quest "some modifications" and ask clinicians using retroviral vectors to notify participants in their study of the leukemia found in this case and revise their consent forms to include this information. But he couldn't say when the trials might resume.

One panel member—Abbey Meyers, president of the National Organization for Rare Disorders—made a pitch for placing all retrovirus-based trials on hold because no one can judge the risks. But her message didn't carry as much emotional weight as another advocate's. A woman who identified herself only as a grandmother of a SCID child rose from the audience to ask that the trials continue. Her grandson, she said, has failed bone marrow transplantation four times and has been waiting 3 years to be enrolled in a trial, now on hold, at the National Institutes of Health. The FDA panel paid heed.

–ELIOT MARSHALL

NSF BUDGET

Panel Prescribes Study To Treat Growing Pains

Call it tough love. Last week a U.S. House spending panel approved a 13% increase for the National Science Foundation (NSF), putting it on course for a doubling of its budget in 5 years. But the committee, concerned that the agency might not be ready to handle such an infusion, asked an outside group of management experts to delve into how NSF does its business. The review is expected to question some well-worn practices at the 52-year-old agency, including borrowing many of its managers from academia.

The House Appropriations Committee approved a 2003 budget for NSF of $5.42 billion. That's $70 million more than its Senate counterpart approved in July (*Science*, 2 August, p. 755) and $394 million more than the Bush Administration requested for the new fiscal year, which began 1 October. Although Congress is currently mired in a budgetary morass, the similarity of the House and Senate numbers augurs well for NSF. "It's a historic time," says Director Rita Colwell about the congressional vote of confidence.

Within that overall boost, both NSF's research and its major facilities accounts would get 15% hikes, with the House adding $26 million to finish a high-altitude environmental research plane and $25 million for a neutrino experiment beneath the South Pole. Education programs would get only the requested 4% rise, although the panel took $40 million from the $200 million sought for math and science partnerships and distributed it among several smaller programs. The overall NSF number is very close to the 15% annual rate needed to double the agency's budget over 5 years, a cherished goal of community lobbyists.

With the agency about to march off in double time, legislators are asking the National Academy of Public Administration (NAPA) to see if NSF is ready for the journey. "We're not criticizing them, but we want to be sure they can handle the growth," says one congressional aide. Looking at recent budgets, legislators wonder if NSF has gorged itself on top-down cross-disciplinary initiatives in information technology, nanotechnology, and biocomplexity while starving individual fields, in particular physics, chemistry, and astronomy. Those disparities, says a report accompanying the spending bill, could undermine a time-tested precept that "the choice of research priorities and individual projects should flow principally from practicing scientists ... through external peer review." Notes another aide, "A lot of NSF's budget is broken down into tiny pieces, with the chunks carved up at the top. Is that the best way to stay at the cutting edge of science?"

The report language also expresses concern about NSF's extensive use of scientists borrowed for a few years from somewhere else, usually a university, to fill positions at all levels. NSF officials believe strongly that such rotators, who make up almost 40% of NSF's 600-person scientific work force, represent new blood and also spread the word about NSF after returning to their home institutions. But the result might also be staff members "who have less experience and could have split loyalties between their federal roles and past or future employers," says the report. Legislators are especially concerned about the prevalence of rotators at the top: The heads of five of NSF's seven research directorates are currently on temporary assignments. (There's a search on for a sixth chief.)

Colwell says NSF "welcomes the attention" from NAPA or any other group asked to look at its management acumen, although she insists that the agency "is already seen as a model organization" within the federal government. And she strongly defends NSF's personnel practices. "It's a constant renewal of ideas and views," she says about the use of rotators, who typically stay for 2 to 4 years. The NAPA study, which can't start until after NSF's 2003 budget is approved, is expected to take a year or so.

–JEFFREY MERVIS

CREDIT: (LEFT) SAM KITTNER

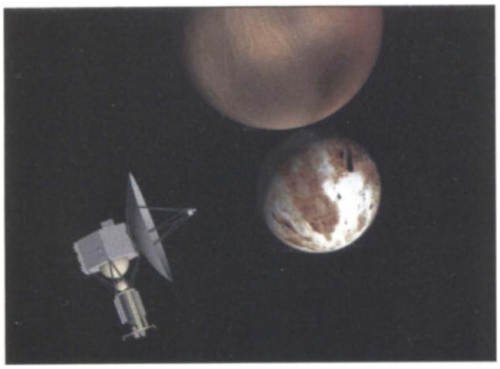
Management model. NSF's Rita Colwell "welcomes" review of agency practices.

NASA BUDGET

Plans for Pluto and Hubble Gain in Congress

Pluto was the Roman god of the dead, but a $488 million mission to his planetary namesake is very much alive. Last week, a U.S. House spending panel brushed aside objections by the Bush Administration and agreed to a Senate plan to continue funding the effort. The decision, coupled with a National Research Council report this summer that backs exploration of Pluto and the nearby Kuiper belt, virtually ensures that the controversial mission will move forward.

Pluto's kiss of life came from the House Appropriations Committee, which voted to boost NASA's 2003 budget by $400 million over this year's $14.9 billion. That's $300 million more than the Administration requested, although most of that will go to projects requested by individual legislators. Within science programs, the bill increases funding to explore Mars, asks NASA to consider extending the life of the Hubble



Back from the dead. A NASA mission to Pluto, shown arriving in 2015, got a boost last week from Congress.

