



# RESEARCH MATTERS

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## OF SPECIAL NOTE

### ORDA Contacts for Some Colleges Temporarily Changed

Erick Schwartz has left ORDA for a new position at the Veterans Administration. Until his position is filled, Steve Banker (sbanker@siu.edu) will be the ORDA contact for the College of Science (including Fisheries and Wildlife); Joel Fritzler (jcfritz@siu.edu) will be the contact for the Colleges of Business and Education, and for Continuing Education; and Jo Nast (jonast@siu.edu) will be the contact for CASA.

All three of these research project specialists have other duties assigned to them on a half-time basis, so we ask that researchers **please bear with us and allow as much lead time with proposals as possible during this time of extreme short staffing.**

### Undergraduate Research/Creative Activity Awards Announced

A record 42 students applied for one-year Undergraduate Research/Creative Activity awards through REACH, the university's undergraduate research program ([www.siu.edu/~reach](http://www.siu.edu/~reach)). Twenty awards were made, ranging from \$955 to \$1,500, for projects to begin in July 2007. Congratulations to the recipients:

Ashley Baker  
Interior Design  
"Study of Environmental Design Interventions to Enhance Early Childhood Learning"  
Faculty mentor: Melinda La Garce, Architecture - Interior Design

Nicholas Birky  
Zoology  
"A New Kind of Hangover: NutraSweet, Formaldehyde, and Alcohol"  
Faculty mentor: Michael Hoane, Psychology

Jared Boulds  
Chemistry  
"Determination and Optimization of the Efficiency of Current Methods of Protein Identification"  
Faculty mentor: Gary Kinsel, Chemistry

Jared Burde  
Physics  
"Films of Complex Molecules Adsorbed on Carbon Nanotube Bundles"  
Faculty mentor: Maria Calbi, Physics

Michael Burns

Zoology

"Shape Analysis and Systematic Status of the Blenny Darter, *Etheostoma blennioides*, a Percid Fish from the Tennessee River Drainage"

Faculty mentor: Brooks Burr, Zoology

Katie Butera

Psychology / Physiology

"Cooperation Development in Young Twins"

Faculty mentor: Lisabeth DiLalla, Psychology

Jamie Douglas

Zoology / Animal Science

"The Effects of Dietary Phytoestrogens on Gut Microflora and Disease Resistance in Two Teleost Species"

Faculty mentor: Anita Kelly, Zoology

Julius Frazier

Zoology

"Thermoregulatory Behavior of an Insular Boa Constrictor"

Faculty mentor: Karen Lips, Zoology

Kathleen Lask

Physics / Mathematics

"Gas Storage and Separation Using Novel Materials: Adsorption of Hydrogen, Deuterium, and Methane on Metal-Organic Frameworks"

Faculty mentor: Aldo Migone, Physics

Christopher Leffelman

Plant Biology

"Effects of Oil and Fatty Acid Supplementation on Volatile Flavors of Oyster Mushroom"

Faculty mentor: Aldwin Anterola, Plant Biology

Bryan McConomy

Biology / Pre-Medicine

"Effectiveness of VNS in Recovery of Function in Endothelin-1 Stroke-Induced Rats"

Faculty mentor: Douglas Smith, Psychology

Kara McConville

Rehabilitation Services

"Contingency Management and the Methamphetamine Epidemic: A Treatment Plan for Methamphetamine Abuse in Southern Illinois"

Faculty mentor: D. Shane Koch, Rehabilitation Institute

Russell McKeith

Animal Science

"Can We 'Arm and Hammer' Better Pork Products?: Using Sodium Bicarbonate to Alter pH in Hot Dogs"

Faculty mentor: Karen Jones, Animal Science

Amanda Rabideau

Physiology / Philosophy

"Mice Expressing a Genetically Engineered, Constitutively Active Luteinizing Hormone Receptor as a Potential Model for Determining the Molecular Basis of Premature Ovarian Failure"

Faculty mentor: Prema Narayan, Physiology

Naketa Ross

Psychology

"Contributions of Resiliency to the Effects of Campus Involvement on Retention"

Faculty mentor: Kathleen Chwalisz, Psychology

Andrew Somor

Forestry

"Effect of Autumn Olive Removal on Nitrogen Leaching at Plot and Watershed Scales"

Faculty mentor: Karl Williard, Forestry

Tina Steibel

Social Work

"The Relationship of Physical Impairment and Monitored Exercise with Depressive Symptoms Among Cardiac Patients in Southern Illinois"

Faculty mentor: Wayne Paris, Social Work

Benjamin Vandermyde

Forestry / Administration of Justice

"Alternative Method to Herbaceous Control Without Use of Herbicide:

*C. purpureum* (Canadian Fungus)

Application to *Elaeagnus umbellata* (Autumn Olive)"

Faculty mentor: John Groninger, Forestry

Joan Weber

Early Childhood Education

"Findings Across Screening Tools (FAST)"

Faculty mentor: Deborah Bruns, Special Education

Christopher Williams

Civil and Environmental Engineering

"Development of a Prototype of an Intelligent System"

Faculty mentor: Max Yen, Civil and Environmental Engineering

## RESEARCH DIGEST

### More Support Promised for NIH

—excerpted from *The Chronicle of Higher Education*, March 16, 2007

[Congress] will move to increase appropriations for the National Institutes of Health in FY08 and will restore support for a major long-term academic study on children's health, said Rep. David Obey, the Wisconsin Democrat who is chairman of the House Appropriations Committee. Obey also said President Bush's proposed spending of \$28.8 billion for the NIH in 2008 would represent "a step backward" and would hamper biomedical research.

