

National Institutes of Health in the FY 2002 Budget

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HIGHLIGHTS

- The National Institutes of Health (NIH) would receive \$23.1 billion for its total budget in FY 2002, an unprecedented dollar increase of \$2.8 billion (13.5 percent). NIH R&D would rise 13.6 percent to \$22.4 billion (see Table II-9). This would follow 14 to 15 percent increases in each of the last three years.
- Both the Bush Administration and Congress are committed to doubling the NIH budget in five years, and FY 2002 would be the fourth year of that effort. The President's budget projections show the NIH budget reaching the target of \$27.2 billion in FY 2003, roughly double the FY 1998 level of \$13.7 billion, and growing at the rate of inflation thereafter.
- Most NIH institutes and centers would receive increases between 11.5 and 12.5 percent in FY 2002.
- NIH funds more than half of all federal support for basic research. NIH basic research would total \$13.0 billion in FY 2002, an increase of 12.4 percent, or 56 percent of the total federal investment. NIH is also the largest funding source for applied research (see Table II-1).

INTRODUCTION AND POLITICAL ENVIRONMENT

The National Institutes of Health (NIH) is the second-largest supporter of R&D in the federal government, after the Department of Defense. In its

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mission to promote biomedical research and other fundamental inquiries that may lead to medical advances, it is by far the largest federal supporter of basic research, applied research, and R&D at colleges and universities, and has a disproportionate impact on support for the life sciences and related fields.

The FY 2002 budget request of \$23.1 billion for NIH would be a \$2.8 billion (or 13.5 percent) increase (see Table II-9). NIH classifies 97 percent of its budget as R&D. (The remainder is for overhead and research training.) Its FY 2002 R&D would total \$22.4 billion, a 13.6 percent increase.

The proposed increase would follow increases of nearly 15 percent in FY 1999, 2000, and 2001. These large increases were intended by Congress to be the first three installments of a plan to double the NIH budget between FY 1998 and 2003. Although President Clinton never embraced the plan and never requested the roughly 15 percent increases needed each year to achieve this goal, President Bush made finishing the doubling effort a campaign promise last year. In his first budget, President Bush would keep NIH on the doubling track, though the request would fall slightly short of a linear trajectory to the \$27.2 billion goal for FY 2003 and would necessitate a \$4.1 billion boost next year.

The outyear projections in the President's budget call for the larger \$4.1 billion boost in FY 2003 to achieve the \$27.2 billion doubling goal. The projections then call for NIH to grow at the expected rate of inflation of 2.1 percent from FY 2004 to FY 2006 (see Table I-15).

In response to the President's request, Congress will try to provide even more money to NIH. Although supporters of the doubling effort are pleased with the Bush request, they may seek a \$3.4 billion total boost for FY 2002 to \$23.8 billion, requiring a smaller increase in FY 2003 to finish the doubling effort.

Despite its funding successes, NIH is also in an awkward legislative situation because its research activities touch on several controversial areas. One area is stem cell research. Although stem cells can be derived from either embryos or from adults, so far the most promising source of stem cells for research purposes has involved extracting cells from

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human embryos that would normally be discarded by fertility clinics after fertility treatments. A coalition of mostly anti-abortion groups opposes the use of embryos in research while a coalition of disease-oriented patients groups strongly favors it. Although NIH is prohibited from funding any research that involves the destruction of a human embryo, during the Clinton Administration NIH formulated a policy that would prohibit NIH funding for the derivation of stem cells from human embryos (a process that results in the destruction of the embryo), but would permit NIH funding of embryonic stem cell (ESC) research if the extraction of stem cells were done with private funds under numerous strict conditions.

