News
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****UT Southwestern launches Cancer Immunobiology Program

DALLAS--The University of Texas Southwestern Medical Center at Dallas will launch a new Cancer Immunobiology Program aimed first at developing innovative treatments for lymphoma and leukemia and eventually for other forms of cancer.

Dr. William Neaves, interim dean of Southwestern Medical School, has appointed Dr. Ellen Vitetta, an established immunologist and cancer researcher, as director of the new program.

In making the appointment, Neaves said: "The faculty of UT Southwestern has identified oncology (the science of cancer) as a top priority for academic development over the next decade. Fortunately, the school already has some programs in cancer research that have achieved national and international recognition. One such program is the cancer immunobiology research of Dr. Ellen Vitetta."

The new director is a professor of microbiology at UT Southwestern and co-chairman of the Immunology Program in the Southwestern Graduate School of Biomedical Sciences.

"The availability of designated funds to support an increased effort in cancer immunobiology enables the school to build new strength in oncology around Dr. Vitetta's established and highly regarded research on cancer immunotoxins," commented Neaves.

Vitetta has achieved recognition for her efforts to develop an immunotoxin to fight cancer. An immunotoxin is a drug designed to kill specific cells. It chemically links a portion of a potent poison, in this case ricin, to an antibody. The poison can be "aimed" to kill malignant cells, which react with the antibody, without harming normal cells.

Working with Dr. Jonathan Uhr, chairman of the Department of Microbiology at Southwestern Medical School, Vitetta developed immunotoxins that successfully killed cancer cells in the bone marrow of leukemic mice. She and her collaborators also were successful in killing leukemia cells in the whole animal.

In December 1985, Vitetta's immunotoxins began their first tests in human patients at the Fred Hutchinson Cancer Research Center in Seattle. In those tests, the objective was to kill T cells in donated bone marrow to prevent graft versus host disease (GVHD), a major complication in bone marrow transplants that occurs when immune cells in the transplanted bone marrow, or graft, regard the

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recipient, or host, as foreign tissue that must be destroyed. Without the T cells that initiate an immune response, the graft accepts its new home. Eight patients were transplanted with the treated bone marrow and acute GVHD was prevented. One patient, who entered the clinical trial with terminal leukemia, has been disease-free for a year. The results of the study have been submitted for publication.

Vitetta, Uhr and their colleagues are currently preparing another immunotoxin that will be injected into the bloodstream of patients with B cell lymphoma and aimed directly at the cancer cells. Tests are underway to obtain approval from the Food and Drug Administration before the trial is initiated. If all goes well, Vitetta hopes to begin Phase I clinical trials at Baylor Hospital in Dallas early next year.

The new Cancer Immunobiology Program will involve a broad approach to lymphoid malignancies. While continuing her own research program in the Department of Microbiology, Vitetta plans to recruit three independent investigators to join the new program.

"I would like to develop a group of investigators who will run independent research programs but integrate their programs toward the common goal of understanding leukemia and lymphoma. A deeper understanding of these diseases will lead to the development of new methods of treatment that hopefully will be innovative and exciting. Eventually, we would hope to extend our studies and new therapies to other types of tumors," Vitetta said.

"The group should represent strength in molecular biology, pharmacology and cell biology. This would make possible in-depth analysis of the mechanisms underlying tumor formation, immune response to tumors, new immunologic approaches to therapy and the fate of new anti-cancer reagents in patients." Vitetta will be the group's specialist in immunology.

She said, "This is, to me, the most exciting way to do research -- to put people together who see things from different points of view and try to get them to develop a new way to do something."

Although these new appointees will form the nucleus of the program, Vitetta notes that there is already a great deal of expertise at UT Southwestern in immunology, lymphoid cancer and cancer in general. "I hope that the Cancer Immunobiology Program will act as a focal point for these other investigators and provide opportunities for new collaborations, a seminar series and clinical connections."

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NOTE: The University of Texas Southwestern Medical Center at Dallas was formerly named The University of Texas Health Science Center at Dallas. The name was changed on Oct. 8, 1987. The components of UT Southwestern are Southwestern Medical School, Southwestern Graduate School of Biomedical Sciences and Southwestern Allied Health Sciences School.