

## WASHINGTON NEWS

### FY2003 Budget Request Shows 8% Increase in Scientific R&D

President Bush's budget request for FY2003, released on February 4, places primary emphasis on the war on terrorism, homeland security, and stimulating the economy. The portion for research and development (R&D) totals \$111.8 billion, representing an overall 8% increase over FY2002. A large portion of the budget request goes to development programs in the National Institutes of Health (NIH), with an overall 16% increase, and the Department of Defense (DoD), with an overall 11% increase. Inflationary increases or minor losses are apparent in a number of the accounts that grant funding for materials research (see Table I).

Initiatives that continue to be important in the president's budget include Nanotechnology, which shows an increase of 17% to \$679 million in its third year, Networking and Information Technology (IT), and Global Climate Change (see Table II).

The president's science advisor, John H. Marburger III, who is also director of the administration's Office of Science and

Technology Policy, said that this budget request completes an initiative to double NIH R&D funding by 2003. He said that scientists have referred to the 21st century as "the century of bioscience."

Of the money budgeted for NIH, the National Institute of Biomedical Imaging and Bioengineering (NIBIB), established two years ago, is to receive \$121.4 million, which is an increase of 8.4% from the authorized amount received in FY2002. NIBIB plans to continue research already started on biomedical imaging and bioengineering, including enhanced drug delivery systems. For FY2003, the institute wants to launch new initiatives, including real-time and multimeasurement sensors and nanoparticle materials for drug production, discovery, and delivery.

A request of \$842.2 million goes to the Office of Biological and Physical Research, created at the beginning of FY2001 within the National Aeronautics and Space Administration (NASA). Of this, \$134.1 million is targeted for physical sciences research, formerly microgravity research, to continue multi- and cross-disciplinary basic research. The office plans to continue

fabrication of the International Space Station (ISS) racks and experiment inserts for the Fluids, Combustion, and Materials Science Facilities to be launched in the 2004–2005 time frame. It will also continue its collaborative research effort in Biomolecular Physics and Chemistry program with a specific focus on the joint NASA-National Cancer Institute thrust in the development of nanotechnology-derived biosensors for *in situ* monitoring of physiological functions, collaborative research in tissue engineering, and research in the area of the combustion synthesis of advanced structural materials and biomaterials.

The area of space product development in NASA is slated to receive \$14.8 million. This will support NASA's Commercial Space Centers and ISS research such as zeolite crystal-growth sample processing and new materials processing capabilities. The ISS Capability Program, which funds materials research, is slated to receive \$347.2 million. Overall, NASA is to receive an increase of 17.7% over last year for IT R&D, 2.0% for Global Climate Change, and no change in support for nanoscale research (see Table II).

The budget request for the National Institute of Standards and Technology (NIST) of \$577.5 million shows a decrease of 15% from FY2002 appropriations, but the portion to go toward key science and technology activities represents an increase of \$76 million. Of the \$402.2 million for Scientific and Technical Research and Services, \$5 million goes to Homeland Security; \$3 million to health care, including support for tissue engineering, prosthetic materials, and efforts that combine materials science and cell biology; \$4 mil-

**Table I: Research in the FY2003 Budget.\***  
(budget authority in millions of dollars)

	FY2003 Budget	FY02–03 Percent
<b>Research (basic + applied)</b>		
Defense	4,952	-0.2%
National Institutes of Health (NIH)	26,846	14.6%
Energy	5,383	1.7%
National Science Foundation (NSF)	3,441	4.7%
National Institute of Standards and Technology (NIST)	317	-5.1%

\*Excerpted from the American Association for the Advancement of Science preliminary analysis of R&D in the FY2003 budget.

lion for nanotechnology as part of the National Nanotechnology Initiative; and \$6 million for neutron science.

Of \$120.8 million for Industrial Technology Services within NIST, \$107.9 million is for the Advanced Technology Program—which amounts to a decrease of \$76.6 million from the FY2002 appropriation—and \$12.9 million is for the Manufacturing Extension Partnership—which represents a decrease of \$93.6 million over last year.

