

Probing the brain with magnets

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Evolution under attack in Turkey



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Princeton's new president



of his former professors, says Okamoto may not have been "socially mature enough" to seek advice on handling materials in his lab. Okamoto has told RIKEN officials that he did not bring any samples from the United States to Japan, let alone into the RIKEN labs. RIKEN is trying to trace the origin of all materials in Okamoto's lab; Ito says that, so far, it has not found any evidence of U.S. materials.

Ito and other RIKEN officials are particularly chagrined at the accusation that RIKEN acted as an agent of the Japanese government for economic espionage. "We have operated with extraordinary openness," he says. RIKEN conducts collaborative research projects with institutions throughout the world, Ito says, and nearly a quarter of its 245 researchers are non-Japanese. "I am seriously worried about this incident having an impact on RIKEN's image," he says.

—ELIOT MARSHALL AND DENNIS NORMILE

THE POSTGENOMIC ERA

Windfall for European Data Bank

PARIS—The European Union has come to the rescue of the continent's premier repository of DNA and protein sequence information. As *Science* went to press, the E.U. was preparing to announce that it would help provide a roughly 50% boost in the \$11 million annual budget of the European Bioinformatics Institute (EBI). The cash injection, to come over the next 3 years, will fund four new projects, including repositories of data from "gene chips" and protein-protein interactions. These

projects, in turn, will help provide much-needed operating funds for EBI.

This is the second major piece of good news that the financially troubled EBI, located near Cambridge, U.K., has received in the past 6 months. Last December, the governing council of the European Molecular Biology Laboratory in Heidelberg, Germany—EBI's parent organization—agreed to bail out the institute after E.U. officials had decided to stop funding routine operating costs for a number of European research centers (*Science*, 5 November 1999, p. 1058, and 8 December 2000, p. 1869). "This is a day for celebration," says EBI co-director Graham Cameron. "It is the biggest dollop of money ever put into [European] bioinformatics infrastructure."

The groundwork for the E.U.'s generosity was laid last November, when Philippe Busquin, research commissioner at the European Commission—the E.U.'s executive wing—earmarked \$22 million for genome projects involving databases and animal disease models. This week's announcement that a significant chunk of these funds will go to the EBI represents a partial relaxation of spending rules that some scientists feel are too stringent. "The struggle has been to fund research proposals that are not directly linked to the simple maintenance of databases," explains Carlos Martinez-Riera of the research directorate. Indeed, both E.U. and EBI officials stress that the money was awarded only after the EBI and other partners submitted proposals for new programs rather than for ongoing costs. Although the philosophy behind the funding rules has not changed, Martinez-Riera says, the new EBI funding in practice will help sustain the institute. "We have met each other in the middle," he says.

The E.U. money will fund four new projects: a database for information derived from "DNA arrays," which monitor the expression of thousands of genes at once; a data bank of three-dimensional protein structures; a database of biochemical interactions between proteins; and a project to integrate several existing EBI databases so that researchers can conduct more sweeping searches. The EBI, slated to receive \$11.3 million for these projects over

the next 3 years, will carry them out in collaboration with 30 other labs in 11 European countries. EBI's partners will share an additional \$5.7 million in E.U. funding.

"This kind of science creates its record in electronic form," says Cameron. The E.U. funds, he says, should better position EBI to "carry on its crucial role as a custodian of this record."

—MICHAEL BALTER

CLIMATE CHANGE

17 National Academies Endorse Kyoto

As the Bush Administration dithers over what it might do to address global warming, 17 national academies of science decided to cut to the chase in an editorial in this week's

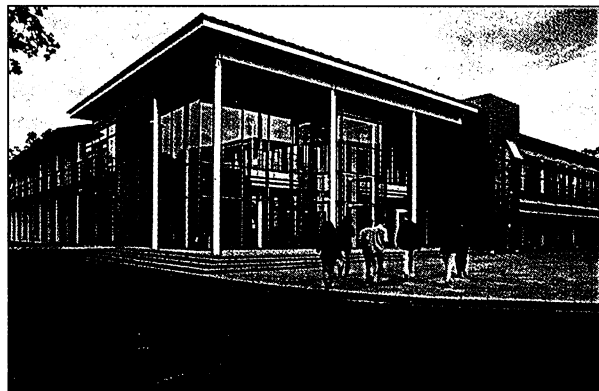


Advocate. Robert May helped organize the collective statement.

