

# Spirit of INNOVATION

Research, Creativity and Commercialization News

OFFICE OF RESEARCH ADMINISTRATION NEWSLETTER March 2007 (Volume VI, No. 9)

The **Office of Research Administration** supports and advocates research and technology transfer by faculty, graduate students and staff. The ORA provides services in conjunction with external and internal sources of funding for research, along with services related to commercializing discoveries through technology transfer. The goal of this newsletter is to inform the campus community of grants received, to highlight the accomplishments of our faculty, graduate students and staff, and to share with you a calendar of important events and deadlines. Please direct any comments or questions regarding the newsletter to Tamara Wilgers ([wilgerst@umsl.edu](mailto:wilgerst@umsl.edu)).

## RECENT AWARDS

### **EXTERNALLY FUNDED AWARDS, January 2007**

January 2007 External Funding Where it Came From	
Association	\$7,500
Corporation	\$0
Federal	\$
MO Local Government	\$434,249
Other University	\$0
State of Missouri	\$168,092
<b>TOTAL</b>	<b>\$609,841</b>

**Jerry Dunn**, Child Advocacy Center, awarded \$21,014 for "Sexual Assault Prevention and Education Services" by the Missouri Department of Health and Senior Services.

**Joel Glassman**, Center for International Studies, awarded \$5,000 for "Coordination of MAUI-Utrecht Network Student Exchange Program" by the Mid-American University International (MAUI).

**David Laslo**, Public Policy Research Centers, awarded \$40,000 for "Job Vacancy Survey for Kansas City Metro Area" by the Missouri Department of Economic Development.

January 2007 External Funding Where it's Going	
Research	\$461,917
Other Sponsored Activity	\$147,924
Instruction	\$0
Student Financial Aid	\$0
<b>TOTAL</b>	<b>\$609,841</b>

**David Laslo**, Public Policy Research Centers, awarded \$401,910 for "Workforce Development Information System" by the St. Louis Agency Training Employment.

**David Laslo**, Public Policy Research Centers, awarded \$20,007 for "Skilled Workforce Initiative - Retention Coach" by the St. Louis Agency Training Employment.

**Judith Walker de Felix**, Graduate School, awarded \$107,078 for "Charter School Sponsorship" by the Missouri Department of Elementary and Secondary Education.

**Patricia Wentz**, KWMU-FM Radio, awarded \$2,500 for "Cityscape" by the Arts and Education Council of Greater St. Louis.

**Laura Westhoff**, History and Teaching & Learning, awarded \$12,332 for "Perspectives on American Democracy" by the Cooperating School Districts.

**Total Awarded: \$609,841**

## UM-ST. LOUIS RESEARCH AWARDS, Spring 2007

**Eike Bauer**, Chemistry and Biochemistry, was awarded \$10,544 for "Novel Metal Complexes as Catalysts for the Enantioselective Substitution on Propargylalcohols."

**John Brunero**, Philosophy, was awarded \$3,260 for "Why Should We Be Rational?"

**Gerald Gao**, Marketing, was awarded \$8,900 for "Multinational Firms' International Expansion Processes and the Performance Consequences."

**Laurie Greco**, Psychology, was awarded \$10,630 for "ACT for Life Pilot Intervention for Boys with Conduct Problems."

**Margo-Lea Hurwicz**, Anthropology, was awarded \$3,260 for "Alzheimer's Disease Explanatory Model Instrument: Proposed Development."

**Lea-Rachel Kosnik**, Economics, was awarded \$7,000 for "Tradeoffs in Energy/Environmental Regulatory Decisions."

**Patricia Parker**, Biology, was awarded \$12,100 for "Developing Conservation Management Models Using Noninvasive Techniques."

**Christopher Spilling**, Chemistry and Biochemistry, was awarded \$11,800 for "Cell Culture Models for Basic Pharmaceutical Research."

**Bethany Zolman**, Biology, was awarded \$12,500 for "Characterization of Double and Triple Mutants Disrupting Acyl-CoA Oxidase Function in Arabidopsis."

**Total Awarded: \$79,994**

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## FUNDING OPPORTUNITIES

Opportunities listed are a sampling only. For additional opportunities, visit [Grants.gov](http://www.grants.gov) (<http://www.grants.gov>), [Grant Advisor Plus](http://www.grantadvisor.com/tgaplus/) (<http://www.grantadvisor.com/tgaplus/>), [InfoEd](http://www.infoed.org/new_spin/spinmain.asp) ([http://www.infoed.org/new\\_spin/spinmain.asp](http://www.infoed.org/new_spin/spinmain.asp)) and the RFP Bulletin of the [Foundation Center](http://www.fdncenter.org/pnd/rfp/index.jhtml) (<http://www.fdncenter.org/pnd/rfp/index.jhtml>), or contact [Tamara Kratochvil](mailto:kratochvilt@umsl.edu) ([kratochvilt@umsl.edu](mailto:kratochvilt@umsl.edu)) for a customized database search.

