BIOMEDICAL RESEARCH

NCI Cuts Contracts to Fund More Grants

Richard Klausner, director of the National Cancer Institute, is planning a dramatic shift of funds out of NCI contract research and into extramural grants. At the same time, Klausner told *Science*, NCI hopes to create a new appeals process to give scientists who narrowly miss winning an NCI grant a quick second shot. Klausner will take these proposals to the National Cancer Advisory Board (NCAB) at its next meeting, scheduled for 27 February. If the board gives its approval, the first benefit grant-seekers will see is a huge boost in the "payline" for R01 applicants—the percentage of investigator-initiated proposals that win funding. It is expected to rise from last year's level of 15% to about 23% in 1996.

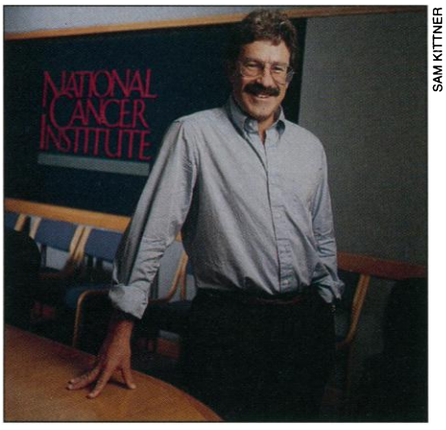
To finance this policy change, Klausner has asked other programs at NCI to make sacrifices. The upheaval began last year, according to NCI Deputy Director Alan Rabson, when Klausner undertook a comprehensive review of NCI programs. It resulted in a firm request from Klausner that contract managers reduce their budgets by 10%. Rabson says these cuts are now being made, and they will affect many functions, including NCI's contract research operation in Frederick, Maryland. NCI budget officer John Hartinger calculates that about $25 million to $30 million will be drawn from contract research accounts in 1996 and put into extramural "research project grants." In addition, NCI is benefiting from a congressional windfall this year that provides a 5.7% overall budget increase, higher than the 4.2% raise the Administration had sought. The net effect, Hartinger says, is that NCI will be able to pump an additional $70 million into grants this year.

While most of the newly available funds will be put directly into grants, Klausner says that some will be set aside in a discretionary account to be used to fund exceptional cases. The plan, Klausner explained, is to permit anyone who is rejected but whose peer-review score comes within four points of the payline (anyone whose proposal ranks at least in the top 27%) to request an "accelerated executive review." For patient-oriented research, the appeals process will be even more generous: Anyone who comes within 10 points of the payline (in the top 33%) may ask for a second, high-level review.

NCI will entertain "a very simplified response which details a point-by-point" answer to criticisms spelled out in the "pink sheet" of reviewer comments. Institute staff will evaluate these petitions and pass them to NCI's executive committee, which Klausner chairs, for a final decision. This offer is "not a guarantee that grants will be funded," Klausner notes, but something akin to a letter from an editor saying a manuscript may be accepted if the author successfully responds to the reviewers' comments.

Klausner hopes these appeals will take a matter of weeks, rather than the 9 to 18 months that applicants now have to wait when they resubmit a proposal. "This wait has become extremely destabilizing, particularly for patient-oriented research, where the queue for getting funded can actually make the difference between whether a project happens or doesn't happen," he says, adding that the "message we're trying to send [is that] we recognize that the lifeblood of this research is investigator-initiated research."

Klausner's funding tilt is certain to win plaudits from the extramural scientific community, and the NCAB is expected to endorse his proposals. NCAB Chair Barbara Rimer, an oncologist at Duke University Medical School, says she feels that this is "exactly the direction" that an independent review (the Bishop-Calabresi report) urged NCI to take last year (*Science*, 26 May 1995, p. 1121). Rimer adds: "There isn't anybody in the field—except maybe the contractors—who would find a problem" with the new strategy. When it comes up at the NCAB's meeting, Rimer says, "I think some members may stand up and cheer."



SAM KITTNER

Prime mover. Klausner's plans will boost NCI's payline and speed up some resubmissions.

–Eliot Marshall

SCIENCE EDUCATION

Calculus Reform Sparks a Backlash

"To every action, there is always opposed an equal reaction," wrote Isaac Newton some 300 years ago. The author of the *Principia* was referring to mechanical motion, but his law also applies to a conflict raging today over another of his inventions—calculus. A nationwide effort to reform calculus teaching has recently spawned a backlash, and although at this point the critics don't quite equal the reformers' force, they are certainly opposed, contending that the new courses water down the subject and coddle students with computers. In general, reform has gone too far toward making calculus look easy, says George Andrews of Pennsylvania State University: "It's not a balanced approach."

MIT MUSEUM

Calculus unplugged. Critics say students worked harder in the 1950s.

Not surprisingly, reformers roundly deny such charges, saying that thanks to their efforts, students are learning more and liking it better. Still, it's clear that the spate of criticism is slowing the pace of reform, as many math departments take a wait-and-see approach to changing the way they teach. Yet despite the divisive debate, both sides agree on one point: The reform movement has had a healthy effect on mathematicians' attitudes toward teaching.

Over the last 10 years, calculus reform has moved from the margins of the mathematical community to a position of prominence, thanks to big grants from the National Science Foundation and encouragement from textbook publishers eager to sell more books. But while reform has been claiming the spotlight, the backlash has been brewing behind the scenes, with clashing opinions in hallways and on-line discussion groups. It finally went public last month, at a standing-room-only panel discussion at the winter meetings of the American Mathematical Society and the Mathematical Association of America, held in Orlando, Florida.

Andrews, who took the con position, sees