The president's proposal reflects a drop of about 2 percent from the agency's budget for FY07, which ends September 30. Mr. Bush's proposal also did not include a second year of funds for a major academic study that would track the health of 100,000 children from birth to adulthood.

## Technology Research Program Rescued

—*excerpted from Science, March 2, 2007*

Written off as dead by critics and fans alike, Congress has given the Advanced Technology Program (ATP) a \$79 million lifeline. Run by the National Institute of Standards and Technology (NIST), ATP was begun in the early 1990s as a way to help companies conduct research aimed at commercializing new products. It has supported everything from genomics to materials science. However, it has long been derided as corporate welfare and Congress did not include money in NIST's 2007 spending bills for the program. But after Republicans left Democrats with the job of finishing this year's budget, staffers staved off ATP's demise in the spending bill President Bush signed in February. Congressional aides say top Democrats on Capitol Hill view the program as an essential piece of the House Democrats' "Innovation Agenda."

## Nanotech: Safety Research Slated for Gains

—*excerpted from Science, Feb. 16, 2007*

Heeding calls for increased research on the health and environmental implications of nanotechnology, President Bush has proposed a \$3-million-a-year network of academic centers to pursue the topic. But that network doesn't address what many consider a bigger problem for the field: the lack of research tied more tightly to the development of new U.S. regulations.

In 2006, the federal government funded \$38 million in research on nanotechnology environmental health and safety. That is likely to grow to \$46 million this year, and the president's budget would boost it to \$59 million. At the cornerstone of this new push is a network of centers, funded by the NSF and modeled after existing NSF networks.

But not everyone agrees that basic research is the best investment the government could be making to understand the environmental health and safety

aspects of nanoproducts. Nanotechnology "has stopped being a pure science project," says David Rejeski, who directs the Project on Emerging Nanotechnologies at the Woodrow Wilson International Center for Scholars. "Nanotechnology is being commercialized at a very fast pace right now. You've got to position the science ahead of that." Rejeski argues that U.S. regulatory agencies are struggling to keep up with the questions being raised about how best to regulate nanotech products entering the market.

Last September, leaders of the House Science Committee called for expanding the research needed for regulatory agencies to ensure the safety of nanomaterials in the environment. And supporters have reason to believe legislators will heed that plea since every year since the U.S. National Nanotechnology Initiative began in 2001, Congress has topped the president's request.

## Highest Number of Misconduct Findings in 10 Years

—*excerpted from DHHS Office of Research Integrity Newsletter, March 2007*

Two-thirds of the researchers against whom a finding of research misconduct was made in 2006 were excluded or debarred from receiving federal funding for three years to life. The Office of Research Integrity [Dept. of Health and Human Services] made 15 research misconduct findings and closed 35 cases in 2006, the highest number of misconduct findings and closed cases since 1996. Exclusions or debarments were instituted in 10 cases. A notable event was the sentencing of Eric Poehlman to prison for large-scale data falsification in federal grant applications.

The 35 closed cases included 28 investigations and seven inquiries. Forty-three percent of the closed cases resulted in misconduct findings; 20 articles were retracted or corrected. Eighty-five percent of the cases were closed within 12 months from receipt of the final institutional action. Average processing time

was 7.5 months. The pre-2005 cases were reduced by 50 percent to 17.

ORI opened 29 cases and handled 266 queries in 2006. The queries resulted in 88 pre-inquiry assessments to determine if ORI should open a case, 19 referrals to other agencies, and 174 administrative closures because no action was possible. Fifty-three cases were carried into 2007.

## Joint U.S./Russia Program Reunites Research and Academe

—*excerpted from The Chronicle of Higher Education, March 16, 2007*

On the face of it, the Institute of Physical and Organic Chemistry at Southern Federal University is like much of the Russian infrastructure. Its glum, concrete carcass is literally crumbling in spots. What takes place behind the heavy metal doors of its unadorned corridors, though, is exceptional. In a lab on the fifth floor, students devise fluorescent cells to detect pollutants in the environment. On the seventh floor, students superheat water and white-birch bark to extract a substance that one day could be used to treat cancer.

Scientific research has traditionally been left to professionals in Russia. Here, though, graduates and undergraduates work alongside scientists from different fields. The students have been given this chance under a joint program of the United States and Russia with the aim to revive Russian science nationwide by strengthening basic research in universities.

The program, which supports 20 research and education centers, has been so successful that the Russian Ministry of Education and Science used it as a model last year when it unilaterally founded 15 similar university-based centers focusing on the natural sciences and four in the humanitarian and social sciences. Since 1998 the program has poured more than \$30 million into research and education through competitively awarded grants.

Southern Federal is the only univer-





















