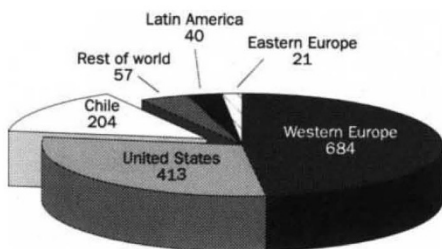


Where Chilean scientists get their PhDs*



*Fondecyt Investigators, 1989-1991
Source: CONICYT

departments whose programmes have passed a national evaluation.

But he is frustrated by his inability to influence the way in which universities spend the lump sums they receive from the education ministry. "Some spend a lot of it on research, and others allocate nothing", he says. A new Conicyt programme that provides researchers with a 15 per cent supplement to their salaries helps to ease the pain, but it is not enough to make a real difference.

D'Etigny would also like to improve communication between the government and university researchers, including greater input from outside advisory panels. "We don't have a good way to develop new areas of science", he says. "That's something that needs to be worked on." □

graduate scholarships in science should not be squandered on substandard programmes. So the foundation sponsored a comprehensive review by British scientists of Chilean science departments: the scholarships awarded were then reserved for students at departments that passed muster. Three years ago, the foundation repeated the exercise with a panel of US scientists.

Another perennial problem for Chilean scientists is the low pay of university professors. Recognizing that talented students were being attracted into the more lucrative fields of medicine, business and the law, the foundation set the annual stipend for its scholarships at a level equivalent to what some university lecturers were earning. Saavedra has little sympathy for his colleagues who complain, telling them "the problem is not that we are paying too much, but that our universities are paying too little".

Although the foundation could afford only eight four-year scholarships a year, the awards proved so popular that two years ago the national government began a larger programme of its own. Since then the foundation has begun a more selective programme — one scholarship each in the fields of biology, chemistry, physics and mathematics — with an even higher stipend, again following Saavedra's preference for quality over quantity. And in 1990 it began a programme of postdoctoral awards for students to complete their education overseas, usually in Europe or the United States.

The foundation also makes small awards to individual researchers for work relevant to industry or to groups needing special equipment, and it has supported a growing academic computer network linking Chile with the rest of the world. It hopes to increase opportunities for young scientists by connecting new and emerging universities to researchers at established universities. And last year it began a joint research programme with its sister foundations by awarding 20 grants for projects involving scientists in Argentina and Brazil.

The foundation's most recent, and in many ways most ambitious, project is a US\$9 million technical high school in Concepcion, about 500 miles south of Santiago, to encourage students with a more practical bent. Modelled on schools in Israel sponsored by the Organization for Rehabilitation and Training, the school will offer disadvantaged teenagers a four-year technical curriculum, free of charge, as well as retraining for older workers. And the foundation hopes to join with industry to upgrade the curricula of 30 other technical schools around the country.

Although the foundation is gradually moving towards greater support for social and cultural projects, Saavedra does not expect its role in fostering science to change. "We're small", he says, "but we want to have an impact beyond our means. And the best way to do that is to insist on quality in whatever we do." □

Unique fund targets quality

Santiago. Money from a foundation created by a Latin American mining magnate has made possible a series of innovative programmes to bolster science and technology in Chile.

In a country without a history of private philanthropy, the Andes Foundation has been one of the most positive developments in Chilean science of the past decade. Its accomplishments range from the creation of a programme of graduate fellowships that has since been copied by the national government to the opening next summer of a technical high school that will give disadvantaged students a chance to receive first-

social welfare — a mandate that allows for considerable flexibility. The fact that the Andes Foundation devotes more than 60 per cent of its budget to education, most of it targeted at basic academic research, reflects the influence of Igor Saavedra, a theoretical physicist at the University of Chile and a member of the foundation's six-member board of directors.

"They came to me because they wanted someone from the university", Saavedra says about a steering committee formed by Stan Davidovich, a prosperous engineer and a director of the company, and Sergio Marksmann, a successful entrepreneur. "They

"Chile needs an intellectual élite to survive and flourish. I hope the foundation can play a role in its creation."

Igor Saavedra
Andes Foundation trustee

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Jeffrey Mervis

class training in electronics, computers and other high-technology fields.

The Andes Foundation is one of four funds created in 1986 from an endowment of US\$250 million left by the dissolution of a consortium of mining companies headed by Luis Hochschild. On Hochschild's death, company officials sold the business, which operated throughout Latin America, placing the assets in a Lichtenstein foundation. The income from the endowment is divided among three other foundations serving Argentina, Brazil and Chile; each receives about US\$5 million a year.

Each foundation is required to spend its money improving educational, cultural and

hadn't decided how to spend the money, and they were willing to listen to my suggestions." Over the course of several meetings, Saavedra persuaded the group to set high standards and maintain them at all costs.

The results have been programmes devoted largely to attracting talent into science and expanding opportunities for those already in the field. "Chile needs an intellectual élite to survive and flourish", says Saavedra. "I hope the foundation can play a role in its creation."

Saavedra went to Britain for his graduate training and so knew how few were opportunities at home. But Saavedra has nevertheless insisted that the creation of the first-ever