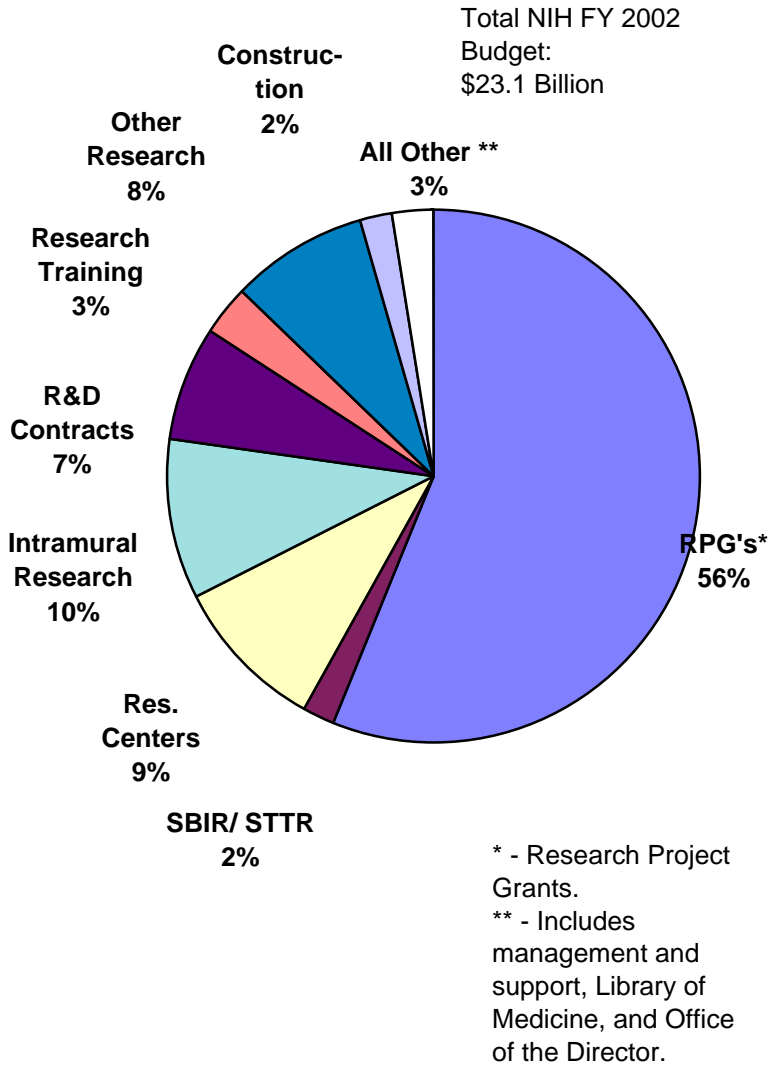
With these new guidelines established last year, NIH hoped to begin funding ESC research grants this spring, but days before a newly created NIH review panel was to review the first set of grant applications under these guidelines, new Department of Health and Human Services (HHS) Secretary Tommy Thompson canceled the meeting and postponed any further NIH action on ESC research until after the Administration could undertake a full review of the NIH policy. The review is expected to last until at least this summer. In response, Senators Arlen Specter (R-PA) and Tom Harkin (D-IA) reintroduced their bill from the last Congress authorizing NIH to fund ESC research; the bill's prospects are uncertain.

FUNDING REQUEST AND PRIORITIES

NIH's highest priority among its funding mechanisms in FY 2002 would be Research Project Grants (RPGs), which are investigator initiated, peer reviewed, and competitively awarded. (NIH funding by institute is found in Table II-9; its budget by funding mechanism is found in Table II-10 and in Figure 1.) RPGs, which make up the majority of NIH funding, would increase by 12.6 percent in FY 2002 to reach \$12.5 billion (see Figure 1). These funds would support an estimated 34,090 RPGs (see Figure 2), a record number, but within that total the number of new and competing grants would stay even at 9,158 because of a larger number of continuing grants. The success rate for grant applications would dip slightly to 30 percent from 31 percent in FY 2001 because of an expected increase in applications, but the successful would receive a 4.3 percent average increase in grant size to \$367,200 (see Figure 2).

