

Gramm-Rudman-Hollings reductions and an additional budget cut (a rescission) being requested by the administration.

"Ouch!" was the initial reaction of Thomas J. Kennedy, a physician and analyst with the Association of American Medical Colleges in Washington, D.C., when asked about the proposed budget cut. He notes that the 6,100 grants available to researchers outside of NIH, known as "competing grants," would be reduced to 5,104 in FY '87. "That's a lot of good investigators out of business," he says. FASEB agrees. In an official statement, the 28,000-member association of mainly university researchers says: "The NIH budget as it stands is unacceptable."

Funding for AIDS, designated HHS's highest public-health priority, would increase \$20 million in FY '87, to \$213 million, the new budget documents say. However, that's assuming that both the Gramm-Rudman-Hollings cut of \$10 million and administration rescission of another \$41 million go through for FY '86. If not, the proposed FY '87 figure would actually represent a drop in AIDS funding of \$31 million.

Social science increases of 5 percent at NSF would restore funding that would be lost in the 4.3 percent across-the-board Gramm-Rudman-Hollings cuts due to occur on March 1, 1986. The agency's behavioral science funding would climb 7 percent, and biological programs about 9 percent.

Energy and environment: Major reductions would occur in most established nondefense R&D areas within the Energy Department. For example, support for magnetic fusion research would fall 8.9 percent, nuclear energy 11.8 per-

cent, solar and renewable-energy research 47.1 percent, fossil-fuel programs 56.2 percent and energy conservation 58.3 percent. Funding for the Environmental Protection Agency's acid rain program would increase 13 percent (to \$55 million) under the new budget, and support for its radon studies would climb 65 percent (to \$6.6 million). At the same time, engineering programs to evaluate pollution-control technologies would suffer an \$11 million (19 percent) drop. And EPA would extract further savings by shutting down several small research labs.

Other major budget proposals include:

- a request of \$4 million for NSF to develop new Minority Centers of Excellence – a program aimed at increasing the participation of minorities in science and engineering

- a 23 percent (\$106.5 million) increase in NSF support for biotechnology research, in part to fund the creation of two multidisciplinary research centers and 10 to 15 mini-centers

- a 47 percent increase in NSF funding for computational science, a program that encourages scientists in all disciplines to make greater and better use of computers

- renewed plans to try to eliminate the Commerce Department's Sea Grant program, and its fire-research and building-science research at NBS

- a nearly 24 percent drop in the Department of Transportation's R&D budget, attributable mainly to reductions in just one project – a long-range program to largely automate the civilian air-traffic control system.

– J. Raloff with J. Silberman

New directions in AIDS transmission

For now, stemming the spread of the AIDS virus relies on understanding who gets infected and how. Recent reports on the mode of transmission are alternately:

- disturbing – the first known instance of a mother infected by her child
- reassuring – a confirmation of previous work showing that casual contact with AIDS patients is not a risk
- curious – a possible link between clitoridectomy and heterosexual transmission in Africa.

In the child-to-mother transmission, the boy was born with a digestive disorder that required numerous medical procedures, including a blood transfusion (done before the AIDS blood screen was available) that exposed him to the virus. The mother, a former paramedic, performed some of the procedures.

Blood samples from both mother and son have repeatedly shown the presence of AIDS antibodies, though virus cultures on both have come up negative. Neither shows overt signs of the syndrome.

Since the mother did not recall ever having stuck herself with a needle, the researchers at the Centers for Disease Control (CDC) who describe the case in the Feb. 7 MORBIDITY and MORTALITY WEEKLY REPORT suggest she got the infection through exposure to blood and body secretions and excretions. She did not wear gloves and often did not wash her hands immediately after exposure; adherence to guidelines for health care workers could have prevented transmission, the CDC researchers contend.

Previous reports have described only three health care workers infected with the AIDS virus, and nonsexual family contact has not been found to spread it (SN: 10/5/85, p. 213). The data on AIDS victims' families are backed up by a report in the Feb. 6 NEW ENGLAND JOURNAL OF MEDICINE from several U.S. institutions. Of 101 people in nonsexual household contact with 39 AIDS patients, only one had evidence of the infection – a child presumably infected around the time of birth.

But as nonsexual transmission of the virus comes to light, the heterosexual transmission of AIDS seen in Africa remains an enigma. Anthropologist Uli Linke of the University of California at Berkeley suggests in the Jan. 17 SCIENCE that the practice of clitoridectomy may provide an explanation. Areas in Africa where part of the female genitalia is ritually removed correspond to the areas of the epidemic, she says. After some types of clitoridectomy, vaginal intercourse can cause bleeding, and anal intercourse is often substituted. Either practice, notes Linke, could encourage spread of the virus. – J. Silberman

In tragedy's wake, NASA budget uncertain

The administration's fiscal year (FY) 1987 budget plan for the National Aeronautics and Space Administration, announced just days after the tragedy of the shuttlecraft Challenger, was actually prepared before it, and thus could change appreciably. Some of those changes could be far-reaching.

The announced budget, which represents a modest increase over FY 1986, includes, for example, \$410 million toward the administration's hoped-for U.S. space station, \$150 million of which is to begin actual systems development. But even if plans for the facility continue to evolve, its timetable could be affected by the amount of funding that must be diverted in the wake of the accident, such as to construct a replacement for Challenger, whose loss reduced the shuttle fleet from four vehicles to three.

This week, NASA officials announced that the next three shuttle flights formerly on the schedule have been "postponed indefinitely," rather than leaving open the possibility that the shuttle's uncertainties might be resolved quickly. The first of them, to observe Comet Halley in March, would almost surely have been unsavable anyway. But the next two, for launching the European Ulysses mission over the sun's poles and the U.S. Galileo orbiter and probe of Jupiter, had formerly been targeted for May "launch windows" that could extend into early June, conceivably allowing for the slim possibility that the shuttle accident investigators could complete their work in time. Instead, both missions could be launched in June 1987, but only one shuttlecraft, Atlantis, at present is equipped to carry the Centaur upper-stage booster required by both spacecraft, and the 1987 window is too short to allow launching Atlantis twice. A second shuttle could be equipped to handle the job, or one of the two missions could be delayed another 13 months.

Eleven other 1986 missions also face uncertainties.

– J. Eberhart