

Spirit of INNOVATION

Research, Creativity and Commercialization News

OFFICE OF RESEARCH ADMINISTRATION NEWSLETTER July 2007 (Volume VII, No. 1)

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).

RECENT AWARDS

May 2007 EXTERNAL FUNDING Sources	
Association	\$3,000
Corporation	\$30,500
Federal	\$381,406
MO Local Government	\$4,160
Other University	\$7,500
TOTAL	\$426,566

May 2007 EXTERNAL FUNDING Purposes	
Instruction	\$8,000
Other Sponsored Activity	\$85,043
Research	\$333,523
TOTAL	\$426,566

EXTERNALLY FUNDED AWARDS, May 2007

Sonya Bahar, Physics & Astronomy and Center for Neurodynamics, awarded \$111,229 for "CAREER: From Imaging Collective Dynamics In The Cortex To Teaching Interdisciplinary Science" by the National Science Foundation.

Edward Bennett and Julie Lynn Ott DeKinder, College of Optometry, awarded \$8,500 for "Clinical Evaluation of Stabilizing Myopia by Accelerating Reshaping Technique The SMART STUDY" by Eyevis, LLC.

Brenda Bredemeier, Educational Psychology, awarded \$2,000 for "Education for Social Responsibility" by Missouri State University.

Margaret Cohen and Tobias Shorts, Academic Affairs, awarded \$3,500 for "Promoting Service-Learning to Meet the UM-St. Louis Goal for Civic Engagement" by Missouri State University.

Martille Elias, Teaching & Learning, awarded \$2,000 for "The Family Writing Project" by Missouri State University.

Erika Gibb, Physics & Astronomy, awarded \$3,750 for "Characterizing Volatile Composition in Preplanetary Disks" by the National Science Foundation.

Erika Gibb and Kari Van Brunt, Physics & Astronomy, awarded \$2,000 for "Solid Volatiles Toward YSOs" by Sigma XI, the Scientific Research Society.

Alan Hauff, Continuing Education & Outreach, awarded \$55,383 for "Missouri Small Business Assistance Center at the University of Missouri-St. Louis" by the U.S. Small Business Administration.

Carl Hoagland, Teaching & Learning, awarded \$4,160 for "Perspectives on American Democracy - website" by the Cooperating School Districts.

James Hunt, Biology, awarded \$14,547 for "Collaborative Research: Using Comparative Genomics to Study the Evolution of Social Behavior" by the National Science Foundation.

Donald Kridel, Economics, awarded \$10,000 for "UMSL/ESI Elasticity Study" by Express Scripts, Inc.

Robert Marquis, Biology, awarded \$12,000 for "Impacts of an invasive shrub, the amur honeysuckle (*Lonicera maackii*) on biotic interactions in native communities" by the National Science Foundation.

Robert Marquis and **Humberto de Paula Dutra**, Biology, awarded \$1,000 for "Impact of an invasive species, *Lonicera maackii*, on biodiversity through biotic interactions" by the Webster Groves Nature Study Society.

Keith Stine and **Alexei Demchenko**, Chemistry & Biochemistry, awarded \$180,497 for "STICS: Surface-Tethered Iterative Carbohydrate Synthesis" by the National Institutes of Health.

Zuleyma Tang Martinez, Biology, awarded \$4,000 for "UMSL Minority Graduate Fellowship" by the National Science Foundation.

Patricia Wente, KWMU FM Radio, awarded \$12,000 for "The DNA Files III" by Soundvision Productions.

Total Awarded: \$426,566

UM SYSTEM RESEARCH BOARD AWARDS REPORT, Academic Year 2006-2007

Category	No. Applications	Budgets Requested	No. Awarded	% Awarded	Dollars Awarded	Award/Request, %
A. Subcommittee or Discipline						
ENGR	52	\$1,980,064	13	25%	\$358,532	18%
HUMFINEART	37	\$777,001	16	43%	\$151,617	20%
LIFESCI	105	\$4,576,526	29	28%	\$869,150	19%
PHYSCIMATH	40	\$1,579,112	13	33%	\$264,704	17%
SOCBEHSCI	63	\$1,897,789	21	33%	\$342,556	18%
Total	297	\$10,810,492	92	31%	\$1,986,559	18%
B. Campus						
UM-Columbia	170	\$6,355,098	59	35%	\$1,268,477	20%
UM-Kansas City	33	\$1,192,418	11	33%	\$205,796	17%
UM-Rolla	55	\$2,074,882	9	16%	\$209,520	10%
UM-St. Louis	39	\$1,188,094	13	33%	\$302,766	25%
Total	297	\$10,810,492	92	31%	\$1,986,559	18%
C. Professorial Rank						
Asst. Professor	157	\$5,464,783	51	32%	\$1,014,836	19%
Assoc. Professor	81	\$2,972,325	25	31%	\$588,578	20%
Professor	53	\$2,099,894	15	28%	\$350,545	17%
Res. Asst/ Assoc/Scie.	6	\$273,490	1	17%	\$32,600	12%
Total	297	\$10,810,492	92	31%	\$1,986,559	18%

Includes 3 Special Opportunity proposals/awards.

