32.4%; 1985, 32.6%; 1986, 32.7%; 1987, 32.6%; and 1988, 32.2%.

There was an increase in indirect costs from 1979 (28.9% of total costs) to 1983 (31.7% of total costs) due largely to increased energy costs.

There is a critical problem of the increased inadequacy of the NIH budget to match the unprecedented opportunities in biomedical research. It would be unfortunate if we were sidetracked by straw men on this issue. The problem is very simply too little money and too little public recognition of the importance of biomedical research.

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One seldom hears praise for the Office of Management and Budget (OMB) from the scientific community these days, but Palca's article makes me think that some may be due. Palca describes how grant commitments from prior years have put a drastic squeeze on NIH funds for new grants in fiscal year 1990.

In fact, OMB foresaw this problem more than 2 years ago and sought to prevent it by requesting an extra $2.7 billion in fiscal year 1988 as an "advanced appropriation" to fund "outyear commitments generated by the award of competing research project grants" (*1*). Most members of the research community regarded the move with suspicion, seeing it as a ploy probably intended to draw attention away from the substantial reduction the Administration proposed in fiscal year 1988 funds for NIH. Congress ignored the request and granted NIH a fiscal year 1988 appropriation 19% above the Administration's request. The current squeeze is the result.

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REFERENCES

1. Intersociety Working Group, *AAAS Report XI: Research and Development, FY 1988* (American Association for the Advancement of Science, Washington, DC, 1987), p. 13.

To think that only 12% of *approved* new and competing NIH grant applications will be funded this year makes one wonder whether the peer review system has become obsolete and whether those who sit in judgment can impartially select from a pool of say 20,000 approved applications those 2400 that are worthy of funding. Las Vegas gives better odds of winning. Palca's article cites several, but not necessarily the most, important reasons responsible for the budget crunch. We are told that money is being diverted from new and competing grants (RO1s) to fund special projects (AIDS and other key projects) even if their priority score is below the cutoff point. New and competing RO1 grants have been reduced by 30% even though the total NIH budget has slightly increased. Why is there no stable pool for new and competing RO1 grants to support investigator-initiated research? How did the budget crunch of the NIH come about?

In my opinion, the most blatant causes are the escalation of indirect costs and of professional salaries charged to research grants. Indirect costs were never intended as a general subsidy of universities and research institutions but rather as a reimbursement for legitimate expenses arising from the operation of a research grant. The steadily rising indirect costs consume such a large portion of research grants that they undercut the base of the research grant programs. At the same time, university and institutional administrators urge principal investigators to charge major portions, or all, of their salaries to research grants in order to subsidize, indirectly, the hiring of new faculty. As a result, the salary budget requests have steadily increased. Yet, when one of the NIH institutes imposed a ceiling on individual salaries that can be charged to research grants, the resulting savings landed in the coffers of the federal treasury.

The internal budget allocations have become unstable and unpredictable. Annual budgets of previously approved research grants have been administratively reduced on short notice, in some cases by as much as 30%. If the present funding rate of 12% is applied to recipients of first awards, only one out of nine will have a chance to be funded the next time around, or one out of four if the funding rate is increased next year to 25%. Highly capable scientists with proven track records are forced to terminate productive research programs and to disband their teams. Clearly, things have gotten out of hand.

While peer review is still the best system of evaluating competing scientific proposals, it is practically incapable, and was never designed, to make funding decisions with such narrow margins. The most qualified scientists used to serve on initial review groups and NIH councils; however, the experience of denying support for three out of four approved applications has been so discouraging that many scientists refuse to serve again. Since the scientific enterprise of this country is so dependent on federal funds, the progressive decline of new and competing research grants can no longer be tolerated without severe consequences. It calls for a reordering of the priorities, the establishment of a stable support base for investigator-initiated research, and a determined effort to resist the drain of funds extraneous to the purpose for which the research grant program of the NIH was established.

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Response: Neurath is incorrect when he states that NIH will fund only 12% of approved new grants in the current fiscal year. The total number of approved new grants includes not only those ranked by study sections above an institute's payline—which for some institutes is now around 12%—but also grants with lower rankings that receive funds because they fall into priority research areas or because they are deemed necessary to maintain a balanced research effort. The percentage of approved grants funded will be closer to 24% for the current fiscal year.—JOSEPH PALCA

Methanol-Powered Cars

Statements quoted in Eliot Marshall's News & Comment article "Gasoline: The unclean fuel" (13 Oct., p. 199) clearly imply that studies regarding the feasibility of using pure methanol to power automobiles are lacking. Yet Brazil has been using automobiles that run on pure alcohol since the 1970's. And guess who manufactures most of these automobiles? Ford, Chevrolet, Volkswagen, and others. The studies have already been done—these automobiles work and work well. How well they would work in our country and with our society is not known, but the vehicles and technology already exist. If our country were really interested in looking into the use of M100 automobiles, I think we could probably import some in a very short time.

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Erratum: In the article "Rockefeller braces for Baltimore" by Barbara J. Culliton (News & Comment, 12 Jan., p. 148), the pictures of David Baltimore and Joshua Lederberg were incorrectly credited. The credit for the Baltimore picture should have read, "M. Lampert, Boston." The credit for the Lederberg picture should have read, "Rockefeller University."