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**FOR HELP GETTING SET UP TO RECEIVE CUSTOM EMAIL ALERTS FOR FEDERAL GRANT OPPORTUNITIES, CONTACT BRENDA STUTTE AT 516-5897 OR [STUTTE@UMSL.EDU](mailto:STUTTE@UMSL.EDU).**

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### INTERNAL FUNDING OPPORTUNITIES

#### UM-St. Louis Small Grants

**DUE: Monday, March 5, 2007, by 5 p.m.**

341 Woods Hall - UMSL Campus

More information:

[http://www.umsl.edu/services/ora/docs/FY07\\_Research\\_Award\\_guide.doc](http://www.umsl.edu/services/ora/docs/FY07_Research_Award_guide.doc) or contact Shannon Nichols at [nicholss@umsl.edu](mailto:nicholss@umsl.edu) or 516-5899

#### University of Missouri Research Board Proposals

**>>> DUE: Monday, March 19, 2007 by 5 p.m. <<<**

341 Woods Hall - UMSL Campus

More information: <http://www.umssystem.edu/ums/departments/aa/research/>, or contact Shannon Nichols at [nicholss@umsl.edu](mailto:nicholss@umsl.edu) or 516-5899

**WHEN PREPARING A GRANT PROPOSAL, YOU MUST SUBMIT YOUR BUDGET TO GINNY SCHODROSKI AT LEAST 2 WEEKS BEFORE THE PROPOSAL SUBMISSION DEADLINE. ANY EXCEPTION MUST BE APPROVED BY VICE PROVOST NASSER ARSHADI.**  
[ginny@umsl.edu](mailto:ginny@umsl.edu) or x.5284

## **EXTERNAL FUNDING OPPORTUNITIES**

### **Department of Agriculture (USDA)**

- Conservation Effects Assessment Project (CEAP) Grant  
<http://www.grants.gov/search/search.do?mode=VIEW&oppId=12437>
- Youth Farm Safety Education and Certification Program Grant  
<http://www.grants.gov/search/search.do?mode=VIEW&oppId=12529>

### **Department of Commerce (DOC)**

- National Oceanic and Atmospheric Administration FY 2007 Broad Agency Announcement Request for Extramural Grant <http://www.grants.gov/search/search.do?mode=VIEW&oppId=12665>

### **Department of Defense (DOD)**

#### DARPA

- BAA0718 Electromagnetic Pulse Tolerant Microwave Receiver Front-End Grant  
<http://www.grants.gov/search/search.do?mode=VIEW&oppId=12538>
- BAA0718 Electromagnetic Pulse Tolerant Microwave Receiver Front-End  
<http://www.grants.gov/search/search.do?mode=VIEW&oppId=12538>
- Defense Sciences Office DEFENSE SCIENCES RESEARCH AND TECHNOLOGY  
<http://www.grants.gov/search/search.do?mode=VIEW&oppId=12612>
- Tactical Technology Office BATTLEFIELD HELICOPTER EMULATOR (BHE) PROGRAM Grant  
<http://www.grants.gov/search/search.do?mode=VIEW&oppId=12405>
- WNaN Adaptive Network Development (WAND) Grant  
<http://www.grants.gov/search/search.do?mode=VIEW&oppId=12727>

#### Office of Naval Research

- Electronic Warfare Technology Grant <http://www.grants.gov/search/search.do?mode=VIEW&oppId=12702>
- Electro-Optical/Infrared Surveillance Sensor Technology Grant  
<http://www.grants.gov/search/search.do?mode=VIEW&oppId=12708>

### **Department of Education (ED)**

- Alcohol and other drug prevention models on college campuses CFDA 84.184N Grant  
<http://www.grants.gov/search/search.do?mode=VIEW&oppId=12468>
- Credit Enhancement Charter School Facilities Program CFDA 84.354A  
<http://www.grants.gov/search/search.do?mode=VIEW&oppId=12421>
- Disability and Rehabilitation Research Projects and Centers Program:
  - CFDA 84.133A-1 Grant <http://www.grants.gov/search/search.do?mode=VIEW&oppId=12594>;
  - CFDA 84.133A-3 Grant <http://www.grants.gov/search/search.do?mode=VIEW&oppId=12595>;
  - CFDA 84.133A-5 Grant <http://www.grants.gov/search/search.do?mode=VIEW&oppId=12596>;
  - CFDA 84.133A-6 Grant <http://www.grants.gov/search/search.do?mode=VIEW&oppId=12599>;
  - CFDA 84.133E-3 Grant <http://www.grants.gov/search/search.do?mode=VIEW&oppId=12600>;
  - CFDA 84.133E-4 Grant <http://www.grants.gov/search/search.do?mode=VIEW&oppId=12601>;
  - CFDA 84.133E-5 Grant <http://www.grants.gov/search/search.do?mode=VIEW&oppId=12603>;
  - CFDA 84.133E-6 Grant <http://www.grants.gov/search/search.do?mode=VIEW&oppId=12605>;
  - CFDA 84.133E-7 Grant <http://www.grants.gov/search/search.do?mode=VIEW&oppId=12606>;
  - CFDA 84.133E-8 Grant <http://www.grants.gov/search/search.do?mode=VIEW&oppId=12607>;
  - CFDA 84.133E-9 Grant <http://www.grants.gov/search/search.do?mode=VIEW&oppId=12608>
- Early Childhood Educator Professional Development Program CFDA 84.349A Grant  
<http://www.grants.gov/search/search.do?mode=VIEW&oppId=12682>