FUNDING OPPORTUNITIES

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

FOR HELP GETTING SET UP TO RECEIVE CUSTOM EMAIL ALERTS FOR FEDERAL GRANT OPPORTUNITIES, CONTACT BRENDA STUTTE AT 516-5897 OR STUTTE@UMSL.EDU.

EXTERNAL FUNDING OPPORTUNITIES

Agency for International Development (USAID)

- Kazakhstan USAID-Almaty, Human Rights in Kazakhstan and Kyrgyzstan
<http://www.grants.gov/search/search.do?mode=VIEW&oppld=14372>
- Russia USAID-Moscow, Building Public Trust in NGOs Grant
<http://www.grants.gov/search/search.do?mode=VIEW&oppld=14436>
- Russia USAID-Moscow, International Media Partnerships Program Grant
<http://www.grants.gov/search/search.do?mode=VIEW&oppld=14534>
- Russia USAID-Moscow, The Homeowners Support Project
<http://www.grants.gov/search/search.do?mode=VIEW&oppld=14321>
- Uganda USAID-Kampala, Strengthening Multiparty Democracy in Uganda Grant
<http://www.grants.gov/search/search.do?mode=VIEW&oppld=14435>

Department of Commerce (DOC)

- National Technical Assistance, Training, Research and Evaluation: Information Dissemination and National Symposium Grant <http://www.grants.gov/search/search.do?mode=VIEW&oppld=14505>

Department of Defense (DOD)

Air Force Office of Scientific Research

- DEFENSE UNIVERSITY RESEARCH INSTRUMENTATION PROGRAM (DURIP) Grant
<http://www.grants.gov/search/search.do?mode=VIEW&oppld=14271>
- FY2008 Multidisciplinary University Research Initiative (MURI) - For Submission to AFOSR
<http://www.grants.gov/search/search.do?mode=VIEW&oppld=14530>

Defense Advanced Research Projects Agency (DARPA)

- Computer Science Study Group <http://www.grants.gov/search/search.do?mode=VIEW&oppld=14520>
- Information Processing Technology Office IPTO Office-wide BAA Grant
<http://www.grants.gov/search/search.do?mode=VIEW&oppld=14551>
- LANdroids Grant <http://www.grants.gov/search/search.do?mode=VIEW&oppld=14524>

Department of the Army

- Lyophilized Human Plasma for Combat Casualty Care Grant
<http://www.grants.gov/search/search.do?mode=VIEW&oppld=14541>

Office of Naval Research

- Defense University Research Instrumentation Program (DURIP) Grant
<http://www.grants.gov/search/search.do?mode=VIEW&oppld=14425>
- Low-Cost Over-the-Horizon SATCOM and Line-of-Sight Communications
<http://www.grants.gov/search/search.do?mode=VIEW&oppld=14470>
- Multidisciplinary University Research Initiative (MURI) Grant
<http://www.grants.gov/search/search.do?mode=VIEW&oppld=14519>

Department of Education (ED)

- Disability and Rehabilitation Research Projects and Centers Program--Burn Model Systems (BMS) Centers CFDA 84.133A-3 Grant <http://www.grants.gov/search/search.do?mode=VIEW&oppld=14511>

Department of Energy (DOE)

- Electric Power Generation Using Geothermal Energy Co-Produced with Oil and/or Gas Wells
<http://www.grants.gov/search/search.do?mode=VIEW&oppld=14434>

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 or x.5284

- Solar America Initiative (SAI) University Photovoltaic Process and Product Development Support Grant <http://www.grants.gov/search/search.do?mode=VIEW&oppld=14504>
- Synthesis Gas to Liquid Fuels Validation Grant <http://www.grants.gov/search/search.do?mode=VIEW&oppld=14441>

