

644

Competition over ecological concepts



646

Songs on the brain



654

Old lakes, new species

U.K. UNIVERSITIES

# Tuition Scheme Sparks Worries

A revolutionary proposal in British higher education—a system of graded tuition fees—may scare students away from science courses, researchers fear. The government plan, aired last week, would abandon the existing one-size-fits-all fee and allow universities to charge students up to \$5000 per year. But it has come under fire from two directions: student groups and politicians arguing that the higher fees will dissuade poorer students from enrolling in expensive-to-teach subjects such as science, and university leaders contending that the plan would not bail them out of their current funding crisis.

Reforms are necessary because public funding for education has not kept pace with a dramatic rise in university enrollment in the United Kingdom in recent decades. Indeed, a cash crunch is visibly taking a toll on campuses across the country. “We’re £8 billion [\$13 billion] in the hole in terms of infrastructure improvements that need to be made,” says Leslie Aiello, head of the graduate school at University College London. “Things are in crisis, and something needs to be done to inject money into the system.”

In a report last week from the Department for Education and Skills, the government argues that students who benefit from a university education should contribute directly toward its costs. Currently, students pay \$1800 per year in fees, no matter where or what they study. Under the new plan, universities in England and Wales would be allowed to set their own fees up to the \$5000 ceiling. (Scottish universities are governed by a separate system.) Students would not have to pay the fees until after graduation and after their annual income exceeds \$24,500. Interest-free payments would be spread out at a rate commensurate with a graduate’s income, and those who enter certain public-sector jobs or earn low salaries may have their fees paid by the government.

Such a scheme might sound generous to North American students, who can expect to pay up to \$30,000 a year in tuition up front at private universities. It has, however, caused an uproar in Britain. There, until 5 years ago, higher education was free for anyone who met the academic requirements for entrance.

In a statement last week, The Royal Society, the U.K.’s most prestigious scientific body, cautioned that higher fees for science

courses, if implemented, might discourage students from enrolling. That’s a well-founded concern, says Peter Cotgreave of the lobby group Save British Science. “If I’m a clever person from a relatively poor background, I would probably study law” rather than science, as fees might be lower and salaries higher, he says.

In the end, the new fees are unlikely to please anybody. The real cost of educating a student at Imperial College in London is closer to \$17,000 a year, far more than the college will recoup in fees, says rector Richard Sykes. Imperial has said it will charge the maximum for all courses, as none costs less than \$5000 per year. With students paying fees retroactively, Aiello notes that universities would see no extra cash under the plan for



**Coming up short.** Leaders at Cambridge University and elsewhere say that a controversial new funding scheme won’t solve their cash-flow problems.

at least a few years.

The education department will accept comments on the report until the end of April. Legislation on the proposal is expected in Parliament later this year.

—GRETCHEN VOGEL

SPAIN

# Research Chief a Victim of the Oil Spill?

**BARCELONA**—Criticisms of the government’s handling of the *Prestige* oil spill may have claimed the first victim in the top echelons of Spanish science policy. On 24 January, the



**Sunk by *Prestige*?** Rolf Tarrach says he learned of his resignation from a newspaper report.

government announced that it had accepted the resignation of Rolf Tarrach, president of the Higher Research Council (CSIC), Spain’s main basic research agency. However, Tarrach suggests that he is being made a scapegoat for the government’s stumbling response to last November’s devastating spill.

Tarrach, a theoretical physicist at the University of Barcelona, had been appointed head of CSIC in September 2000. His appointment was largely welcomed by the scientific community, which hoped he would lure fresh talent into CSIC’s network of 121 research centers. But when Tarrach assumed the reins of the agency and its \$400 million annual budget, he found himself reporting to the science ministry, which had acquired CSIC from the education ministry in 2000.

According to Tarrach, the situation deteriorated steadily. On 21 October, he sent a letter to Pedro Morenés, state secretary of scientific policy, in which he threatened to resign if the ministry did not find a solution to the salary gap between CSIC scientists ▶

CREDITS: (TOP TO BOTTOM) DESIGN STUDIO/CAMBRIDGE UNIVERSITY; CSIC

**Insider to Lead World Health Organization**

A relatively unknown insider, Jong Wook Lee (right), has been tapped as the next director-general of the World Health Organization (WHO). The South Korean tuberculosis expert has worked at WHO for nearly 20 years, most recently as head of WHO's Stop TB antituberculosis program.



The 28 January vote by the organization's Executive Board at WHO's Geneva, Switzerland, headquarters was close: Lee received 17 votes to 15 for runner-up Peter Piot, head of UNAIDS. Three other finalists—Pascoal Manuel Mocumbi, prime minister of Mozambique; Ismail Sallam, Egypt's former health minister; and Mexico's health minister Julio Frenk—were eliminated in a first round of voting.

Lee has said he will work to decentralize WHO and strengthen its country and regional offices. Lee's current boss, David Heymann, executive director of WHO's division of communicable diseases, praised the board's choice. Lee "has shown great skills in working with partners in the private sector," he said, which will be important for the organization in coming years. The WHO General Assembly is expected to approve Lee's nomination at its meeting in May. He will take over from current Director-General Gro Harlem Brundtland at the end of June.

