

donor agencies to withhold millions of dollars in grants. At the time, some of Western's supporters charged that Leakey was behind the ouster, but Western himself said that mining interests hoping to gain access to park lands were responsible.

This time, however, Western says he is "very puzzled" about why Moi prevented him from serving until his contract was to expire in February 1999, adding that the decision appeared almost "whimsical." Editors at *The Nation*, Kenya's leading newspaper, appear equally confused. In a 20 September editorial, they demanded that government officials explain "in fuller detail why Dr. Western was fired." Whatever the explanation, Western says he will continue to "do everything possible to support the KWS." One lesson his own tenure teaches, he says, is that the agency's governing board—rather than Kenya's president—should be given the power to hire and fire directors. "The crucial point is to keep politics out of the KWS," he says. He adds that he is "unaware of anyone waiting in the wings" to take his old job, which is being filled on an acting basis by KWS Deputy Director David Kioko.

Western plans to spend the next few years writing about his conservation experiences. He is disappointed that he won't be able to finish several tasks he started at the KWS, such as developing a long-term funding strategy and a process for identifying key areas in need of conservation. Western is proud, however, of gains he made in involving Kenyans in conservation efforts. "Conservation has filtered right down to the grassroots," he claims. "We began a process of engaging people in conservation and the role it plays in their lives."

—DAVID MALAKOFF

INFRASTRUCTURE GRANTS

Canada to Draw Up Strategic Plans

OTTAWA—With \$520 million to spend on refitting the nation's academic laboratories, the Canada Foundation for Innovation (CFI) has generated a lot of interest from university researchers. Too much, as it turns out.

This month, after sifting through more than 300 proposals for its first round of grants, CFI officials decided that they couldn't choose among virtually identical projects without first seeking a community consensus on priorities in a dozen or so fields for which applicants were seeking funding. That exercise will force a delay in the bulk of awards and could lead to collab-

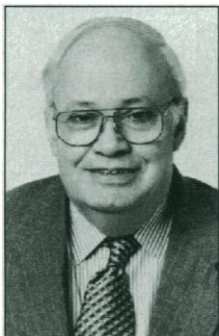
orations and significant revisions among what are now competing projects. University administrators warn that it also could pose quite a challenge for a community accustomed to going its own way.

CFI was created last year with government funds, and it instantly became the country's largest foundation. The upcoming awards are seen as a badly needed shot in the arm to the nation's sagging academic research infrastructure, and university officials had no problem generating \$785 million worth of requests for an initial pot of \$260 million, despite a requirement for matching funds. An initial review earlier this month eliminated about one-third of the applications, but the original goal of issuing all awards by the end of the year has been pushed back indefinitely.

The new approach involves drawing up what David Strangeway, president of CFI, calls "a coherent regional or national strategy" for several fields. Without such a strategy, he says, CFI can't be sure that its money is being put to the best use. In the area of genomics, for example, CFI received 18 applications for genetics centers, all dealing with human genomics. Strangeway says the national interest might be better served if some of these proposed centers focused on animal or plant genomics.

Strangeway says CFI's governing board will select the specific fields to be examined at a meeting on 13 October. He estimates the formation of 10 to 12 task forces, composed of experts drawn from around the country and the world, that would cover such areas as genomics, high-performance computing, and digital libraries. The panels would make their recommendations regarding national scientific priorities and needs. The universities, meanwhile, will be encouraged to work together to revise their proposals to address those national strategies. Both the recommendations and the revised proposals will then be fed back to CFI peer-review committees, whose advice will be incorporated into the board's funding decisions.

Such directives may encounter some resistance, however, say university administrators. "Universities spend a lot of time developing their expertise in certain areas," notes Sally Brown, executive vice president of the Association of Universities & Colleges of Canada. "If somebody puts in a human genome project as opposed to a plant one and is then told that we've got enough of those, there will be some sensitivities." Others are skeptical about Canada's capacity to develop discipline-specific strategies. "We don't even have a



Money talks. CFI's Strangeway asks for road map before making awards.

ScienceScope

MAKING HAY WITH PLANT GENOME AWARDS

The University of Missouri, Columbia, learned it had snagged its largest grant ever last week—but not through the usual channels. Senator Kit Bond (R-MO) announced the \$11 million National Science Foundation (NSF) award to start mapping the corn genome even before university officials in his home state were officially notified of their windfall.