National Energy Technology Laboratory

- Building America Energy Efficient Housing Partnerships Grant <http://www.grants.gov/search/search.do?mode=VIEW&oppld=14430>
- Program Area of Interest 1 - High Efficiency LEDs <http://www.grants.gov/search/search.do?mode=VIEW&oppld=14184>
- Program Area of Interest 2 - LED Based Integrated Luminaire <http://www.grants.gov/search/search.do?mode=VIEW&oppld=14185>
- Program Area of Interest 3 - Manufactured Materials - Phosphors, encapsulants, and mounting materials for LEDs <http://www.grants.gov/search/search.do?mode=VIEW&oppld=14191>
- Program Area of Interest 3 - Manufactured Materials - Phosphors, encapsulants, and mounting materials for LEDs Grant <http://www.grants.gov/search/search.do?mode=VIEW&oppld=14191>
- Program Area of Interest 4 - OLED Lighting Panel Design <http://www.grants.gov/search/search.do?mode=VIEW&oppld=14188>
- Program Area of Interest 5 - Low cost substrates and encapsulation for OLEDs <http://www.grants.gov/search/search.do?mode=VIEW&oppld=14189>

Department of Health and Human Services (HHS)

- Assistant Secretary for Planning and Evaluation National Poverty Research Center Grant <http://www.grants.gov/search/search.do?mode=VIEW&oppld=14067>
- Pension Counseling Technical Resource and Assistance Center <http://www.grants.gov/search/search.do?mode=VIEW&oppld=14543>
- The National Education and Resource Center on Women and Retirement Planning Grant <http://www.grants.gov/search/search.do?mode=VIEW&oppld=14544>

Agency for Healthcare Research and Quality

- AHRQ National Research Service Award Institutional Research Training Grant (T32) Grant <http://www.grants.gov/search/search.do?mode=VIEW&oppld=14532>

Centers for Disease Control and Prevention

- Increase Access to Voluntary, Confidential HIV Screening and Diagnostic HIV Counseling and Testing in South Africa by Using Evidence-Based Models and Approaches, with Emphasis on Hard-to-Reach Populations under PEPFAR Grant <http://www.grants.gov/search/search.do?mode=VIEW&oppld=14548>
- NIOSH Support for Conferences and Scientific Meetings (R13/U13) Grant <http://www.grants.gov/search/search.do?mode=VIEW&oppld=14291>
- Strengthening Surveillance for Infectious Diseases Among Newly-Arrived Immigrants and Refugees <http://www.grants.gov/search/search.do?mode=VIEW&oppld=14513>

Health Resources & Services Administration

- Fetal Alcohol Spectrum Disorders Grant <http://www.grants.gov/search/search.do?mode=VIEW&oppld=14498>

National Institutes of Health

- Biology of Breast Pre-Malignancies (R01) Grant <http://www.grants.gov/search/search.do?mode=VIEW&oppld=14123>
- Harmonization of Longitudinal Cross-National Surveys of Aging (R21) Grant <http://www.grants.gov/search/search.do?mode=VIEW&oppld=14508>
- High-End Instrumentation Grant Program (S10) Grant <http://www.grants.gov/search/search.do?mode=VIEW&oppld=14421>
- Identifying and Reducing Diabetes and Obesity Related Health Disparities within Healthcare Systems (R01) Grant <http://www.grants.gov/search/search.do?mode=VIEW&oppld=14510>
- Methods of Statistical Analysis of DNA Sequence Data for Studies Relating Variation to Disease (R01) Grant <http://www.grants.gov/search/search.do?mode=VIEW&oppld=14512>
- NCMHD Community-Based Participatory Research (CBPR) Initiative in Reducing and Eliminating Health Disparities: Intervention Research Phase (R24) Grant <http://www.grants.gov/search/search.do?mode=VIEW&oppld=14126>
- NINR Nursing Science Research on Interventions in Chronic Illness (P01) Grant <http://www.grants.gov/search/search.do?mode=VIEW&oppld=14515>
- Omics and Variable Responses to CAM: Secondary Analysis of CAM Clinical Trials: (R01) Grant <http://www.grants.gov/search/search.do?mode=VIEW&oppld=14286>; (R21) Grant <http://www.grants.gov/search/search.do?mode=VIEW&oppld=14287>
- Preapplication for Cheminformatics Research Centers (X02) <http://www.grants.gov/search/search.do?mode=VIEW&oppld=13500>
- Protein Homeostasis in Aging: Repair and Degradation (R21) Grant <http://www.grants.gov/search/search.do?mode=VIEW&oppld=14419>

- Psychopharmacology of Widely Available Psychoactive Natural Products: (R01) Grant <http://www.grants.gov/search/search.do?mode=VIEW&oppld=14244>; (R03) Grant <http://www.grants.gov/search/search.do?mode=VIEW&oppld=14245>
- Research on Interventions that Promote Research Careers (R01) Grant <http://www.grants.gov/search/search.do?mode=VIEW&oppld=14264>
- Ruth L. Kirschstein National Research Service Awards for Individual Predoctoral Fellowship Training in Complementary and Alternative Medicine (F31) Grant <http://www.grants.gov/search/search.do?mode=VIEW&oppld=14422>

Department of Labor (DOL)

