

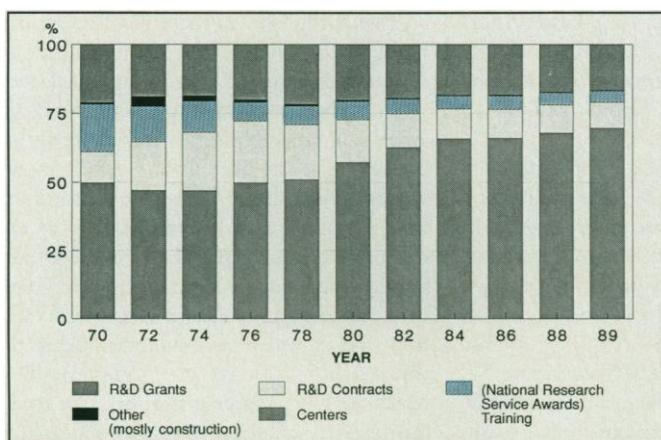
# Institute of Medicine Backs Training Over Research

At a time when biomedical scientists are complaining loudly that first-rate research proposals are being turned down because of lack of funds, it takes courage (or foolhardiness) for a group of researchers to come up with a proposal that could reduce the number of new grants handed out by the National Institutes of Health. But that's exactly what a committee of the Institute of Medicine has just done.

In a report released last week,\* a committee chaired by Scripps Clinic neuroscientist Floyd Bloom urges NIH to put more resources into training grants and construction of new facilities—even if there is no real increase in NIH's total budget. Although in the short term this may exacerbate the squeeze on research grants funding, Bloom argues that without more support for the research infrastructure—both in terms of physical and human resources—the long-term health of the U.S. biomedical research enterprise will be seriously threatened.

To start with, more predoctoral and postdoctoral training grants are needed to draw bright young people into health science research, the committee argues. A wave of retirements is anticipated in the 1990s and the total number of high school graduates—and potential researchers—will decline through the middle of the decade. The first effects of these demographic shifts are already evident: Fewer students are applying to medical schools and the number of bachelor's degrees awarded in the biological sciences has been in a long-term decline.

Although NIH has always reserved a portion of its budget for training the next generation of scientists, in the 1970s the balance between research and training shifted toward research.



**Shifting balance.** The proportion of NIH's extramural budget devoted to training decreased in the 1970s and has never recovered.

And support for training continued to slump in the 1980s as NIH put an increasing share of its extramural budget into research grants in a desperate attempt to keep up the number of new proposals it could fund each year (see chart).

Obviously the easiest way to increase training support is to ask for more money. But, unlike most Institute of Medicine or National Academy of Sciences panels, Bloom's committee couldn't make the standard plea for Congress to appropriate an extra helping for the committee's favorite cause. It was expressly told not to take that easy way out by Institute of Medicine

president Samuel Thier. So the committee had to ask itself the hard question: Is support for training so important that it should be increased at the expense of research grants if necessary? It took 2 years to answer in the affirmative. And the decision was so painful that, along the way, a draft of the report was rejected by an internal review panel in part because the committee could not quite bring itself to make the choice explicit.

In the end, the committee recommended a modest shift of resources. It says the share of NIH's extramural budget spent on training grants should be increased from its current level of 4.2% to 5.75% by 1995 and 6.75% by 2000, and that this shift should take place even if NIH's total budget stays level. The additional training funds would cost the equivalent of about 60 research grants a year.

As for facilities, the committee notes that NIH had virtually abandoned support for construction by 1980, and universities have since been forced to put off a vast amount of new construction and refurbishing of old research buildings. By some accounts, \$8-billion worth of construction is now urgently needed. The committee recommends that NIH should get back into the construction business in a small way by raising the share of its extramural budget that is spent on facilities from its current minuscule level of 0.25% (mostly for AIDS-related projects) to a slightly less minuscule 0.5%. This might also have to come out of research funds if there's no increase in NIH's budget.

In addition, because the construction problem will be so expensive to tackle, the committee broke its own ground rules and asked Congress to appropriate money to establish a matching fund for biomedical research facilities. This needn't be new money, however: Just take a fraction of the \$300 million now being funneled through Congress to specific institutions through pork-barrel amendments, the committee suggests.

Though these proposed reallocations might seem trivial, the Institute of Medicine is evidently bracing for a sharp reaction from the research community. In an introduction to the report, Thier and National Academy of Sciences president Frank Press note that this report, with its emphasis on long-term stability in biomedical research, might seem incongruous to researchers preoccupied with the current funding crisis. Indeed, say Press and Thier, "We recognize that . . . the committee might also have addressed and highlighted the immediate funding pressures."

The committee did pay some attention to these issues, however. But even here, its prescriptions are controversial. One suggestion, for example, is that in order to fund more researchers from a limited budget, health research agencies should experiment with sliding-scale funding. Those projects rated highest by study sections would get full funding, while those rated slightly lower would receive less than they requested.

This is the second unsolicited set of recommendations NIH has received recently urging changes in its grants system. Earlier this year, the House appropriations committee said more attention should be paid to the total costs—including indirect costs—of individual grants in deciding which research to support (*Science*, 28 September, p. 1496), a recommendation that is causing consternation at NIH and among university administrators. What's clear at this point is that any prescription other than a big budget increase is likely to be unpalatable. And in today's fiscal climate, it's also clear that a big budget increase is not likely.

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\*Funding Health Sciences Research: A Strategy to Restore Balance (Institute of Medicine, National Academy Press, Washington, D.C., 20418).