Recent Federal Funding Reflects Strength, Diversity of UMD Research Enterprise

The university has netted several new, significant research awards that campus officials say exemplify its ability to successfully compete for federal funding in critical areas such as national security, veteran affairs and fire protection.

Awards from the Department of Defense (DoD), the National Science Foundation and other federal agencies were announced within the past six months. Several helped contribute to a banner year for UMD researchers, who brought in $502 million for the fiscal year ending June 30. This represents an 11 percent increase in federal funding from the previous year.

“Our external awards, despite a sluggish economy, speak volumes to the strength of our research enterprise,” says Patrick O’Shea, Maryland’s vice president for research and chief research officer. “That we regularly secure federal funding at the highest levels identifies us as one of the nation’s truly great public research universities, and one that is well-suited to working with the federal government.”

One DoD-funded project has psychologists Arie Kruglanski and Michelle Gelfand taking a novel approach to understanding how young people overseas might become radicalized. The UMD researchers are talking with detainees already tied to terrorism. “We hope to identify tactics that can inoculate young people against terrorist recruiters,” Kruglanski says.

The five-year project is supported by a $4.5 million Minerva Research Initiative, part of a federal program dedicated to long-term social sciences research related to DoD priorities.

Another project features Laura Wilson, chair of health services administration in the School of Public Health, who is investigating methods to help injured veterans remain in their home communities and avoid or postpone institutional care.

Known as the Legacy Corps for Health and Independent Living, the three-year project will provide caregiver support services to veteran and military families at 17 sites in 11 states. Wilson is principal investigator of the $5.7 million grant from the Corporation for National and Community Service, a federal agency. Researchers in the A. James Clark School of Engineering have received approval for two Major Research Instrumentation (MRI) awards funded by the National Science Foundation, the highly competitive MRI awards support two projects: one in fire protection (Andre Marshall is the PI) to study engineered spray technologies used in fire suppression and microelectronic applications; another in small-angle scattering technology (Rob Briber is the PI) for the characterization of nanoscale structures in materials.

Nanoscale characterization is a critical step in the design of new materials for applications in areas as diverse as energy, microelectronics, civil infrastructure, defense and health care, says Briber.

UMD researchers have also won seven Defense Univer- sity Research Instrumentation Program (DURIP) grants, used to purchase major equipment (costing $50,000 or more) for defense-related research.

“The DURIP awards are quite competitive, so the fact that we won seven is testament to our capabilities in areas as diverse as nature-inspired robotics to studying the effects of space debris on satellites,” says Ken Gertz, associate vice president for research development.

UPDATE FROM THE OFFICE OF FEDERAL RELATIONS

Election Results Could Reshape National Research Agenda

While both President Barack Obama and former Massachusetts Gov. Mitt Romney have emphasized the crucial role research plays in innovation and economic progress—and the importance of federal investment in R&D—they would implement these ideas very differently, according to a recent analysis conducted by the Information Technology and Innovation Foundation.

Romney endorses a more prominent role for the private sector but does see a role for federal spending in energy research. In a 14-page energy policy blueprint released in August, he supported the production and use of fossil fuels, and even mentioned launching a new survey of carbon-based energy resources in the United States. Obama, on the other hand, insists on the federal government taking the lead on U.S. independence from foreign oil and pursuing clean energy and efficiency.

The candidates also differ on the issue of agency funding. Obama has said he wants to double the funding for key research agencies. Critics, however, argue that during his presidency, the discretionary budget authority for the National Institutes of Health has risen less than 1 percent. Likewise, although Romney also pledges support for key research agencies, during the primaries he proposed cutting nonsecurity discretionary spending by 5 percent through his economic plan.

FIA Grows Collaborative Outreach and Expertise

The Future of Information Alliance (FIA) is rapidly expanding its collaborative outreach and research efforts, following a new $1 million gift from the Robert W. Deutsch Foundation.

Launched last year with significant support from the Division of Research, the alliance has attracted students and faculty from across campus, as well as 10 outside partners that include Government and Politics, the National Archives and the Library of Congress.

Part of the Deutsch funding brings Dan Russell, Google’s director of user happiness, to campus for a year as a “futurist in residence” to work closely with faculty, students and FIA partners, says journalism’s Ira Chinoy, who along with the iSchool’s Allison Drumm is leading the alliance.