### **Department of Energy (DOE)**

- Atmospheric Radiation Measurement (ARM) Program Announcement  
<http://www.grants.gov/search/search.do?mode=VIEW&oppId=12695>
- Development of Diagnostic Systems for Magnetic Fusion Energy Sciences Experiments  
<http://www.grants.gov/search/search.do?mode=VIEW&oppId=12433>
- Development of Diagnostic Systems for Magnetic Fusion Energy Sciences Experiments  
<http://www.grants.gov/search/search.do?mode=VIEW&oppId=12433>
- Development of Diagnostic Systems for Magnetic Fusion, Energy Sciences Experiments Grant  
<http://www.grants.gov/search/search.do?mode=VIEW&oppId=12433>
- Funding Opportunity Notice for FY 2007 SBIR/STTR Phase II  
<http://www.grants.gov/search/search.do?mode=VIEW&oppId=12393>
- Hydrogen and Fuel Cell Analysis: Environmental Impacts of Hydrogen Systems Grant  
<http://www.grants.gov/search/search.do?mode=VIEW&oppId=12506>
- Submission of Supplemental Applications for Phase II SBIR/STTR Grants  
<http://www.grants.gov/search/search.do?mode=VIEW&oppId=12686>

## Department of Health and Human Services (HHS)

### Administration for Children and Families

- Basic Center Program Grant <http://www.grants.gov/search/search.do?mode=VIEW&oppld=12730>
- Head Start Graduate Student Research Grants  
<http://www.grants.gov/search/search.do?mode=VIEW&oppld=12469>
- Special Improvement Project (SIP) <http://www.grants.gov/search/search.do?mode=VIEW&oppld=12432>

### Centers for Disease Control and Prevention

- Adopting and Demonstrating the Adaptation of Prevention Techniques for Persons at Highest Risk of Acquiring or Transmitting Human Immunodeficiency Virus (ADAPT 2) (UR6)  
<http://www.grants.gov/search/search.do?mode=VIEW&oppld=12395>
- Costs Medical Practices Incur Ordering, Storing, and Delivering Vaccines to Adult Patients: Does Reimbursement Cover Costs? Grant <http://www.grants.gov/search/search.do?mode=VIEW&oppld=12498>
- Economic Studies of Vaccines and Immunization Policies, Programs, and Practices Grant  
<http://www.grants.gov/search/search.do?mode=VIEW&oppld=12714>
- Health Promotion and Disease Prevention Research Centers: Special Interest Project Competitive Supplements <http://www.grants.gov/search/search.do?mode=VIEW&oppld=12609>
- Public Health Research Dissertation Grant  
<http://www.grants.gov/search/search.do?mode=VIEW&oppld=12671>
- Using Provider Reminder/Recall to Enhance Up-to-Date Coverage of 18-Month Olds Grant  
<http://www.grants.gov/search/search.do?mode=VIEW&oppld=12716>

