

National Institutes of Health in the FY 2006 Budget

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HIGHLIGHTS

- The National Institutes of Health (NIH) would receive a total of \$28.7 billion in FY 2006, an increase of \$146 million (0.5 percent) over the current FY 2005 estimate (see Table II-9).
- The budget would support a total of 36,555 research project grants, 411 fewer than in FY 2005. This total includes 9,463 new and competing awards, an increase of 247 over FY 2005, and 27,092 non-competing awards, 658 fewer than the current year (see Table II-10).
- The average cost of research project grants would be \$377,000; however, this figure is skewed due to the inclusion of multiple large cohort AIDS clinical trials and HIV vaccine awards. When adjusted, the average cost for a competing research project grant is \$347,000.
- The NIH Roadmap would receive \$333 million in FY 2006, an increase of \$98 million over FY 2005. Of this total, \$83 million would come from the NIH Director's Discretionary Fund, and the Institutes and Centers (ICs) would contribute the remaining \$250 million through a 0.9 percent tap on each IC's budget request.
- The budget proposes level funding for most stipends under the Ruth L. Kirchstein National Research Service Award (NRSA) program. Stipend levels for postdocs with 1-2 years experience would increase 4.0 percent.

BACKGROUND

The National Institutes of Health (NIH) is the world's premier medical research institution, supporting more than 212,000 research personnel at over 2,800 research universities, medical schools, teaching hospitals,

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independent research institutes and industrial organizations throughout the United States and the world. Located within the Department of Health and Human Services (HHS), the NIH is comprised of 27 distinct institutes and centers (ICs), each of which has an explicit mission directed to the advancement of an aspect of biomedical and behavioral sciences. An institute's focal point may be a particular disease, organ system, stage of development, or have a crosscutting mission such as developing research tools and other resources.

Under the FY 2006 budget proposal, the NIH would account for 21.1 percent of the nation's total investment in R&D, second only to the Department of Defense. Under the Administration's plan, NIH R&D would account for 49 percent of all non-defense research (see Table II-1). The largest portion of the NIH budget is devoted to research in the life sciences. In FY 2002, the NIH devoted \$19.7 billion or 89.2 percent of its total budget to life sciences. This comprised 77.4 percent of the total federal investment in life sciences research. The second largest discipline was psychology research, which received \$744 million in FY 2002, 3.4 percent of the NIH total, but 82.2 percent of the total federal investment in psychology research (see Figure 1).

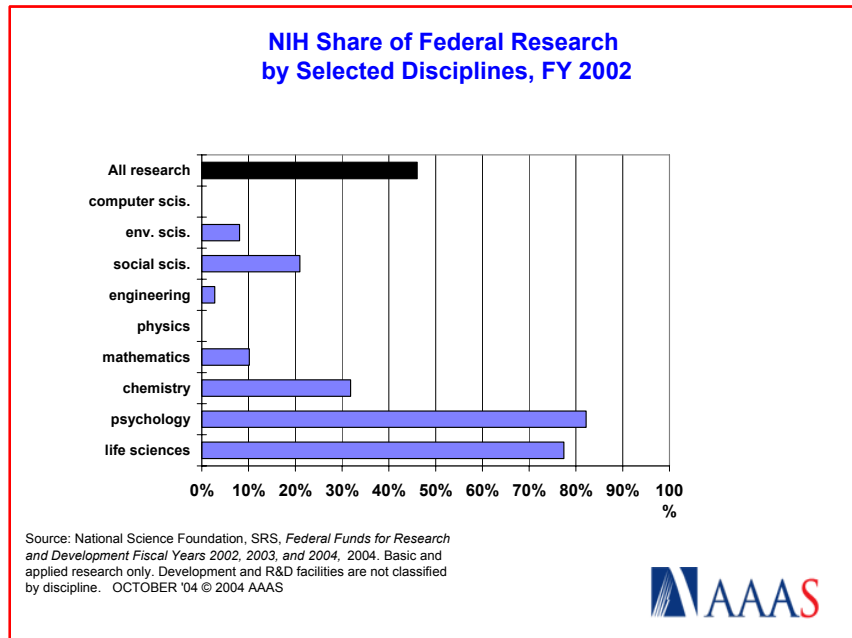


Figure 1.