Space Telescope, and chides the agency for backing away from materials science research on the space station.

The Pluto mission has been unpopular with both the Clinton and Bush administrations, which would prefer that NASA work on advanced propulsion systems that might eventually provide a faster trip to Pluto and the Kuiper belt. But Senator Barbara Mikulski (D–MD) has fought hard to restore funding, and last week the House panel matched the $105 million approved for Pluto by a Senate panel in late July (*Science*, 2 August, p. 755) for the 2003 fiscal year that began on 1 October. There's another $15 million for it as part of a new series of low-cost missions, leaving the project just $2 million shy of the amount supporters say is needed to keep it on track for a 2006 launch. Although Congress has fallen far behind in passing spending bills for the new year, the similar funding levels in both houses for the Pluto mission virtually ensures its continuation.

A 2006 launch would deliver the spacecraft to Pluto by 2015 and to the Kuiper belt by 2026. The date was picked to stay ahead of a projected freezing of the planet's thin atmosphere as it moves away from the sun, although last week astronomers reported new data suggesting that Pluto's atmosphere in fact might be warming rather than cooling. Administration officials say privately that a 2006 launch might be impossible because the spacecraft's nuclear-electric power system requires a complex approval process and a new launch vehicle might not be ready. But project manager Tom Coughlin of the Johns Hopkins University Applied Physics Laboratory in Laurel, Maryland, insists that neither problem is a showstopper.

The House panel also provided a $20 million boost to NASA's Mars exploration program to cover rising costs in planned robotic and orbiter missions. It also urged NASA to ignore the advice of a recent controversial report that ranked some materials science as a low priority aboard the space station. At the same time, lawmakers decided that equipment shortages on the orbiting base preclude a proposed $11 million biology project called Generations.

As for the Hubble, the committee told NASA to study an extension beyond 2010, when the instrument was scheduled to return to Earth aboard the space shuttle. Committee members fear that delays in launching the newly named James Webb Space Telescope could leave astronomers with a viewing gap. The new scheme would require an additional Hubble servicing mission in 2007.

–ANDREW LAWLER

BIOLOGICAL AND CHEMICAL WARFARE

Secret Weapons Tests' Details Revealed

Documents released last week by the Pentagon about secret biological and chemical weapons tests have fueled the anger of veterans who say they were used as unwitting guinea pigs. But biological and chemical arms experts say that there are no major revelations in the documents—although they do illustrate the vast scope of the U.S. chemical and biological warfare program at the height of the Cold War.

The information was released as the Pentagon tries to document a series of 134 chemical and biological warfare studies that were planned in the 1960s. The tests came to light as the result of pressure from worried veterans—some of whom blame health problems on exposure to test agents—and members of Congress. Many of the trials were never carried out, but at least 46 trials took place, acknowledged William Winkenwerder, assistant secretary of defense for health affairs, last week at a press briefing. The newly released material pertains to 27 of them. The Department of Defense intends to produce and post online detailed fact sheets about all of the tests by next spring (deploymentlink.osd.mil).

Guinea pigs aboard. The U.S.S. *Power* was sprayed in 1965 with stand-ins for biowarfare agents.

CREDITS: (TOP TO BOTTOM) GSFC/NASA; NAVSOURCE ARCHIVES

ScienceScope

Budget-Delay Jitters Supporters of the National Institutes of Health (NIH) are worried that new programs could be crippled if legislators don't pass the agency's 2003 budget soon.

Congress did not complete most appropriations bills before the fiscal year ended 30 September, instead approving a series of temporary resolutions to fund agencies at 2002 levels. NIH can stay on track if its budget—slated to complete a 5-year doubling to $27.2 billion—is adopted by mid-December, NIH Director Elias Zerhouni told a House appropriations panel last week. But further delay would force NIH to scale back grants, put off construction projects, and "greatly interfere with" $1.7 billion in new bioterrorism research and vaccine development, Zerhouni said. A delay until March—one worst case scenario—could shrink the number of new grants from about 9850 to 6800, according to some research advocates.

Academic Fusion Two of Britain's top universities have announced their engagement. Imperial College London and University College London (UCL) plan to merge into a single university, officials said this week.

Joining forces is the only way to compete in the knowledge economy, says Richard Sykes, the rector of Imperial, who is acting as marriage broker. Before coming to Imperial last year, Sykes was chief executive of Glaxo Wellcome, masterminding the 2000 megamerger of GlaxoSmithKline, now the world's largest pharmaceutical company (*Science*, 16 November 2001, p. 1443). The name of the new university has yet to be decided, and the British Parliament must approve the fusion, "but we'll start sharing resources by December," says Sykes.

Derek Roberts, provost of UCL, says the two institutions complement one another. For example, the 176-year-old UCL has a law school but no business school, whereas the 95-year-old Imperial trains executives but not lawyers. First up is a joint fundraising campaign to boost their combined $12 million endowment.

Schön Papers Pulled Jan Hendrik Schön, the Bell Labs physicist tagged for faking data (*Science*, 4 October, p. 30), and his coauthors earlier this week agreed to retract 16 papers faulted by an inquiry. European officials, meanwhile, have launched two new inquiries. Officials at the University of Konstanz are reexamining Schön's doctoral work. And the DFG, Germany's primary science funding agency, is studying whether grant money given to Schön while at Bell Labs was used to promote fraudulent data. Schön could not be reached for comment.