



NATIONAL SCIENCE FOUNDATION

The President's 2009 Budget will:

- Support aggressive funding for key research agencies to advance basic science through the President's American Competitiveness Initiative;
- Invest in the foundations for innovative technologies that drive future economic growth;
- Provide research facilities needed to keep America at the forefront of science and engineering; and
- Enhance fellowship and early-career opportunities for beginning researchers.

Doubling Basic Research through the American Competitiveness Initiative

- *Increases funding for the National Science Foundation (NSF).*
 - Maintains the President's commitment to aggressive funding of critical basic research investments in the physical sciences, engineering, and related fields.
 - Increases 14 percent over the 2008 enacted level, including a 16-percent increase for NSF's primary research activities.

Investing in the Future Economic Competitiveness of the United States

- *Promotes investment in new technologies.*
 - \$397 million for nanotechnology research and facilities to continue advancing fundamental understanding of those devices and materials with revolutionary properties.
 - \$1.1 billion for fundamental information technology research and cutting-edge supercomputing and networking resources, including: \$100 million, an 110-percent increase, for an NSF-wide effort to develop radically new computational concepts and tools; and \$30 million for a new targeted cyber-security research effort in privacy, fundamental theory, and usability.
- *Supports a state-of-the-art computing infrastructure.* \$186 million, a 17-percent increase, for a widely accessible suite of supercomputers, data warehouses, advanced networks, and experimental facilities.
- *Constructs key new scientific facilities.* \$148 million for the design or construction of four major new cutting-edge research facilities in astronomy and physics, and \$115 million for a diverse portfolio of smaller-sized instruments and other tools.
- *Maintains and extends the life of current facilities.* Nearly \$1 billion for the ongoing operation and maintenance of a wide range of major research facilities, including a research vessel

fleet, astronomical telescopes, geological and environmental monitoring networks, and the NSF-owned and operated South Pole Station.

Enhancing Opportunities for Beginning Researchers

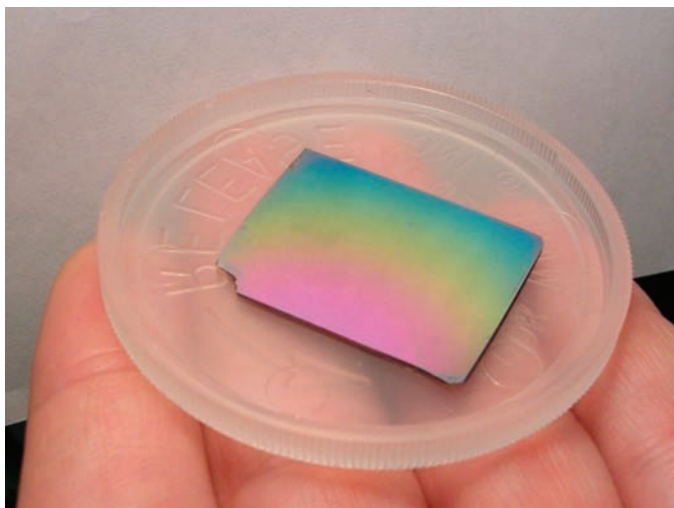
- *Recognizes young researchers.* \$182 million, an 8-percent increase, for NSF's most prestigious award program in support of the early career-development activities of those faculty members likely to become the academic leaders of the future.
- *Promotes student pursuit of advanced degrees.* \$125 million, a 30-percent increase, for the NSF-wide graduate research fellowship program, which recognizes and supports outstanding graduate students who are expected to significantly contribute to research, teaching, and future innovations in science and engineering.
- *Provides opportunities for new students.* \$62 million, a 6-percent increase, to support active and meaningful research participation by undergraduate students in NSF-funded research.

Major Savings and Reforms

- Improves project management and oversight by strengthening NSF's project office and instituting new processes that provide clear go/no-go decision points for policy makers. The Budget slows funding of some facility projects that do not have fully developed project plans, and continues projects that have passed appropriate project reviews.

Since 2001, the National Science Foundation has:

- Advanced all fields of science, engineering, and mathematics research by funding 70,000 grants at academic institutions via a competitive, merit-based process.
- Strengthened the foundations of the science and engineering workforce by directly supporting academic works of 77,600 graduate students and 31,500 undergraduate students.
- Enabled breakthroughs with potentially significant future economic impacts through its key role in supporting and encouraging American science, math, and engineering.
- Advanced understanding of the Earth's poles, including detailed studies of environmental change in the Arctic, through its participation in the International Polar Year.



Source: Stephen Swallen, University of Wisconsin-Madison

A new type of glass—developed by NSF-supported scientists—may ultimately aid drug delivery in the body.

National Science Foundation
(In millions of dollars)

	2007 Actual	Estimate	
		2008	2009
Spending			
Discretionary Budget Authority:			
Research and Related Activities	4,672	4,805	5,594
Education and Human Resources	797	726	790
Major Research Equipment and Facilities Construction	191	205	148
Agency Operations and Award Management	248	282	305
Inspector General	11	11	13
National Science Board	4	4	4
Total, Discretionary budget authority	5,923	6,033	6,854
 Total, Discretionary outlays	 5,469	 6,061	 6,263
Mandatory Outlays:			
H-1B Fee Programs	52	148	128
All other	8	47	23
Total, Mandatory outlays	60	195	151
 Total, Outlays	 5,529	 6,256	 6,414