### National Institutes of Health

- Alcohol Use Disorders: Treatment, Services Research, and Recovery (R03) Grant  
<http://www.grants.gov/search/search.do?mode=VIEW&oppld=12573>
- Continued Development and Maintenance of Software (R01) Grant  
<http://www.grants.gov/search/search.do?mode=VIEW&oppld=12719>
- Cross-Disciplinary Translational Research at NIH (R01)  
<http://www.grants.gov/search/search.do?mode=VIEW&oppld=11781>
- Developmental Psychopharmacology (R21) Grant  
<http://www.grants.gov/search/search.do?mode=VIEW&oppld=12680>
- Diet Composition and Energy Balance (R01) Grant  
<http://www.grants.gov/search/search.do?mode=VIEW&oppld=12598>
- Drug Abuse as a Cause, Correlate, or Consequence of Criminal Justice Related Health Disparities among African Americans (R01) <http://www.grants.gov/search/search.do?mode=VIEW&oppld=11792>
- Drug Abuse, Risky Decision Making and HIV/AIDS: (R03) Grant  
<http://www.grants.gov/search/search.do?mode=VIEW&oppld=12449>; (R01) Grant  
<http://www.grants.gov/search/search.do?mode=VIEW&oppld=12452>; (R21) Grant  
<http://www.grants.gov/search/search.do?mode=VIEW&oppld=12457>
- Early Career Award in Chemistry of Drug Abuse and Addiction (ECHEM) - NIDA (R03)  
<http://www.grants.gov/search/search.do?mode=VIEW&oppld=12422>
- Global Research Initiative Program, Behavioral/Social Sciences (R01) Grant  
<http://www.grants.gov/search/search.do?mode=VIEW&oppld=12508>
- Lung Cancer and Inflammation (R01) Grant  
<http://www.grants.gov/search/search.do?mode=VIEW&oppld=12569>
- Molecular Probes for Microscopy of Cells (R01) Grant  
<http://www.grants.gov/search/search.do?mode=VIEW&oppld=12726>
- Neuroscience Research on Drug Abuse: (R01) Grant  
<http://www.grants.gov/search/search.do?mode=VIEW&oppld=12685>; (R21) Grant  
<http://www.grants.gov/search/search.do?mode=VIEW&oppld=12688>; (R03) Grant  
<http://www.grants.gov/search/search.do?mode=VIEW&oppld=12694>
- Nursing Science Centers in Self-Management or End-of-Life Research: Building Research Teams for the Future: (P20) Grant <http://www.grants.gov/search/search.do?mode=VIEW&oppld=12602>; (P30) Grant  
<http://www.grants.gov/search/search.do?mode=VIEW&oppld=12574>
- Prescription Drug Abuse (R01) <http://www.grants.gov/search/search.do?mode=VIEW&oppld=11808>

### Substance Abuse & Mental Health Services Administration

- Linking Adolescents at Risk for Suicide to Mental Health Services Grant  
<http://www.grants.gov/search/search.do?mode=VIEW&oppld=12510>

## Department of Justice (USDOJ)

- 2007 and 2008 Annual Survey of Jails in Indian Country Grant  
<http://www.grants.gov/search/search.do?mode=VIEW&oppld=12533>

## Department of State (DOS)

### Bureau of Educational and Cultural Affairs

- FY 2008 FULBRIGHT STUDENT PROGRAM Grant  
<http://www.grants.gov/search/search.do?mode=VIEW&oppld=12522>
- International Sports Programming Initiative Grant  
<http://www.grants.gov/search/search.do?mode=VIEW&oppld=12622>

#### **Environmental Protection Agency (EPA)**

- COMMUNITY ACTION FOR A RENEWED ENVIRONMENT (CARE) Grant  
<http://www.grants.gov/search/search.do?mode=VIEW&oppld=12472>
- Computational Toxicology Centers: Development of Predictive Environmental And Biomedical Computer-Based Simulations And Models Grant <http://www.grants.gov/search/search.do?mode=VIEW&oppld=12513>
- FY 2007 Nutrients Benefits Valuation Grant  
<http://www.grants.gov/search/search.do?mode=VIEW&oppld=12666>
- FY 2007 Request for Proposals, Pollution Prevention Grants Program  
<http://www.grants.gov/search/search.do?mode=VIEW&oppld=12426>
- National Community-Based Lead Outreach and Training Grant Program: Request for Proposals FY 2007  
<http://www.grants.gov/search/search.do?mode=VIEW&oppld=12416>

#### **National Aeronautics and Space Administration (NASA)**

- Fundamental Aeronautics: Subsonic Rotary Wing Project 2  
<http://www.grants.gov/search/search.do?mode=VIEW&oppld=12408>
- Fundamental Aeronautics: Supersonics Project 2 Grant  
<http://www.grants.gov/search/search.do?mode=VIEW&oppld=12409>
- NASA ARMD RESEARCH OPPORTUNITIES IN AERONAUTICS NRA  
<http://www.grants.gov/search/search.do?mode=VIEW&oppld=9270>
- Planetary Geology and Geophysics Grant  
<http://www.grants.gov/search/search.do?mode=VIEW&oppld=12663>
- ROA 2006: Aviation Safety: Integrated Intelligent Flight Deck Technologies 2 Grant  
<http://www.grants.gov/search/search.do?mode=VIEW&oppld=12362>
- ROSES 2007: Cosmochemistry Grant <http://www.grants.gov/search/search.do?mode=VIEW&oppld=12661>
- ROSES 2007: Decision Support through Earth Science Research Results Grant  
<http://www.grants.gov/search/search.do?mode=VIEW&oppld=12662>
- ROSES2006: Astronomy and Physics Research and Analysis – 2007 Grant  
<http://www.grants.gov/search/search.do?mode=VIEW&oppld=12438>

#### **National Endowment for the Arts (NEA)**

- Big Read Grant <http://www.grants.gov/search/search.do?mode=VIEW&oppld=12710>

#### **National Endowment for the Humanities (NEH)**

- Digital Humanities Fellowships Grant <http://www.grants.gov/search/search.do?mode=VIEW&oppld=12428>
- Fellowships and Faculty Research Awards  
<http://www.grants.gov/search/search.do?mode=VIEW&oppld=12429>
- Fellowships for Advanced Research on Japan Grant  
<http://www.grants.gov/search/search.do?mode=VIEW&oppld=12427>

