

Research@ MARYLAND

CONNECTING *the* UNIVERSITY of MARYLAND RESEARCH COMMUNITY

Seed Grant Program With UMB Promotes Collaborative Research

A **COMPETITIVE SEED GRANT PROGRAM** that stimulates collaborative research between the University of Maryland (UM) and the medical, pharmacological and dentistry schools at the University of Maryland, Baltimore, (UMB) has just announced its initial cohort of eight winning research projects.

The seed grant program was designed to foster cross-disciplinary teams of faculty researchers from both institutions, who would then collaborate on new avenues of research that might not be explored by any one group alone. Both UM and UMB are providing funding for the program, so far totaling more than \$450,000.

"We want to capitalize on the research interests of the two institutions in order to become more competitive for NIH funding," says **Ken Gertz**, associate vice president for research development. "We recognize that

there are many opportunities within the NIH extramural program that specifically target teams of engineers, chemical and life scientists, and clinicians working together to address specific health issues."

There is a history of UM faculty joining with UMB in cutting-edge areas of research related to the life sciences and bioengineering. "We've already established cross-disciplinary teams [with UMB] in nanotechnology research and in developing new means of drug delivery," says **William Bentley**, the Herbert Rabin Distinguished Professor of Engineering and chair of the Fischell Department of Bioengineering. "We want to build upon these strong research relationships, and this seed grant program will give us added stimulus to do so."

Another round of funding is scheduled for next year. For more information, contact Anne Geronimo, ageronimo@umd.edu.



The Seed Grant Program joins faculty researchers from UM and UMB. From the more than 30 proposals submitted, here is the first cohort of winning projects with their respective PIs:

- **Michael Cummings** (UM) will work with **Christopher Plowe**, M.D. (UMB) to better understand the basis for resistance in a parasite causing malaria to a class of drugs derived from a Chinese herb.
- **Peter Kofinas** (UM) will work with **Bartley Griffith**, M.D. (UMB) to develop molecular imprinted polymer coatings to enhance the biocompatibility of artificial lungs.
- **Sameer Shah** (UM) will work with **Robert Bloch** (UMB) to examine the roles of intermediate filaments in the stability and function of skeletal muscle.
- **Iqbal Hamza** (UM) will work with **Angela Wilks** (UMB), using genetic, genomic and cell biochemical approaches to elucidate the molecular mechanisms that underlie host-pathogen interactions.
- **Siba Samal** (UM) will work with **Abdu Azad** (UMB) to develop an efficacious and safe vaccine for a highly pathogenic avian influenza virus (H5N1 Vietnam/1203/04 strain).
- **Hey-Kyoung Lee** (UM) will work with **Scott Thompson** (UMB) to explore the concept of using homeostatic synaptic plasticity to better understand how the human brain responds to changes in activity after injury or loss of peripheral sensory inputs.
- **Adam Hsieh** (UM) will work with **Alan Shuldiner**, M.D. (UMB) to study genetic modifiers of disease phenotypes as they relate to osteogenesis imperfecta, a heritable form of osteoporosis.
- **Steve Rokita**, (UM) will work with **Sarah Michel**, (UMB) to develop a new class of gene therapy agents based upon a zinc finger protein platform.

DeFries Named MacArthur Fellow



The MacArthur Foundation has named **Ruth DeFries**, a Maryland faculty researcher who studies how humans are transforming the Earth's surface, as one of its 24 MacArthur Fellows for 2007. DeFries, who will receive

a \$500,000 "genius award" over the next five years, was selected for "... creativity, originality, and the potential to make important contributions in the future," according to a foundation news release.

THE FEDERAL CORNER OCTOBER UPDATE FROM THE OFFICE OF FEDERAL RELATIONS

Reauthorization of the Higher Education Act

On Sept. 3, 2007, President Bush signed the "First Higher Education Extension Act of 2007." As part of the reauthorization process, some of the bills introduced by the House and Senate are:

Student Loan Sunshine Act (H.R. 890): The Act aims to protect students and parents from exploitation by private party lenders and also those lenders that offer gifts to colleges to secure loan businesses.

College Cost Reduction Act of 2007 (H.R. 2669): This Act primarily boosts scholarships and reduces tuition costs. As a means to achieving this goal, the Act proposes interest rate cuts in half on subsidized students loans over five years.

Higher Education Access Act of 2007: This bill aims to eliminate the Pell Grant provision that adversely affects award amounts for students admitted to low-cost institutions. It will also aim at establishing a new grant program for low-income students.

Appropriations

The status of **FY08 appropriations bills is very much up in the air. Congress is significantly behind in the appropriations cycle with no clear resolution in sight. The most likely scenario is that the government will run on a series of Continuing Resolutions (CRS) until possibly as late as February or March of '08. Also, it is very likely that the individual appropriations bills will be rolled into an omnibus bill which is a much more difficult vehicle to decipher. This situation means that expected research dollars could be delayed.**

Look to the Federal Corner for more information regarding higher education and the federal government. We will inform you about trends in federal research funding, legislation that affects higher education, and other relevant topics. If you have a specific matter you would like to see discussed, please contact Rae Grad, director of federal relations, at rgrad@umd.edu.

NEWS You Can Use

Information From the Office of Research Administration and Advancement (ORAA)

Electronic Research Administration (eRA) News from NSF

Based on recent input from the research community, NSF has decided to allow the use of the Times New Roman font (size 11). Other acceptable fonts include Arial, Palatino Linotype, Courier New (all size 10) and Computer Modern (size 11). In addition to the previously mentioned fonts, Macintosh users may use Helvetica and Palatino. Mathematical formulas may be in a font size less than 10 as long as the text is readable.

