

SOUTHWESTERN NEWS

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UT SOUTHWESTERN RESEARCHERS CREATE COMPOUND BELIEVED TO FIGHT CANCEROUS TUMORS

DALLAS – Dec. 1, 2000 - Biochemistry researchers at UT Southwestern Medical Center at Dallas have created a synthetic cancer-fighting compound found naturally in some marine sponges that scientists around the world have been racing to recreate.

The National Cancer Institute (NCI) isolated the compound, salicylihalamides, from a sea sponge. It was gathered during an expedition to collect samples of sponge species that had not been tested in the past; researchers have known for many years that sponges contain anti-cancer agents. The compound was dissolved into a solution and applied to human tumor cell cultures. It was found to be potentially effective in fighting several cancers, including melanoma and renal cancer. Preliminary studies at the NCI indicate that it acts differently than other chemotherapeutic agents already in use.

Dr. Yusheng Wu, postdoctoral research fellow; Dr. Lothar Esser, instructor; and Dr. Jef K. De Brabander, assistant professor, all of biochemistry at UT Southwestern, were the first to recreate the molecular compound in their laboratory. Their results have been published in today's issue of the German Chemical Society's journal, *Angewandte Chemie*, International Edition. They first became interested in recreating the compound after the NCI published the results of its sea sponge study in 1997.

"It's been a big race," De Brabander said. "There are only a few molecules that come along every year that researchers get excited about."

The UT Southwestern researchers found a flaw in the molecular model that the NCI first proposed. The structure of naturally occurring salicylihalamides is actually a molecular mirror image of the model that was proposed by the NCI.

The UT Southwestern researchers also have synthesized several derivatives of salicylihalamides, which will be valuable research tools in understanding how the compound works and ensuring safe toxicity and optimum effects. These results will appear in an upcoming issue of the American Chemical Society's journal *Organic Letters*.

The UT Southwestern researchers soon will begin testing the compound on mice.

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