Occupational Safety and Health Administration

- Susan Harwood Training Grant, FY 2007 Grant <http://www.grants.gov/search/search.do?mode=VIEW&oppld=14509>

Department of State (DOS)

Bureau of Educational and Cultural Affairs

- Announcement Type: New Cooperative Agreement Grant <http://www.grants.gov/search/search.do?mode=VIEW&oppld=14552>
- Study of the United States Institutes for Student Leaders from the Western Hemisphere Grant <http://www.grants.gov/search/search.do?mode=VIEW&oppld=14553>
- Survey of International Educational Exchange Activity in the United States Grant <http://www.grants.gov/search/search.do?mode=VIEW&oppld=14275>

Department of Transportation (DOT)

- The Center for Excellence in Project Finance Grant <http://www.grants.gov/search/search.do?mode=VIEW&oppld=14250>

Environmental Protection Agency (EPA)

- CLIMATE ECONOMIC WORKSHOPS Grant <http://www.grants.gov/search/search.do?mode=VIEW&oppld=14282>
- FY 2007 Request for Proposals for Coordination of Regional Pollution Prevention Information Centers Grant <http://www.grants.gov/search/search.do?mode=VIEW&oppld=14270>
- Water Security Initiative Contamination Warning System Demonstration Pilots <http://www.grants.gov/search/search.do?mode=VIEW&oppld=14322>

Institute of Museum and Library Services (IMLS)

- Institute of Museum and Library Services Assess Impact of Free Access to Computers and Internet <http://www.grants.gov/search/search.do?mode=VIEW&oppld=14442>

National Aeronautics and Space Administration (NASA)

- NATIONAL SPACE SCIENCE AND TECHNOLOGY CENTER RESEARCH AND SUPPORT Grant <http://www.grants.gov/search/search.do?mode=VIEW&oppld=14529>
- ROA 2007: B.3 Integrated Intelligent Flight Deck Technologies 1 <http://www.grants.gov/search/search.do?mode=VIEW&oppld=14428>
- ROA 2007: B.4 Integrated Vehicle Health Management 1 <http://www.grants.gov/search/search.do?mode=VIEW&oppld=14426>
- ROA 2007: B.5 Integrated Resilient Aircraft Control 1 <http://www.grants.gov/search/search.do?mode=VIEW&oppld=14427>
- ROSES 2007: New Investigator Program in Earth Science Grant <http://www.grants.gov/search/search.do?mode=VIEW&oppld=14161>

National Endowment for the Arts (NEA)

- American Masterpieces: Chamber Music Grant <http://www.grants.gov/search/search.do?mode=VIEW&oppld=14226>
- American Masterpieces: Presenting Grant <http://www.grants.gov/search/search.do?mode=VIEW&oppld=14229>
- American Masterpieces: Visual Arts Touring Grant <http://www.grants.gov/search/search.do?mode=VIEW&oppld=14230>
- NEA Arts on Radio and Television, FY2008 <http://www.grants.gov/search/search.do?mode=VIEW&oppld=14546>

National Science Foundation (NSF)

- Advanced Learning Technologies (ALT) <http://www.grants.gov/search/search.do?mode=VIEW&oppld=7927>

- Broadening Participation in Computing
<http://www.grants.gov/search/search.do?mode=VIEW&oppld=12876>
- CEDAR, GEM, and SHINE Postdoctoral Research
<http://www.grants.gov/search/search.do?mode=VIEW&oppld=10284>
- Coupling, Energetics, and Dynamics of Atmospheric Regions (CEDAR)
<http://www.grants.gov/search/search.do?mode=VIEW&oppld=8859>
- Course, Curriculum, and Laboratory Improvement
<http://www.grants.gov/search/search.do?mode=VIEW&oppld=12313>
- Developing Global Scientists and Engineers (International Research Experiences for Students (IRES) and Doctoral Dissertation Enhancement Projects (DDEP)
<http://www.grants.gov/search/search.do?mode=VIEW&oppld=2350>
- Geophysics <http://www.grants.gov/search/search.do?mode=VIEW&oppld=8223>
- Hydrologic Sciences <http://www.grants.gov/search/search.do?mode=VIEW&oppld=8174>
- Industry/University Cooperative Research Centers Program
<http://www.grants.gov/search/search.do?mode=VIEW&oppld=12062>
- Information Technology Experiences for Students and Teachers (ITEST)
<http://www.grants.gov/search/search.do?mode=VIEW&oppld=11346>
- Inorganic, Bioinorganic and Organometallic Chemistry
<http://www.grants.gov/search/search.do?mode=VIEW&oppld=7626>
- Joint Domestic Nuclear Detection Office/National Science Foundation: Academic Research Initiative
<http://www.grants.gov/search/search.do?mode=VIEW&oppld=12404>
- NanoManufacturing <http://www.grants.gov/search/search.do?mode=VIEW&oppld=7641>
- Petrology and Geochemistry <http://www.grants.gov/search/search.do?mode=VIEW&oppld=8172>
- Physics Frontiers Centers Grant <http://www.grants.gov/search/search.do?mode=VIEW&oppld=14190>
- Research Experiences for Undergraduates Grant
<http://www.grants.gov/search/search.do?mode=VIEW&oppld=14439>
- Science, Technology, Engineering, and Mathematics Talent Expansion Program Grant
<http://www.grants.gov/search/search.do?mode=VIEW&oppld=14447>
- Tectonics <http://www.grants.gov/search/search.do?mode=VIEW&oppld=8173>
- Undergraduate Research and Mentoring in the Biological Sciences
<http://www.grants.gov/search/search.do?mode=VIEW&oppld=10450>