#### **National Science Foundation (NSF)**

- Joint Domestic Nuclear Detection Office/National Science Foundation: Academic Research Initiative Grant [http://www.nsf.gov/publications/pub\\_summ.jsp?ods\\_key=nsf07545](http://www.nsf.gov/publications/pub_summ.jsp?ods_key=nsf07545)
  - In FY 2007, the Domestic Nuclear Detection Office (DNDO) within the Department of Homeland Security (DHS) will invest, in partnership with the National Science Foundation (NSF), in leading edge, frontier research at academic institutions. This transformational research effort will be focused on detection systems, individual sensors or other research that is potentially relevant to the detection of nuclear weapons, special nuclear material, radiation dispersal devices and related threats. Research that would benefit from incorporation of social and behavioral science components is appropriate for consideration. The joint DNDO/NSF effort, in coordination with the efforts of other agencies, seeks to advance fundamental knowledge in new technologies for the detection of nuclear threats and to develop intellectual capacity in fields relevant to long-term advances in nuclear detection capability. This research, and the research community that will be built under the ARI, is seen as critical to our nation's ability to deploy effective nuclear detection measures to counter the serious threat of a nuclear terrorist attack. Research proposals on detection of biological, chemical, and conventional weapons are specifically excluded from the scope of this solicitation.
  - Letter of Intent Due Date(s) (required): March 28, 2007

- Full Proposal Deadline(s): May 02, 2007
- Annually thereafter through 2011, first Wednesday in April
- MARGINS Program Grant <http://www.grants.gov/search/search.do?mode=VIEW&oppld=12463>
- Science of Science and Innovation Policy Grant  
<http://www.grants.gov/search/search.do?mode=VIEW&oppld=12683>

**Nuclear Regulatory Commission (NRC)**

- U. S. Nuclear Regulatory Commission Nuclear Education Grant Program  
<http://www.grants.gov/search/search.do?mode=VIEW&oppld=12551>

**NEW ANNOUNCEMENTS: FOUNDATIONS & OTHER: DEADLINE MEMO**

<http://www.grantadvisor.com/tgaplus/undue.pdf>

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**GRANT SUBMISSION POLICY**

**PeopleSoft Signature Routing Sheet (PSRS)**

Must be delivered to the Office of Research BEFORE the grant will be submitted. Applies to any grant being submitted to any agency. Must include ALL signatures (all PIs Co-PIs, Dept. Chairs, Deans of each person, dept, and/or school who has time/resources committed through direct costs or cost sharing/match).

**Budgets: SUBMIT YOUR BUDGET TO GINNY SCHODROSKI TWO WEEKS PRIOR TO SUBMISSION DEADLINE.** Large or complex budgets should be finalized a week before submission so that the PSRS can be prepared and routed for ALL required signatures. Proposal review time must be allowed before asking someone to commit their unit.

**Note:** If you are going to be away from the University at the time of submission, you must arrange before leaving to sign the PSRS signature page.

**Questions?** Contact Ginny Schodroski at 516-5284 or [ginny@umsl.edu](mailto:ginny@umsl.edu).

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## RESEARCH AND COMMERCIALIZATION NEWS

### UNIVERSITY OF MISSOURI NEWS

- Compliance Training to be Held March 14 (OMB Circular A-133)
- Keeping the Fruits of Research Close to Home in St. Louis
- UM-SL's George Gokel Honored by New Journal of Chemistry

### OTHER NEWS OF INTEREST

- Human Model Completed
- Tighter Controls Needed for Nanotechnology, Says UN Report
- FY 2005 AUTM U.S. Licensing Survey
- Patents: Waiting for a First Office Action

### **Compliance Training to be Held March 14** (OMB Circular A-133)

The Office of Research Administration will host a training session for all researchers who have a federally funded or flow-through grant and all faculty and staff who work administratively with grant funds (e.g., PIs, department assistants, fiscal officers, etc.).

Facilitated by Susan Eickhoff, Partner, KPMG (the University's external auditor), the training will focus on UM-St. Louis' FY 2005 A-133 audit of federal grants and related compliance issues. The A-21 also will be discussed as it relates to the audit.

By the end of the course, participants will be familiar with:

1. The objectives and importance of an A-133 audit;
2. The OMB compliance supplement;
3. The 14 compliance requirements; and
4. The findings related to the University's June 30, 2005, Single Audit Report. ●

WHAT:	<b>University of Missouri OMB Circular A-133 Training</b>
WHEN:	Wednesday, March 14, 2007 9 a.m. to 2:30 p.m. Lunch will be provided.
	An abridged session from 3 to 3:45 p.m. is available for faculty members with teaching schedule conflicts.
WHERE:	222 J.C. Penney Bldg.
WHO SHOULD ATTEND:	EVERYONE who has a federally funded or flow-through grant or who works administratively with grant funds. (PIs, department assistants, fiscal officers, etc.)
RSVP:	By Wed., March 7, to Karen Boyd ( <a href="mailto:boyd@umsl.edu">boyd@umsl.edu</a> or ext. 5923). (Accurate attendance count required for handouts and lunch.)

