

In Argentina, a Life of Contrasts

During an economic crisis, foreign funding shields some scientists, who contend that science can only help the country.

Alberto R. Kornblihtt gazes around his University of Buenos Aires classroom and his eyes linger on the empty desks. Since last spring, at least a dozen students have dropped Kornblihtt's introductory biology class. These kids don't lack ambition, or even good grades. What they lack is bus fare.

For Kornblihtt, an HHMI international research scholar, this is a unique time marked by both privilege and pain. Argentina, long recognized as Latin America's scientific star—boasting top academic labs and three Nobel prizes—has collapsed into a deep economic depression. One out of every two Argentines cannot buy basic food and clothes. “Whole families, with small children, wander along Buenos Aires streets every evening, collecting paper and cardboard from the rubbish to sell,” Kornblihtt says.

Yet he heads to work each morning, preparing novel experiments on regulation of messenger RNA in mammalian cells. His lab is well stocked. He sets aside time to write journal articles and travels to international meetings. All of this makes Kornblihtt—and 15 other Argentines who are HHMI international research scholars—a distinct minority. “I am one of the lucky ones,” he says. Living a life of contrasts, these researchers find themselves in a position to help others—and raise awareness about the role of science in building a stronger economy.

Although political instability has racked Argentina for



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decades, the financial impact hit hard this year as the country defaulted on international debt, froze bank accounts and devalued the peso—which promptly lost 70 percent of its value. “It used to be that one peso equaled one dollar,” explains Maria Fernanda Ceriani, an HHMI international research scholar at the Leloir Institute of Biochemistry Research, Campomar

Foundation, in Buenos Aires who is working to identify the genes behind neurodegenerative disorders such as Parkinson's and Alzheimer's. “Now it takes almost four pesos to equal one dollar, so the amount of money in your hand is one-quarter of what you had before.” In the United States, that would be the equivalent of spending \$6 for a gallon of gas, \$8 for bread and \$200 for ordinary tennis shoes—without any increase in salary.

The shortfall threatens Argentina's storied scientific establishment, as supplies run short, government funds dry up and graduate students scramble for positions abroad. For Argentine scientists, lab supplies—all purchased from U.S. and European companies—have become prohibitively expensive. “If you don't have a grant from abroad that is in dollars or euros, you are basically without money to do science,” says Ana Belén

Elgoyhen, an HHMI international research scholar at CONICET, a science funding agency in Buenos Aires. After a six-month freeze on research grants, some money has begun to flow again. But the grants buy considerably less than before.

Scientists fear the tumult will lead to a brain drain. In 2002, science enrollment at

the University of Buenos Aires dropped by more than a third. Graduate students are flocking overseas. “In my generation, people would go abroad for training, with the clear idea of coming back soon after,” says Fernando A. Goldbaum, an HHMI international research scholar at Campomar who is engineering proteins to develop new vaccines against brucellosis, a bacterial disease that afflicts both animals and people in many countries. “Now, more young people are . . . staying [away] longer or even for life.”

But not all stay abroad. Ceriani returned to a different Argentina in April after a five-year postdoctoral position at the Scripps Research Institute in La Jolla, California. “The contrast is huge, but I don't regret moving back,” Ceriani says. She does add that setting up a new lab would have been impossible without HHMI. “When you are starting from scratch, you need a million things—chemical reagents, plasticware, equipment. This is one of the ways HHMI funding has had a major impact on our science.” HHMI supports 16 scientists in

Argentina. Their five-year grants range from just under \$267,000 to \$450,000.

These researchers estimate that fewer than a third of Argentine scientists have funding from outside the country. The Wellcome Trust, for instance, awards grants to Argentine researchers working with colleagues in the United Kingdom. Similarly, the National Institutes of Health (NIH) offers Fogarty International Research Collaboration Awards to Argentine researchers working with U.S. scientists. Other coveted awards come from Italy, Japan and the European Union.

Researchers with outside funds are quick to share lab resources. “I am collaborating with other scientists, and I offer them things like petri dishes and Eppendorf tubes because I know they don't have them, and we just can't do collaborative experiments without them,” says Goldbaum, who also received a \$32,000 NIH grant this year for his work on vaccines. Kornblihtt remembers



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tight times earlier in his career, when he had to sterilize and reuse plastic petri dishes at least once or twice. “I’m afraid that some groups, if they want to keep working, will soon have to go back to these methods.”

Argentina’s HHMI research scholars see science as a way forward, and as the country’s crisis deepens, they are sounding the call for stronger investment in research. “One could argue that it’s nonsense to support science when you have to feed hungry people,” Kornblihtt concedes. But he contends that science and technology will be the cornerstone of a stronger country, and he has joined others in drafting proposals for improved state policies. “I link my fight for science with a



fight for independence,” he says. “If we want to get out of this crisis, we should be more independent, both politically and economically—and in that picture, science is key.” Kornblihtt suggests that the government increase the national science budget to at least one percent of the gross national product and require private companies to invest in local research and development, which, he says, would create new jobs.

“I think our real impact may be as an example in the middle of this disaster,” says Goldbaum, noting that even now Argentina has more HHMI research scholars than any other Latin American country. Within Latin America, HHMI also sup-

ports scientists in Brazil, Chile, Mexico, Uruguay and Venezuela—several of these countries are facing economic downturns as well.

“Our problem is not that we are a poor country but that we are a rich country that has been badly managed,” says Argentina’s Goldbaum. “To see young people doing science at an international level could have a big impact by showing that this kind of effort, in the long term, can bring success.”

Still, everyone feels the emotional drain of a country where banks refuse to cash checks and political leaders change like the shifting sands. “Even if you have an HHMI grant,” says Elgoyen, “you still have to live this disturbing life where you don’t know what’s going to happen in the future. The only way to survive, I guess, is to keep going.”

—KATHRYN BROWN