The grant is just the first from a \$40 million plant genome initiative added—with Bond's help—to NSF's budget. Three-quarters of the extra funds

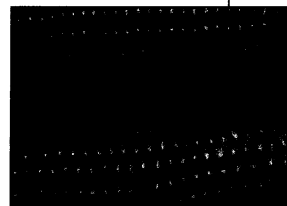
are supposed to help meet the growing demand for genomic studies of food crops and other economically important plants (*Science*, 27 June 1997, p. 1960), rather than expand studies on a laboratory workhorse, the mustard *Arabidopsis*.

In Missouri, plant geneticist Edward Coe's team will use its funds to take the initial steps needed to determine the order of some of the 2.5 billion bases that make up corn's genetic code. The 5-year project will soon be joined by other studies: NSF plans to announce about two dozen more plant genome projects by 1 October. Just who gets to break the good news to winning researchers remains to be seen.

RUSSIAN INITIATIVE WINS MAJOR SPONSOR

Despite Russia's economic turmoil, an ambitious plan to reform the nation's research and higher education establishments is moving forward. *Science* has learned that the John D. and Catherine T. MacArthur Foundation will spend \$6 million over 4 years to help create elite research centers at top universities.

Run by the Russian Education Ministry and the U.S.-based Civilian Research and Development Foundation, the initiative will establish centers that can help train the next generation of scientists (*Science*, 29 May, p. 1336). The MacArthur money—and potential matching funds from other foundations and Russia—will allow the program to expand beyond a pilot project under way at the University of Nizhny Novgorod. In January 1999, organizers expect to invite proposals for a competition to award two to three new centers.



national science strategy, so who are we trying to kid?" asks Paul Hough, executive director of the Canadian Consortium for Research, an association of scientific lobbies.

But universities realize that some collaboration is inevitable, if not also desirable, says Brown. "Budget cuts have forced it," she says. "It's not often national in scope, but there's certainly a lot more of this stuff going on."

Strangeway acknowledges that there are a host of potential political land mines. But he says the CFI must exercise "due diligence" in ensuring that taxpayers "get the best return on intellectual activity." And Chad Gaffield, president of the Humanities & Social Sciences Federation of Canada, agrees that half a billion dollars provides a strong impetus for collaboration: "They have a lot of money as a carrot, so, presumably, there is a very good incentive to get this worked out."

—WAYNE KONDRÓ

Wayne Kondro writes from Ottawa.

SCIENTIFIC PRIZES

Lasker Awards Go to Cancer Researchers

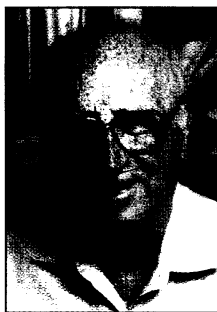
Seven biologists received coveted Albert Lasker Medical Research Awards this week. The award for basic research went to three scientists in recognition of their contributions toward understanding cell division mechanisms, while three others shared the clinical prize for their studies on the genetic basis of cancer. In addition, former *Science* Editor-in-Chief Daniel E. Koshland Jr. received a separate Lasker award for lifetime achievement in medical research. Although not the most lucrative awards—this year's basic and clinical winners get \$10,000 each—the Laskers are considered highly prestigious because they frequently foreshadow the Nobel Prize. Indeed, 59 Lasker winners have gone on to win Nobels.

The chair of the jury that selected the winners, Joseph Goldstein of the University of Texas Southwestern Medical Center in Dallas, who is himself both a Lasker and a Nobel Prize winner, says that the current awardees "really provided the foundation" for understanding both normal cell division and the genetic errors that cause it to go awry, as happens in cancer. The winners for basic research—Yoshio Masui, a professor emeritus of zoology at the University of Toronto; Lee Hartwell, director of the Fred Hutchinson Cancer Research Center in Seattle; and Paul Nurse, director-general of the Imperial Cancer Research Fund in London—helped tease out the many components of the biochemical machinery that drives cell division.

