

Research@ MARYLAND

CONNECTING *the* UNIVERSITY of MARYLAND RESEARCH COMMUNITY

UMD Awards Reach \$545 Million

Research funding jumps 36 percent in two years

The University of Maryland brought in a record \$545 million in research awards for fiscal 2010, a \$27 million increase from the previous year. This represents a 36 percent jump in external funding from as recently as two years ago and solidifies Maryland's standing within the top 10 of all universities nationwide without a medical school.

"The university's research community is addressing many of the most demanding challenges we face today, and our faculty expertise in pursuing innovative, multidisciplinary solutions has not gone unnoticed," **Nariman Farvardin**, senior vice president for academic affairs and provost, said at a recent reception honoring Maryland researchers.

Maryland's success in securing record funding is due in part to faculty going after large, multidisciplinary awards tied to federal research priorities such as energy, homeland security and public health, says Interim Vice President for Research **Norma Allewell**.

"We've been working for several years now—first under [former vice president for research] Mel Bernstein's leadership, and continuing today—to match our research capabilities with the federal government's and society's most pressing needs," she says.

Allewell notes that the number of Maryland faculty who brought in grants of \$500,000 or more in fiscal 2010 jumped from 179 to 239—a 34 percent increase.

These large awards are representative of research and scholarship from almost every academic discipline on campus. They include a \$10 million grant from the National Science Foundation to develop modeling software used in areas like airplane safety and cancer research, and a multimillion-dollar grant from the Department of Defense for the university's National Foreign Language Center to provide online resources for federal workers to master critical foreign languages.

Other large FY10 awards include \$5.1 million from the U.S. Department of Agriculture for research on new irrigation systems to help farmers conserve water, and \$1.8 million from the American Cancer Society to improve prostate cancer awareness among local African-American men.

Recent partnerships with private corporations and federal agencies and labs have also helped to grow the university's research enterprise, says **Ken Gertz**, asso-



From top, left: Federal funding supports UMD research in brain imaging, quantum physics, space systems tools, health disparities and unmanned aerial vehicles.

Funding Sources

From the 3,289 funding proposals submitted by Maryland faculty in FY10, more than \$545 million in research funding were secured. Federal funding included:

- \$95 million from the Department of Defense
- \$73 million from the National Science Foundation
- \$55 million from the Department of Commerce, which includes the National Institute of Standards and Technology
- \$49 million from the Department of Health and Human Services
- \$41 million from NASA

ciate vice president for research development. One example is the agreement signed with Lockheed Martin in June that provides a minimum of \$1 million a year for three years to support collaborative research in areas such as logistics, climate change and cybersecurity.

Gertz says the university has received significant funding to improve its research facilities, including \$10.3 million from the National Institute of Standards and Technology to build an advanced quantum physics laboratory. Also, a \$1.5 million grant from the National Science Foundation will provide needed

renovation for a new Center for Cognitive, Social, Computational and Mathematical Neuroscience.

Maryland received almost \$55 million in American Recovery and Reinvestment Act funding last year, which is supporting research ranging from early childhood development to computational gene modeling.

"It is a testament to the quality of our faculty and research enterprise as a whole," Gertz says, "that we have experienced such a major rise in the university's research volume, impact and visibility."

The Division of Research offers a range of resources that can assist Maryland faculty in receiving external funding. These include:

- **technical writers and graphic artists to help in presenting competitive funding proposals;**
- **a faculty incentive program to fund pilot work and proposal costs;**
- **a research seminar series that brings senior federal officials from nearby Washington, D.C., to campus to discuss priorities;**
- **seed grant programs to stimulate collaborative research with industrial, federal and academic partners;**
- **facilitating connections to funding agencies.**

Information Forum Draws Over 200

Information can bring people together. It can inspire innovation. It can change people's lives.

Armed with this knowledge, more than 200 faculty, students and visitors met in November to discuss the future of information at a campus forum sponsored by the Division of Research.

"We need to think about what type of future research that we—as information leaders—should be doing collectively," says **Allison Druin**, associate dean of research in the College of Information Studies, Maryland's iSchool. "It's an area that we believe we are a thought-leader in, and where we can have a much larger footprint on the national stage."

Druin is on a steering committee that has been meeting for the past year to better integrate information strengths across campus and to consider the formation of a cross-campus initiative. She says the forum brought together researchers from disciplines like information studies, computer science, journalism and University Libraries, yet also attracted faculty from 12 colleges in fields as diverse as art, art history, astronomy, American studies, women's studies, marketing, sociology, theatre and architecture.

"The forum was certainly motivated by a faith that the time had come to address this subject in an interdisciplinary way, and that the endeavor could not help but be fruitful," says journalism's **Ira Chinoy**.

