

U.S. BUDGET

Democratic Congress Begins to Put Its Stamp on Science

Six months into their rule on Capitol Hill, the Democrats have begun to make their mark on science policy. Many of their moves have underscored differences with the White House, including efforts to overturn the ban on federal funding for work on new embryonic stem lines, prominent accusations that the Bush Administration has politicized science advice, and proposals to increase and reshape funding for climate change research (see sidebar below). But as far as the Administration's most prominent science initiative is concerned, the new Congress has so far been more than supportive, at least in loosening the purse strings: It is poised to top the president's generous requests for the multiagency American Competitiveness Initiative (ACI), which is aimed at sharply increasing funds for the physical sciences.

It's unclear how the hyperpartisan atmosphere might affect Democratic budget aims, but the ambitious spending plans are helping balloon domestic spending bills. That's attracted White House threats of the veto pen. And looming over the whole process are yet-to-be-written defense bills, which could be the big spoiler if war-related funding requires some across-the-board cuts later in the year.

In the past few weeks, House committees have approved most of the appropriations bills that contain funds for science, and a picture has started to emerge of how science policy is shaping up in the new Congress. Some highlights, agency by agency, of the action thus far:

National Institutes of Health (NIH): There's not much relief in sight for NIH. An appropriations bill passed by a House panel and a companion measure approved by the Senate spend-

Global AIDS Fund, effectively cutting the Senate raise to only 2.8%. Still, even that meager increase would push the bill's total above the limit the White House has indicated would be acceptable. A provision that would permit federal funding for recently developed stem cell lines (see p. 1825) would further encourage a Bush veto. Congressional action "is only half the battle," says Jon Retzlaff of the Federation of American Societies for Experimental Biology in Bethesda, Maryland.

NASA: The House appropriations committee has given a thumbs-up to the president's \$3.9 billion exploration effort, to be run by NASA, but the committee also made clear that the agency's stressed science programs must thrive as well. Lawmakers added

\$60 million for data, research, and analysis in 2008, a slap at the agency's attempts to hold down such spending in order to pay for science project overruns and a new launcher. The House bill also directs NASA to ask the National Research Council to conduct a study of life and microgravity sciences, two areas the agency has virtually abandoned in recent years. The boosts in science, however, would come largely by deducting funds from NASA's tracking and data-relay satellite system, used to communicate with both military

Budget Highlights

- **Biomedical Research**

Both House and Senate are expected to provide a small increase over 2007, but not enough to keep pace with biomedical inflation.

- **American Competitiveness Initiative**

Congress is likely to add to the president's request for physical science research. House bills would give DOE's Office of Science a 16% increase and NSF's education programs more than requested.

- **Climate Change Research**

House bills include significant increases for research and \$50 million for a new commission that would bankroll new studies.



ing panel would both give NIH a small raise, reversing the president's proposed \$279 million cut. The Senate boost of \$1 billion, for example, would provide a 3.5% increase—only half the amount biomedical research advocates are hoping for. That would bring NIH's total budget to \$29.9 billion, \$250 million more than the House has approved.

Even the Senate total is less than meets the eye, however. Both the House and Senate measures would add \$200 million to the \$100 million that NIH now transfers to the

NEW PRIORITIES FOR CLIMATE CHANGE RESEARCH

When Democrats gained control of the U.S. Congress, they made climate change one of their top priorities. But they quickly realized that putting into law caps on greenhouse gas emissions could take years of political wrangling—and possibly a new president. So while proposals for emissions controls have captured headlines (*Science*, 11 May, p. 813), key legislators have quietly focused on a more immediate goal: reordering priorities in climate change research to reflect the most pressing questions.

Budget bills now working their way through Congress (see accompanying story) include more than half a billion dollars for new applied energy research, a novel \$50 million climate research commission that would address regional impacts, and some \$17 million to spread the message on climate change through education and public outreach. Climate change research has sufficiently quantified anthropogenic warming, say Democratic aides. These new initiatives focus on "the causes, the impacts, and solutions," as a spokesperson for House Majority Leader Steny Hoyer (D-MD) describes them.

Some Democratic proposals have followed explicit calls—even requests for hardware—from the science community. Earth science researchers were

dismayed when a Pentagon review stripped climate sensors from an \$11.5 billion weather satellite system last year (*Science*, 16 June 2006, p. 1580), but Congress did little more than investigate. This year, a draft spending bill would set aside \$24.9 million for NASA and the National Oceanic and Atmospheric Administration to begin to develop two of the canceled sensors—both crucial for measuring Earth's heat balance—to bolt onto the crafts later if possible. The same bill calls for \$60 million to start developing a series of earth science missions at NASA in the precise order recommended last year by a National Academies panel that looked at needs and priorities for Earth observation over the next decade. The proposed educational funds also loosely follow that panel's recommendation to "improve scientific literacy" about Earth's climate.

Elsewhere, Democrats have set out on their own. Representative Norman Dicks (D-WA), chair of the Interior appropriations subcommittee, held a hearing in April on potential climate change impacts on everything from drought in the Great Basin in the western United States to insect populations that could ravage American forests. His subcommittee subsequently approved \$94 million for new climate research at environmental agencies and endorsed Dicks's proposal for a climate commission that one aide describes as "out of the box." Chaired by the president of the National Academy of Sciences, it would

and civilian satellites—a cut certain to be opposed by the Administration. Senate appropriators have yet to act.