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The NIH budget experienced unprecedented growth between FY 1998 and FY 2003, as the budget doubled from just over \$13 billion to nearly \$27 billion. During this doubling period, NIH received funding increases ranging from 14-16 percent annually and was able to significantly expand both basic and clinical research. However, there is concern that many Members of Congress see the completion of the doubling as a time to devote scarce resources to other agencies and provide inflationary future increases for the NIH, potentially impeding the agency's ability to take full advantage of the recent investments. Because NIH makes awards for 4 or 5 years, but Congress provides funding annually, there is concern that smaller-than-expected increases will cause a crisis that will result in reduced payments for the out-year commitments, and fewer new initiatives. The relatively small increases afforded the agency in FYs 2004 and 2005 and the 0.5 percent increase proposed by the President in FY 2006 are below projected levels of biomedical research and development inflation, and provide the NIH with significant administrative and managerial challenges.

The NIH receives broad support from both chambers of Congress, particularly from the chairmen and ranking members of the House and Senate Labor, Health and Human Services, Education and Related Agencies Appropriations subcommittees. This is evidenced by the additional funds that were added to NIH in final negotiations over FY 2005 appropriations. Additionally, although the NIH in recent years has received less-than-inflationary increases, much of the Public Health Service, and other non-defense, non-homeland security research programs have suffered programmatic decreases. However, despite the strong support for the NIH, the large budget deficit and continuing overseas military operations will hamper Congress' ability to provide more funds than the President has recommended for FY 2006.

FY 2006 FUNDING REQUEST

The FY 2006 budget request of \$28.7 billion for the NIH is an increase of \$146 million (0.5 percent) over FY 2005 (see Table II-9). Of this total, 97 percent, or \$27.9 billion is considered research and development (R&D). The \$141 million increase in R&D is also an increase of 0.5 percent. The NIH estimates that the increase in the Biomedical Research and Development Price Index for FY 2006 will be 3.2 percent.

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The NIH classifies 54.6 percent (\$15.2 billion) of its total R&D as basic research, an increase of \$125 million (0.8 percent), making NIH the largest federal supporter of basic research with 57.4 percent of the federal investment. NIH is also the largest federal supporter of applied research with \$12.6 billion, an increase of \$193 million (1.6 percent) over FY 2005, comprising 43.8 percent of the total federal investment. NIH does not classify any of its work as development (see Table II-1).

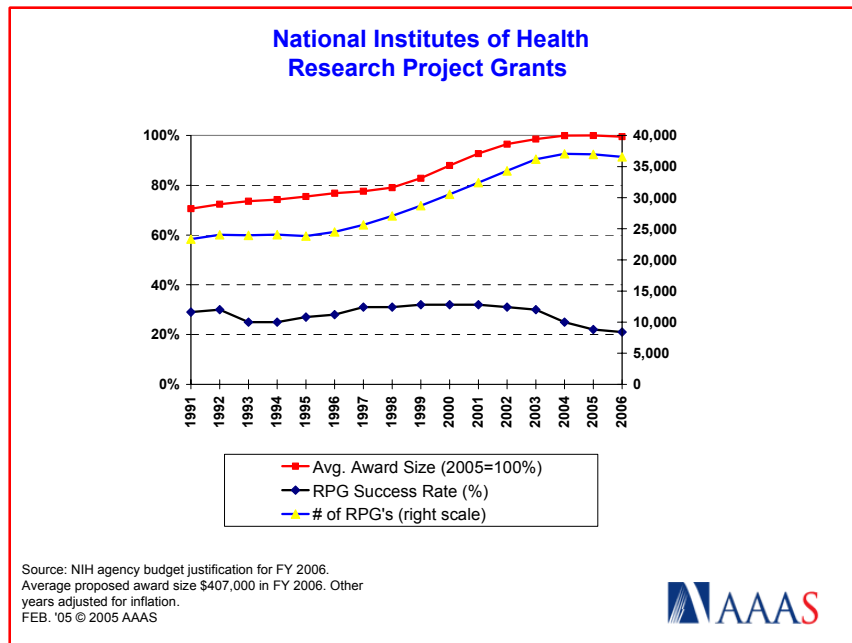


Figure 2.

The largest segment of the NIH budget is dedicated to research project grants (RPGs). In FY 2006, NIH proposes to allocate \$14.9 billion to RPGs, an increase of \$52 million (0.4 percent). This will support a total of 36,555 RPGs, 411 fewer than FY 2005. Within this total, the NIH proposes 9,463 new and competing awards, an increase of 247 (2.7 percent) over FY 2005, and 27,092 non-competing awards, 658 (2.4 percent) fewer than FY 2005. The NIH also plans to award 2,191 SBIR/STTR (Small Business Innovation Research and Small Business Technology Transfer) awards, at a cost of \$616 million (see Table II-10). NIH estimates that the FY 2006 budget request would result in a success rate of 21 percent, down from 22 percent in FY 2005 and 25 percent in

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FY 2004. During the doubling period (FYs 1999-2003), the NIH success rates hovered between 30 and 32 percent (see Figure 2).