NEW ANNOUNCEMENTS: FOUNDATIONS & OTHER; DEADLINE MEMO

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

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.

RESEARCH AND COMMERCIALIZATION NEWS

UNIVERSITY OF MISSOURI NEWS

- **[NPRST to Discuss Grant Opportunities on Campus July 23](#)**
- **[College of Education: PSAs Now Require Dean's Signature](#)**
- **[UMSL's George Gokel Receives American Chemical Society Midwest Regional Award](#)**

OTHER NEWS OF INTEREST

- **[COGR Survey of 2005-2006 Facilities & Administrative Rates](#)**
- **[How Much U.S. Technological Innovation Begins in Universities?](#)**
- **["Translational Medicine Partnership Forum" Slated for St. Louis in September](#)**

NPRST to Discuss Grant Opportunities on Campus July 23

Representatives from the Naval Personnel Research Studies and Technology Center (Millington, TN) will be on the UM-St. Louis campus July 23 to speak with faculty interested in working with them. The NPRST recently had two major five-year research thrusts approved, amounting to approximately \$7.5 million per year in research funding over the next five years. Areas of interest include, but are not limited to, psychology, economics and many fields of business. If you would like to attend, please contact Diane Mongillo at mongillo@umsl.edu or 314-516-6109. ●

College of Education: PSAs Now Require Dean's Signature

NOTICE: Beginning immediately, all Personal Service Contracts (PSAs) submitted by those in the UM-St. Louis College of Education will require the signature of the Dean or the Dean's designee. You can download a copy of a PSA template to be used by College of Education faculty and staff at: <http://coe.umsl.edu/web/divisions/orf/index.cfm>.

For everyone else, please continue to use the [PSA template](#) found on the [ORA web site](#). ●

UMSL's George Gokel Receives American Chemical Society Midwest Regional Award

George Gokel, Distinguished Professor of Science and Associate Director of the Center for Nanoscience at UM-St. Louis, has been named winner of the prestigious 2007 American Chemical Society Midwest Regional Award.

The St. Louis Section of the American Chemical Society established the ACS Midwest Regional Award in 1944 to publicly recognize outstanding achievements in chemistry in the Midwest region. The award is conferred annually on a scientist who has made meritorious contributions to the advancement of pure or applied chemistry, chemical education and the profession of chemistry. To be eligible, a nominee's cited work must have been performed while he or she was residing within the Midwest Region of the ACS, which includes Missouri, Arkansas, Iowa, Nebraska, Kansas, Southern Illinois, and South Dakota.

Dr. Gokel is the third UM-St. Louis chemist to be so honored. Seven chemists from the four campuses of the University of Missouri have received this award.

ACS Midwest Regional Award Winners:

2007	George Gokel	University of Missouri—St. Louis
2006	Jay Switzer	University of Missouri—Rolla
2005	Jerry Atwood	University of Missouri—Columbia
2004	Mark S. Gordon	Iowa State University
2003	Kristin Bowman-James	University of Kansas
2002	Michael Gross	Washington University
2001	Vasu Nair	University of Iowa

