Scientists Take One Last Swing

For the fifth time this year, Bernadine Healy was on the mound, showing scientists her best stuff—the controversial NIH Strategic Plan. This time 250 top researchers took a final cut at her pitch

Last month, 250 top U.S. researchers frantically rescheduled existing commitments in order to spend 2 days last week holed up in a hotel outside Washington, D.C.'s Dulles Airport. The reason? National Institutes of Health (NIH) director Bernadine Healy asked them to.

No, Healy hasn't become so powerful she can order the nation's premier biomedical researchers to change their travel plans at a moment's notice. Rather, she offered them an irresistible opportunity: a final chance to influence NIH's "strategic plan," a document that Healy intends to use to chart the future course for her agency. And as if that carrot weren't enough to bring them out of their labs, Healy wields a formidable stick: On the first evening of their deliberations she reminded the assembled researchers that "decisions will be made whether or not scientists choose to participate."

Early drafts of the plan have already caused friction between Healy and her bosses in the Department of Health and Human Services (HHS), who view the whole planning effort as an attempt to grab a bigger budget for NIH. And they have drawn fire from researchers at four previous gatherings, who saw it as an effort to impose top-down management on biomedical science (*Science*, 31 January, p. 529 and 14 February, p. 788). But Healy doesn't shy away from criticism, and being good pragmatists, the band of 250 participated—despite lingering doubts about Healy's motives. Said embryologist Steven McKnight of the Carnegie Institution of Washington during a break in the meeting: "I don't think she's just having us in to rubber-stamp her proposals." He did, however, acknowledge that was a possibility: "It may be true, but thinking that way is counterproductive."

Indeed, there was an even deeper ambivalence among the attendees than is hinted at in McKnight's words: Could it be that by merely showing up, McKnight and his colleagues were giving tacit support to a strategic planning process that could undermine investigator-initiated research as the driving force behind NIH funding? What if Healy politely listened to their advice and then went her own way, pronouncing to the world that she had properly sounded the community and that it had given her its stamp of approval? And yet given the potential importance of the exercise, how could scientists not come? Which leaves the 250 nervously waiting to see how much of what they had to say makes it into NIH's strategic thinking.

Buying Power?

From the opening hours of the meeting, the anxious attendees who split up into 11 panels were set on a course that co-opted them into the planning process. What they were buying into—the draft document—contained two aspects that have irked researchers at every one of the four meetings that led up to the Dulles gathering: First, Healy—and her document—is planning to set priorities for the $10 billion agency, something that sounds too much like corporate-style "top-down" management, with Healy as CEO. And second, the CEO seems to care more about economic imperatives than any self-respecting basic researcher would like to know. Indeed, the draft strategic plan discussed at the Dulles meeting states as one of its goals "to expand the knowledge base through health-related research that contributes to the nation's economic well-being and ensures a continued high return on the public investment in research."

So at meeting after meeting, prominent scientists have stood up to object to these thrusts, only to find that Healy won't back down. To the contrary, she says scientists have a false sense of security that basic research will be well supported if there is some arbitrary number of R01 grants—the name of the grant most researchers receive from NIH. "We have sold well the R01 as NIH's *numero uno* strategic priority," says Healy, and "this has caused problems." Healy insists that rather than arguing for a fixed number of grants, she can make a better argument for support for NIH in front of Congress and the Administration by emphasizing programs that fit national goals. "We have got to become a priority for the United States and the American public," says Healy. To do that, Healy maintains, scientists will have to be willing to consider their work in a larger context: one that forces them to look beyond the confines of their own labs and that gives them a stake in the entire, federally funded research enterprise. "We're trying to change a culture," says Healy.

Buying In

And so by design or not, the 11 panels—seven focusing on crosscutting science topics and four on policy areas—climbed aboard the planning process simply by buying into the Healy format. Phillip Sharp, head of the department of biology at the Massachusetts Institute of Technology (MIT) and co-chair of the panel on molecular medicine, told his group that their job should be "identifying the areas of science and technology that if there's any growth in the budget should be given additional resources." And sure enough, after 2 days its members emerged with a list of five priority areas: gene therapy, molecular genetics of human diseases and behavior, cytokine receptors and ion channels, molecular basis of disease pathogenesis and molecular targets, and synthetic chemistry and drug design.

But there was no sense of triumph at having reached a list of priorities, because these

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Culture shock? NIH director Bernadine Healy *(right)* told leaders in the biomedical community at a gathering outside Dulles Airport last week: "We're trying to change a culture." They're dubious.

Healy's 'Billion Dollar Question'

NIH director Bernadine Healy won't be satisfied with her controversial strategic planning process unless it not only provides a blueprint for NIH planners to do a better job of dividing the existing budget pie, but also offers guidance on how to spend any new money that might become available. To that end, Healy posed to the 250 elite biomedical researchers at last week's meeting just outside Washington what she refers to as the "Billion Dollar Question."

Healy explained that this is not a fanciful question: When she is called upon to testify before sympathetic Congressional committees, members frequently ask her what she would do if the agency had an extra billion dollars on top of the normal, inflationary increases usually applied to NIH's $9.4 billion base budget. Healy wants an answer not merely developed by her and her staff, but one that reflects the best prognostications of the U.S. biomedical brain trust.