The average cost of research project grants would be \$377,000; however, this figure is skewed due to the inclusion of a large cohort of AIDS clinical trials (102 trials at \$2.8 million per award), which are cycling from non-competing into competing status, and the large G-8 HIV vaccine awards (14 awards at \$2.4 million per award). When adjusted, the average cost for a competing research project grant is \$347,000. No inflationary increases are proposed for direct, recurring costs in non-competing awards; however, where NIH has committed to a programmatic increase in an award, such increases will be provided.

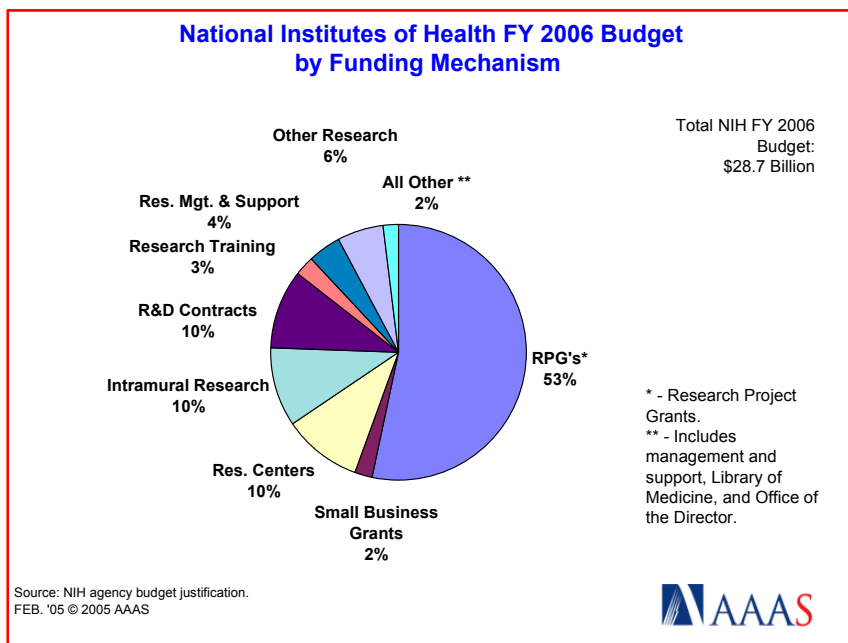


Figure 3.

The NIH also funds research through other mechanisms, such as research contracts, centers, and the NIH intramural program. Under the FY 2006 request, R&D contracts would increase \$130 million (4.9 percent). The majority of this increase is due to biodefense initiatives. Research Centers would receive an increase of \$62 million (2.3 percent), the majority of which would be devoted to increases in the NIH Roadmap, biodefense, AIDS and the Neuroscience Blueprint (see Figure 3).

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The NIH also supports a significant number of training awards to ensure that highly trained scientists will be available to conduct the nation's medical research needs. The Ruth L. Kirchstein National Research Service Awards provide up to \$45,000 for entry-level post-doctoral individuals. The FY 2006 budget would maintain stipend levels at the FY 2005 level, with the exception of a 4.0 percent increase for post-doctoral individuals with 1-2 years experience. Additionally, the request would provide an additional \$500 to individual post-docs to compensate for rising health insurance costs. These increases are financed by reducing the number of Full-Time Training Positions (FTTPs), in an attempt to adequately support post-docs and improve recruitment and retention rather than maximize the number of positions. The budget would support a total of 17,442 FTTPs, 397 fewer than in FY 2005.

The FY 2006 budget request would provide \$30 million through the National Institute of Allergy and Infectious Diseases (NIAID) to fund an additional Regional Biocontainment Laboratory to support extramural researchers within a region or metropolitan area, and to support the construction or renovation of up to 6 smaller laboratories to bring them up to Biosafety Level 3 standards. This is in addition to the \$82 million provided for general repairs and improvements for non-biodefense intramural facilities projects provided in the Buildings and Facilities account and \$8 million from the National Cancer Institute (NCI) for repairs and improvements to the NCI-Frederick campus. No funds are proposed for non-biodefense extramural construction.

