

RESEARCH FACILITIES

Spain Aims to Lure Systems Biologists to a Place in the Sun

BARCELONA—In a stylish marriage, the European Molecular Biology Laboratory (EMBL) is teaming up with the Spanish government to create a new center for the development of mathematical models of living systems. The venture, funded by Spain, will be based at a beachfront research park that opened here last month. The partnership creates a new southern outpost of the Heidelberg-based EMBL, in partnership with Barcelona's new Center for Genomic Regulation (CRG).

Spain has agreed to invest \$16.5 million over the next 9 years to support six research groups in systems biology as part of a broader push to boost Barcelona's scientific profile. The systems biologists will join hundreds of other researchers in the Barcelona Biomedical Research Park (BBRP), which will house up to 80 research groups studying topics as diverse as embryonic stem cells, genetic sequencing, and the effects of environmental pollutants.

"With BBRP, we want Barcelona to become a big capital of knowledge in southern Europe," says pharmacologist Jordi Camí, the park's general director and former head of Barcelona's Municipal Institute of Medical Research (IMIM). In addition to the EMBL offshoot, the park will house IMIM and its respected department of environmental epidemiology, a 400-bed hospital, the Pompeu Fabra University Experimental and Health Sciences Department, a

Center of Regenerative Medicine, and the CRG, which will support research on genomics, proteomics, and bioinformatics, as well as systems biology. A new Institute of High Technology will provide access to sophisticated imaging with a cyclotron and two positron emission scanners.

At the helm of the EMBL/CRG unit will be Luis Serrano, currently coordinator of the EMBL Structural and Computational Biology Unit in Heidelberg. The EMBL/CRG groups will work with a variety of systems, including RNA interference, biochemical networks, and mouse development. Serrano says all groups will be working to develop "a quantitative understanding of biological systems that allows you to make testable predictions." Two principal investigators have been appointed, and the mixed EMBL/CRG search committee has plans to hire three more.

Like their counterparts at EMBL, the researchers will receive 5-year contracts, renewable for an additional 4 years. Serrano says he hopes the system will encourage "a spirit of rotation and the removal of the 'position for life' philosophy" that is prevalent in Spanish science. Organizers also hope the EMBL brand name will



Hot area. Barcelona launched a new biomedical park in May.

help the unit attract international talent.

Ben Lehner, an RNA interference scientist at Wellcome Trust Sanger Institute in Cambridge, U.K., has been hired to lead one of the research groups at the Systems Biology unit. He says he's impressed by "how serious the Catalan government is about turning Barcelona into an international hub for biomedical research." He thinks it may be a "golden" time for recruiting talent back to Europe in light of "the current crisis in science funding that we are seeing in the United States."

—XAVIER BOSCH AND GRETCHEN VOGEL

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U.S. IMMIGRATION REFORM

Senate Bill Would Boost High-Tech Workforce

Business leaders and U.S. academic institutions are applauding some of the provisions in the immigration reform bill approved last week by the Senate. And although the overall measure is at odds with a version passed last fall by the House of Representatives, which focuses more on reducing rather than regulating immigration, scientists don't expect those provisions to be bargaining chips as the two bodies try to reach a compromise.

The Senate bill retains several provisions from last month's abortive agreement (*Science*, 14 April, p. 177), including hiring more high-tech foreign workers and granting permanent residency to foreign students graduating with advanced degrees in science and engineering from U.S. universities. It also would modify a program that annually awards 50,000 visas by lottery to applicants from low-immigration countries—poor nations such as Bangladesh and Angola as well as wealthier ones such as Australia and Germany. Current rules allow applications from anyone who has

finished high school and worked for 2 years. The amendment would reserve two-thirds of these visas for applicants with advanced science and engineering degrees. "Rather than have a lottery system which says to the unemployed cab driver in Kiev, 'You should have a chance to come to America,' we are going to have a lottery system that says to the physicist in Kiev, 'You have a shot at coming to America,'" explained Senator Judd Gregg (R-NH) as he offered the amendment.

Sandra Boyd of the National Association of Manufacturers welcomes the change, although she says the immediate benefits may be slight. "The countries that qualify for the diversity visa program are not the ones where U.S. companies go looking for talent in the first place," she explains. The amendment even makes sense to Jack Martin of the Federation of American Immigration Reform (FAIR), which opposes opening U.S. borders. "Having a higher degree requirement for the lottery would certainly be in keeping with the needs of the economy," he says.

Higher education lobbyists are heartened by the Senate's support of a proposal to grant automatic permanent residency, or "green cards," to foreign students graduating from U.S. institutions with master's degrees and Ph.D.s in science and engineering fields. The legislators also raised the H-1B visa cap from the existing 65,000 to 115,000 a year, with an automatic 20% boost each year if the ceiling is reached, and increased the annual employment-based green card ceiling from 140,000 to 290,000.

None of these measures is expected to figure prominently in upcoming discussions between the House and Senate, however, although the House version of the bill would eliminate the diversity program. "The principal issues of contention will be the amnesty and guest worker provisions," says Martin. President George W. Bush has supported immigration reform but must walk a fine line to avoid alienating conservatives who prefer the House version.

—YUDHIJIT BHATTACHARJEE