

# **SOUTHWESTERN NEWS**

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## **RENOWNED RESEARCHER FROM ITALY JOINS UT SOUTHWESTERN ANGIOGENESIS RESEARCH TEAM**

DALLAS – Dec. 12, 2000 – Dr. Marina Ziche, a leading European authority in the field of angiogenesis research, is spending 10 months at UT Southwestern Medical Center at Dallas as a visiting professor, to help inaugurate a program aimed at enlarging UT Southwestern's research capabilities in angiogenesis.

Ziche's expertise will accelerate UT Southwestern's angiogenesis research and help develop young researchers in the field, according to Dr. Philip Thorpe, professor of pharmacology. The visit is made possible through the Effie Marie Cain Research Scholar endowment. It allows an established authority in the field to provide in-depth training in angiogenesis to young scientists on the UT Southwestern campus. In future years, the endowment also will offer researchers here an opportunity to work in Ziche's lab in Italy and in other leading centers in America and abroad.

"We have a unique opportunity with Dr. Ziche to create a mutually beneficial mentoring program," Thorpe said. "We will establish collaborations that will forward our efforts in angiogenesis research."

Angiogenesis – the formation of new blood vessels that supply nutrients and oxygen to body organs – is being studied as a way to control the growth of tumors and to moderate the damage caused by a stroke or heart attack.

Research has focused on two approaches to affect tumor blood vessels, Thorpe said. With anti-angiogenesis, agents are developed to inhibit growth in malignant tumors, typically small tumors. With vascular targeting, the object is to identify the molecules present in the tumor's blood vessels and destroy them or inhibit their formation. This approach is designed to work on large tumors.

"In addition to anti-cancer work, we also hope to design drugs that are useful in treating

(MORE)

## ANGIOGENESIS RESEARCH - 2

stroke and myocardial infarction, through modifying angiogenesis,” said Thorpe. “Dr. Ziche has specific expertise that will expand and accelerate our program.”

Ziche’s arrival will bring a new dimension to the ongoing research. An associate professor at the Institute of Pharmacological Sciences at the University of Siena, Italy, she has been at the forefront of angiogenesis research for 20 years. Her work focuses on endothelial cells, a layer of cells lining blood and lymphatic vessels and the heart.

“We want to combine our knowledge from different perspectives,” Ziche said of her visiting professorship. “Our goal is to modify these endothelial cells. We have found that some molecules in these cells can split apart and become both pro- and anti-angiogenic. We use endothelial cells differently in each organ of the body, and each tumor has vasculature that can be a little different.”

The researchers are now identifying markers of human tumor blood vessels as they develop drugs that will work against tumor development and growth. UT Southwestern’s angiogenesis research is now nearing the clinical trial stage, Thorpe said. Clinical trials could begin as early as 2001.

“We’ve been through proof of principle and the identification of molecules on human blood vessels. Now we are getting pharmaceutical companies to take these into clinical trials,” he said. “We hope and expect that UT Southwestern will be a major player in this field, and the Cain Foundation’s support in helping us mentor young investigators who will be future leaders in the field is a very important component of our plan.”

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