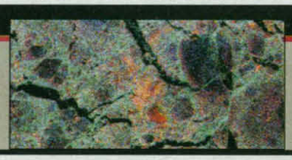
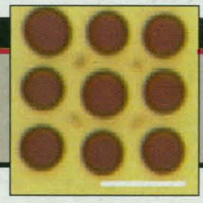


PAGE 1061
Slowdown in the Southern Ocean



1067
Coaxing polymers to pattern circuits

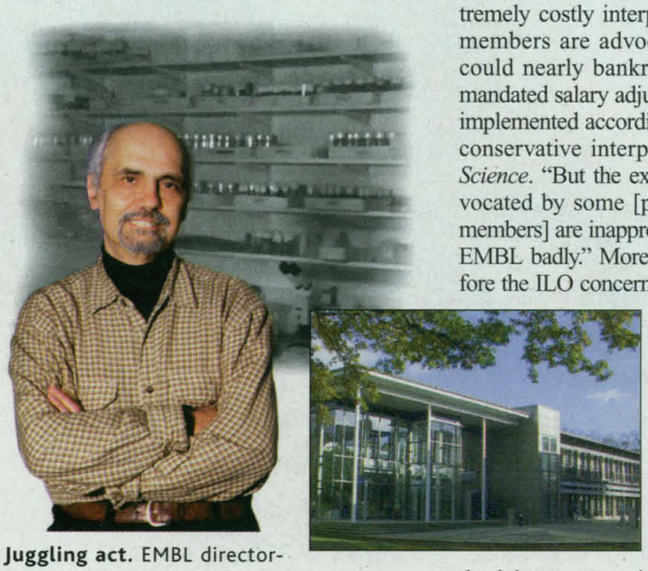
MOLECULAR BIOLOGY

EMBL Faces Huge Bill Following Adverse Pay Dispute Ruling

Scientists at one of the world's leading research centers, the European Molecular Biology Laboratory (EMBL) in Heidelberg, Germany, are in shock after being told that an adverse judgment in a salary dispute could wipe out as much as 25% of the lab's core funding and threaten cancellation of its ambitious future plans. The bad news was delivered at a staff meeting last month by EMBL director-general Fotis Kafatos, who told researchers and other employees that a worst-case interpretation of the ruling—which was rendered by the Geneva-based International Labour Organization (ILO)—could lead to the institution shutting down. Although Kafatos stressed that this possibility was remote, even under the most optimistic interpretation the complex judgment will cost the lab millions of dollars in back salary payments and possibly curtail important new research initiatives.

The decision comes at the worst possible time for the 25-year-old institution. EMBL is already facing the potential loss of European Union (EU) infrastructure funding for one of its outstations, the European Bioinformatics Institute (EBI), near Cambridge, U.K. The EU—which this year provided about 36% of the EBI's $8.3 million budget—decided earlier this year to cut all its infrastructure funding to EBI and several other European research facilities next year. (A letter from more than 60 European scientists protesting this decision was published in this week's *Nature*.) Later this month, Kafatos is scheduled to go before EMBL's governing council, which consists of delegates from the lab's 16 member countries, to present a draft 5-year scientific plan for 2001 to 2005 that is expected to include a significant boost in EMBL funding for EBI and its new mouse genetics facility at the Monterotondo Research Center near Rome. Kafatos and other EMBL researchers fear, however, that the council may take a dim view of increased support for EBI if it is forced to fork out huge additional sums of money to the lab's staff.

The convoluted legal case has its roots in EMBL's status as an international organization, sponsored by 15 European nations plus Israel. Many such organizations—including NATO, the European Space Agency, the Organization for Economic Cooperation and Development, and others—belong to a group called the Coordinated Organizations (Co-Org), which sets salary levels and scales for its members. Although EMBL has never joined Co-Org, in 1982 the lab adopted the Co-Org system as a "guide" for salary levels, a decision that was written into its staff regulations. But in 1992 the EMBL council, concerned with the growing costs to the lab of following the Co-Org guidelines, began capping salary increases at lower levels. As a result, overall salaries at EMBL began to slip below those at Co-Org member organizations.



Juggling act. EMBL director-general Fotis Kafatos's plans for the European Bioinformatics Institute may be in jeopardy.