Science. Affirming the Intergovernmental Panel on Climate Change's (IPCC's) conclusion that human activities are warming the planet, the statement urges those with "doubts"—by implication, the United States—to ratify the Kyoto Protocol, which would impose binding limits on greenhouse gas emissions by industrialized countries (see p. 1261). Robert May, president of

the Royal Society of the United Kingdom, which organized the statement, says it was partly provoked by Bush's recent rejection of the Kyoto treaty, along with resistance to the Kyoto terms from countries such as Australia.

Notably absent from the list of signers is the U.S. National Academy of Sciences (NAS). It was invited to sign, but the NAS board felt it could not endorse a document it did not help draft on a few days' notice, says F. Sherwood Rowland, NAS foreign secretary. According to several sources, the statement's explicit backing for the Kyoto Protocol was a problem. The protocol is "regulatory, not science," Rowland says. The academy, moreover, is conducting its own expedited review of the IPCC report and did not want to be seen to prejudge the outcome.



Halcyon days. After months of uncertainty, the European Bioinformatics Institute is at last on firm financial footing.

CREDITS: (TOP TO BOTTOM) CHRISTINE NESBITT/AP; DOUG YOUNG/EMBL

ScienceScope

Go Slow NASA has suddenly applied the brakes to an effort to create an outside group to run space station research (*Science*, 17 December 1999, p. 2251). NASA Administrator Dan Goldin surprised his own staffers recently when he told a congressional panel he prefers to "ease into the whole thing."

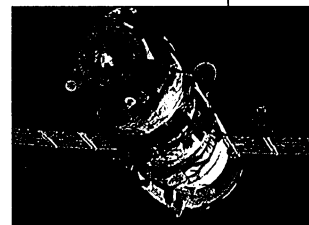
The "thing" is an independent nonprofit organization that would oversee station science and commercial efforts. The idea won approval last year from the National Research Council and has been backed by other studies. But instead of choosing a single winner in a competition, as expected, NASA intends to pick two semifinalists—perhaps in 2002—and let them compete for an additional year.

The shift has little to do with research, say NASA officials and congressional aides. Instead, it reflects concerns over the new entity's location and how it will handle commercial projects. The delay isn't expected to worry researchers, as the station will have little room for science until after 2005.

Accounting Problem The debate over the National Ignition Facility (NIF) has ignited again. At a Washington, D.C., press conference last week, former federal budget examiner Robert Civiak said the Department of Energy (DOE) has vastly understated the cost of NIF, a laser megaproject under construction at the Lawrence Livermore National Laboratory in California.

Last year, some members of Congress tried to kill NIF after DOE admitted that construction costs had spiraled from \$1.2 billion to \$3.4 billion (*Science*, 5 May 2000, p. 782). But consultant Civiak, a researcher who once tracked NIF for the White House budget office, says the real total is closer to \$5 billion. In a report released by the Natural Resources Defense Council and Tri-Valley CAREs, two groups that oppose the project, Civiak concludes that the DOE estimate ignores some costly items, including more than half a billion dollars for fabricating and positioning the laser's targets. Overall, he estimates that operating NIF for 30 years will cost \$34.5 billion, compared to DOE's estimate of \$6.7 billion.

Livermore's Susan Houghton says Civiak's analysis is "silly." NIF's budget shouldn't be saddled with the full cost of targets, for instance, she argues, because other projects will use them, too. Congress is expected to take another look at NIF's costs later this year.



"This is a complicated subject, and the National Academy wants to hear from its chosen experts after having looked at it thoroughly," says Rowland.

