

FY08 Budget Likely to Impact University's Research Funding

THE '08 OMNIBUS BILL recently passed by Congress has proven disappointing for many academic researchers nationwide. While agencies like the Department of Homeland Security fared reasonably well, most other federal agencies that support research did not. In fact, the total federal investment in research and development for FY08 was significantly less than what was proposed in earlier Congressional budget plans. "This decrease of resources is of great concern to our academic research community and jeopardizes our ability to address critical national needs," says **Mel Bernstein**, vice president for research at the University of Maryland.

Highlights from the American Association for the Advancement of Science (AAAS) research and development analysis of the federal budget include:

— The **National Science Foundation's** budget of \$6 billion is a 2 percent increase over 2007, well short of the 8 to 10 percent in earlier bills that reflected the American Competitiveness Initiative (COMPETES Act) proposed increases.

— The **National Institutes of Health's** (NIH) budget is \$29.5 billion, an increase of just 0.9 percent, or \$275 million, over last year. This amount is \$776 million less than an earlier appropriation vetoed in November, with nearly all NIH institutes receiving flat funding.

— **NASA's** research and development spending, which excludes the Space Shuttle, totals \$12.5 billion, an increase of 5.7 percent, or \$670 million. But the entire increase would go toward development—and research and development facilities spending—for two human space flight projects.

— The **Department of Defense** proposed to slash science and technology spending 22 percent, but following Congressional additions, the total science and technology investment is \$13 billion, down 7 percent from last year. Overall, DoD support of basic research gains 3.2 percent to \$1.6 billion, with Congress capping indirect costs on basic research grants at 35 percent. More specifically within DoD:

- The **Defense Advanced Research Projects Agency** (DARPA) saw its budget fall 9.6 percent to \$2.8 billion as a result of Congressional frustration over DARPA's inability to spend past budgets.

- Funding for the three-services **University Research Initiatives**, which awards basic research grants competitively to universities, received a combined \$302 million, up 5 percent from 2007.

- Among the increases is \$18 million—up from \$10 million—for the **Focus Center Research Program**, a joint DoD-semiconductor industry program to support university research in semiconductor technology.

- The largest increase among basic research programs would go to the **National Defense Education** program, more than doubling, from \$19 million last year to \$44 million in 2008.

— The **Department of Energy's** Office of Science received a total budget of \$4 billion, a 4.6 percent increase, but a loss of nearly half a billion from earlier Congressional appropriations. The high-energy physics, nuclear physics, fusion sciences and basic energy sciences programs received dramatically less than requested.

— The **Department of Agriculture's** National Research Initiative of competitively awarded research grants remained flat at \$191 million. This amount was short of the \$257 million request

— The **Environmental Protection Agency's** research and development funding fell by 3.2 percent or \$18 million.

— The **Department of Transportation's** research and development funding rose 7.3 percent to \$852 mil-



lion, with cuts to aviation research and development balanced by large increases for highway research and development.

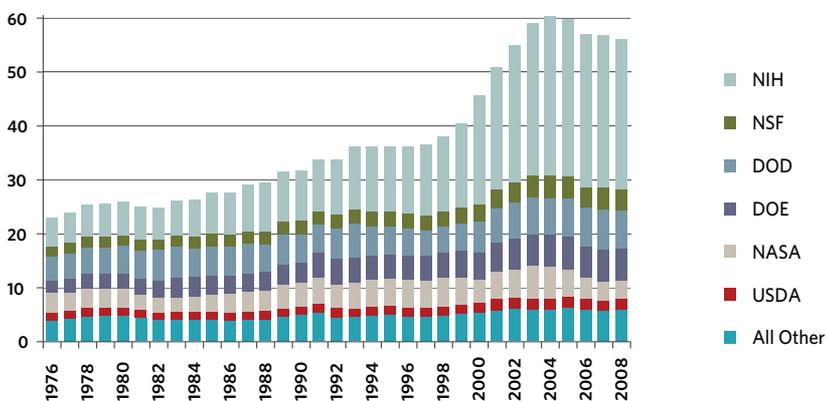
— The **Department of Commerce's** research and development received increases for both the **National Oceanic and Atmospheric Administration** (NOAA) and the **National Institute of Standards and Technology** (NIST). Research and development in NOAA climbed 7.6 percent to \$573 million. And NIST research and development gained 4.7 percent to \$514 million, the same amount as the request.

— The **Department of Homeland Security's** (DHS) university programs received \$49 million, the same as last year and \$11 million more than requested. DHS plans to support 11 university-based centers by 2008. Overall, DHS saw a large increase in research and development, with a final total of \$1 billion, \$86 million or 9 percent more than in 2007.

For additional information, readers may also visit the AAAS Web site at www.aaas.org/spp/rd/upd1207.htm

Trends in Research by Agency, FY 1976-2008 (Conference)*

in billions of constant FY 2007 dollars



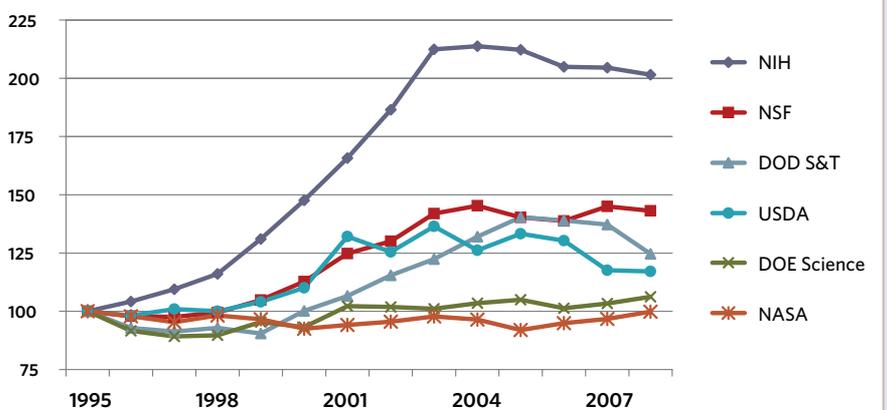
Source: AAAS analyses of R&D in annual AAAS R&D reports.

