

Media Contact: Deborah Wormser
214-648-3404

deborah.wormser@utsouthwestern.edu

Two UT Southwestern scientists honored as rising stars in Texas research

DALLAS – Dec. 11, 2012 – The Academy of Medicine, Engineering, and Science of Texas (TAMEST) today announced that two UT Southwestern Medical Center researchers are among the four chosen for the 2013 Edith and Peter O'Donnell Awards.

Dr. Lora Hooper, associate professor of immunology and microbiology, and Dr. Youxing Jiang, professor of physiology, will be honored at a banquet at the Westin Galleria in Dallas on Jan. 17 in conjunction with TAMEST's 10th annual conference. Both are accomplished Howard Hughes Medical Institute investigators, and Dr. Hooper also has an appointment in UT Southwestern's Cancer Immunobiology Center.

Each year, the awards honor outstanding achievements by early-career investigators in science, medicine, engineering, and technology innovation. Each award consists of a \$25,000 honorarium, a citation, a trophy, and an invitation to speak at the conference.

The 2013 O'Donnell Award in Medicine honors Dr. Hooper for her discovery of immune mechanisms that promote host-bacterial interactions. These discoveries in part explain how beneficial bacteria can safely exist in the intestinal tract and may ultimately reveal what to do when illness-causing bacteria predominate.

The 2013 O'Donnell Award in Science recognizes Dr. Jiang's efforts to elucidate the atomic structures of membrane-bound ion channels, which are cell surface proteins that allow specific charged particles like sodium and potassium ions to pass through or be blocked by cell membranes.

"The achievements of Dr. Hooper and Dr. Jiang exemplify the breadth of research under way at UT Southwestern, important work with benefits we hope will extend across the state of Texas and throughout the world of medical science," said Dr. Daniel K. Podolsky, president of UT Southwestern. "We are grateful to Edith and Peter O'Donnell for their support of scientific advancement."

Ion channels are so fundamental to human existence that problems in these proteins are blamed for a range of conditions called channelopathies, which include some forms of epilepsy, migraine, fibromyalgia and paralysis. Solving the atomic structure of ion channels, a very high-tech way of visualizing them at the atomic level, is a major step toward understanding and better treating

(MORE)

THE UNIVERSITY OF TEXAS SOUTHWESTERN MEDICAL CENTER AT DALLAS

UT Southwestern Medical School • UT Southwestern Graduate School of Biomedical Sciences • UT Southwestern Allied Health Sciences School
UT Southwestern University Hospitals & Clinics

Office of News and Publications • 5323 Harry Hines Blvd., Dallas, TX 75390-9060 • Telephone 214-648-3404 • Fax 214-648-9119
www.utsouthwestern.edu

2013 O'Donnell Awards – 2

these conditions, Dr. Jiang explained.

"I am deeply honored," said Dr. Jiang. "This award recognizes the hard work of many outstanding scientists in my lab. I am also grateful for the incredible support that the physiology department and the university have provided to us."

Much of Dr. Hooper's research focuses on the battles that take place, or don't, in a sort of "demilitarized zone" in the intestine. That zone is a 50-micron-wide area – about half the width of a human hair – between the intestinal wall and the normally good, or commensal, bacteria that live in the gut. Under normal conditions, these bacteria aid in digestion and the delivery of nutrients from the food we eat without damaging the delicate intestinal lining. When something goes wrong with this arrangement the bacteria are able to invade the intestinal wall and can cause inflammatory bowel disorders.

"It is a tremendous honor to receive this award, which is a reflection of the contributions of many excellent students and colleagues that I've worked with in my lab, as well as the collaborative environment and standard of scientific excellence at UT Southwestern," Dr. Hooper said.

Last fall, Dr. Hooper published a study in the journal *Science* showing for the first time how a protein that her laboratory discovered in 2006 works to police the intestinal demilitarized zone and keep bacteria from damaging the intestinal lining.

Most recently, in a study published in the *Proceedings of the National Academy of Sciences* in October, her laboratory found that gut bacteria launch biological warfare against other bacterial species in response to environmental stress, such as changes in available nutrients or the presence of antibiotics. The bacteria go to war by churning out viruses that attack other bacterial species. The scientists hope to harness this intestinal warfare to develop ways to fight antibiotic-resistant bacterial infections.

Other 2013 O'Donnell Award winners are Dr. Li Shi of UT-Austin for engineering and Dr. Timothy Nedwed of ExxonMobil Upstream Research Company for technology innovation.

###

This news release is available on our World Wide Web home page at
www.utsouthwestern.edu/home/news/index.html

To automatically receive news releases from UT Southwestern via email,
subscribe at www.utsouthwestern.edu/receiveneews