Many were there to hear keynote speaker Dan Russell, Google's director of user happiness, but most also shared the desire to collaborate with other faculty and to have a research, education and policy impact in the future of information.

"People told me this professionally matters to them, yet it is also something that is personally important to them," Druin says. "They want to be a part of this."



We introduce you to new faculty and research scientists in the Maryland research community.



Feinian Chen is an associate professor of sociology. Her research crosscuts a range of areas in demography, family sociology, aging and quantitative methodology.



Joel Simmons is an assistant professor of government and politics. His research focuses on social policy, economic policy and economic development. He is working on a book on the political determinants of the pace of economic innovation.



Jason Farman is an assistant professor of American studies. His recent book, "Mapping the Digital Empire," looks at the impact of social media on the status and representation of global borders.



Elizabeth Redcay is an assistant professor of psychology. Her research examines the development and neural bases of communicative behaviors, including joint attention, social interaction and language.



Christine Greenhow is an assistant professor with a joint appointment in the College of Education and the iSchool. Her research focuses on learning in social media contexts, with the goal of improving theory, practice and policy.

Advancing Women in Science

Despite the fact that women now earn 40 percent of the science and engineering doctoral degrees in the United States, female scientists and engineers account for only 17 percent of all full professorships at research universities nationwide.

A new university program funded by the National Science Foundation hopes to change that. The five-year, \$3.2 million initiative is designed to help advance women—particularly those of color—on the faculties of science, technology, engineering and mathematics, or STEM, colleges.

Launched on Oct. 1, the program provides new mentorship and funding opportunities for women faculty members, creates greater transparency about how career advancement decisions are made and increases the awareness and use of benefits designed to help faculty members balance work and family lives.

With additional funding pledged by deans and the vice president for research, it is anticipated that the program's impact will extend beyond the STEM disciplines to women researchers across campus.

"We're thrilled that we'll be able to have an impact on all parts of the university, and that we'll be changing the culture to make this a great institution for the excellent young women and men of today and the future," says biologist **Avis Cohen**, the project director and a co-principal investigator of the grant.



Avis Cohen leads a new initiative that supports women scientists across campus

FACULTY AWARDS & HONORS



ELIZABETH PAPANIAN, associate professor of Russian, has received a 2010 best book award from the American Association of Teachers of Slavic and East European Languages. The award recognizes Papazian's "Manufacturing Truth: The Documentary Moment in Early Soviet Culture," which discusses early Soviet culture, from the establishment of Bolshevik power in 1921 to the declaration of socialist realism as the official method of Soviet literature in 1934.



ALISON FLATAU, professor and interim associate dean for research at the A. James Clark School of Engineering, received the 25th Anniversary Aerospace Educator Award from Women in Aerospace, a nonprofit dedicated toward advancing women's opportunities in the aerospace community. Flatau was recognized for exceptional leadership and dedication to aerospace education and for her unwavering commitment to the advancement of women in the field.



ERIC USLANER, professor of government and politics, was named a 2010 Fulbright distinguished chair in political science at the School of Politics and International Relations at the Australian National University. The distinguished chairs program is comprised of approximately 40 distinguished lecturing and research awards ranging from three to 12 months and is among the most prestigious appointments in the Fulbright Scholars Program.

Maryland Researchers Win Grand Challenges Grant

Daniel Stein, professor of cell biology and molecular genetics, and **Phillip DeShong**, professor of chemistry and biochemistry, were recently awarded a grant from the Bill & Melinda Gates Foundation for their proposal to construct and test a novel vaccine delivery platform.

The grant is part of the foundation's \$100 million Grand Challenges program, which encourages scientists worldwide to expand the pipeline of ideas to fight global health challenges.

The Maryland researchers, the first on campus to receive a Grand Challenges grant, believe their platform can be used to develop low-cost vaccines for bacterial infections where carbohydrates form the basis of protective immunity, such as bacterial pneumonia and diarrheal diseases.



Daniel Stein (left) and Phillip DeShong (right) are the first Maryland faculty to win an award from the Grand Challenges program.



RESEARCH@MARYLAND

CONNECTING the UNIVERSITY of MARYLAND RESEARCH COMMUNITY

Office of the Vice President for Research

2133 Lee Building
University of Maryland
College Park, MD 20742-5121
www.umresearch.umd.edu

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 e-mail them to Anne Geronimo, Division of Research, at geronimo@umd.edu.

Produced by University Publications for the Division of Research
Norma Allewell, interim vice president for research

Executive editor: Anne Geronimo
Managing editor: Tom Ventsias
Art director: Jennifer Paul