* FY 2008 figures are latest AAAS estimates of FY 2008 appropriations. Research includes basic research and applied research. 1976-1994 figures are NSF data on obligations in the Federal Funds survey. DECEMBER '07 REVISED © 2007 AAAS



Trends in Federal R&D, FY 1995-2008 (Conference) *

selected agencies in constant dollars, FY 1995=100



Source: AAAS analyses of R&D in AAAS Reports VIII- XXXII.

* FY 2008 figures are latest AAAS estimates of FY 2008 appropriations. R&D includes conduct of R&D and R&D facilities. DECEMBER '07 REVISED © 2007 AAAS



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.



Jennifer Golbeck is an assistant professor in the College of Information Studies. Her research focuses on social networks, trust, Web science, artificial intelligence and human-computer interaction.



Lawrence Clark is an assistant professor in the Department of Curriculum and Instruction. His research interests include influences on secondary mathematics teachers' instruction decisions, equitable mathematics learning environments, and professional development of secondary mathematics teachers.



Ganesh Sriram is an assistant professor in the Department of Chemical and Biomolecular Engineering. His research interests include systems biology and metabolic engineering, including metabolic networks, regulatory networks, fuel production from biorenewable resources and inherited metabolic diseases.



Sarah Bergbreiter is an assistant professor in the Department of Mechanical Engineering with an appointment in the Institute for Systems Research. Her research interests are focused on mobile microrobots, micro-electro-mechanical systems (MEMS), large-scale multi-robot systems and wireless sensor networks.



Kerry Green is an assistant professor in the Department of Public and Community Health. She brings to the department expertise in prevention science with a particular interest in school-based interventions for children.

FACULTY AWARDS & HONORS



CHARLES WELLFORD, professor of criminology, has been selected to chair a 15-person committee for the National Research Council that will assess the research program of the National Institute of Justice. This 27-month project with a grant of \$1.2 million will conduct an evaluation of the central national criminal justice science and technology research program and recommend a 10-year research agenda.



MIAO YU, assistant professor of mechanical engineering, received the Air Force Office of Scientific Research Young Investigator Program Award. She received the award for her research proposal on the development of fly ear-inspired sensors on a micro-opto-electro-mechanical systems platform for use in micro-air vehicles.



LUZ MARTINEZ-MIRANDA, associate professor with the Department of Materials Science and Engineering, the Maryland NanoCenter and the Graduate Program in Bioengineering, has been elected as a Fellow in the American Physical Society. Martinez-Miranda was cited for her sustained achievements in recruiting, mentoring and advancing women and minorities in physics, and for her research to understand liquid crystal systems and further their application.

MITH Brings Together Technology and Humanities



The Maryland Institute for Technology in the Humanities (MITH) is a collaboration among the College of Arts and Humanities, University Libraries and the Office of Information Technology. Established in 1999, today MITH is recognized as one of the

leading centers of its kind, bringing together the humanities and digital technology and exploring new possibilities for both.

"New technology is transforming all of the disciplines in the humanities, and MITH has been instrumental in engaging faculty and students with this transformation," says **Neil Fraistat**, a professor of English and MITH's director.

MITH's research focuses on digital tools, text mining and visualization, as well as the

creation and preservation of electronic literature, digital games and virtual worlds.

Currently, MITH is working on numerous projects, funded by such sources as the Library of Congress and the Andrew W. Mellon Foundation. For example,

- the Our America Digital Archives project has a goal to make texts written in or about the Americas digitally available, representing the full range and complexity of a multilingual nation;
- the Metadata Offer New Knowledge (MONK) project is a digital environment designed to help humanities scholars discover and analyze patterns in the texts they study;
- and, the Preserving Virtual Worlds project explores methods for preserving digital games, interactive fiction and shared real-time virtual spaces.

To learn more about MITH, please visit the center's Web site at www.mith2.umd.edu.



UPCOMING EVENTS & CONFERENCES

National Science Foundation's Priorities and Future Directions

Featured speaker is Tom Cooley, chief financial officer and director of NSF's Office of Budget, Finance and Award Management.

Tuesday, March 4, 11 a.m. to noon

Benjamin Banneker Room, Stamp Student Union Building
For more information: geronimo@umd.edu

National Institute of Biomedical Imaging and Bioengineering Research Priorities and Future Directions

Guest Speaker: William Heetderks, director of Extramural Science Programs

Tuesday, April 8, 11 a.m. to noon

Jeong H. Kim Engineering Building, Pepco Room [1105].
For more information: geronimo@umd.edu

NEUROSCIENCE AND COGNITIVE SCIENCE (NACS) SEMINAR SERIES

Scientific Integrity and Authorship

Guest Speaker: Frances Macrina, Edward Myers Professor of Dentistry and vice president for research at the Virginia Commonwealth University

Friday, April 25, noon

1208/1243 Biology-Psychology Building
For more information: rdooling@umd.edu



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