

Office of Scientific Integrity obtained by *Science*, however, O'Toole challenges this explanation. She alleges that Imanishi-Kari did not use an ELISA to test hybridomas for idiotype at all, as the notebook indicates. In her memo, O'Toole claimed that Imanishi-Kari told her in 1986 that she had performed the ELISA recorded in the laboratory notebook to test only for a characteristic known as isotype. O'Toole charged that the reagents used in the isotype assay could not have detected the presence of idiotype.

This dispute essentially boils down to a question of which reagents Imanishi-Kari used in the ELISA, and there appears to be no definitive way to check it. Dingell's committee staffers did, however, have the Secret Service examine Imanishi-Kari's notebook pages containing the ELISA data. The first page contains a handwritten statement that an idiotype-detecting reagent was used to screen the hybridomas, but the forensic analysis indicated that this statement was added in a different ink from the rest of the page after the data themselves were recorded.

Such issues have kept members of the current NIH panel occupied for an inordinate amount of time. Their "employer," OSI deputy director Hadley, estimates that the scientists have each put in "hundreds of man-hours." And that time is almost purely advisory: unlike the first NIH investigation, which was conducted entirely by the three immunologists convened by NIH, the new five-member scientific panel defers line duties to OSI staff members. "We do all of the heavy-duty interviewing and data review," Hadley told *Science*. "We do the legwork and present it to the panel. They look, and say, 'You haven't done X, Y, and Z.'"

Will this incredible effort be worth it, if only because it finally puts matters to rest and allows the principals to go on with their lives? Perhaps not. According to Hadley, OSI is already planning a "phase two" of the investigation—dubbed by Dingell aides the "who-knew-what-when" investigation. OSI has passed on responsibility for this follow-up to the inspector general's office within the Department of Health and Human Services.

Whatever the final result of the NIH and other investigations, the Baltimore case has already given some of science's most prominent members and institutions a black eye. And there is little question in the minds of many prominent scientists that the damage has been partly self-inflicted. As Harvard molecular biologist Walter Gilbert, who has watched the case closely, says: "Everyone could have walked away after making a public retraction.... I'll never know why David [Baltimore] defended the paper down the line like that. There was no reason to defend the paper that way." ■ DAVID P. HAMILTON

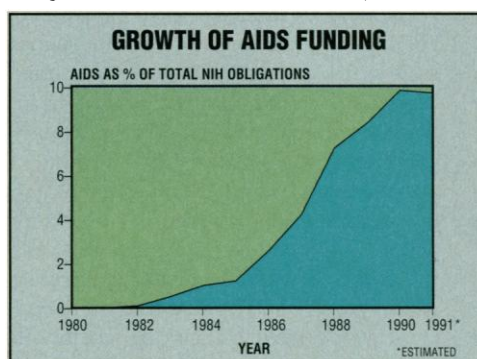
## Putting AIDS Research in Perspective

In 1985, the National Institutes of Health was spending a mere \$64 million a year on AIDS research and activists were pounding on Congress's doors demanding big increases. They got their way: NIH is now spending more than \$800 million a year on AIDS-related research, nearly 10% of its total budget. But is all this money being spent on the right things?

"Mostly yes" is the perhaps unsurprising answer from the biomedical research establishment: a committee of the Institute of Medicine chaired by Washington University Chancellor William H. Danforth, which was asked by NIH to look into the question. But, in a report released yesterday,\* the committee identifies segments of NIH's AIDS activities that need strengthening, as well as programs that might be cut back without harming the overall effort.

Take epidemiology research. The populations most affected by AIDS have changed dramatically in recent years. Women, children of infected mothers, and intravenous drug users have emerged as important populations to study in order to understand the spread of AIDS. The report suggests that NIH take a hard look at some of its long-term studies composed largely of homosexual males and decide whether the data these are producing are still worth the investment.

Also, the committee says it is time for the AIDS Clinical Trials Group (ACTG) to narrow its focus. ACTG has overextended itself, the report says, trying to do too many trials. ACTG should focus on drugs for opportunistic infections and trials of drugs or drug combinations that are unlikely to be conducted by the pharmaceutical industry.



**Reaching a plateau.** AIDS research will account for 9.7% of NIH's \$8.3-billion budget in 1991.

In contrast, basic biological research, basic behavioral research, nursing research, and research on opportunistic infections associated with AIDS are all in need of increased support, the panel says. In particular, the committee argues that NIH should devote more attention to vaccine research and step up planning to test vaccines in humans. This will also mean that NIH will have to ensure an adequate supply of primates for vaccine development.

NIH's point man for AIDS, Anthony S. Fauci, director of the National Institute of Allergy and Infectious Diseases and the associate director of NIH for AIDS research, says most of the criticisms the panel came up with are already being addressed. The report, says Fauci, "represents a static evaluation of a process that is dynamic.... A lot of what they're recommending has been done, is being done, or is being planned to be done." For example, Fauci says ACTG's structure and direction is being reviewed, and ACTG members will be given financial incentives to do a better job recruiting women and minorities to participate in trials. And he says several epidemiological studies are currently being reevaluated, and older studies like the multicenter AIDS cohort studies may be cut back. As for a 5-year plan, Fauci endorses it in principle, but "you have to be careful," he says. "Science doesn't always work by plan." Still, Fauci admits that it is unlikely that AIDS budgets will expand dramatically in the future, so planning will be that much more important.

Although it was not part of its charge, the committee leveled a blast at shortcomings in health care for AIDS victims. NIH's job is to facilitate discovery and evaluation of "therapeutic, diagnostic and preventive agents, and not to assure health care," the report notes. At \$164 million, the NIH clinical research budget is not nearly enough to care for the more than 60,000 AIDS patients in this country. If NIH is asked to shoulder this clinical care burden, the report warns, it will threaten the institute's ability to conduct clinical research.

■ JOSEPH PALCA

\* *The AIDS Research Program of the National Institutes of Health* (National Academy Press, Washington, D.C. 1991).