In 1995, EMBL's staff association challenged this decision. When the council refused to relent, three EMBL scientists and two nonscientific staff members—later joined by a large number of their colleagues—filed complaints for back pay with the ILO, which arbitrates labor disputes involving international organizations. On 8 July of this year, the ILO's administrative tribunal ruled in their favor, arguing that EMBL could not deviate from its own staff regulations without providing "proper reasons" and adding that "financial considerations … do not constitute a valid reason." The tribunal's order, which cannot be appealed, directs EMBL to implement the Co-Org salary increases for 1995, and in addition to pay employees 10% annual interest since that year on the sums past due.

However, the decision leaves ambiguous whether the council is only required to grant the percent increases mandated for 1995, or whether it must now restore overall salary levels to what they would have been if the guidelines had been followed since 1992, an extremely costly interpretation that some staff members are advocating—but one which could nearly bankrupt the lab. "The ILO-mandated salary adjustments are reasonable if implemented according to the council's [more conservative interpretation]," Kafatos told *Science*. "But the extreme interpretations advocated by some [present and former staff members] are inappropriate and could damage EMBL badly." Moreover, two more cases before the ILO concerning salaries for 1996 and 1997 are still pending and are expected to be decided early next year, although the amounts of money involved are considerably less.

At the staff meeting last month, Kafatos said that at worst the ruling would require the lab to pay an immediate lump sum of about $11 million, or about a quarter of the $43 million the member states provided EMBL in 1999 for its core operating costs. The tab for catching up with Co-Org salary scales would then run about $2 million per year in future years. And these large sums do not include the possible adverse judgments for 1996 and 1997. Even the best-case scenario, in which the lab would not have to fully adjust overall salaries to Co-Org levels, would still mean a $2.7 million bill for the 1995 judgment alone.

"The council was wrong in not granting these salary increases," says structural biologist Luis Serrano, chair of the EMBL staff association. "From a legal point of view they made a blunder." But Kafatos says that the lab was not obligated to follow Co-Org rules. "It is clear that the EMBL council never ceded its decision-making powers to Co-Org [because] we are not a member."

"I am not worried that EMBL will shut

CREDITS: (LEFT TO RIGHT) EMBL; R. HARPER/EBI

down," says computational biologist Peer Bork, "because that is an extreme scenario and I don't think it will happen. But there is a chance that we will lose our critical mass in some [research] areas and will not be competitive anymore." One of these areas, Bork says, is the hot field of functional genomics, "which requires a lot of expensive equipment." And Serrano adds that "it is clear this is going to be a major blow for EMBL." Just how major, he says, depends on which interpretation of the ILO ruling that the staff chooses to insist upon, a decision currently being debated in the lab's corridors.

As *Science* went to press, the staff association was expected to meet this week to discuss its options. EMBL employees might agree to spread the back payments over a number of years to soften the blow or to take increased holiday time to partly compensate for the money they are owed. But Serrano says that many of the original complainants in the case are no longer at EMBL, and they may not be willing to compromise—in which case the matter could end up back before the ILO if the governing council does not agree with the staff interpretation. According to one staff member who prefers to remain anonymous, "there are people who don't care if the lab goes down the drain over this."

Kafatos will have to tread carefully to avoid such a scenario in the coming months. The best solution, he says, would be one that would "safeguard both the fair interest of all EMBL personnel and the continued well-being of EMBL as an institution." And he will be looking for any encouraging signs that the staff will rally behind him. Says Serrano: "Nobody in this building is interested in destroying EMBL." **–MICHAEL BALTER**

ANIMAL RIGHTS

Booby-Trapped Letters Sent to 87 Researchers

Psychobiologist John Capitanio could see the razor blade through the back of the envelope mailed to his office at the University of California, Davis. He already knew what to look for: Capitanio had been told he was one of 87 scientists using nonhuman primates in their research across the United States targeted last month by a shadowy animal rights group that originated in Britain. Booby-trapped to slice the fingers of an unsuspecting scientist trying to open them, the letters mark a new and disturbing turn toward violence by the militant wing of the animal rights movement.

