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# Federal stimulus money boos

NIH funds studies of cancer, tinnitus, genetics, infectious diseases

February 17, 2009, was a notable day for U.S. scientists. President Barack Obama signed the American Recovery and Reinvestment Act (ARRA), giving an additional \$10.4 billion to the National Institutes of Health (NIH), an agency of the U.S. Department of Health and Human Services.

NIH consists of 27 institutes and centers that fund research in health issues ranging from deafness, mental health and cancer to environmental health sciences and the human genome. Thanks to ARRA funds, thousands of research projects at universities, medical schools, and other research institutions are being funded in an effort to help stimulate the economy with innovative research while creating or maintaining American jobs.

NIH Acting Director Raynard S. Kington, M.D., Ph.D., said in a prepared statement, "NIH is well positioned to fund the best science in pursuit of improving the length and quality of the lives of our citizens while at the same time stimulating the economy." NIH developed several new funding programs to use stimulus money, which must be used by 2010.

At press time, 11 SIU School of Medicine research projects received ARRA grants. Some researchers received stimulus dollars to supplement existing grants. In other cases, ARRA has allowed NIH to fund projects that had been reviewed favorably but for which no money had been available. The money may somewhat reverse the sluggish support of the past few years. "It's a bump down effect," explains Linda Toth, Ph.D., associate dean for research and faculty affairs. "A lot of grants that were just below the cut-off are now being funded, and that will likely increase future opportunities for funding."

The short deadlines for ARRA applications sent re-

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**– Linda Toth, Ph.D.**

searchers scrambling to prepare applications. "The NIH stimulus money is a once in a lifetime opportunity that's come on us very fast," Dr. Toth notes. Competition for the grants was intense, too. For example, an estimated 22,000 researchers applied for just one designation of grants, the "Challenge" grants. April Strader, Ph.D., in the Department of Physiology in Carbondale received one of these.

"These funds allow faculty to extend research more rapidly or into new directions with increased money to spend for supplies to do the research. Some funding will enable the hiring of additional personnel," Dr. Toth says. She estimates that each of the funded projects will mean at least one job added to the local economy. "The larger grants will allow hiring of full time research staff, bringing opportunity for new jobs and moving the research forward faster."

Studies show that research dollars translate into dollars for the economy. According to the nonprofit, non-partisan organization Families USA: "In Your Own Backyard: How NIH Funding Helps Your State's Economy" (June 2008) each dollar invested in fiscal year 2007 generated, on average, \$2.2 in state business.

In addition to research projects, the NIH used its ARRA money to provide opportunities for facility renovation, repair and improvement. SIU School of Medicine has applied through these highly competitive programs for money to

# ts SIU research

renovate portions of the animal facility at the SIU Medical Instructional Facility, build a medical simulation center, add a research wing to the SimmonsCooper Cancer Institute at SIU and develop a Center for Clinical Research and Metabolic Research.

These applications were required to address job creation, assess the environmental impact of the project, and consider “green” design approaches and technologies. “If we receive any of this funding, the new facilities will have a major impact on our research,” Dr. Toth says. “They will provide new resources for faculty and allow us to maintain a research infrastructure that will support current and future research grants.”

Two pending grants would allow the purchase of shared instrumentation — a flow cytometry unit and a confocal microscope — replacing outdated equipment with technologically advanced models.

Dr. Toth says the NIH reporting requirements for ARRA are more demanding than for typical funding. Detailed reports are due each quarter rather than annually and must indicate how many jobs were created.

“It’s definitely been a stimulus,” Dr. Toth declares. “Our faculty have been stimulated to submit more grants and to develop new research ideas.” ●●●



## ARRA-Funded Projects

### Biochemistry and Molecular Biology

**Ramesh Gupta, Ph.D.** – RNA Splicing in Archaea

### Physiology

**James A. MacLean, Ph.D.** – Regulation of Insulins by the RHOX5 Homeobox Gene Supports Spermatogenesis

**Laura L. Murphy, Ph.D.** – Ginseng and Its Constituents in Complementary Breast Cancer Therapy

**Jodi Huggenvik, Ph.D., and Michael Collard, Ph.D.** – DEAF-1 Interactions and Protein Modifications in Prostate Cells

**April Strader, Ph.D.** – Understanding the Role of Bile as a Mechanism for Improved Glucose Homeostasis following Bariatric Surgery

### Internal Medicine

**Andrzej Bartke, Ph.D.** – Interaction of Caloric Restriction with Longevity Genes

### Surgery

**Carol Bauer, Ph.D.** – Features of Chronic Tinnitus in Animal Model as Indicated by MEMRI & MRS

**Kathy Campbell, Ph.D.** – Developing D-methionine as an Aminoglycoside Otoprotectant

### Pharmacology

**Don Caspary, Ph.D.** – Glycine Receptor in Rat Tinnitus Model (2 awards)

**Julio A. Copello, Ph.D.** – Communication Between Neighboring Ryanodine Receptor Channels in Skeletal Muscle

**Linda Toth, Ph.D.** – Mechanisms of Fatigue in Chronic Viral Disease

### Microbiology

**Edward Gershburg, Ph.D.** – Definition of Structural Organization and Enzymology of EBV Protein Kinase

**William Halford, Ph.D.** – Development of an Effective Genital Herpes Vaccine