Seaweed extract may hold promise for non-Hodgkin's lymphoma treatment

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Seaweed extract may eventually emerge as a lymphoma treatment, according to laboratory research presented at the second AACR Dead Sea International Conference on Advances in Cancer Research: From the Laboratory to the Clinic, held here March 7-10, 2010.

Lymphoma is a cancer of the immune system and is classified into Hodgkin's and non-Hodgkin's types, which are then further classified into B-cell and T-cell groups.

"Some forms of B-cell lymphoma are especially resistant to standard treatment and thus new therapies are needed," said Mohammad Irhimeh, Ph.D., assistant professor of hematoncology and stem cells at the Hashemite University in Jordan. "In this study, we looked at a new treatment strategy using novel active compounds derived from a natural source ¬¬— seaweed."

Seaweeds containing fucoidan, a sulfated polysaccharide similar to heparin in chemical structure, have been reported to have anti-tumor activity in mice and some cell lines.

For the current study, Irhimeh and colleagues at the University of California, Berkeley, and Royal Hobart Hospital in Australia treated lymphoma cell lines with a commercially available seaweed extract.

They found that the extract had an inhibitory effect on the growth of lymphoma cell lines, while leaving the control healthy cells intact. The

researchers also noted a significant pattern of activity in the genes known to be linked with apoptosis, or cell death, in lymphoma.

Irhimeh said they would continue to study the mechanism of action for these biological effects and had a goal of conducting phase II or III clinical trials.

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