

Seeking a place for Portugal among world's scientific elite

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LISBON, Portugal — When Zachary Mainen told colleagues he was quitting his job as associate professor at a top U.S. research institute to pursue his career in western Europe's poorest country, they were puzzled.

The 39-year-old American neuroscientist in April swapped Cold Spring Harbor Laboratory in New York for Portugal's Champalimaud Foundation.

"At first people were surprised I'd do that," Mainen said. "But after they heard what's going on, they were less surprised ... They were offering conditions comparable to what I might have in the U.S."

Tiny Portugal is looking to make a big name for itself. While a crunch on biomedical research budgets in the United States has tightened competition for grants there, the fledgling Champalimaud Foundation has \$784 million to spend and is courting top scientists with the lavish facilities of a planned world-class research center.

The private foundation was created from an endowment from Antonio Champalimaud, one of Portugal's wealthiest businessmen, who bequeathed it a quarter of his \$3.1 billion estate when he died in 2004.

Portugal, a European Union member with a population of 10.6 million people, has no tradition of scientific eminence. National spending on research and development is feeble, at less than 1 percent of gross domestic product, according to 2005 figures. That's below the European Union average of 1.8 percent and far off the U.S. average of 2.8 percent. The lack of funds and technology has long pushed Portugal's best scientists abroad.

Private gifts for scientific advancement are common in the United States but rare in Europe, where public funds and pharmaceutical companies foot the bill for most biomedical research. British charity Wellcome Trust is among the few that buck the trend.

The Champalimaud Foundation's president, former Portuguese health minister Leonor Beleza, toured leading U.S. schools such as Johns Hopkins University in Baltimore and the Massachusetts Institute of Technology to see how she might turn her institution into a similar beacon for the world's scientific elite.

At MIT she met Susumu Tonegawa, winner of a Nobel Prize in 1987 for his work in immunology. "He said to us, 'Don't think you can't achieve the best, because if you're ambitious, and the people you choose are rigorous and do good science, you can achieve good results,'" Beleza said in an interview with The Associated Press.

Beleza opted to focus on two fields where breakthroughs capture public attention: clinical cancer research and basic neuroscience.

Cancer diagnosis and treatment are weak in Portugal, largely due to inadequate screening and the state welfare system's limited funds, experts say. The Champalimaud Foundation's planned



high-tech research center, due to open in 2010 at the mouth of the River Tagus in Lisbon, features sophisticated diagnostic and treatment units for cancer patients in the lower levels. The research labs are on the floor above.

That tailor-made layout plugs into the modern health care trend for research — closely linking laboratory developments to onsite doctors and patients in what is termed a "bench-to bedside" approach. The idea is for the paths of researchers and doctors involved in treating outpatients to

cross not just at the bedside but also at the water-cooler.

The neuroscience program aims to unlock the secrets of human behavior by understanding how the brain arrives at decisions. The findings may help decipher mental illnesses such as schizophrenia. The foundation also awards a \$1.6 million annual prize for advances in eyesight research.

Another lure is that when its scientists eventually move on, the foundation will allow them to carry away some of the research funds they raised during their time in Lisbon. It's an initiative known as a "golden parachute." Beleza says she doesn't want her foundation to fall into the common European trap of providing jobs for life, which can stifle progress.

She concedes, however, that this southwestern European country's distance from mainstream capitals is a drawback. That's why researchers moving to this Atlantic city are encouraged to travel.

The foundation has already snared some illustrious support.

Tonegawa, of MIT, agreed to be on the jury for the annual vision prize. James D. Watson, the Nobel Prize-winning scientist who helped discover the molecular structure of DNA, is on the foundation's scientific committee.

Antonio Damasio, author of the 1994 book "Descartes' Error" and director of the Brain and Creativity Institute of the University of Southern California in Los Angeles, sits on the foundation's general council.

Damasio, who left Portugal after obtaining his Ph.D. at Lisbon University in 1974, reckons the foundation's lack of a track record will work in its favor.

"Beginning from the ground up without past errors to correct is an enormous advantage," he said in comments e-mailed to the AP.