these efforts, along with recent changes in Indonesia, offer glimmers of hope, says Supriatna. For example, Indonesia has a freer press than it used to, which is publicizing the crisis. In addition, the International Monetary Fund has put conditions on new loans to Indonesia, forbidding extension of oil-palm plantations and loans to loggers. International conservation groups are funneling money to the national parks and pressing the World Bank to tie debt forgiveness to forest protection. They have also established a trust fund to promote ecotourism and boost such forest crops as spices and rattan. "We're looking at a very serious problem," van Schaik says, "but for the first time in decades, there's reason for optimism." **–DAN FERBER**

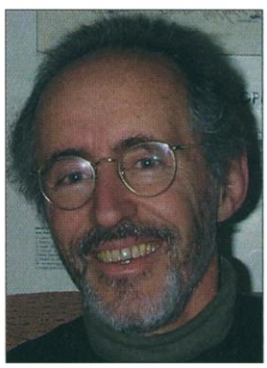
Dan Ferber is a writer in Urbana, Illinois.

EUROPEAN SCIENCE

Spain Opens Coffers to Keep Talent at Home

Like many top Spanish scientists in recent years, Miguel Beato coped with his country's prolonged science funding funk by working abroad. "I'd given up ever going back to Spain," he says. But now that Barcelona is building a $55 million biomedical research park and planning a biocenter at the University of Barcelona, Beato, a cell biologist at the University of Marburg in Germany, is contemplating the unthinkable: coming home.

Beato is not the only one impressed with Spain's sudden scientific resurgence. Late last month, the government announced a plan to boost science and technology spending over the next 4 years from $2.8 billion, or 0.9% of the gross national product in 1999, to the European average of 2% by 2003. Tasked with pushing this agenda is a new Ministry for Science and Technology, created last month by Prime Minister José Maria Aznar. "There is a real commitment by the government to give a major boost to research and development," says the ministry's newly appointed science policy chief Ramón Marimón. That's sorely needed, says molecular biologist Margarita Salas of the Center for Molecular Biology in Madrid. "Without this step," she says, "Spanish science is in serious danger of going downhill."



Brighter skies? Miguel Beato sees Spanish science picking up.

Researchers have been waiting for good news for more than a decade: The last significant hike for science funding was in the mid-1980s, when a booming economy allowed the government to more than double the science budget. "The consequences were remarkable," says Salas. "The number of scientists and the quality of the research shot up in a very short time." Beginning in the early 1990s, however, Spain's science budget stagnated, the victim of a general belt-tightening aimed at shrinking Spain's budget deficit.

Marimón and his boss, Science Minister Anna Birulés, have revealed little about how they plan to dole out the budget increase. However, they do say that basic research will be the main beneficiary in next year's budget, and that they hope to create 25% more positions for scientists by 2003. The latter initiative would address the worst problem nationwide, scientists say. "We can't even offer positions to the many well-trained young scientists who want to come back to Spain" after completing postdocs abroad, says Salas. Some help is coming from the regional governments, particularly Catalonia. Besides sponsoring the two new biomedical initiatives and for the first time appointing its own regional science minister earlier this year, Spain's affluent northeastern state has freed up funding for about 30 life science faculty positions at the University Pompeu Fabra in Barcelona. "Catalonia is showing Spain the way," says Beato, who now spends about 2 months a year at Pompeu Fabra as a visiting professor.

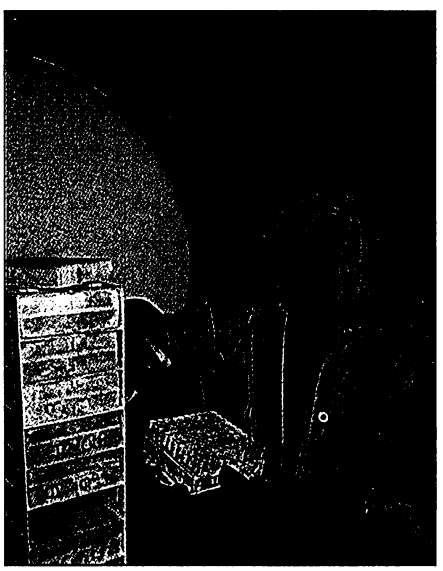
Private donors are also stepping up efforts to retain key scientists. In January, the Botin Foundation, run by the Bank of Santander, bestowed a windfall on cellular biologist José Jorcano of the National Research Center for Energy, Environment, and Technology—a grant for $1 million a year for up to 9 years to support his work on the etiology of cancer. And in February, the Juan March Foundation, known for endowing the arts, made a splashy entrance into Spanish science by announcing that it would award one $800,000-plus grant every year to a promising biomedical researcher under the age of 50. An international review panel is expected to select the first winner this fall.

Despite these promising signs, some observers are not convinced that the long drought is over. "There have been too many words and too little action in the past. We have to wait and see what really happens," says neurobiologist José Lopez-Barneo of the University of Seville Medical School. However, he adds, "simply having the word 'science' back on the political agenda and a ministry devoted to it is a giant step forward." **–MICHAEL HAGMANN**

CONSERVATION BIOLOGY

California Team to Map Rare Species' DNA

To help unravel genetic kinship among mammals, the San Diego Zoo and Amersham Pharmacia Biotech announced last week that they are launching the first systematic effort to decode the DNA of endangered species. Over the next year, the team plans to sequence key portions of the genetic code of one representative of each of the 146 mammalian families. Many of the animals are from a menagerie that most visitors to the San Diego Zoo never get to see—a "Frozen Zoo" of stockpiled DNA, from rare Przewalski's horses to western lowland gorillas.



DNA on ice. Sequencing effort will tap CRES's Frozen Zoo of tissue samples.

Using Amersham's capillary sequencing machines, the project aims to generate complete sequences of the DNA in the mitochondria, tiny powerhouses outside the cell's nucleus that produce chemical energy. Because mitochondrial DNA mutates at a fairly reliable rate, scientists can judge how long ago species diverged according to differences in mtDNA sequences. These biochemical clocks will help sort out little-known relationships within families such as the insectivores, says geneticist Oliver Ryder of the San Diego Zoo's Center for Reproduction of Endangered Species (CRES): "I think we'll gain fantastic insights into molecular evolution."

Conservation experts welcome the project. "It's a positive step toward unlocking important new genetic data that eventually will be useful for managing endangered species," says David Wildt of the Smithsonian Institution's Conservation and Research Center in Front Royal, Virginia. Indeed, such projects

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