

structure on an as-needed basis, with minimal public investment. The problem is that both statesmanship and a lot of clever politicking will be needed to pull it off. NASA will have to become as much a coordinator as a builder, spinning off major pieces of the space station to international partners; it has rarely had to do such a thing in the past. Successive administrations will have to master the delicate interplay between government and private sector investment; that particular subject has been buffeted in the ideological winds for generations.

And NASA will probably have to justify once again why it needs to bother with building "infrastructure" at all. It is a

legitimate question: if the private sector enthusiasm is so high, why not just let private investors build the pieces as needed—and as they become profitable?

These questions should begin to take on some urgency by late next year, when NASA's fiscal year 1987 budget request for the space station will approach \$1 billion. Some critics, such as the authors of the OTA's upcoming space station study, are not too sure that the agency will rise to the occasion. They worry that NASA's space station is mostly the product of agency officials' bureaucratic concern for keeping their own engineers and research centers busy, plus a corporate culture that still sees space as

NASA's sole preserve and that is obsessed with thinking big.

NASA, however, maintains that a permanently manned space station, while absolutely necessary for large-scale industrial and scientific research in space, is far too expensive and financially risky for private investors; the government has a long tradition of taking the lead in this kind of project. Top agency officials also say they are eager to cooperate with private industry in space. "We're trying to leverage our money," says Evans. "If we could let the private sector do the more mundane things, it would free up our limited funds to do the cutting edge things."—**M. MITCHELL WALDROP**

Congress Drafts Generous Biomedical Budgets

Although Senate approval is still pending, Congress is expected to boost NIH and other agencies by more than 10 percent

Congress is close to approving a budget increase of at least 10 percent for biomedical research in fiscal year (FY) 1985. The Administration had requested virtually no increase, partly on the assumption that Congress would follow its usual practice of boosting whatever was requested, but the final totals are likely to be well above what the Administration anticipated. The expected increases would permit a sharp rise in the number of new grants that could be funded.

The funds are included in the appropriations bill for the Department of Health and Human Services (HHS), which was approved by the House on 1 August. The Senate is expected to approve a broadly similar bill when it reconvenes in September. However, several important differences between the two bills will have to be reconciled before Congress departs for the election, and there is also an outside chance that President Reagan will veto the bill. Nevertheless, the chances for passage are considered good.

The biggest difference between the House and Senate appropriations bills arises from the House's refusal to allot money for unauthorized programs. Although both the Senate and House have passed bills that would reauthorize many National Institutes of Health (NIH) programs, disagreements over how to deal with fetal research and other bioethical questions, and whether to establish arthritis and nursing institutes are holding up final passage. Observers say there is

less than a 50–50 chance of a bill being enacted this year.

The House did not include any funds for unauthorized programs in its version of the NIH appropriation, making it look at first glance vastly different from the Senate version. However, once the unauthorized component is taken away from the Senate's total for NIH, the two are very close. The House calls for a total of \$4.834 billion, while the Senate is slightly higher at \$4.932 billion. Both figures are considerably higher than the comparable FY 1984 appropriation of \$4.301 billion or the \$4.395 billion recommended in the President's budget request for NIH.

The biggest chunk of unauthorized funds in the Senate bill, but omitted from the House version, is for training grants, amounting to more than \$220 million (see box). The House also has not allocated money for the National Cancer Institute's cancer control and construction programs or for the National Library of Medicine's grants and contracts program—altogether nearly \$100 million. If Congress fails to pass an NIH reauthorization bill, these programs will be funded at current (lower) levels under a continuing resolution.

Both the House and Senate bills seek to bolster NIH support for extramural research. The Senate version shows greater largesse, recommending an additional \$240 million over the President's budget to fund approximately 6850 new and competing grants. The House also

recommends an increase, of \$151 million, to allow for a total of 6200 new grants—1200 more than the Administration calls for. The recommended increases would enable about 40 percent of proposals that receive high ratings from peer review committees to be funded, according to an NIH official. The current rate is about 30 percent.

Several items in the appropriations bill represent unsettled, potentially contentious issues. The House report and the Senate version of the bill carry strong language about restoring most of the 588 full-time job slots at NIH that the Administration has recommended cutting.

NIH officials have said that the cutbacks could hurt intramural research programs, especially if they affect post-doctoral fellows, foreign visitors, and summer students. Congress has provided money to prevent this from happening, but the Administration contends that it, rather than Congress, has the prerogative to set personnel levels. HHS officials recently sent a strongly worded letter to senators on the Appropriations Committee, objecting to "unnecessary constraints on personnel management" in the Senate bill. The HHS officials called portions of the bill "an inappropriate intrusion into the responsibility of the Secretary [Margaret Heckler] to manage the Department. . . ."

A similar situation has come up for the Alcohol, Drug Abuse, and Mental Health Administration, with Congress

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seeking to restore job slots—by restoring funds—that the Administration wants to eliminate (*Science*, 13 July, p. 148). How these disagreements are resolved will

depend on whether Congress insists on retaining job slots by actually writing them into the bill it enacts rather than recommending them in the accompanying reports.