2000	Joyce Y. Corey	University of Missouri–St. Louis
1999	Dewey E. Holten	Washington University
1998	Kenneth J. Klabunde	Kansas State University
1997	Reuben Rieke	University of Nebraska–Lincoln
1996	Garland R. Marshall	Washington University Medical School
1995	Thomas J. Barton	Iowa State University
1994	Theodore Kuwana	University of Kansas
1993	Daniel W. Armstrong	University of Missouri–Rolla
1992	Richard L. Schowen	University of Kansas
1991	Michael J. Welch	Washington University
1990	Donald J. Burton	University of Iowa
1989	Robert W. Murray	University of Missouri–St. Louis
1988	C. David Gutsche	Washington University
1987	Jacob Schaefer	Monsanto Company
1986	Charles W. Gehrke	University of Missouri–Columbia
1985	John Corbett	Iowa State University
1984	Norman Cromwell	University of Nebraska
1983	Jakob Kleinberg	University of Kansas
1982	Klaus Ruedenberg	Iowa State University
1981	Donald W. Setser	Kansas State University
1980	Robert Hansen	Iowa State University
1979	Ralph Adams	University of Kansas
1978	Orville Chapman	Iowa State University/UCLA
1977	Paul Kuroda	University of Arkansas
1976	Stanley Wawzonek	University of Iowa
1975	Takeru Higuchi	University of Kansas
1974	Glen A. Russell	Iowa State University
1973	Herbert S. Gutowsky	University of Illinois
1972	Myron L. Bender	Northwestern University
1971	John C. Bailar, Jr.	University of Illinois
1970	Irving M. Klotz	Northwestern University
1969	Joseph J. Katz	Argonne National Laboratory
1968	Byron Riegel	G D Searle and Co
1967	Frank H. Spedding	Iowa State University
1966	Ralph G. Pearson	Northwestern University
1965	Richard H. Wiley	University of Louisville
1964	Harold H. Strain	Argonne National Laboratory
1963	Herman Pines	Northwestern University
1962	Oliver H. Lowry	Washington University
1961	Samuel I. Weissman	Washington University
1960	Charles D. Harrington	Mallinckrodt Chemical Works
1959	Melvin DeGroot	Petrolite Corporation
1958	Charles D. Hurd	Northwestern University
1957	Ray Q. Brewster	
1956	Ray Q. Brewster	
1955	Carroll Hochwalt	
1954	Richard M. Hixson	

1953	Roger Adams	University of Illinois
1952	Edward Mallinckrodt, Jr.	
1951	Henry Gilman	Iowa State University
1950	William S. Haldeman	
1949	Robert D. Coghill	
1948	Paul L. Day	
1947	no winner	
1946	Anderson W. Ralston	
1945	Carl F. and Gerty T. Cori	Washington University
1944*	Lucuas P. Kyrides	

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COGR Survey of 2005-2006 Facilities & Administrative Rates

Council on Governmental Relations
June 2007

The Survey of 2005-2006 Facilities & Administrative (F&A) Rates (and related F&A topics) was conducted in the Fall-Winter of 2006-2007. In total, 139 surveys were completed. This includes surveys completed by each of the top 20 research institutions, 41 out of the top 50, and 81 out of the top 100 institutions as listed in the 2005 NSF Survey results (R&D Expenditures, ranked by all R&D expenditures for the first 200 institutions).

Trend Analysis

COGR has conducted the F&A survey on a bi-annual basis for over a decade (note, the scheduled 2004-2005 survey was pushed back one year due to timing and logistical considerations). The table shown below provides insight to F&A rate trends since 2000-2001.

Reporting Group & Survey Year	2000-2001	2002-2003	2005-2006
All Institutions	51.5%	51.5%	51.2%
Private Institutions	57.3%	56.5%	56.0%
Public Institutions	48.2%	49.2%	48.9%

Download Report: FA Rates Survey 2005-06

(<http://www.umsi.edu/services/ora/about/documents/FARatesSurvey2005-06.pdf>)

Effective F&A Recovery by Institution (all sponsored activity) ●

How Much U.S. Technological Innovation Begins in Universities?

April 15, 2007

By JINYOUNG KIM and GERALD MARSCHKE

Federal Reserve Bank of Cleveland

In developed economies, technological progress is a key route to improved living standards, and universities are thought to be important sources of innovation in the economy. The U.S. patent records offer a rich set of information with which to examine the flow of technological know-how from university laboratories to industry.

Using information gleaned from patents, a number of interesting questions can be addressed: How significant is the flow of technological know-how from university to industry? Has it changed over

time? Which industries benefit the most from university research? What sorts of firms are best equipped to access university research?

We examine these questions using data from 1985 to 1997 (the last year for which we have reliable data), a period that coincides with an unprecedented increase in innovation and patenting in the United States.

Knowledge Flow from University to Industry

How we seek to answer these questions depends on our belief about how knowledge transfer between the sectors takes place. Certainly some economically important science flows from universities to industry via the conventional means of scientific communication. Industry personnel read scholarly publications written by university scientists, and they absorb university research through attendance at academic conferences and lectures. Researchers studying technology transfer believe, however, that much new and valuable university-produced knowledge is not easily transmitted except through sustained, close interaction with university researchers.

New knowledge initially is known only to its discoverer or discoverers. If knowledge is not incremental—that is, distant in some sense from pre-existing knowledge—it may not be easily connected to old, familiar science and thus difficult to codify. This kind of knowledge is naturally excludable and tends, at least initially, to remain lodged in the human capital of the discovering scientist or scientists.