### **Keeping the Fruits of Research Close to Home in St. Louis**

Excerpted from the New York Times

February 07, 2007

By ROBERT SHAROFF

ST. LOUIS — In the late 1990s, Dr. William H. Danforth, chancellor emeritus of Washington University here, watched as a faculty member in the university's engineering department tried to market an innovative device— a switch to speed transactions on the Internet — that had emerged out of a research project.

"He tried for two years to get a company started in St. Louis and failed," said Dr. Danforth, the older brother of John C. Danforth, the former United States senator.

Giving up, the faculty member then moved to San Francisco, where he quickly found financial backers, office and research space and other kinds of assistance. In less than a year, the company was sold to Cisco Systems for \$350 million.

That experience, Dr. Danforth said, convinced him that something needed to be done to reorient the business climate in his native city.

"We have great research here," he said, "but we have not done so well with the commercialization of that science."

In 2001, Dr. Danforth — along with a number of other business and civic leaders — founded the Coalition for Plant and Life Sciences, a nonprofit group. The goal was to jump-start St. Louis's nascent biotechnology industry by providing both new and mature companies with increased access to financing and up-to-date facilities.

Dr. Danforth, a cardiologist, says that St. Louis is better positioned than many cities to capitalize on biotech because of the number of universities and other institutions in the area. The city also has a number of research sites run by large agricultural and pharmaceutical companies, like Monsanto and Pfizer.

Over the last six years, the coalition has had some notable successes. On the financial side, the amount of biotech venture capital funds either invested or managed in St. Louis has climbed to \$556 million.

"We've gone from virtually nothing to having structured investments and investors in place," said Robert T. Fraley, chief technology officer of Monsanto and a member of the coalition.

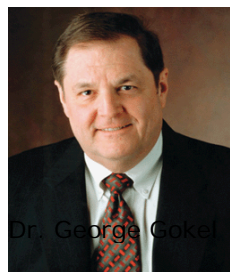
Probably the most visible outgrowth of this effort, however, is the Center of Research, Technology and Entrepreneurial Exchange. Known as Cortex, it is a 250-acre office and research district in a blighted neighborhood just west of downtown.

The district is controlled by a nonprofit consortium formed by Washington University School of Medicine, St. Louis University, Barnes-Jewish Hospital, the University of Missouri-St. Louis and the Missouri Botanical Garden, which are all within a few miles of the area. They all also conduct research in the area of life sciences. ●

### **UMSL's George Gokel Honored by *New Journal of Chemistry***

Read Complete Special Issue Introduction Online:

[http://www.rsc.org/delivery/\\_ArticleLinking/DisplayHTMLArticleforfree.cfm?JournalCode=NJ&Year=2007&ManuscriptID=b700480j&Iss=Advance\\_Article](http://www.rsc.org/delivery/_ArticleLinking/DisplayHTMLArticleforfree.cfm?JournalCode=NJ&Year=2007&ManuscriptID=b700480j&Iss=Advance_Article)



Dr. George Gokel

Dr. George Gokel

*New Journal of Chemistry* editors have produced a special 60th-birthday issue in honor of Dr. George Gokel, Distinguished Professor of Science and Associate Director of the Center for Molecular Electronics at UM-St. Louis, who served two 3-year terms on the editorial board of *NJC* including two years as the U.S. Associate Editor for the journal.

The issue includes manuscripts from Gokel's peers, colleagues, co-workers and friends, according to *NJC* editors Jerry Atwood and Jonathan Steed, who also note in the issue's introduction that those received and the "alacrity with which the invitations to contribute have been accepted ... demonstrate very clearly the significance of his ongoing contribution to science." ●

## **Human Model Completed**

Systems biologists have finished a comprehensive computer model of metabolism, providing an invaluable tool for drug discovery and disease research.

Excerpted from MIT's Technology Review

February 06, 2007

By KATHERINE BOURZAC

Read Complete Article Online: <http://www.technologyreview.com/Biotech/18142/>

Researchers at the University of California, San Diego, have constructed the first complete computer model of human metabolism. Available free on the Web, the model is a major step forward in the fledging field of systems biology, and it will help researchers uncover new drug pathways and understand the molecular basis of cancer and other diseases.

Metabolism is the sum of all chemical reactions involved in breaking down the nutrients in food into energy and using them as the raw materials for making everything the body needs, from hormones like insulin to the lipids that make up cell membranes. The computer model of metabolism, constructed by researchers in the lab of Bernhard Palsson, professor of bioengineering, connects all such known chemical reactions in the body to every human gene.

