

Contact: Susan Fitzpatrick, Ph.D.  
Tel: (314) 721-1532  
Email: [susan@jsmf.org](mailto:susan@jsmf.org), or [www.jsmf.org](http://www.jsmf.org)

## McDonnell Foundation Announces 2009 Grants for The 21<sup>st</sup> Century Science Initiative Awards

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### **\$14 Million in Grants Continue the Commitment to Founder's Vision**

(St. Louis, MO) The Officers of the James S. McDonnell Foundation today announced more than \$14 million in grants in their ongoing program, the **21<sup>st</sup> Century Science Initiative**.

Founded in 1950 by the late aerospace pioneer and founder of what would become the McDonnell Douglas Corporation, James S. McDonnell believed that science and technology gives mankind the power to shape knowledge for the future while improving our lives. "Mr. Mac's" vision continues to be realized through the research these grants are supporting. Since the inception of the program in 2000, more than \$148 million in funding has been awarded.

In 2009, the 21<sup>st</sup> Century Science Initiative funded research in three program areas. Support for the program area Understanding Human Cognition was provided through targeted awards and through Collaborative Activity Awards. Two other program areas supported research primarily through a competitive research awards process. *Brain Cancer Research* supports research leading to new knowledge that will eventually lead to increased rates of survival and improve functional recovery for individuals with brain cancer. *Studying Complex Systems* supports scholarship and research directed toward the development of theoretical and mathematical tools that can be applied to the study of complex, adaptive, nonlinear systems.

"Support of research and applications of research findings to important problems remains a pivotal role for private philanthropy and for the McDonnell Foundation. The foundation is committed to the ideal that having a diversity of private and public funders helps ensure that the most creative work will obtain needed support", said McDonnell Foundation Vice President, Dr. Susan Fitzpatrick.

The McDonnell Foundation's 2009 21<sup>st</sup> Century Science Initiative Awards are:

### **Research Awards: Studying Complex Systems**

**Massachusetts Institute of Technology, Cambridge, Massachusetts**

Principal Investigator: Damon M. Centola, \$259,000 over three years.

Experimental investigations into the effects of network structure on social contagions

**McMaster University, Hamilton, Ontario**

Principal Investigator: Jonathan Dushoff, \$448,671 over five years.  
Exploring how infectious diseases, beliefs, and behaviors interact on a social network

**Princeton University, Princeton, New Jersey**

Principal Investigator: Andrew P. Dobson, \$445,730 over five years.  
Allometry of parasites and food-webs

**The Santa Fe Institute, Santa Fe, New Mexico**

Principal Investigator: Luis M. Bettencourt, \$437,131 over three years.  
Towards a predictive theory of social organization and dynamics in cities

**Tel Aviv University, Tel Aviv, Israel**

Principal Investigator: Eytan Ruppin, \$449,000 over three years.  
Community modeling of bacterial metabolic interactions

**University of Georgia, Athens, Georgia**

Principal Investigator: Andrew W. Park, \$448,249 over four years.  
Transient pathogen evolution in heterogeneous host populations

**University of California-Merced, Merced, California**

Principal Investigator: Ajay Gopinathan, \$301,702 over five years.  
Biological transport in complex and dynamic environments

**Research Awards: Researching Brain Cancer**

**Children's Medical Research Institute, Sydney, Australia**

Principal Investigator: Megan Chircop, \$164,000 over one year.  
Dynamain as a new drug target for the treatment of glioblastoma

**Cleveland Clinic Foundation, Cleveland, Ohio**

Principal Investigator: Jeremy N. Rich, \$450,000 over five years.  
Microenvironmental reprogramming of glioma cells

**Northwestern University, Chicago, Illinois**

Principal Investigator: John A. Kessler, \$146,969 over one year.  
A new approach to the treatment of brain tumors

**University of California – San Diego La Jolla, California**

Principal Investigator: Santosh Kesari, \$424,476 over five years.  
Mechanisms of sensitivity to PDGFR inhibitors in human gliomas

**University of North Carolina at Chapel Hill, Chapel Hill, North Carolina**

Principal Investigator: Yue Xiong, \$449,732 over three years.  
Mechanism and mouse model for IDHI-Mediated suppression of human secondary gliomas

**University of Texas Southwestern Medical Center, Dallas, Texas**

Principal Investigator: Luis F. Parada, \$90,000 over one year.  
Large-scale screening for therapeutic targets in a mouse model of glioma

## Collaborative Awards: Researching Brain Cancer

### **Hugo W. Moser Research Institute at Kennedy Krieger Inc., Baltimore, Maryland**

Principal Investigator: John J. Laterra, \$1,484,812 over two years.

Regulatory mechanisms and therapeutic targeting of brain cancer "Stem Cells"

## Special Initiative Awards: Researching Brain Cancer

### **Massachusetts Institute of Technology, Cambridge, Massachusetts**

Principal Investigator: Forest M. White, \$240,000 over two years.

Integrative systems-level approach to glioblastoma targeted therapy

## Collaborative Awards: Understanding Human Cognition

### **California Institute of Technology, Pasadena, California**

Principal Investigator: John M. Allman, \$2,773,395 over four years.

Neurobiology of the Von Economo Neurons and related circuits

### **Moss Rehabilitation Research Institute - Albert Einstein Healthcare Network, Philadelphia Pennsylvania**

Principal Investigators: Laurel J. Buxbaum and Myrna Schwartz, \$1,798,835 over three years.

Prospective control of action: Computational principles, neural substrates, and clinical implications

### **Rutgers, the State University of New Jersey, New Brunswick, New Jersey**

Principal Investigator: Stephen J. Hanson, \$1,061,305 over three years

Accessing Brain Interactivity II

## Special Initiative Awards: Understanding Human Cognition

### **Bangor University, Wales, United Kingdom.**

Principal Investigator: Robert Rafal, \$161,989 over three years.

The Visceral Mind: A hands on course in the neuroanatomy of cognition

### **The Rockefeller University, New York, New York**

Principal Investigator: Charles D. Gilbert, \$362,728 over five years.

Computational models of recurrent cortical networks

### **University of Chile, Santiago, Chile**

Principal Investigator: Marcela Peña, \$1,200,930 over three years.

Summer School In Cognitive Science, Neuroscience and Education

### **University of Southern California, Los Angeles, California**

Principal Investigator: Terence D. Sanger, \$450,000 over four years.

High speed simulation and prediction of the effect of brain injury on development

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