Although animal rights groups have vandalized many laboratories in the United States, in recent years most attacks on individuals have occurred in Europe (*Science*, 4 June, p. 1604). "This is the first time there's been a campaign of this ilk [in the United States] on this large a scale," says Mary Brennan, executive vice president of the Foundation for Biomedical Research (FBR), a Washington, D.C., watchdog group, which warned the intended victims after spotting a list of them on an animal rights organization's Web site. While some researchers, like Capitanio, seemed to take the missives in stride, others saw them as much more serious: "Some of my colleagues are feeling very frightened," Capitanio says.

As *Science* went to press, more than 50 of the 87 letters had been received, all bearing a Las Vegas postmark dated 22 October. In addition to a razor blade taped inside the upper edge of the envelope, each letter contained a short, typed message that read, in part: "You have until autumn of the year 2000 to release all of your primate captives and get out of the vivisection industry."

A group called the Justice Department has claimed responsibility for the letters in a 24 October communiqué on a Web site, the Animal Liberation Frontline Information Service, that posts information supplied by "underground" groups such as the Animal Liberation Front (ALF; www.enviroweb.org/ALFIS/index2.html). The FBR and another group, Americans for Medical Progress, spotted the posting the next day and alerted the researchers listed. No injuries have been reported.

The Justice Department originated in Britain, where it has acknowledged sending letter bombs and other devices to pharmaceutical labs, animal breeders, and researchers since 1993. One of the group's members served 3 years in prison. Three years ago, the group began sending similar threatening letters, complete with razor blades, to Canadian hunting groups and fur retailers. A fact sheet on the site associated with the ALF, which expresses a commitment to "nonviolence" despite having taken credit for past attacks on animal labs, explains that the Justice Department "see[s] another path … [that] involves removing any barriers between legal and illegal, violent and nonviolent."

Some researchers already accustomed to regular protests by animal rights groups seemed unfazed by the letters. "There's not a whole lot we can do about this sort of thing other than just stay alert and not fool around with anything that looks suspicious," says Peter Gerone, director of the Tulane Regional Primate Center in Covington, Louisiana. But others were less nonchalant, including a University of Washington, Seattle, AIDS researcher who declined to have his name published. "I have a family," he says. "I don't want to say I'm afraid, but there are certain situations where you don't take chances." Capitanio says he's okay now, but admits that "I might feel more nervous next autumn."

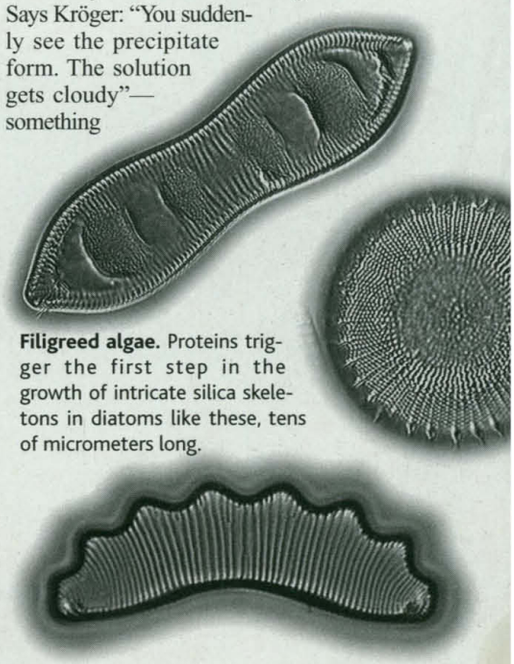
–JOCELYN KAISER

BIOMATERIALS

Reverse Engineering the Ceramic Art of Algae

The glasslike silica laceworks within the cell walls of diatoms are so beautiful they'd be on display in museum cases if only they were thousands of times bigger. No one knows how these tiny algae pull off their bioceramic art, but researchers are closing in on the secret. On page 1129, biochemist Nils Kröger and colleagues at the University of Regensburg in Germany report new clues—silica-forming proteins dubbed silaffins.

Within seconds after they added their first silaffin samples to solutions of silicic acid, a silicon-containing organic compound, Kröger, Rainer Deutzmann, and Manfred Sumper knew they were onto something. Says Kröger: "You suddenly see the precipitate form. The solution gets cloudy"—something



Filigreed algae. Proteins trigger the first step in the growth of intricate silica skeletons in diatoms like these, tens of micrometers long.

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