Similar models of metabolism in microbes such as yeast and *E. coli* -- including several generated by Palsson's lab -- are enabling researchers to engineer organisms that more efficiently produce products like ethanol and antimalarial drugs. (See "Watching Bacteria Evolve in the Lab" and "Engineered Microbes Boost Ethanol.") But, says Aviv Regev, a computational biologist at the Broad Institute, in Cambridge, MA, "a high-quality model of metabolism in humans has been elusive."

The new model includes every known gene and every metabolic reaction Palsson's group uncovered in an extensive search of the scientific literature. A given gene in the database is associated with its protein product, which might be associated with a number of metabolic reactions, which are associated with other reactions, which are associated with nutritional inputs like glucose and the output of energy or a product like melatonin. Palsson calls the model "a mathematical representation of all this data." The online database will be updated continuously. ●

## **As Ethics Panels Expand Grip, No Field Is Off Limits**

Excerpted from the New York Times

February 28, 2007

By PATRICIA COHEN

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[http://www.nytimes.com/2007/02/28/arts/28board.html?\\_r=1&th&emc=th&oref=slogin](http://www.nytimes.com/2007/02/28/arts/28board.html?_r=1&th&emc=th&oref=slogin)

Ever since the gross mistreatment of poor black men in the Tuskegee Syphilis Study came to light three decades ago, the federal government has required ethics panels to protect people from being used as human lab rats in biomedical studies. Yet now, faculty and graduate students across the country increasingly complain that these panels have spun out of control, curtailing academic freedom and interfering with research in history, English and other subjects that poses virtually no danger to anyone.

The panels, known as Institutional Review Boards, are required at all institutions that receive research money from any one of 17 federal agencies and are charged with signing off in advance on almost all studies that involve a living person, whether a former president of the United States or your own grandmother. This results, critics say, in unnecessary and sometimes absurd demands.

Among the incidents cited in recent report by the American Association of University Professors are a review board asking a linguist studying a preliterate tribe to "have the subjects read and sign a consent form," and a board forbidding a white student studying ethnicity to interview African-American Ph.D. students "because it might be traumatic for them."

"It drives historians crazy," said Joshua Freeman, the director of the City University's graduate history program. "It's a medical model, it's inappropriate and ignorant." One student currently waiting for a board to approve his study of a strike in the 1970s, Mr. Freeman said, had to submit a list of questions he was going to ask workers and union officials, file signed consent forms, describe the locked location where he would keep all his notes, take a test to certify he understood the standards.

Review boards, first created in 1974, were initially restricted to biomedical research. In 1981 the regulations were revised to cover all research that involves "human subjects" and is designed to contribute to "generalizable knowledge."

Yet precisely how to interpret these rules has largely been left to each review board — 5,564 in all. And while the regulations apply specifically to research that gets federal dollars, many colleges use Institutional Review Boards to monitor all research, no matter where the funds come from. This system of helter-skelter enforcement, critics say, has no meaningful oversight and no appeal process.

Debbie S. Dougherty and Michael W. Kramer, two former members of a review board at the University of Missouri, Columbia, who wanted to study review boards, had to first get their own board's O.K. Although they thought their project was exempt from board approval, the only entity authorized to make that decision is the board itself, and the only appeal if the researchers had rejected the ruling is also the board.

Bernard A. Schwetz, director of the federal Office for Human Research Protections, which administers the regulations, acknowledges that the guidelines covering the boards' actions have not been clear enough and says he intends to make public new proposed guidelines before the end of the year. Still, he said the priority is to protect human subjects and dismissed the notion that most nonmedical research carries few dangers. "Obviously the balance is very subtle," he said. "I think it's naive to say there isn't any risk."

But to many faculty and graduate students, review boards are like a blister that gets worse with every step. Those outside of the hard sciences say the legitimate concerns over ethics and safety are largely irrelevant to most of their research. ●

### **Tighter Controls Needed for Nanotechnology, Says UN Report**

February 05, 2007

Excerpted from MIT Technology Review

By Associated Press

Read Complete Article Online:

[http://www.technologyreview.com/read\\_article.aspx?id=18144&ch=nanotech](http://www.technologyreview.com/read_article.aspx?id=18144&ch=nanotech)

NAIROBI, Kenya (AP) -- The U.N. called Monday (02/05/07) for tighter regulation on technology to change or create materials at the atomic and molecular level, a process being used to develop new drugs, foods and other commercial products.

In its annual report of the global environment, the U.N.'s Environment Program said "swift action" was needed by policy makers to properly evaluate the new science of nanotechnology.

Although nanotechnology could transform electronics, energy industries and medicine, more research is needed to identify environmental, health and socio-economic hazards, Achim Steiner, who heads UNEP, said in the 87-page report.