FY 2006 PRIORITIES

A major focus of the FY 2006 budget request is the **NIH Roadmap for Medical Research**, the NIH Director's plan to target major opportunities and gaps in biomedical research that no single institute or center could tackle alone. In FY 2006, the NIH is proposing to spend \$333 million on the NIH Roadmap, an increase of \$98 million (41.7 percent) over FY 2005. Roadmap funds would be divided among the three core themes: \$169 million for New Pathways to Discovery, \$44 million for Multidisciplinary Teams of the Future, and \$120 million for Re-engineering the Clinical Research Enterprise. The total budget request includes \$83 million from the Office of the Director, and the individual institutes and centers would contribute the remaining \$250 million through a contribution of 0.9 percent of each IC's individual budget.

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The FY 2006 budget request includes \$1.8 billion for NIH **biodefense** efforts, an increase of \$456 million (3.2 percent). However, the budget request notes that when adjusted for one-time extramural facilities expenditures in FY 2005, biodefense research activities would increase by \$125 million (8.1 percent). This total includes \$1.7 billion in appropriated funds and \$97 million from the Public Health and Social Services Emergency Fund (PHSSEF). Of this \$97 million, \$47 million is slated for continued development of radiological and nuclear countermeasures and \$50 million for a new initiative to develop chemical threat countermeasures. The NIH's biodefense priorities in FY 2006 include clinical development of vaccines for plague, tularemia, Valley Fever, Ebola, botulism, and West Nile Virus; clinical development of anti-toxin/antibody treatment for anthrax; and preclinical development of drugs, vaccines, and diagnostics with a focus on therapies.

The NIH is also proposing \$26 million for the **Neuroscience Blueprint**, a framework to enhance the effectiveness of the agency's neuroscience agenda. Supported by 15 institutes and centers, the major initiatives proposed for the Neuroscience Blueprint in FY 2006 include \$2.0 million for the Neuromouse Project, \$2.5 million for cross-institute neuroscience training programs, and \$7.5 million for neuroscience core grants.

The FY 2006 NIH budget request includes a total of \$2.9 billion for **HIV/AIDS** related research, an increase of \$12 million (0.4 percent). The agency's highest priority in this area is development of an HIV/AIDS vaccine. Other components of the NIH HIV/AIDS agenda include HIV prevention research; development of microbicides; behavioral interventions; therapeutics to develop simpler, cheaper and less toxic drugs; international research; and research on the disproportionate impact of HIV/AIDS on racial and ethnic minorities.

OTHER HEALTH RESEARCH IN THE FEDERAL BUDGET

Although over 95 percent of the R&D funding at the Department of Health and Human Services (HHS) is conducted by the NIH, significant activity also occurs at other agencies within HHS, including the Agency for Healthcare Research and Quality, Centers for Disease Control and Prevention, Food and Drug Administration, Centers for Medicare and Medicaid Services, and the Health Resources and Services Administration (see Table II-8).

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DEPARTMENT OF VETERANS AFFAIRS (VA)

The Department of Veterans Affairs (VA) also has a large biomedical research program. VA's Medical and Prosthetics Research program funds R&D to improve health care for veterans and to stress research into injuries and illnesses specifically relevant to the veteran population. The VA research program is an intramural program and requires all grantees be VA employees. (This means VA principal investigators must hold at least a 5/8 appointment from the VA; many grantees also hold joint faculty appointments at affiliated universities and medical schools.) Unlike other federal research agencies, VA does not make grants to universities (although some may administer grants of jointly-appointed investigators), cities and states, or any other non-VA entity.

The FY 2006 budget would provide \$786 million for the VA research program, an increase of \$2 million (0.3 percent) over FY 2005 (see Table II-19). In FY 2006, VA has again proposed to combine funding for the direct costs of the research, with the indirect costs of research, which have traditionally been funded through the VA Medical Care appropriation.¹ This new budget structure, called the Research Business Line, is intended to better account for the full costs of conducting the research program. VA proposes that the total funding of \$786 million be equally divided between the direct and indirect cost pools, at \$393 million. VA estimates that the FY 2006 budget would provide for a total of 2,157 research grants, a decrease of 52 from the current year estimate.

Basic research would comprise \$315 million (40.1 percent) of the total VA R&D budget, the same level as FY 2005; applied research accounts for \$433 million (55.1 percent) of the total, an increase of \$3 million (0.7 percent); and \$38 million is devoted to development, a decrease of \$1 million. VA scientists are also successful in competing for, and leveraging, research support from other federal agencies (such as NIH), foundations and industry. In FY 2006, VA is estimating that VA investigators will increase the amount of grants received from other federal agencies by 6.0 percent and from other groups by 5.0 percent. When all these figures are combined, VA estimates its total research enterprise would be \$1.7 billion, an increase of \$49.2 million (3.1 percent) (see Table II-19).

¹ The indirect cost portion of the total VA research budget supports laboratory facilities, ancillary support services and physician/clinician salaries.