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McDonnell Foundation Announces New Grants for The 21st Century Science Initiative

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\$18.9 Million in Grants Continue the Commitment to Founder's Vision

(St. Louis, MO) During 2007, the Directors of the James S. McDonnell Foundation awarded more than \$18.9 million in grants in their ongoing program, the **21st Century Science Initiative**. Founded in 1950 by the late aerospace pioneer and founder of what would become the McDonnell Douglas Corporation, the McDonnell Foundation grants reflect James S. McDonnell's belief that science and technology gives mankind the power to shape knowledge for the future while improving our lives. Since the inception of the Foundation's 21st Century Science Initiative in 2000, more than \$100 million in funding has been awarded is support of research and scholarship.

The 21st Century Science Initiative funds research in two grant types in three program areas: *Bridging Brain, Mind and Behavior, Brain Cancer Research* and *Studying Complex Systems*. In January 2007, the Foundation announced the James S. McDonnell Foundation Scholar Awards, a new grant type for the *Bridging Brain, Mind and Behavior* program area. The Scholar Awards represent a shift from funding an applicant's research proposal to funding an applicant's overall research program.

"The McDonnell Foundation continues to dedicate its funding to scientific research so scientists can continue to acquire and apply knowledge needed to address the complex problems facing ours and future generations," said McDonnell Foundation Vice President, Dr. Susan Fitzpatrick.

The McDonnell Foundation's 2007 21st Century Science Initiative Awards are:

Scholar Awards:

In the Area of Bridging Brain, Mind, and Behavior

Johns Hopkins University, Baltimore, Maryland

Principal Investigator: Lisa Feigenson, \$600,000 over six years. Developmental origins of hierarchical memory representations

Massachusetts Institute of Technology, Cambridge, Massachusetts

Principal Investigator: Pawan Sinha, \$600,000 over six years.

Learning to see in late childhood

New York University, New York, New York

Principal Investigator: Lynne Kiorpes, \$600,000 over six years.

Uncovering the neural basis of developmental disability

Rutgers, The State University of New Jersey, Newark, New Jersey

Principal Investigator: György Buzsáki, \$600,000 over six years.

Neuronal mechanisms of episodic memory

University of California, San Diego, San Diego, California

Principal Investigator: Pamela Reinagel, \$600,000 over six years. Linking visual behavior to neural processing in the thalamus

University of Wisconsin, Madison, Madison, Wisconsin

Principal Investigator: Jenny R. Saffran, \$600,000 over six years.

Prediction as a mechanism of infant language acquisition

Collaborative Awards: Bridging Brain, Mind & Behavior

The Salk Institute for Biological Studies, La Jolla, California, in support of a collaboration, Neurogenesis in rodents: genetic and molecular approaches to study the physiology of neurogenesis and its behavioral effects on hippocampal memory tasks, Principal Investigator: Fred H. Gage, \$4,951,749 over five years.

New York University, New York, New York, Affect, learning and decision making, Principal Investigators: Elizabeth A. Phelps and Trevor W. Robbins (Cambridge University), \$1,737,958 over three years.

Brain, Mind & Behavior Special Initiative:

Arizona State University, Phoenix, Arizona, for a collaborative workshop in comparative neurobiology, model organisms and the human brain, Principal Investigator: Jason Scott Robert, \$48,005 over one year.

Research Awards: Studying Complex Systems

Cornell University, Ithaca, New York

Principal Investigator: Stephen P. Ellner, \$449,459 over three years.

Contemporary rapid evolution: dynamics and persistence in complex ecological communities

Princeton University, Princeton, New Jersey

Principal Investigator: Ignacio Rodriguez-Iturbe, \$450,000 over three years. Transport in river networks: a complex system perspective for biodiversity

University of Michigan, Ann Arbor, Ann Arbor, Michigan

Principal Investigator: Sharon C. Glotzer, \$449,908 over five years. Emergence of complex material structures from particle assembly

The University of Pennsylvania, Philadelphia, Pennsylvania

Principal Investigator: Joshua B. Plotkin, \$449,593 over five years.

Robustness and adaptability in evolving viral populations

University of Texas Southwestern Medical Center, Dallas, Texas

Principal Investigator: Gürol Süel, \$433,476 over five years. Nonlinear systems dynamics in differentiation circuits

University of Utah, Salt Lake City, Utah

Principal Investigator: Frederick R. Adler, \$346,742, over four years.

The ecology and evolution of the common cold

Complex Systems Pilot Award:

Beth Israel Deaconess Medical Center, Boston, Massachusetts

Principal Investigator: Madalena D. Costa, \$125,000 over two years.

Multiscale analysis of complex biologic systems

Collaborative Awards: Studying Complex Systems

Arizona State University, Phoenix, Arizona, Cognitive Complexity and Error in Critical Care, ER, and Trauma, Principal Investigator: Vimla L. Patel, \$4,724,573 over five years.

Research Awards: Researching Brain Cancer

Columbus Children's Research Institute, Columbus, Ohio

Principal Investigator: Jiayuh Lin, \$120,000 over one year. Stat3 as a novel therapeutic target for glioblastoma multiforme

Stanford University, Stanford, California

Principal Investigator: Matthew P. Scott, \$450,000 over four years. Regulation of medulloblastoma by the sterol synthesis pathway

Technion - Israel Institute of Technology, Technion City, Haifa, Israel

Principal Investigator: Gera Neufeld, \$350,000 over four years

The effects of Class-3 semaphorins on the development and progression of brain tumors

Brain Cancer Pilot Awards:

City of Hope National Medical Center and Beckman Research Institute, Duarte, California

Principal Investigator: Yanhong Shi, \$112,500 over one year.

Nuclear receptor TLX and its targeting microRNAs in brain tumor stem cells

Stanford University, Stanford, California

Principal Investigator: J. Martin Brown, \$122,607 over one year.

Increasing the radiocurability of GBM by inhibition of tumor vasculogenesis