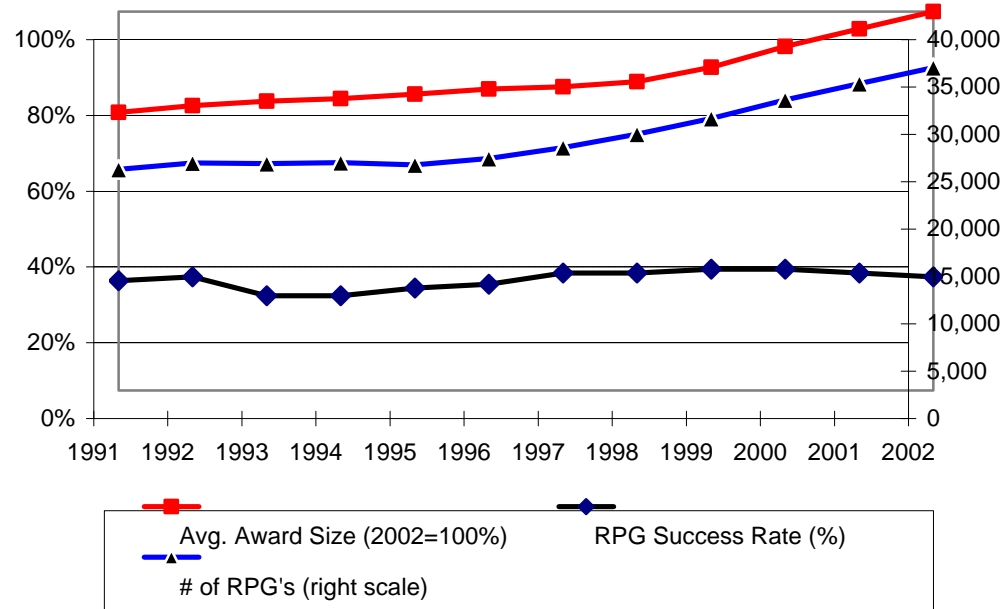
The FY 2002 budget proposes \$645 million for research training grants,

Figure 1.
National Institutes of Health FY 2002 Budget
by Funding Mechanism



Source: NIH agency budget justification.

**Figure 2. National Institutes of Health
Research Project Grants**



Source: NIH agency budget justification for FY 2002. Average proposed award size \$367,200 in FY 2002. Other years adjusted for inflation.

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9.1 percent above the FY 2001 level. The request would support 16,304 full-time training positions in FY 2002, 140 more than this year, and would allow most stipends to increase by 10 percent.

NIH distributes 84 percent of its budget to extramural performers; approximately 11 percent to intramural research, mostly at NIH's Bethesda, Maryland, campus; and the remaining 5 percent to management, administration costs, and intramural facilities. The majority of NIH's extramural support goes to colleges and universities; as a result, NIH is by far the largest federal supporter of R&D at colleges and universities with nearly two-thirds of the federal total. Because the federal government funds 58 percent of all R&D at colleges and universities, at most universities and colleges with medical schools NIH is the single largest funding source for R&D.

NIH classifies the majority of its budget as basic research, \$13.0 billion out of \$23.1 billion in FY 2002 (up 12.4 percent; see Table II-1). NIH is by far the largest federal supporter of basic research, and in FY 2002 would provide 56 percent of all federal support, a share that has been steadily increasing for decades. NIH is also the largest federal supporter of applied research, \$9.0 billion out of its \$23.1 billion budget in FY 2002 (40 percent of all federal support). NIH does not classify any of its work as development, and would fund \$407 million in R&D facilities and capital equipment in FY 2002, a boost of 75.5 percent that would establish the agency as the third-largest funding source for R&D facilities behind the National Aeronautics and Space Administration (NASA; \$2.9 billion) and the Department of Energy (DOE; \$1.1 billion).

The FY 2002 request identifies four high-priority themes that will receive extra attention and funding: genetic medicine, clinical research, infrastructure and enabling technologies, and eliminating health disparities.

