

Business

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Medical research roundup

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Following is a list of some of the medical research grants awarded to scientists in the area.

WASHINGTON UNIVERSITY SCHOOL OF MEDICINE

The Scientists: Dr. Gregory Mark Lanza, the Oliver M. Langenberg Distinguished Professor of Science and Practice of Medicine; and Samuel Achilefu, professor of radiology and of biochemistry and molecular biophysics

The Grant: \$11 million from the National Cancer Institute

The Project: Many cancer drugs used in clinics today are not effective in killing cancer cells without destroying healthy organs. In some cases, the cancer cells resist treatment by overcoming the mechanism by which the drug works. One of the major goals of this proposal is to develop new drugs made of tiny light-absorbing molecules. Upon absorption of light, the drug will produce toxic radicals inside cancer cells. The cancer cells will die slowly, allowing the body to get rid of the dead cells efficiently. If successful, we will apply the treatment method to cancer patients. We expect that the therapy will be effective in cancer cells without harming healthy cells.

The Scientist: Dr. Beau Ances, associate professor of neurology

The Grant: \$3 million from the National Institute of Nursing Research

The Project: This funding will support research to study the effects of exercise training on brain health in older HIV positive individuals

The Scientist: Dr. Maurizio Corbetta, MD, the Norman J. Stupp Professor of Neurology

The Grant: \$2.7 million from the National Institute of Neurological Disorders and Stroke

The Project: The goal of this project is to use advanced brain scanning techniques to understand how a stroke changes the communication between brain areas, and how those changes in turn relate to the behavioral problems caused by the stroke. We measure both the physical connections and the correlated activity across areas, and their functional communication. We think that these studies will allow us to develop novel diagnostic tools that we can deploy to predict recovery and long-term outcome after stroke, the most important cause of disability and lost work in the world.

The Scientists: Dr. Daniel S. Ory, the Alan A. and Edith L. Wolff Distinguished Professor of Cardiology and professor of medicine and of cell biology and physiology.

The Grant: \$2.5 million from the National Institute of Neurological Disorders and Stroke

The Project: Niemann-Pick C (NPC) disease is a fatal, neurodegenerative disorder, for which there are no FDA-approved therapies. Children affected by this disorder show symptoms in early childhood, and usually die in adolescence. This project will test the effectiveness of a new class of drugs, known as histone deacetylase inhibitors, in treating this disease.

The Scientist: Dr. Andrey S. Shaw, the Emil R. Unanue Professor of Immunology in Pathology and Immunology.

The Grant: \$2.3 million from the National Institute of Diabetes and Digestive and Kidney Diseases

The Project: The project focuses on the causes of kidney failure. The main job of the kidney is to filter the blood to make urine. In this project, we propose to use state of the art imaging methods to understand how injury to cells in the kidney by toxins or drugs results in a response by the cell that allows blood proteins to leak into the urine.

The Scientist: Scott Frey, associate director of the Rehabilitation and Participation Science PhD Program, professor of occupational therapy and neurology

The Grant: \$2.3 million from the United States Department of Defense, United States Army

The Project: This funding will support work to develop, implement and evaluate an innovative program of post-transplant rehabilitation in hand transplant recipients. The project aims to channel recent discoveries in neuroscience to facilitate long-term, experience-dependent adaptations within the brain's sensory and motor systems.

The Scientist: Dr. Adetunji Toriola, assistant professor of surgery

The Grant: \$447,000 from Susan G. Komen

The Project: To investigate how a specific molecular pathway that plays an important role in bone formation may affect breast density and subsequently breast cancer risk.

ST. LOUIS UNIVERSITY SCHOOL OF MEDICINE

The scientist • Dr. Adrian Di Bisceglie, professor of internal medicine

The grant • \$4.0 million from the National Institutes of Health (NIH)

The study • To continue to fund the Midwest Hepatitis B Consortium, which enrolls patients in studies to test new therapies for hepatitis B and collaborates with laboratory researchers studying new approaches to fight the virus.

The scientist • David Ford, professor of biochemistry and molecular biology

The grant • \$3.0 million from the National Institutes of Health (NIH)

The study • To identify new therapies for sepsis, an immune response to an infection that causes inflammation of the whole body, sometimes leading to organ failure, and which affects 750,000 people in the U.S. each year.

The scientist • Dale Dorsett, professor of biochemistry and molecular biology

The grant • \$1.2 million from the National Institutes of Health (NIH)

The study • To study how sister chromatid cohesion proteins participate in gene transcription in order to illuminate mechanisms that underlie human genetic syndromes and cancers.

The scientist • Debra Zand, associate professor of pediatrics

The grant • \$600,000 from the St. Louis Mental Health Board

The study • To fund rapid response, culturally competent behavioral health interventions for children with serious mental illness and their families.

The scientist • Dr. Timothy J. Kutz, associate professor of pediatrics

The grant • \$104,054 from Missouri Foundation for Health

The study • To improve the accessibility and quality of health care services for area children in foster care and, thereby, increase the number of children who receive the medical, psychological and dental services they need as a part of a \$341,645 initiative by Missouri Foundation for Health called "Medical Homes for Foster Children."

The scientist • Dr. Katherine Mathews, associate professor of obstetrics, gynecology and women's health

The grant • \$76,547 from the Missouri Foundation for Health

The study • To reduce infant mortality in St. Louis city and county as a part of Missouri Foundation for Health's "Weaving Together Support for At-Risk Women Before, During, and After Pregnancy" initiative.