni juice” for lung cancer prevention in 340 smokers provided some interesting findings.



After one month, noni juice significantly reduced the binding of aromatic adducts to DNA in smokers, raising the possibility that it might also reduce cancer risk. “DNA adducts are a good marker for very early carcinogenesis and cancer prevention,” said Mian-Ying Wang, M.S., M.D., who has been exploring the use of noni juice for the prevention of cancers for eight years. “If noni supplements are able to block carcinogen binding to DNA, it could prevent carcinogenesis at the initiation stage.”

“Because noni juice is a strong antioxidant and an anti-inflammatory nutritional supplement, we wanted to know if it can help prevent cancer in another model,” Wang explained. To test her hypothesis, Wang received a developmental grant from NCI to study whether noni juice can help prevent carcinogen-induced tumor formation in an animal model of breast cancer.

Her current investigations use the carcinogenic agent dimethylbenz(a) anthracene (DMBA) to induce mammary cancer*. In her studies, rats received water or water supplemented with up to 10% noni juice. Preliminary results revealed that those animals given 5% noni juice fortified water had the lowest incidence of tumor formation 5 months after exposure to DMBA.

*Grant number: 1R21CA121682-01A2

A Noni Flower. The Noni plant bears a fruit which can be eaten and is sometimes used for natural medicinal purposes.