Although still in its infancy, the nanotechnology industry is booming. By 2014, nanotechnology is projected to capture 14 percent of the US\$2.6 trillion global manufacturing market. In 2004, it made up less than 0.1 percent.

The report was released on the opening day of the Global Ministerial Environment Forum, which brought nearly 100 environmental ministers and deputy ministers to Nairobi for the annual conference.

"This is a phenomenally rapidly expanding technology, but as yet we do not know what we are releasing into the atmosphere," Steiner told journalists, adding that there are no regulations in place specifically to monitor nanotechnology.

Nanotechnology is technology on the scale of a billionth of a meter, or about one 80,000th of the width of a human hair: the scale of atoms and molecules. ●

## FY 2005 AUTM U.S. Licensing Survey

Association of University Technology Managers (AUTM)

Download Licensing Survey (PDF): [http://www.autm.net/UserFiles/File/US\\_LS\\_05Final.pdf](http://www.autm.net/UserFiles/File/US_LS_05Final.pdf)

### SUMMARY (from <http://www.autm.net>)

The report includes stories about academic breakthroughs in terrorism prevention, pollution control, education advancement and disease diagnosis and treatment, and how technology transfer professionals assist researchers' in bringing these new products and services to market, for the benefit of society and the economy. With statistical contributions from more than 228 respondents, the Survey is the most comprehensive report of its kind.

Highlights from the U.S. 2005 Licensing Survey include:

- More than \$42 billion in R&D expenditures at U.S. academic centers
- 527 new products introduced into the market in 2005 – 3,641 introduced from FY98 through FY05
- 628 new spinoffs created in 2005 -- 5,171 since 1980
- 28,349 current, active licenses (each single license represents a one-on-one relationship between a company and a university)
- 4,932 new licenses signed in 2005 ●

### Patents: Waiting for a First Office Action

The U.S. Patent and Trademark Office (USPTO) recently released numbers on their application examination process, giving us a chance to look at the average time lag just to get an initial response.

But first, some background. Patent applications filed with the USPTO are examined by a particular group of examiners who look at all inventions within a given technology field. However, an application typically does not reach an examiner for six months after filing.

Upon receipt of an application, the examiner reviews the application, particularly the claims, and then conducts a patentability search by looking at prior patents and publications. The examiner then prepares a critique of the application -- an "Office Action" -- in which prior patents and publications, along with other objections to the application (e.g. formalities of the application, rejection of claims, etc.), are listed.

Now, for the numbers. Working from numbers on patent examination recently released by the United States Patent and Trademark Office, Dennis Crouch, of Counsel at McDonnell Boehnen Hulbert & Berghoff LLP, created a table of the average delay until a first office action is mailed from the USPTO after a patent application is filed. ([http://www.patentlyo.com/patent/2007/02/how\\_long\\_do\\_i\\_w.html](http://www.patentlyo.com/patent/2007/02/how_long_do_i_w.html)) The numbers reflect an average for each technology center as it operates today, but do not necessarily reflect corresponding delays for applications filed today.

The information contained in the chart below is set up as follows: The 3.8 year delay in Electronic Commerce (TC 3620) means that the applications receiving first office actions during the past three months were filed 3.8 years ago on average. ●

Average Time After Filing Before First Office Action		
Tech Center	Description	Yrs
3620	Electronic Commerce	3.8
2140	Computer networks	3.3
2130	Cryptography security	3.0
2190	Interprocess communications	3.0
2160	Database and file management/	2.9
2620	Television and TV Recording	2.8
2610	Digital Communications General	2.7
1740	Metallurgy	2.5

1610	Pharmaceutical formulations	2.5
1760	Food technology	2.4
2120	Miscellaneous computer	2.4
3730	Medical instruments	2.4
1640	Immunology receptor/ligands	2.3
2180	Computer architecture	2.2
2110	Computer architecture	2.2
1630	Molecular biology	2.2
3760	Body treatment	2.1
1620	Organic chemistry	2.0
3680	Machine elements	2.0
1710	Synthetic resins	2.0
3710	Amusement and	2.0
1750	Chemical products and	1.9
3630	Static structures	1.9
1650	Fermentation microbiology	1.9
1770	Stock materials and	1.8
3650	Material handling and	1.8
3750	Fluid handling and	1.8
1720	Fluid separation and	1.8
2890	Semiconductor Electrical	1.7
3660	Computerized vehicle	1.7
3720	Manufacturing devices	1.7
3610	Surface transportation	1.7
2820	Semiconductors and	1.6
3740	Thermal and	1.6
2830	Power generation and	1.6
2810	Semiconductors and	1.6
3670	Wells earth boring/	1.6
2870	Liquid crystals	1.6
2950	Photocopying	1.6
3640	Aeronautics	1.5
1660	Plants	1.4
1730	Glass and paper making	1.3
2900	Designs	1.2

Compiled by Dennis Crouch  
Posted on Patently-O: Patent Law Blog, Feb. 17, 2007

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