Music to the ears of extramural researchers, those billion bucks, but they're not likely to play well with the White House Office of Management and Budget, which is looking for areas of domestic discretionary spending to cut, not expand. So perhaps the real reason for Healy to dangle the billion dollars in front of the scientific community is to get them behind her in her budget battles to come.

Though professing to be worried that setting priorities could mean taking money away from existing research if the new money never arrived, the researchers at last week's meeting pitched right in and offered Healy a folder full of suggestions:

■ **The Human Cell Project.** Speaking for the structural biology panel, pathologist James D. Crapo of Duke University Medical Center in Durham used this name to describe a research project that, he said, would be "a logical next step to the human genome initiative," and would encourage research in a variety of crucial biological processes, from receptor-ligand interactions to cell signaling to protein-DNA interactions.

■ **Vaccines.** Microbiologist Barry R. Bloom of Albert Einstein College of Medicine in the Bronx, co-chair of the molecular immunology and vaccine development panel, proposed creating 5 to 10 consortia of universities and industry, all aimed at developing new vaccines. In addition to providing a nurturing environment for research into vaccines that would protect against diseases now common in the West, Bloom argued these consortia would permit the development of vaccines for diseases prevalent in the developing world. (The latter have been low on the priority lists of the major pharmaceutical companies because, despite the prevalence of such diseases, a one-time vaccine that eliminates them is not likely to generate much revenue.) Sensing Crapo had started a trend, Bloom dubbed his scheme "The Human Vaccine Project." This may have excited the panel on population-based studies, which suggested that the additional money could be used to create an enormous population cohort and clinical trial program, a kind of "Healthy Human Project."

■ **Infrastructure Support.** Neurologist Sid Gilman from the University of Michigan Medical Center in Ann Arbor said his panel felt the extra billion should be spent on restoring the infrastructure in America's universities.

The reaction to all these ideas from the woman who would play Big Spender? A good start, but she wants even more. She urged each one of the scientists at last week's meeting to send in his or her own ideas. And that has opened a door for *Science*'s readers. If you would like to provide your ideas for how the scientific community should spend an extra billion it doesn't have on NIH, jot them down and fax them to 202-408-8026—or mail them to J. Palca, *Science*, 1333 H St., N.W., Washington, DC 20005. *Science* will forward them to NIH.

–J.P.

panelists were keenly aware of the downside of making their suggestions. As Lewis T. (Rusty) Williams, a cardiologist at the University of California at San Francisco and co-chair of the molecular medicine panel, put it: "The concern is we're shooting ourselves in the foot." By identifying the hottest topics in biology, the panelist worried that the topics not included in the list would be more vulnerable to cuts. Yes, Healy had encouraged participants to think in terms of large increases in the budget; she even posed the $1 billion challenge (see box), suggesting that panels like Sharp's should feel free to brainstorm where new money ought to go. But what if she never gets her billion? Could Congress or Healy's bosses at HHS insist, as researchers and even some of the top NIH officials who participated in the meeting posited, that the hottest areas be pursued even with no increases in the NIH budget, thereby gutting the budget for less glamorous but nonetheless crucial areas of science like basic biochemistry and physiology. "It takes an element of faith to believe that won't happen," Williams told *Science* during a break in his panel session, and not a lot of attendees were brimming over with that emotion.

A Fragmented Community

But somebody will have to make decisions, since the scientific community hardly speaks with one voice on any issue. Take the following exchange as two panels in adjacent rooms debated the question about how to spend Healy's additional billion dollars. In the International Room, Herbert Pardes, dean of Columbia University College of Physicians and Surgeons in New York, argued that the extra money should be spent on rebuilding the crumbling infrastructure of the biomedical research enterprise. Right next door in the Dulles A Room, embryologist Donald Brown of the Carnegie Institution of Washington in Baltimore was telling his panel: "I'm really very unsympathetic to the bricks and mortar argument." Brown argued that an extra billion might more profitably be spent supporting an entirely new area of basic research for NIH, such as plant science.

Of course, there were points of agreement among the panels. Virtually all conceded that NIH would have to commit more resources to training of the next generation of scientists, and there was widespread agreement that NIH could do a better job of letting the public know what they were getting for their $10 billion research investment. A panel on the peer review process concluded that that part of NIH was working fairly well, although panel members urged reforms in both the way reviewers were selected, and the way new panels were established.

The 17 July issue of *Science* will offer more of the Healy mindset in the form of a policy forum she has written. Healy hopes this article will generate additional comment from the scientific community, this time via a fax poll. In the meantime, Healy's strategic planning process will push inexorably forward, with the intention of having a document ready to guide the final stages of the fiscal 1994 budget planning process. But Healy insists the strategic plan is not merely about budgets, it is about managing a research enterprise in a way that will bring the greatest good to the greatest number, with the ultimate mission of improving health for all Americans, not just the biomedical research community. Even those who mistrust managers acknowledge that Healy must make decisions. They just hope that her decisions will preserve what has made U.S. science the envy of the world.

–Joseph Palca