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LETTERS TO THE EDITOR

Postdoctoral Training in South America: Opportunities in Chile

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Article

The training required to obtain a job as a University professor or investigator in the biomedical sciences has become a long and difficult endeavor. The minimum requirements for a faculty position at the Assistant Professor level in most academic institutions with graduate programs are: Doctoral degree with postdoctoral experience. This is true in industrialized countries and it is becoming the norm in South America as well. It is now common to do a 2-3 year postdoctoral training before applying for a permanent position in an academic setting ([Marincola and Solomon, 1998](#)). The common tract for further career development after a PhD in the South is to take a postdoctoral position in the USA or Europe. This decision is always a difficult one, since it usually requires, learning a new language, adjusting to a different culture and in most cases the cost of moving and settling in the new country is not financed by the new laboratory. In some instances the best PhDs from developing countries can get fellowships either from the Center for Scientific Research in their respective countries or from very limited and selective international fellowship programs for postdoctoral training in the USA or Europe. Acquiring a fellowship can ease the burden of traveling cost and health insurance, but does not ease the difficulties of learning a different language and adjusting to new culture.

What other options are there for PhD graduates in the Americas? There are several opportunities to do world-class level research in South America!. Recent efforts for development in biotechnology research have provided funding for postdoctoral training in countries like Chile ([Orellana, 2004](#)). The Chilean government finances an annual postdoctoral research fellowships competition through its National Fund for Scientific and Technological Development ([FONDECYT](#)) a program of the Commission for Scientific Research and Technology ([CONICYT](#)). These fellowships are open to Chilean citizen as well as international scientists. The fellowship not only provides monthly salary for the research fellows but also provides funds for the proposed research. The average monthly salary for postdocs in 2003-2004 was close to US\$ 1,200. If we take into account that the cost of living in Chile is 50% less than in the USA, the FONDECYT fellowship stipend is comparable to that of a first year postdoctoral scientist in the USA. In addition to this fellowship, the current grants awarded to scientists in Chile include funds to pay for a postdoctoral fellow, at similar salaries as the FONDECYT fellowships. While I had the opportunity to work in Chile, more than 10 announcements for

postdoctoral positions appeared in the website of the [Chilean Biological Society \(www.biologiachile.cl\)](http://www.biologiachile.cl). Fellowships for research in the south are also available through other international organizations (Table 1).

Table 1. Sources of Research Fellowships.

| Organization | Website |
|--|---|
| Third World Academy of Sciences-TWAS | http://www.twas.org |
| Academia de Ciencias de América Latina (ACLA) | http://www.acal-scientia.org |
| United Nations University-Biotechnology for Latin America and the Caribbean (UNU-BIOLAC) | http://www.biolac.unu.edu |
| The Pan American Health Organization | http://www.paho.org |
| Organization of the American States | http://www.oas.org |
| United Nations Educational, Scientific and Cultural Organization (UNESCO) | http://portal.unesco.org |

The opportunities do not end at the postdoctoral training. During the same year 2003-2004 there were more than a dozen calls for faculty positions in the area of biological sciences. These opportunities are not likely to be a short-lived demand for PhDs. Chile is focusing on developing its biotechnology industry. In the year 2004 Chile started the National Plan "Biotechnology as a tool for development and well being" which focuses on developing scientific and technological capacity in the country ([Orellana, 2004](#)). As Chile develops its Biotech companies, there will be a need for qualified scientists, better research training at the Universities, and an increase in the collaboration between industry and academia ([Hernandez-Cuevas and Valenzuela, 2004](#)). In addition, Chile ranks third in South America in the number of PhD graduates in the biological sciences, which will provide the necessary manpower to carry out the research in the industry and academic laboratories (<http://www.ricyt.edu.ar>).

The research done in Chile is of high quality and impact. In the laboratory I was working during my postdoctoral training, the graduating students published at least 2 papers in international journals like *Biochemistry*, *FEBS Letters*, *Proceedings of the National Academy of Sciences*, *Journal of Cellular Biochemistry*, among others. In 2004 the University of Chile was selected as one of the best 500 Universities in the world (<http://ed.sjtu.edu.cn/rank/2004/2004Main.htm>). In recognition of the scientific accomplishments of Chilean scientists, four of them have been elected members of the National Academy of Sciences of the United States (<http://www.nationalacademies.org>). In Latin America only Mexico has more members of this academy than Chile.

I want to openly invite young scientists from all over the Americas to consider Chile for the next step in their scientific career. I had the opportunity to work in the laboratory of Dr. Jorge E. Allende at the Medical Science Institute, of the University of Chile, where I had the chance to meet great scientists from Chile and abroad. In one year's time, I was able to start and develop a research project and the results of which, have been recently accepted for publication ([Sobrado et al. 2004](#)). In addition to offering financial support and a great scientific environment, the country offers diverse landscapes and friendly people.

References

HERNANDEZ-CUEVAS, C. and VALENZUELA, P.D. Strategies to capture biotechnology opportunities in Chile. *Electronic Journal of Biotechnology* [online]. 15 August 2004, vol. 7, no. 2. Available from Internet: <http://ejbiotechnology.info/content/vol2/issue1/full/4/index.html>. ISSN: 0717-3458.

MARINCOLA, E. and SOLOMON, F. Training for Today's Marketplace. *Science*, July 1998, vol. 281, no. 5377, p. 645.

ORELLANA, C. Chile launches policy to boost biotech. *Nature Biotechnology*, January 2004, vol. 22, no. 1, p. 7-8.

SOBRADO, P.; JEDLICKI, A.; BUSTOS, V.H.; ALLENDE, C.C. and ALLENDE, J.E. 2004. Basic region of residues 228-231 of protein kinase CK1a is involved in its interaction with axin: Binding to axin does not affect the kinase activity. *Journal of Cellular Biochemistry*. *In press*.

Links

Red de Indicadores de Ciencia y Tecnología, Iberoamericana e Interamericana. Available from Internet: <http://www.ricyt.edu.ar>.

The National Academies of the United States of America: Available from Internet: <http://www4.nationalacademies.org/nas/nashome.nsf>.

Institute of Higher Education, Shanghai Jiao Tong University, China. Available from Internet: <http://ed.sjtu.edu.cn/rank/2004/2004Main.htm>.

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