—GRETCHEN VOGEL

**Indian Animal Activists Dropped From Oversight Panel**

**NEW DELHI**—In a move likely to please the Indian biomedical community, ardent animal activists have been pushed off a committee that supervises animal experimentation.

Under animal-welfare activist and former union minister Maneka Gandhi, the Committee for the Purpose of Control and Supervision of Experiments on Animals conducted a series of inspections that found deficiencies at several well-known science institutes. But Gandhi lost her Cabinet post in July after a squabble with the former health minister, and her committee post last month. Now the panel has shed 10 of 28 members and been recast into a body of scientists and government officials.

Immunologist Satyajit Rath of the National Institute of Immunology in New Delhi welcomes the changes as a move toward more balanced oversight. But Gandhi sees it as "the end of the road for surprise inspections and rigorous oversight."

—PALLAVA BAGLA

and their university counterparts, who earned up to 10% more. The differential was causing a "brain drain of CSIC scientists" to the universities, Tarrach says. He found himself under increasing pressure from the ranks: In a 4 December letter, 10 directors and scientists of CSIC institutes urged him to deal with a series of concerns about his management of the agency.

Tarrach's woes intensified after the oil spill. In a 24 January letter to *Science* (p. 511), 422 scientists accused the government of failing to adequately take into account the views of the scientific community. Although no government official was singled out in the letter, some researchers pin at least part of the blame on Tarrach. He has shown an "incapacity of leadership," charges Juan Eugenio Iglesias of the Institute of Materials Science in Madrid. Tarrach, he says, has demonstrated that "he serves the govern-

ment rather than the scientists."

If that's the case, the government has found an odd way to express its appreciation. On 24 January, the conservative newspaper *ABC* announced Tarrach's resignation. Tarrach himself says he learned of his resignation from the news article; he blames his fall on the *Science* letter, which generated widespread press coverage in Spain that day.

In a written statement, the science ministry explained that Tarrach resigned because he "wished to return to the academic life." A spokesperson declined to comment on suggestions that the *Science* letter precipitated Tarrach's departure. Ironically, the CSIC official most responsible for dealing with the oil spill—Emilio Lora-Tamayo, CSIC vice president and head of the agency's scientific commission on the spill—is being tapped as Tarrach's successor.

—XAVIER BOSCH

Xavier Bosch is a writer in Barcelona.

**NEUROSCIENCE**

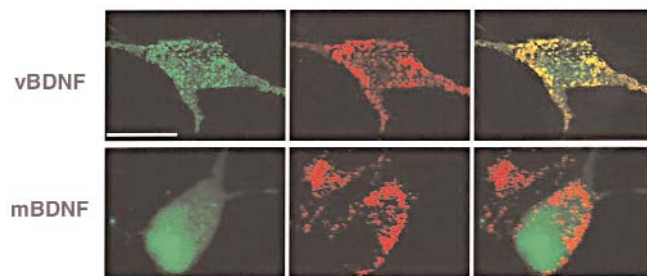
**Minor Variation in Growth-Factor Gene Impairs Human Memory**

Buried deep within the brain, the sickle-shaped hippocampus helps determine what a person learns and remembers. Now, researchers have identified a tiny genetic variation that may influence just how effectively the hippocampus functions. The genetic twist may also affect a person's susceptibility to brain diseases such as Alzheimer's.

People carrying a particular variation in the gene for a protein called brain-derived neurotrophic factor (BDNF) didn't perform as well on a memory test as people with the standard version of the gene did, according to a report in the 24 January issue of *Cell* by Michael Egan, Bai Lu, Daniel Weinberger, and colleagues at the National Institutes of Health (NIH) in Bethesda, Maryland. Brain-imaging and other studies point to abnormal functioning of hippocampal neurons in those with the variation, which changes just one amino acid in BDNF, replacing valine with methionine at position 66 of the protein. Neurobiologist Susan Patterson of Columbia University in New York City says that the work "provides a very nice demonstration that BDNF plays a role in some forms of human memory."

The NIH team had ample reason to suspect that BDNF might be involved in mem-

ory and learning. Although it was originally discovered as a general facilitator of neuron growth and maintenance, over the past few years, numerous groups, including Lu's, have linked it to the neuronal remodeling that underlies learning and memory. In particular, they have found that it enhances a phenomenon called long-term potentiation (LTP), in which synapses, the connections



**Delivery error.** The red stain identifies the secretory vesicles, and the green stain identifies either the valine (*top*) or methionine (*bottom*) variant of BDNF in these hippocampal neurons. Merging the green- and red-stained images (*top and bottom right*) shows that only the valine variant ends up in BDNF's normal location in the vesicles.

between neurons, are strengthened when their neurons are stimulated simultaneously.

In the first phase of their work, Weinberger and his colleagues searched gene databases for variations in BDNF that might influence the protein's function. They also wanted to see if any variations could be linked to schizophrenia, which is associated with derangements in hippocampal function.

The valine-to-methionine switch at ▶

CREDITS: (TOP TO BOTTOM) WORLD HEALTH ORGANIZATION; SOURCE: M. F. EGAN ET AL., CELL 112, 257 (2009)