JAPAN

New Institutes Would Break Mold

TOKYO—Impatient with the slow pace of reform within Japan's research enterprise, the Science and Technology Agency (STA) is developing plans for a new breed of research institutes. The idea is to create 30 to 50 institutes over the next decade that break the traditional Japanese mold by giving their directors greater independence over budget and management issues while at the same time holding them accountable for the results of publicly funded research. The goal is to remake the system from the outside.

"The concept is build and scrap," says Kaoru Mamiya, deputy director-general of policy for STA. The new institutes, he says, will set a high standard for research excellence that older institutes will be expected to match or run the risk of losing government support. A new Brain Science Institute (*Science*, 14 March 1997, p. 1562), which opened its doors last October, and a planned Genome Frontier Program (*Science*, 5 December 1997, p. 1700) are regarded as prototypes for this new breed of institute.

Plans for the new research institutes are outlined in a March report based on a yearlong exercise by a committee of researchers and academics, most of whom have international experience. The panel focused on managing the research enterprise and concentrated on "strategic research" that will bolster the domestic economy while raising living standards around the world. "I don't think astronomy fits into this plan," Mamiya says.

The management ideals underpinning the new institutes run counter to prevailing Japanese practices. "The big problem is that the national labs are managed as if they are government bureaus, not research institutes," Mamiya notes. Although staff members at national labs and universities receive lifetime appointments, just a third of the researchers at the new core institutes would have tenure, and only after demonstrating superior ability. The bulk of the staff would be on fixed-term or postdoctoral appointments. In addition, the plan calls for a flat organization, in sharp contrast to the hierarchical structure of current institutions, and more freedom for younger researchers. The heads of the new institutes also would have considerable discretion in setting research priorities and personnel policies, as well as in managing their budget.

The institutes would be similar in size to major research projects, with an average of 100 researchers organized around a research theme or a visionary leader. Their lifetime would typically be 10 to 20 years. These new institutes might eventually be gathered under the umbrella of an organization resembling Germany's Max Planck Society, France's CNRS, or the U.S. National Institutes of Health. The umbrella organization would have the authority and flexibility to launch research initiatives, steer funding and other support to those institutes doing the best work, and overhaul or close those that don't meet their goals. The end result, boosters say, would be a more dynamic, flexible, and competitive system.

DENNIS NORMILE

Taking the lead. STA's Kaoru Mamiya hopes institutes will help to reform Japanese research.

Committee members acknowledge that some of the ideas in the report have been proposed before, and some have even been tested, including international reviews of scientific programs or limited tenure for faculty. "But nothing has really changed," says Ken-ichi Arai, director of the University of Tokyo's Institute of Medical Science and a member of the committee. Institutional inertia, the plethora of government-wide rules and regulations, and the passive resistance of older scientists have slowed reform to a snail's pace at the country's 90 national labs. A parallel research system, say Arai and others, stands a better chance of making a lasting impact.

So far the plan has attracted little attention. "At this stage, that is to be expected," says Kuniaki Nagayama, a biophysicist at the National Institute for Physiological Sciences in Okazaki and another member of the committee. Even when the details are worked out, he says, the 50 new institutes would employ only a tiny fraction of Japan's total scientific workforce. "This is really for the top-level researchers working at the frontier," he says.

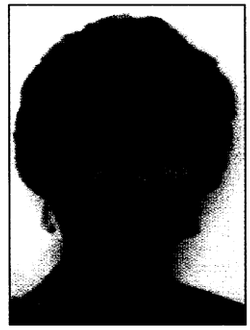
Still, STA hopes that these core institutes will make a big splash. "If we can create something that works really well, I think we can count on the approach being imitated throughout the research community," says Mamiya.

–Dennis Normile

BIOMEDICAL PATENTS

Making Research Tools More Accessible

Biomedical researchers might learn a thing or two from the way musical composers charge for their work, says intellectual-property expert Rebecca Eisenberg of the University of Michigan, Ann Arbor. In biomedicine, property claims form a complex, duplicative, and cumbersome thicket managed by hundreds of individual legal teams, each intent on maximizing royalty income. But composers simply join a property "pool" run by a company that keeps tabs on who uses the music, collects fees according to a standard schedule, and returns income to the artists.



Share and share alike. Rebecca Eisenberg's report urges NIH to "set an example."

Eisenberg made this discordant comparison last week as she delivered a report to the National Institutes of Health (NIH) on biomedical property claims. NIH director Harold Varmus had asked Eisenberg last year to head an 11-member working group to suggest ways that NIH might free up its grantees to share new tools, such as reagents, sequences, and genetically engineered organisms. Eisenberg responded on 4 June at a meeting of Varmus's advisory council that because of statutory constraints, NIH can do little to alter the way patents are managed—even those based on work paid for by NIH. However, Eisenberg said, NIH leaders can "set an example" by resorting to "the bully pulpit" to suggest guidelines that might even include something like the musicians' system. (A copy of the group's report has been posted on the Web at www.nih.gov/news/researchtools/index.htm)

The panel didn't formally recommend that model, but it did endorse some basic principles. First, it said, NIH should encourage scientists to share research tools freely without resorting to legal agreements "whenever possible, especially when the prospect of commercial gain is remote." Second, the panel said NIH should advocate the use of standard agreements to cover the sharing of materials among nonprofit labs—such as one university legal officers en-