UT SOUTHWESTERN MEDICAL CENTER NEWS

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

Two UT Southwestern scientists attain membership in prestigious National Academy of Sciences

DALLAS – April 25, 2006 – Two faculty members at UT Southwestern Medical Center – the dean of the Southwestern Graduate School of Biomedical Sciences and a professor of molecular genetics – today were elected to the National Academy of Sciences, one of the highest honors attainable by an American scientist.

Dr. Melanie Cobb, dean of the graduate school and a professor of pharmacology who has studied enzyme interactions crucial to many cell functions, and Dr. David Russell, a professor of molecular genetics whose research sheds light on diseases involving abnormal cholesterol metabolism, become the 16th and 17th UT Southwestern faculty members currently serving on the prestigious panel.

There are now 22 NAS members at Texas academic medical institutions. More than 75 percent of those are at UT Southwestern. Only one other Texas researcher – Paul Barbara from the Department of Chemistry and Biochemistry at UT Austin – was among the 72 new members and 18 foreign associates who were elected today to the NAS.

"To say I was surprised at my election to the National Academy of Sciences is an understatement," said Dr. Cobb, who holds the Rolf Haberecht and Ute Schwarz Haberecht Deanship of the UT Southwestern Graduate School of Biomedical Sciences, in honor of Olga & Max Haberecht and Anna & Hans Schwarz, and the Jane and Bill Browning Jr. Chair in Medical Science.

"It's because of the support of so many people at UT Southwestern that the scientific community here thrives and researchers are encouraged to pursue exciting science."

Dr. Russell, who holds the Eugene McDermott Distinguished Chair in Molecular Genetics, said: "As a first generation Texan, a Dallas native, a product of the Dallas Independent School District, and a graduate of the University of Texas who has spent his entire professional career at UT Southwestern, this recognition is a reflection of the many educational opportunities provided by the Lone Star state, as well as this institution's unwavering dedication to excellence."

UT Southwestern president Dr. Kern Wildenthal said: "Through their research and service to this institution, Melanie Cobb and David Russell exemplify UT Southwestern's commitment to excellence and are most deserving of this recognition."

Dr. Alfred Gilman, provost, executive vice president for academic affairs and dean of UT

(MORE)

Southwestern Medical School, added: "I am delighted for them both and proud that they and other UT Southwestern faculty members continue to be recognized as world leaders in so many areas of biomedical science."

Dr. Cobb's research centers on a class of enzymes called mitogen-activated protein kinases, or MAP kinases. Many of these enzymes interact together in a series, or cascade, to carry out and regulate essential functions in cells. Dr. Cobb identified and then cloned the first mammalian MAP kinases, and she also defined a MAP kinase regulatory unit, consisting of three to four protein kinases acting in series. Understanding the MAP kinase cascade has provided new insights into many cell processes, and also has helped identify possible new targets for cancer drugs.

"Melanie Cobb is a superb scientist," said Dr. Gilman, former chair of pharmacology, who won the Nobel Prize in 1994 for his work in cell communication. "With her discovery and cloning of the first MAP kinases, she opened a Pandora's Box. Dozens of researchers have since joined this important field of investigation."

Dr. Cobb earned her bachelor's degree at the University of Chicago and her doctorate at Washington University in St. Louis. She joined UT Southwestern in 1983 as an associate professor in pharmacology and was named graduate school dean in 2003. Her many honors include the 1994 Max Planck Research Award for International Cooperation and the ASPET Goodman and Gilman Award in Drug Receptor Pharmacology in 2000.

Dr. Russell's research focuses on the metabolism of cholesterol, which is eliminated from the body by being converted to bile acids in a complex biochemical pathway involving 15 enzymatic reactions. Prior to his research, this pathway was understood only in outline form, and none of the genes encoding the enzymes had been isolated. Through a combination of biochemistry, cell biology and DNA manipulation, Dr. Russell identified the genes for six of the enzymes and demonstrated that mutations in three of them cause fatal liver disease in children.

His earlier studies on the process that converts the cholesterol byproduct testosterone into dihydrotestosterone, a potent male hormone, led to the development of drugs that are now commonly prescribed to treat male pattern baldness and benign growth of the prostate.

"Dr. Russell is an undisputed leader in applying biochemistry, human genetics and molecular biology to unravel metabolic diseases," said Dr. Joseph Goldstein, chairman of molecular genetics at UT Southwestern. "His election to the National Academy of Sciences recognizes his fundamental

(MORE)

research accomplishments in the fields of bile acid metabolism and endocrinology."

Dr. Michael Brown, director of the Erik Jonsson Center for Research in Molecular Genetics and Human Disease who shared the 1985 Nobel Prize with Dr. Goldstein for their pioneering research on the underlying mechanisms of cholesterol metabolism, said: "David Russell brought a molecular understanding to large segments of metabolism and disease. He is a distinguished scientist and a worthy member of the National Academy of Sciences."

Dr. Russell received his undergraduate degree from UT Austin and his doctorate in chemistry from the University of North Carolina-Chapel Hill. He joined UT Southwestern in 1982. Among his honors, Dr. Russell is the recipient of a research career development award from the National Institutes of Health, the Katz Award from the American Heart Association, the Kilby Science Place Award from Texas Instruments, the Oppenheimer Award from the Endocrine Society, and the Windaus Prize from the Falck Foundation.

The election of new NAS members was announced during the 143rd annual meeting of the academy in Washington, D.C. The NAS is a private, nonprofit society of distinguished scholars engaged in scientific and engineering research.

Other UT Southwestern faculty who are members of the NAS and the year they were appointed are: Ronald W. Estabrook, Ph.D., 1979; Michael S. Brown, M.D., 1980; Joseph L. Goldstein, M.D., 1980; Jean D. Wilson, M.D., 1983; Jonathan W. Uhr, M.D., 1984; Alfred G. Gilman, M.D., Ph.D., 1985; Roger H. Unger, M.D., 1986; Steven L. McKnight, Ph.D., 1992; David L. Garbers, Ph.D., 1993; Ellen S. Vitetta, Ph.D., 1994; Johann Deisenhofer, Ph.D., 1997; Eric N. Olson, Ph.D., 2000; Thomas C. Südhof, M.D., 2002; Masashi Yanagisawa, M.D., Ph.D., 2003; and Xiaodong Wang, Ph.D., 2004.

###