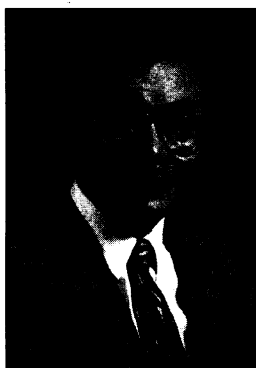
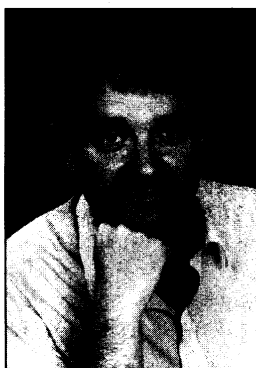
Masui provided the first clue with his 1971 discovery of the then-uncharacterized maturation promoting factor (MPF), which stimulates cell division in frog eggs. Then, Hartwell and Nurse, working with two different yeast species, identified a series of genes involved in regulating cell division in those organisms and, as they and others showed, in other species as well. In fact, one of the genes turned out to encode a component of Masui's MPF.

The winners of the clinical award—Alfred Knudson Jr., former president of the Fox Chase Cancer Center in Philadelphia; Peter Nowell of the University of Pennsylvania School of Medicine in Philadelphia; and Janet Rowley of the University of Chicago Medical Center—examined how genetic abnormalities may trigger cancer. Nowell and Rowley proved that leukemia could be caused by faulty genes, while Knudson showed that development of certain childhood cancers requires mutations in both copies of the genes at fault, a finding that led to the idea of tumor suppressor genes, currently one of the hottest topics in cancer research.

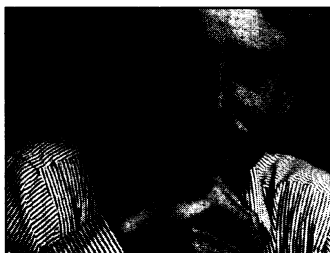
And finally, Koshland, currently a biochemist at the University of California,



Lifetime achiever.
Daniel E. Koshland Jr.



Cell cycle pioneers. From left to right are Paul Nurse, Yoshio Masui, and Lee Hartwell.



Berkeley, was honored for his work on enzyme regulation and cell signaling systems, as well as his efforts to reshape biology studies at Berkeley and his success at improving the quality of *Science*. —JENNIFER COUZIN

U.K. ASTRONOMY

300-Year-Old RGO Finally to Close

LONDON—Like Lewis Carroll's Cheshire cat, which disappeared leaving only its grin, one of Britain's oldest scientific institutions will vanish next month leaving only its name. The 300-year-old Royal Greenwich Observatory (RGO) in Cambridge, which provides technical and scientific support for Britain's astronomers, will close in October as part of cost-cutting measures by the Particle Physics and Astronomy Research Council (PPARC). Far from leaving a grin, however, the loss has left many astronomers grimacing. "The closure sends a very unfortunate signal to our foreign colleagues, students, and the public about the status of British astronomy," says Britain's Astronomer Royal, Martin Rees.

After reviews of Britain's home-based astronomy facilities over 15 years, RGO finally lost out last year in a contest with the Royal Observatory Edinburgh to become Britain's single Astronomy Technology Centre (ATC), serving telescopes in the Canary Islands and Hawaii (*Science*, 13 June 1997, p. 1641). The ATC opens officially next month. The former science minister, John Battle, backed the decision but asked the council to try to find a way of saving the name of the RGO in some form. However, to stay afloat as a semi-independent scientific institution, RGO staff developed a business plan for telescope design and construction and discussed the possibility of closer links with Cambridge University.

But at the end of last year, PPARC finally decided to close the observatory, in part because of worries that a reconfigured RGO might end up in competition with the new ATC (*Science*, 19 December 1997, p. 2049). PPARC says the closure will release an extra \$3.2 million for astronomy research over the next 4 years and \$6.5 million each year after that.

PPARC and the government are now discussing plans to transfer the RGO name back to its original site in Greenwich, southeast London. The old observatory at Greenwich, straddling the Greenwich Meridian at zero degrees longitude, is now a museum and will house new public exhibitions on astronomy under a plan agreed this month between the National Maritime Museum—its owner—and PPARC. Many old instruments held in Cambridge and the RGO's public as-