The private funding also supports a seed grant program, in which teams of UMD students will work with faculty mentors and outside partners on perplexing information challenges. Examples of projects discussed at the kickoff event in September include working with public radio affiliate WAMU to provide 24-hour radio programming for deaf people, or partnering with the U.S. Park Service and National Geographic to improve public access to millions of photos and other materials that document American history and culture.

14th Research Luncheon Gala

Almost 200 faculty and administrators recently gathered in the Samuel Riggs IV Alumni Center to recognize colleagues who have made significant contributions in research and scholarship during the past year.

The annual event is sponsored by the Division of Research and featured brief remarks from President Wallace Loh and Vice President for Research Patrick O’Shea.

The keynote speaker was Steve Fetter, who recently returned to his faculty position in the School of Public Policy after serving for more than three years as assistant director in the White House Office of Science and Technology Policy.

Look to the Federal Corner for information on higher education and the federal government.

If you have a specific topic you’d like to see discussed, contact Rae Grad, director of federal relations, at rgrad@umd.edu.
NEW FACULTY

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

Nathan Kraft is an assistant professor of biology. He studies the ecological and evolutionary forces that structure communities, particularly involving plant systems.

Kells Robertson is an associate professor of English. She studies the interaction between medieval science and poetry, and also specializes in issues of work and labor during the Middle Ages.

Sean Barnes is an assistant professor of operations management. He investigates the transmission of infectious diseases, health-care operations management and complex systems.

Susanne Jang, an assistant professor of psychology. She investigates how working memory in the human brain can be trained, and whether that affects other cognitive functions.

Monifa Vaughn-Cooke is an assistant professor of mechanical engineering. She researches human reliability assessment, systems engineering and bio-behavioral risk assessment.

JEREMY MUNDAY, assistant professor of electrical and computer engineering, received a NASA Space Technology Research Opportunities for Early Career Faculty award. One of only 10 researchers nationwide to earn this recognition, Munday will use the award funding to study new concepts in solar sails, a form of propulsion for deep space exploration.

SANDRA HOFFERTH, professor of family science, received the 2012 Distinguished Career Award from the American Sociological Association Section on Sociology of Family. Hoffertth was honored for her three-plus decades of research and scholarship on family issues relevant to public policy, including teenage childbearing and the effect of government food programs on obesity for underprivileged children.

Physicist Professor EDWARD “JOE” REDISH will receive the 2013 Oersted Medal, the highest honor from the American Association of Physics Teachers. The award recognizes scholars who have had a widespread and lasting impact on the teaching of physics. Redish, a former chair of physics and astronomy at UMD, is an expert in nuclear theory.

UMD Team Works to Improve Health, Vitality of Chesapeake Bay

A multidisciplinary team of Maryland researchers is working with local communities to assess and improve methods for managing stormwater runoff that affects the Chesapeake Bay, the state’s most valuable natural resource.

With $300,000 in funding from the U.S. Environmental Protection Agency, experts in the College of Agriculture and Natural Resources, the School of Public Health and the A. James Clark School of Engineering will track runoff from Howard County, Md.’s Wilde Lake watershed and the District of Columbia’s Watts Branch watershed, both major feeders into the bay.

The group will use a comprehensive approach that includes surveys, interviews, photography and diagnostic software to identify problem areas, increase the use and awareness of best management practices, and develop solutions, says Paul Leisnham, an assistant professor of environmental science and technology who is leading the UMD team.

“We’ll really know at the end of the three-year project what works and what doesn’t work,” he says. “We’ll then be able to help local communities implement a plan that can have long-term, sustainable success.”

UPCOMING EVENTS & CONFERENCES

DIVISION OF RESEARCH SEMINAR SERIES

Innovation and Future Directions at Lockheed Martin
Featured speaker is John Evans, vice president of technology, Lockheed Martin Corp.
Tuesday, Oct. 30, 11 a.m. to noon
 Pepco Room, Room 1105, Jeong H. Kim Engineering Building

New Faculty Research Orientation
Friday, Nov. 1, noon to 3 p.m.
Maryland Room, Marie Mount Hall
Lunch will be provided.

Research Initiatives at the USDA
Featured speaker is Cathy Woteck, underseretary for research, education and economics, U.S. Department of Agriculture (USDA).
Wednesday, Dec. 5, 11 a.m. to noon
Pepco Room, Room 1105, Jeong H. Kim Engineering Building
For more information: geronimo@umd.edu

CORRECTION: In the September issue of research@maryland, the academic appointment of J. Carson Smith was misidentified. Smith is an assistant professor of kinesiology.