This “tacit” knowledge is passed to the noninitiated only when they have the opportunity to observe and query the discoverers at the scientific bench over a sustained period of time. Coemployment and collaboration may create those kinds of transfer opportunities.

Thus, to tap some kinds of university know-how, firms must employ or seek collaboration with university researchers. We use U.S. patent data to study the role of research personnel as a pathway for the diffusion of ideas from university to industry.

Tracking Inventors

The inventors behind the patented invention are listed on each patent, as is the firm, government organization, or university to which the patent is assigned. With our colleague Sangjoon Lee, we matched inventor names on patents to construct a panel data set of inventors that contains the patents in each year of the inventors’ careers.

This enables us to identify for each inventor when and how often he or she is innovating for university and industry assignees (the legal entities to which the intellectual property right is awarded). For each patent assigned to industry, one can tell whether its inventors had previously appeared as an inventor on a patent assigned to a university. Appearing on a patent assigned to a university is evidence that the inventor has had exposure to university research, either directly as a university researcher or through some form of collaboration with university researchers.

We also link a comprehensive database on degrees awarded in North America and Europe to the inventors to establish whether the inventor has an advanced degree (doctorate, usually), another measure of exposure to university research.

Patents list the assignees, and they are, in most cases, the employers of the listed inventors. For assignees that are publicly traded and in the pharmaceutical and semiconductor industries, two of the most innovative industries in the U.S. economy, we obtained data from the U.S. Securities and Exchange Commission. Thus for each of these assignee-firms, we know, for example, the firm’s size, age, expenditures on research and development activities, and the scope of its operations (its number of product lines). With firm-level data, one can evaluate what makes some firms more interested in acquiring or more able to acquire the know-how produced in university laboratories.

We first consider the prevalence of patents granted to industry that list at least one inventor who had previously been named an inventor on a recent (less than ten years old) university-assigned patent. Being named on such a patent typically means the inventor was conducting research as a university-employed scientist in a university laboratory, or as a collaborator of such a scientist. Either way, the inventor with university research experience has had close, sustained contact with novel, specialized techniques and bodies of knowledge, much of which is difficult to access by the firm.

Where the Collaboration Is Closest

Between 1985 and 1997, the percentage of patents that name at least one inventor with university research experience rose economywide from 0.9 to more than 2 percent. Examination of the pharmaceutical and semiconductor industries reveals that results are not uniform across industries. Perhaps not surprisingly (and, as it turns out, by all of the measures that we examined), the pharmaceutical and semiconductor industries demonstrated higher-than-average interaction with university research.

Between 1989 and 1997, about 6.6 percent of patents in the pharmaceutical industry included at least one inventor with university patenting experience compared to about 1.9 percent in the semiconductor industry. In both industries, we find a substantial increase in the percentage of patents naming inventors with university patenting experience: from approximately 5.5 to 6.8 percent in the pharmaceutical industry, and from approximately 0.2 to 2.5 percent in the semiconductor industry.

Universities infrequently patented their inventions before the 1980s. So while it is possible that firms were interacting with university research in earlier years at the same rate as in later years, we do not detect it. In that case, the increase we observe in the use of inventors with university research experience is not a deliberate attempt to get at university techniques and knowledge. It is more so a natural consequence of the more numerous inventors with university patenting experience that occurred for reasons unrelated to industry's labor demand.

We do in fact find that two-thirds of the increase is due to the increased prevalence of inventors with university research experience. One-third is due to an increase in the likelihood that a university-experienced inventor was used by industry in 1997 compared to in 1985.

Perhaps a more direct measure of industry seeking out university-based science is the percentage of industry patents that include at least one inventor with an advanced degree (master's or doctorate degree in natural science and engineering). It is more direct because we know that an inventor with an advanced university degree has undergone a lengthy and intense period of university training. Some inventors that appear on university patents, on the other hand, may have been brought in on a collaborative basis and subsequently experienced little exposure to university sources of knowledge and techniques.

We find an increase in the percentage of patents granted to industry that name an inventor with an advanced degree from 6.9 percent in 1985 to 14.7 percent in 1997. The average levels over the period are higher in the pharmaceutical and semiconductor industries than in the economy broadly: the average is 33 percent in the pharmaceutical industry and 19 percent in the semiconductor industry. As we found with the university research measure, the rate of increase in the fraction of patents naming inventors with advanced degrees was positive in both industries, and it was higher in the semiconductor industry.

Finally, we consider the percentage of industry patents that cite a recent (less than ten years old) university patent. Patent applicants are legally obligated to disclose any knowledge they have of previous relevant inventions. The patent examiner then adds to the application any relevant citations omitted by the applicant. Thus, through the patent citations, each patent documents the "prior art" upon which the new innovation builds, and because we know each cited patent's assignee type, we know whether the prior art originated in university laboratories.