In genetic medicine, NIH hopes to build upon the recent success of the Human Genome Project in sequencing the human genome by sequencing the genomes of a variety of other organisms, and then using sequencing data to identify the genes that are involved in human disease. This initiative will involve researchers funded by several NIH institutes, building on the work of the National Human Genome Research Institute (NHGRI), the lead agency in the Human Genome Project.

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Clinical research is the translation of basic research to improvements in human health. NIH would launch new clinical trials programs in FY 2002, including drug abuse prevention trials, AIDS vaccine trials, and programs to expand the training of clinical investigators.

The theme of infrastructure and enabling technologies aims to keep pace with new directions in biomedical research. Because of an increasing stream of data generated by biomedical research, computer sciences and mathematics have become increasingly important to NIH's mission. NIH hopes to advance the state of knowledge at the intersection of these fields with medicine through investments in the emerging fields of biocomputing and bioinformatics. Central to this effort is the new National Institute of Biomedical Imaging and Bioengineering (NIBIB), created late last year. NIBIB will develop new knowledge, create new technologies, and train researchers to fully integrate quantitative sciences with biomedical research. The NIBIB budget would increase dramatically from a starting budget of \$2 million in FY 2001 to \$40 million in FY 2002.

Within this theme, physical infrastructure would also receive a big boost. Extramural research facilities grants would increase from \$78 million this year to \$100 million in FY 2002, while intramural construction in the Buildings and Facilities (B&F) account would double to \$307 million in FY 2002. There would be three major projects within B&F: the John E. Porter Neuroscience Research Center, a new Animal Research Center (vivarium), and renovation of the existing Clinical Center after most of its laboratories are moved to a new Clinical Research Center in FY 2003.

Eliminating health disparities would be the fourth major theme in the NIH budget, led by the new National Center on Minority Health and Health Disparities (NCMHD) created late last year. The Center expands on programs on minority health formerly funded in the Office of the Director, and will focus on the health of racial and ethnic minority populations in the U.S. and also on disparities in the incidence and prevalence of disease among U.S. population groups. Its budget would jump 20 percent to \$158 million.

NIH'S INSTITUTES AND CENTERS

Most NIH institutes and centers would receive increases of between 11.5

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and 12.5 percent in the Bush budget request (see Table II-9). Among the exceptions is the National Center for Research Resources (NCRR; up 19.2 percent to \$974 million) because of the additional emphasis on extramural facilities (see above) and added funds for research instrumentation. Funding for the Office of the Director (OD) would jump 23.8 percent to \$232 million, primarily because funding for the Office of Research on Women's Health within OD would more than double to \$50 million to support new research initiatives and career development programs for women scientists. The National Institute on Drug Abuse (NIDA) would see its budget increase by 16.2 percent to \$907 million to expand its efforts to develop and test effective medications and therapies against drug abuse. The two new institutes (NIBIB and NCMHD) described above would also receive larger increases because of their lead role in two of the four high-priority themes and also because FY 2002 will be their first full year of operation as independent institutes.

OTHER HEALTH RESEARCH IN THE FEDERAL BUDGET

Although NIH is the dominant funding source for health-related research in the federal budget, other agencies in the Department of Health and Human Services (HHS) also fund health-related research and would see funding increases under the President's request (see Table II-8). Non-NIH R&D in HHS would total \$1.1 billion in FY 2002.

The Agency for Health Care Policy and Research (AHCPR) was renamed the Agency for Healthcare Research and Quality (AHRQ) last year. AHRQ would not receive an appropriation in FY 2002, but its R&D programs would continue to be funded through transfers from other HHS agencies at a level of \$255 million, up from \$226 million in FY 2001. AHRQ's programs evaluate the quality and delivery of health care services, finance research on health care outcomes, explore ethnic and racial health care disparities, and evaluate changes health care delivery.

The Centers for Disease Control and Prevention (CDC) would have \$568 million for R&D in FY 2002, an increase of \$51 million or 9.9 percent. CDC would continue its recent expansion of effort in bioterrorism research, and would increase funding for research on occupational safety and health, emerging infectious diseases, and food safety.