NSF's Board has voted to fund transformative research! The merit review criterion is being revised to incorporate this change and all proposals submitted after Jan. 1, 2008, will be reviewed employing the new criterion. www.nsf.gov/nsb/documents/2007/tr_report.pdf

Cost sharing returns to the NSF Major Research Instrumentation Program. The cost share requirement is 30 percent for University of Maryland.

Assistance for New Faculty from NSF and NIH

NSF—a new merit review Web site to help faculty better understand the review process and identify other resources will be posted by early October 2007.

NIH—a redesigned Web site with expanded content for new faculty on the grants process at NIH http://grants1.nih.gov/grants/grant_basics.htm.

NIH November Deadlines are

November 5 (R01) and November 16 (R03, R21)

Reminder: All electronic packages are due in ORAA six working days prior to the deadline to ensure a successful submission to Grants.gov.

In the coming months, we will continue to introduce you to new faculty and research scientists who have joined the Maryland research community within the past year.



Anna Obizhaeva is an assistant professor of finance. Her research includes the interaction between security prices and trades, optimal trading strategies, dissemination of information, market liquidity and institutional trading.



David Freund is a visiting associate professor of history. His research includes the study of urbanism in postwar America, focusing on the way suburban whites have found a socially liberal attitude toward minorities while simultaneously erecting boundaries that keep those minorities out of their communities.



Susan De La Paz is an associate professor of special education. Her research centers on providing teachers with new instructional models to differentiate their instruction in secondary social studies classrooms, which allows adolescents with learning disabilities improved access and understanding of academic content.



Amir Sapkota is an assistant professor at the Maryland Institute for Applied Environmental Health, with a joint appointment in epidemiology and biostatistics. Sapkota is interested in quantifying the risk of disease associated with exposures to various air pollutants in the environment and the workplace.



Travis Horton joins the Center for Environmental Energy Engineering as a research assistant professor, supporting the center's software group, guiding student research and directing new research projects.

Community Response Grids: Trusted Information in a Crisis



Paul T. Jaeger, assistant professor in the College of Information Studies and director of the Center for Information Policy and Electronic Government (CIPEG), is working with other Maryland researchers to develop an interface that integrates the Internet with mobile technologies to provide quicker and more widespread information during a large-scale emergency. Known as Community Response Grids, or CRGs, these Web-based systems can create interactive communication mechanisms able to reach citizens and first responders simultaneously.

Building on research in human-computer interaction, social networks, policy, trust and information needs in emergencies, researchers from CIPEG (www.cipeg.umd.edu) and the Human-Computer Interaction Lab (www.cs.umd.edu/hcil) are developing a prototype CRG for the University of Maryland campus. "We are trying to leverage all of the different technologies that are already in use today—cell phones, text messaging, PDAs, wireless e-mail and landline Internet access—so that the public can immediately access trusted information they can use in the event of a crisis situation," Jaeger says.

The Office of the Vice President for Research has provided funding to develop the prototype CRG, and Jaeger expects that federal agencies involved in homeland security and public safety will be very interested in looking at the university's test-bed CRG. "First we want to see how this might work in the context of the campus, and that will allow us to determine how we can make this work on a much broader scale like a large city," Jaeger says.

UPCOMING EVENTS & CONFERENCES

Climate Information: Responding to User Needs

A national conference sponsored by the University of Maryland, NASA and NOAA

Monday Oct. 22 and Tuesday, Oct. 23

University of Maryland Inn and Conference Center
www.climateneeds.umd.edu

New Faculty Research Orientation

Monday, Oct. 29, 2-4 p.m.

(Reception for new faculty and deans from 4-5 p.m.)

Maryland Room, Marie Mount Hall

For more information: geronimo@umd.edu

Creating Successful Foundation Proposals

Guest speaker: Anita Plotinsky, director of the Foundation Center of D.C.

Thursday, Nov. 1, 11 a.m.-noon

Maryland Room, Marie Mount Hall

For more information: geronimo@umd.edu

DARPA Funding Strategies

Guest speaker: Darryll Pines, professor and chair, aerospace engineering

Thursday, Nov. 15, Noon-1 p.m. (light lunch provided)

Special Events Room, 6137 McKeldin Library

R.S.V.P. to geronimo@umd.edu

FACULTY AWARDS & HONORS



AVRAM BAR-COHN, Distinguished University Professor and chair, mechanical engineering, was elected as an Honorary Member of the American Society of Mechanical Engineers (ASME) for his contributions in the development of the scientific foundation for thermal management of electronic components and systems. Honorary Membership with ASME is regarded as recognition of a lifetime of service to engineering.



CATHERINE FENSELAU, professor of chemistry and biochemistry, will receive the 2008 Frank H. Field and Joe L. Franklin Award for her research using mass spectrometry. In the past decade, Fenselau has charted major new directions in her laboratory in the field of proteomics, including the development of 18O-labeling, now used worldwide in combination with mass spectrometry to compare relative amounts of proteins present in pairs of samples.



ISAAC WILLIAMS, assistant professor in the School of Architecture, Planning & Preservation, is a recipient of the Henry C. Welcome Fellowship. Awarded by the Maryland Higher Education Commission, the fellowship supports the research and creative work of promising new faculty of diverse backgrounds. Williams' research is focused on the relationship between space and learning, and the ways in which architecture can be didactic, transparent and revelatory as an active contributor to the process of learning.



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The Division of Research publishes **RESEARCH@MARYLAND** several times per semester. Its goal is to better inform and connect the research community at the University of Maryland. Your comments and suggestions are welcome. Please email them to Anne Geronimo, Division of Research, at geronimo@umd.edu.

Produced by the Office of University Publications for the Division of Research, Mel Bernstein, Vice President for Research