



## Bailout for Swiss Protein Database

A unique molecular biology database that had been hovering on the edge of financial collapse in recent months now appears to be on the road to recovery. Last week, after being inundated with messages from concerned researchers, the Swiss government promised to seek long-term funding for SWISS-PROT, a database of amino acid sequences in more than 50,000 naturally occurring proteins.

SWISS-PROT, pioneered by Amos Bairoch at the University of Geneva, was threatened with closure in May (*Science*, 17 May, p. 946) when the European Union turned down a \$1.9 million, 3-year grant on which \$1.4 million from the Swiss government depended. So Bairoch and his colleagues sent out a global e-mail alert requesting messages of support from researchers. Meanwhile, in May, the canton of Geneva stepped in with \$250,000 in emergency funds to sustain the Swiss team, which

runs the database jointly with the European Bioinformatics Institute near Cambridge, United Kingdom, through 1996.

Responses poured in from more than 1500 researchers, including Nobel laureates and other leading biologists; Bairoch forwarded them to the Swiss government. Last week, science agency director Heinrich Ursprung replied with the welcome news: The government will seek new means of financing SWISS-PROT beyond 1996. "I'm optimistic a solution will be found," Ursprung said, adding that while he recognizes the importance of bioinformatics, "it is very encouraging to learn that the entire scientific community shares the same view." Although pleased by the news, Bairoch is still seeking additional funds from other sources.

## Argonne Revives Criticized Fuel Process

Despite opposition from nonproliferation groups, Argonne National Laboratory near Chicago is reviving a nuclear fuel processing step—developed for the Integral Fast Reactor, a \$900 million program which Congress axed in 1994—to be used now only for waste separation.

The resurrected step involves using an electrochemical process to separate reusable uranium from a variety of radioactive and

chemical waste materials—including long-lived waste such as plutonium. In the original plan, the long-lived waste would have been purified enough to be re-mixed with the uranium and used again for fuel. Physicist Yoon Chang of Argonne points out that the process "did not produce pure plutonium," but some groups still charged that the technology could create weapons-grade material if misused.

Now, says Department of Energy (DOE) official Bill Magwood, "changes have been made addressing" those concerns. In the modified process, used since 21 June on rods from the closed Experimental Breeder Reactor-II near Idaho Falls, the long-lived waste can't be mixed with uranium. Instead, it's incorporated into stable glass and geolite compounds for long-term storage. And as in the original plan, this pilot project, funded at \$50 million a year, separates out short-lived waste that would otherwise have to be stored with the plutonium. The process, says Magwood, could "save taxpayers a huge amount of money" if it proves useful for other DOE radioactive waste.

But Daniel Horner of the Nuclear Control Institute in Washington, D.C., isn't convinced: The "basic capabilities of the technology" haven't changed, he says.

## Radiation Study: Back From the Brink

After 18 months of uncertainty, a U.S.-Japanese study of atomic-bomb survivors appears to be back on solid ground. Last week a blue ribbon panel soundly endorsed the program's research, a result that comes amid discussions between the U.S. National Academy of Sciences and the Department of Energy (DOE) to extend the NAS's role as U.S. manager of the project for 5 years.

The Radiation Effects Research Foundation (RERF)—funded jointly by the DOE and Japan—studies the health of people who survived the 1945 atomic bombings. In early 1995, the DOE alarmed some radiation biologists when it voiced doubts about its \$18 million annual payment to RERF and considered having a university take over the politically sensitive project from the NAS. After months of wrangling, the DOE extended the academy's contract for a year (*Science*, 30 June 1995, p. 1835). Meanwhile, last fall a nine-member panel chaired by Roger Clarke, director of the U.K. National Radiological Protection Board, began reviewing RERF's research.

The panel's 2 July report praises the population studies as "unique" and the data collected as of "extremely high" quality. It also recommends changes such as more peer review and more collaboration with universities in Japan and abroad. "We're very pleased," says Paul Gilman, executive director of the NAS commission on life sciences. "This reflects back on us."

Meanwhile, DOE officials say the agency will soon begin negotiating with NAS to extend its contract for 5 years beyond October 1996. The NAS has made an "excellent effort" at trimming overhead costs, an agency concern, says DOE's Steve Galson. The DOE is cutting RERF funds by 25% next year—a result, Galson says, of agencywide belt-tightening. But, he adds, Japan has agreed to make up the loss.

## Russia Joins CERN Collider Project

Russia has joined the growing roster of nonmember countries pledging support for Europe's next big particle accelerator—the Large Hadron Collider (LHC) at the CERN high-energy physics lab near Geneva. The Russian government will contribute \$60 million to the total bill of \$3 billion for LHC, the world's largest proton accelerator. Russia signed a protocol with CERN in June specifying its participation, and earlier this week CERN and Russian officials announced the agreement in Moscow.

According to the documents, the agreement will set up two special funds in Russia into which CERN and the Russian government will each put \$60 million over the next 10 years. The money will be used to fund research in Russia to support collider construction and development of LHC equipment by Russian industry. About 430 Russian researchers

will participate in the construction and use of the LHC.

Russia has held observer status at CERN since 1991 and since 1994 has spent \$1 million to \$1.5 million a year to support Russian researchers there. "Still," says Boris Saltykov, Russia's science minister, "Russian science being a hostage of the economy, we cannot afford the full membership in CERN, for it would require an annual contribution of at least \$50 million. Although there's no other obstacle for us to become a full member, we have to wait until the economy is stable."

CERN also has gotten commitments from Japan and India and is negotiating contributions from more nonmember countries, including Canada and the United States. If enough countries chip in, CERN hopes to shorten the date for reaching full energy of 14 teraelectron volts at the LHC from 2008 to 2005.