Secretary of Energy Spencer Abraham said that following the president's emphasis on security, the Department of Energy (DOE) requested \$8 billion for the National Nuclear Security Administration (NNSA) that directs additional funding to nuclear nonproliferation and stockpile stewardship programs. He said that the request of \$3.3 billion for the Office of Science will support increased funding for operations and instrumentation at the division's user facilities. The request also provides funding to keep the construction of the Spallation Neutron Source on schedule; for increases in research, including nanoscience; and for climate change research, including the Climate Change Research Initiative. Secretary Abraham said the department is also devoting

**Table II: Interagency Science and Technology Initiatives.\***  
(budget authority in millions of dollars)

	FY2003 Budget	FY02-03 Percent
<b>Nanoscale Science, Engineering, and Technology</b>		
National Science Foundation (NSF)	221	11.1%
Defense	201	11.7%
Energy	189	52.7%
National Aeronautics and Space Administration (NASA)	22	0.0%
Commerce	44	15.8%
National Institutes of Health (NIH)	43	4.9%
<b>Networking and Information Technology R&amp;D</b>		
Commerce	42	-2.3%
Defense	306	-4.4%
Energy	313	0.3%
NASA	213	17.7%
NSF	678	0.3%
<b>U.S. Global Change Research Program (USGCRP)**</b>		
NSF	203	8.0%
Energy	129	7.5%
NASA	1,112	2.0%

\*Excerpted from the American Association for the Advancement of Science Preliminary Analysis of R&D in the FY2003 Budget.  
\*\*USGCRP FY2003 figures include Climate Change Research Initiative.

resources to implementing the administration's National Energy Plan, directing R&D toward new ideas and innovation.

While the overall budget for the

National Science Foundation (NSF) shows an increase of 5%, a portion of this comes from shifts in accounts from programs moving over to NSF from other agencies. NSF director Rita Colwell said that the budget request for her agency includes \$221 million for nanotechnology research and \$286 million for IT research. The agency will implement a \$15-million research program as part of the Climate Change Research Initiative. In addition, \$1.1 billion will go toward building a "world-class science and engineering workforce," according to the agency. The amount requested for materials research within the Division of Mathematical and Physical Sciences is \$219.3 million, down by 0.1% from last year.

In DoD, the Defense Advanced Research Projects Agency (DARPA) is slated for a 23% increase over last year in the portfolio of the Defense Research Sciences. Materials and Electronics Technology alone is designated to receive 35.5% of the funding budgeted for basic research, and is up 28% from FY2002. Of this, \$7.6 million is targeted for nanoscale/biomolecular and metamaterials, \$20 million for spin-dependent materials and devices, and \$10 million for engineered biomolecular nano-devices and microsystems. □

### Web Site Resources for FY2003 Science R&D Budget Requests

Presidential administration Office of Science and Technology Policy (OSTP)  
Budget documents available at [www.ostp.gov/html/02\\_2\\_4.html](http://www.ostp.gov/html/02_2_4.html)

Department of Commerce (DOC)  
Budget documents available at [www.doc.gov/bmi/budget/](http://www.doc.gov/bmi/budget/)

Department of Defense (DoD)  
Budget documents available at [www.dtic.mil/comptroller/fy2003budget/index.html](http://www.dtic.mil/comptroller/fy2003budget/index.html)

Department of Energy (DOE)  
Budget documents available at [www.mbe.doe.gov/budget/03budget/index.htm](http://www.mbe.doe.gov/budget/03budget/index.htm)

National Aeronautics and Space Association (NASA)  
Budget documents available at [www.nasa.gov/budget/budget2003\\_index.html](http://www.nasa.gov/budget/budget2003_index.html)

National Science Foundation (NSF)  
Budget documents available at [www.nsf.gov/home/budget/start.htm](http://www.nsf.gov/home/budget/start.htm)

National Institutes of Health (NIH)  
Budget documents available at [www.nih.gov/news/budgetfy2003/2003NIHpresbudget.pdf](http://www.nih.gov/news/budgetfy2003/2003NIHpresbudget.pdf)

AAAS R&D Budget and Policy Page  
<http://www.aaas.org/spp/dspp/rd/rdwwwpg.htm>

Overall budget  
<http://www.whitehouse.gov/omb/budget/fy2003/budget.html>

**FOR WASHINGTON NEWS POLICY AFFECTING MATERIALS RESEARCH...**

...access the Materials Research Society Web site: [www.mrs.org/pa/](http://www.mrs.org/pa/)