Many scientists—and indeed, the 17 national academies—think the IPCC did just that. Over 2500 scientists pored over data for 3 years, producing a massive, multi-volume report that is the consensus of "the global expert community in the field of climate change, not some subset of it," says May. In their statement the academies, including those of Australia, France, China, and India, write: "Doubts ... expressed recently about the need to mitigate the risk posed by global climate change" are not "justified." Ratification of the 1997 Kyoto Protocol "represents a small but essential first step" to halt the buildup of greenhouse gases.

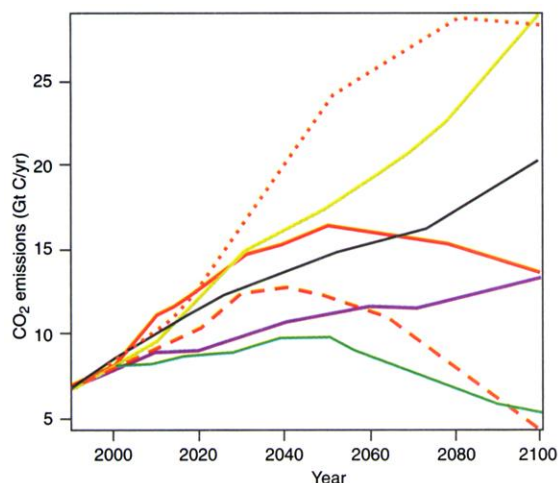
White House officials, however, apparently question the IPCC's conclusions, and after "informal discussions," NAS officials say, they decided to review them. Over the next few weeks, an 11-member panel funded by the NAS will try to answer questions that IPCC's Working Group I al-

The panel includes seven academy members, including Rowland, a Nobel Prize winner for his research on ozone layer-destroying chemicals, as well as NASA's James Hansen, who has recently suggested adding soot to the pollutants that Kyoto targets, and Richard Lindzen, a meteorologist at the Massachusetts Institute of Technology and a global warming skeptic. The latter pair are part of a group of scientists who have been briefing Bush Cabinet officials weekly, offering a condensed Climate Science 101, says a White House spokesperson. Most panelists have also participated in the IPCC process. The panel will meet in a closed door, 2-day session in Irvine, California, next week and issue its report by early June. Until that time, the academy is remaining mum on climate change. Even then, says Rowland, it is unlikely to issue an opinion on the Kyoto Protocol.

The academy has already issued numerous reports on climate change science. And in a 1992 report called "Policy Implications of Greenhouse Warming," an NAS panel urged the United States to launch "a concerted program to start mitigating the further buildup of greenhouse gases." Some scientists speculate that the new study and the academy's reluctance to endorse the Kyoto treaty reflects changing times. "It is reasonable considering the political environment," says Jack Townsend, a member of the National Academy of Engineering and retired head of NASA's Goddard Space Flight Center. He points out that NAS "is not independent in the sense that they receive government money to conduct studies. They can't tee off too many customers."

The academy's hesitance on the Kyoto treaty is not shared by some of its members. Rowland and several other NAS members signed a letter organized by the Union of Concerned Scientists just before the December 1997 Kyoto meeting urging mandatory limits on greenhouse gas emissions. But another member who often speaks out on policy, Stanford ecologist Paul Ehrlich, says he understands the NAS's position. "As an academy member, I'm quite happy to say the Bush position is idiotic," says Ehrlich. But the academy, he notes, was set up "to give scientific advice to the government" through its deliberate panel process and "has no mechanism for taking a position" on urgent policy issues.

—JOCELYN KAISER



Going up. The IPCC looked at seven scenarios for CO₂ emissions, from optimistic to pessimistic.

ready covered. The panel will decide, for example, whether climate change is occurring, whether human-produced greenhouse gases are contributing, and how much temperatures will rise. NAS executive officer William Colglazier says that "obviously we're not going to redo the analysis that IPCC did," but the academy is gathering the IPCC's technical documents and will issue its own "consensus statement." He says the NAS doesn't doubt the IPCC's conclusions but simply feels it needs to analyze the evidence itself. "It would have been difficult for us to do an objective study" if the academy signed the statement, says Colglazier.