NIH Seeks Training Grant Increase

A top-level committee of the National Institutes of Health (NIH) has recommended substantial increases in stipends paid to junior scientists and graduate students from NIH training grants. The committee, which was established by NIH director James B. Wyngaarden and chaired by Claude Lenfant, director of the National Heart, Lung and Blood Institute, argues that NIH training grant stipends are significantly smaller than those offered by other agencies and that increases are needed to attract bright people into biomedical research careers. The committee report, which is still in draft form, indicates that NIH would need at least \$35 million more than is in the President's budget request for 1985 in order to raise stipends to the recommended levels.

Such an increase requires congressional approval, however, and that could be a problem. The Senate Appropriations Committee already has essentially incorporated the committee's recommendations into a bill it passed in June, and which is likely to pass the full Senate in September. But the House, which passed its version of the bill on 1 August, has refused to allocate new funds for training. Representative William Natcher (D-Ky.), who chairs the House appropriations subcommittee on labor, health, and human services, maintains that separate legislation reauthorizing the training program is needed before increases can be approved. If the House prevails, the training grant program will be funded at its present level of \$166 million instead of the \$222 million recommended by the Senate, which would increase the program more than the Lenfant report calls for.

The Lenfant report's recommendations would increase predoctoral annual stipends from the current level of just under \$5300 to \$6550. This is still well below the \$8100 that National Science Foundation predoctoral fellows now receive, but it is \$1000 more than was recommended in President Reagan's budget for 1985.

More substantial changes are recommended for postdoctoral stipends, because "recruitment of M.D. trainees is a problem," the report notes. Current NIH stipends are "significantly lower than both the stipends offered by the Department of Defense and salaries paid to house staff with comparable experience." To narrow that gap, the report recommends that the biggest boost be for postdocs who are beginning their third year of training. Their stipends would be about \$22,000, some \$6000 above current levels. (In practice, many M.D.'s would start at this new level because of time already spent in clinical training.)

The initial 2-year training period actually spent doing research is coming to be regarded as crucial for predicting long-term success in research, according to Wyngaarden. Thus, NIH is revising guidelines for its training programs to encourage all postdoctoral trainees to commit themselves to a minimum of 2 years of research, and clinical fellows to devote at least 80 percent of their time to research, Wyngaarden says. "There will also be guidelines to stress a stronger basic science component of such training."

Wyngaarden says that some of these changes are aimed at attracting more M.D.'s into biomedical research. "We don't want to slight the Ph.D.'s," he is quick to add. "But there's also a talented pool of medical students, and we are not getting a fair share of it into biomedical research."

Until Congress acts, NIH's hands are tied in taking these steps to attract young people into biomedical research. However, NIH has recently acted to increase career development awards to support scientists who have already established their research credentials. These awards, which come out of research funds, will be increased to \$40,000 from the current level of \$30,000. Congressional approval is not required for the increases. —J.L.F.

Although neither the House nor the Senate version of the NIH appropriations bill spells out exactly how much additional money must be spent on AIDS research, both suggest that Congress will be generous once it receives some revised recommendations from NIH. Several different sets of figures currently are being bandied about because additional money for AIDS still may be designated for FY 1984.

The President's budget earmarked \$54 million for AIDS research—divided among several agencies in addition to NIH—for FY 1985. Recently, Assistant Secretary of Health and Human Services, Edward N. Brandt, Jr., recommended that this figure be increased by nearly \$36 million, with NIH to receive half the increase. However, Brandt's recommendations have not been acted upon by the Administration. Congress, meanwhile, has asked NIH to report by 1 September how much of the proposed increases in its budget should be devoted to AIDS research.

Several other agencies also may receive increases for conducting research on AIDS. For example, the House has approved \$3.35 million over the Administration's budget request of \$12 million for AIDS programs at the Centers for Disease Control (CDC), but the Senate merely has asked HHS to request additional funds, if needed. However, the Senate also recommends that CDC assign 58 additional full-time staff to work on AIDS, bringing its total to 138. Brandt's unapproved recommendation calls for an additional \$11 million for CDC's research on AIDS next year.

Both versions of the appropriations bill also offer substantial increases to the National Institute of Mental Health (NIMH). The two versions are very similar, calling for allotments of about \$196 million for NIMH research programs, which is about 10 percent more than the President's budget request. Both versions also call for funding at least 340 new grants next year, which is an increase of 64 over current levels.

The overall picture for biomedical research now looks considerably improved. "Congress has been generous," notes one NIH official, "but only by comparison to the paucity of the Administration's budget recommendations. [NIH] is the only research agency where the Administration requested increases that were less than inflation. Congress apparently felt compelled to increase the budget significantly to make up the deficiencies and to provide 'comparability' with other R&D agencies."

—JEFFREY L. FOX