J SOUTHWESTERN NEWS

Media Contact: Amanda Siegfried 214-648-3404 amanda.siegfried@utsouthwestern.edu

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UT Southwestern scientist honored among best in Texas research

DALLAS – Jan. 8, 2009 – Dr. Rama Ranganathan, professor of pharmacology at UT Southwestern Medical Center, was recognized today as one of the state's top rising stars in research by The Academy of Medicine, Engineering and Science of Texas (TAMEST).

Dr. Ranganathan was named a recipient of one of three 2009 Edith and Peter O'Donnell Awards by the academy at its annual conference in Dallas. Dr. Ranganathan is director of the Systems Biology Division of the Cecil H. and Ida Green Comprehensive Center for Molecular, Computational and Systems Biology at UT Southwestern, where he also holds the Cecil H. and Ida M. Green Chair in Biomedical Science.

Each year, the O'Donnell Awards honor outstanding achievements by young investigators in science, medicine and engineering. Each award consists of a \$25,000 honorarium, a citation and an inscribed statue.

Dr. Ranganathan received the award for science. His work aims to link basic research on molecules and cells with analysis of how biological systems function, both in health and in sickness. The ultimate goal of this field of research is to understand how networks of interactions on various levels – from proteins and cells to tissues and organs – produce well-honed biological systems that are more than the sum of their parts.

Other O'Donnell Award recipients this year are Dr. Brian Korgel of UT Austin, for engineering; and Dr. Brendan H.L. Lee of Baylor College of Medicine in Houston and the Howard Hughes Medical Institute, for medicine.

"Dr. Ranganathan embodies the best qualities of Texas science and the achievement this award seeks to recognize, rigorously pursuing important questions of cell science with innovative strategies," said Dr. Daniel K. Podolsky, president of UT Southwestern. "We are grateful to Edith and Peter O'Donnell for this recognition of excellence, and we are proud to have Dr. Ranganathan as our colleague at UT Southwestern."

The awards, first given in 2006, were named by TAMEST to honor two of the Lone Star State's most generous and far-sighted supporters of medical, engineering, and scientific research and education. Previous UT Southwestern recipients of the award are: Dr. Michael Rosen, professor of biochemistry and pharmacology, who received the inaugural award for science in 2006; Dr. Zhijian "James" Chen, (MORE)

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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

2009 O'Donnell Award – 2

professor of molecular biology, the 2007 recipient for science; Dr. David Mangelsdorf, chairman of pharmacology, the 2007 recipient for medicine; and Dr. Beth Levine, chief of infectious diseases, the 2008 winner for medicine.

"It is truly a great honor to be selected for an award that bears the name of Edith and Peter O'Donnell," Dr. Ranganathan said. "They have worked with dedication toward promoting scientific excellence in the state of Texas for many years and, consequently, share in the achievements of our university. Their efforts have helped progress our research program in many ways."

Dr. Ranganathan's research has focused in part on uncovering the most fundamental evolutionary design principles of living systems. By carefully examining how proteins have evolved over time, for example, he discovered a set of simple "rules" that nature appears to have used to design and manufacture proteins, which carry out all of life's functions. To test the rules he discerned, Dr. Ranganathan developed sophisticated computer programs to then produce artificial proteins that look and function like their natural counterparts.

Such design work could lead to tailor-made proteins that perform specific tasks in the body or replace malfunctioning natural proteins.

"This work could contribute to understanding how complex biological systems can arise through the iterative process of random variation and selection that we call evolution," Dr. Ranganathan said.

Dr. Ranganathan earned both his medical degree and his doctorate in biology from the University of California, San Diego, after receiving his bachelor's degree in bioengineering from UC Berkeley. He joined the UT Southwestern faculty in 1997.

TAMEST was launched in 2004 by Sen. Kay Bailey Hutchison and Nobel laureates Dr. Michael Brown, professor of molecular genetics at UT Southwestern, and the late Dr. Richard Smalley to provide broader recognition of the state's top achievers in these fields and enhance the state's identity as a research leader. The academy also aims to foster the next generation of scientists and to increase awareness and communication among Texas' up-and-coming minds about future priorities in research.

Academy members include the state's Nobel Prize winners – four of whom are active faculty members at UT Southwestern – and the 200-plus Texas members of the Institute of Medicine, National Academy of Engineering and National Academy of Sciences.

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