Like the previous measures, the citation measure rises over time. In 1985, 3.1 percent of industry patents cited university patents economywide. The measure increases steadily until 1995, when it achieves a rate of 8.4 percent, dropping off to a little under 7 percent by 1997. Qualitatively, this measure displays patterns that are similar to those of the previous measure. The measure's average level is higher for the pharmaceutical and semiconductor industries, but in both industries this measure approximately doubles over the 1985–95 period, though both show a bit of fall off through 1997.

Given that universities patented their innovations at lower rates in earlier years, industry access was not as apparent. However, the likelihood that a university patent is cited by industry is not subject to this problem. We find that the average university patent in 1995 is more likely to be cited in an industrial patent than the average university patent in 1985. Between 1995 and 1997, the citation rate falls to very nearly the citation rate in 1985, however.

Characteristics of Receptive Firms

What are characteristics of firms that make them more or less receptive to the kind of research emanating from universities? In our firm-level analyses, we find that firms with large research operations in both industries are more likely to access university research than firms with small ones, holding other measurable characteristics constant.

This suggests the presence of scale economies that give an edge to large or diversified firms in exploiting university know-how. Younger pharmaceutical firms are more likely to utilize inventors with university research experience. A firm's age does not seem to matter in the semiconductor industry. Empirical findings in other contexts suggest what economists call complementarity between skilled labor and capital; that is, capital equipment (machinery, tools) is more productive in the hands of skilled workers, and thus capital equipment and skilled labor tend to appear together in production. We find capital-skill complementarity as the use of university-research-experienced innovators (a kind of skilled labor) rises with the firm's R&D expenditures per inventor.

How Important Are Universities to Innovation?

The period under study witnessed unprecedented changes in the innovation rates in the United States. Between 1961 and 1984, the annual domestic patent application count in the United States varied within a narrow range of 59,000 and 72,000. After 1984, however, the annual patent application rate doubled, reaching 149,825 in 1999. The number of patents granted experienced a similar rise.

Our results suggest that technological transfer from university to industry may have played a role in the innovation explosion of the last two decades. We find economywide and in the very innovative pharmaceutical and semiconductor industries, in particular, that industry's use of inventors with past experience in university laboratory settings increased during the mid-1980s through the 1990s. Findings predicated on citation-based measures of industrial access of university research point in the same direction.

A number of questions remain unanswered and the focus of our (and other researchers') present and future work. Foremost among these is: What is the effect of hiring or collaborating with university-experienced scientists on the productivity and output of firms' research and development activity? Patents represent more applied forms of research, and our patent-based measures likely imperfectly capture the transfer of the more-basic kinds of university knowledge to industry. Thus another important part of the research agenda is expanding measures of technology transfer. Industry and university scientists often collaborate in publishing scientific papers. Publication information is available over time and relatively easy to gather. Accordingly, collaborations on scientific publications may serve as a useful barometer of technological transfer of a more basic kind between the academic and industrial sectors. Answering these questions will help us better understand the role of university research in U.S. economic growth. ●

Jinyoung Kim and Gerald Marschke were a participants at the Federal Reserve Bank of Cleveland's Conference on Universities, Innovation and Economic Growth, held in November 2006. Dr. Kim is a professor at Korea University, and Dr. Marschke is an associate professor of economics at the University at Albany, State University of New York; a faculty research fellow at the National Bureau of Economic Research; and a research fellow at the Institute for the Study of Labor

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"Translational Medicine Partnership Forum" Slated for St. Louis in September

A unique healthcare technology partnering and investor forum – the **Translational Medicine Partnership Forum** ("TransMed Partnership Forum"), will be held **September 10-11**, in St. Louis. This first-ever TransMed Forum will showcase leading early-stage companies and projects developed by top investigators from the nation's premier research institutions.

The event will bring together leading university investigators and research administrators, experts from the major non-profits funding disease research, top corporate R&D and business development executives, start-up entrepreneurs, and experienced early-stage investors.

This inaugural event will offer the following highlights:

- 13 disease & technology-focused roundtables featuring leading investigators
- Small group discussions addressing the major challenges and strategies for supporting translational medicine
- Conference partnering system to facilitate and enhance meetings with prospective partners, investors, or other collaborators
- Opportunity to identify most promising cutting-edge therapeutic and device opportunities
- Chance to network with some of the world's most prominent university scientists, investors, company scientists and foundations funding translational medicine

For more information, registration and sponsorship opportunities, visit <http://www.transmedpartnership.org>. Email info@transmedpartnership.org if you have questions or to receive update e-mails prior to registering. ●

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