National Science Foundation (NSF): House appropriators have added \$80 million to the president's request for NSF, for a total budget increase of 10%, to \$6.51 billion. Nearly all the money the House added would supplement NSF's \$750 million education directorate. Legislators were especially kind to the agency's fledgling effort to help undergraduates who want to become math and science teachers, adding \$36 million to the \$10 million Robert Noyce Scholarship program. The most controversial element of the House approach is a \$10 million program to support so-called transformative research. The chair of NSF's oversight board, Steven Beering, says such a program "would be wonderful." But foundation officials oppose a new program to do what they say NSF is already doing—funding the most innovative research—citing as proof the large number of NSF-supported U.S. Nobel laureates.

Department of Energy (DOE): Science lobbyists are ecstatic over bipartisan generosity toward the physical sciences, ACI's focus. The House has basically matched the Administration's \$4.4 billion increase for DOE's Office of Science, the government's biggest patron of the physical sciences, with some extra funds for earmarks and climate studies. That would amount to a 16% boost. American Physical Society lobbyist Michael Lubell says he "thought we had a big problem last fall" after the Democratic triumph

because of what he calls "Democratic tendencies" to support industrial, near-term research. But he calls the Democrats' performance thus far "very pleasing."

Environmental Protection Agency (EPA) and National Oceanic and Atmospheric Administration (NOAA): The House and Senate spending committee bills are \$300 million apart in their plans for the Environmental Protection Agency, although the gap is narrower in the research account. The House would appropriate \$8.1 billion for EPA, a 4.7% increase over last year, and boost the agency's spending on science and technology by \$55 million to \$788 million. The majority of the increase for science would go to a new climate change commission (see below). In addition, clean-air research would rise by an unprecedented 21%, to \$114 million. Details on the Senate plan weren't available by press time, but the total for science and technology would rise to \$773 million.

The House, which normally cuts the president's funding request for NOAA, would instead increase it by \$190 million to just above \$4 billion. The Office of Oceanic and Atmospheric Research is slated for \$415 million, an increase of \$52 million over last year. Of that amount, \$20 million would go to competitive grants in climate research. "I haven't seen anything that big recently," says Peter Hill of the Consortium for Oceanographic Research & Education in Washington, D.C. Hill expects the Senate will drop in some earmarks, perhaps bumping up the agency to \$4.3 billion.

—ELI KINTISCH

With reporting by Jocelyn Kaiser, Andrew Lawler, Jeffrey Mervis, and Erik Stokstad.

Greening of Congress. House Majority Leader Steny Hoyer touts Democrats' policies.

disburse \$50 million over 2 years through the Environmental Protection Agency for underfunded research areas with an emphasis on regional impacts and adaptation (\$5 million would go to administration). Similarly, last week the House passed \$20 million in new funding for improved computer models.

Some of these efforts are likely to run into opposition on the floor of the House and in the Senate. The senior Republican on the House Appropriations Committee, Jerry Lewis (R-CA), for example, has opposed Dicks's commission, calling instead for "an in-depth review of the basic science" of climate change. Also displeased with the moves is presidential science adviser John Marburger, who says the government is already addressing the key questions and its "strong prioritization process" is fine as is.

—ELI KINTISCH



Earth to NASA

NASA is eyeing the moon and beyond, but Congress wants to bring the agency back to Earth—or at least Earth's orbit. Under pressure from lawmakers, the space agency released a report this week on how it intends to use the international space station as a U.S. national laboratory. In the past few years, NASA has slashed the station's research funding, and the study emphasizes pulling in more terrestrial agencies—such as the National Institutes of Health and the Pentagon—as well as private companies to conduct the bulk of research on the station. NASA, naturally mindful of its budget, wants to make sure outsiders fund their own station research. Lawmakers reacted cautiously to the report, with House Science and Technology Committee Chair Bart Gordon (D-TN) calling for a "meaningful return on our [space station] investment."

—ANDREW LAWLER

Issues With Tissues

To the relief of universities, a U.S. appeals court has found that tissue samples belong to a researcher's institution, not to the investigator himself or the patients who donated them. *Washington University (WU) v. Catalona* arose when about 6000 prostate cancer patients asked WU School of Medicine to let WU urologist William Catalona take their blood and tissue samples with him when he moved to Northwestern University in Illinois. After WU sued to challenge the samples' transfer, a U.S. district court ruled in WU's favor last year (*Science*, 21 April 2006, p. 346). Last week, the 8th U.S. Circuit Court of Appeals upheld that ruling. WU had not distributed the tissue samples while the case was on appeal, but the school will now consider proposals from researchers to use them. Catalona is mulling an appeal to the Supreme Court.

—JOCELYN KAISER

The Color Green Unites Them

The Swiss agbiotech giant Syngenta will collaborate with the Institute of Genetics and Developmental Biology of the Chinese Academy of Sciences to identify and develop new traits such as drought tolerance, the company announced on Monday. Financial details of this 5-year agreement were not disclosed. China has approved more than a dozen genetically modified plants, such as rice and soybean, for commercialization or field trials since 1997 and designated modified crop development a "major engineering project" in its science and technology plan for 2006 to 2020.

—HAO XIN

New Priorities for Climate Change Research

Eli Kintisch

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