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Young Leaders for Biology in India

MANY DEVELOPING COUNTRIES IN ASIA ARE RAPIDLY BUILDING NEW RESEARCH INSTITUTES, EAGER to establish a vibrant and progressive scientific enterprise on a nationwide scale. As Huang and Tan point out in the Policy Forum on p. 1471, this buildup of scientific infrastructure must be combined with changes in culture that promote innovation and collaboration, which are required ingredients for recruiting a new generation of outstanding scientists. India, a nation faced with such challenges, is engaged in a promising grassroots experiment aimed at attracting back talented young researchers and fostering a new scientific culture in the biological sciences.

In recent years, India has made considerable investments in life-science research (the current budget is approximately double that of 5 years ago). The new resources have been directed primarily toward creating new institutes, revitalizing older ones, and expanding the number of research and teaching positions. Thus far, India has not adopted China's and Singapore's strategy of offering lavish resources to established U.S. or European scientists to either move to or create outpost laboratories in Asia. Instead, India is reaching out to its young scientists who have mostly trained abroad, hoping to entice them to return home. To facilitate repatriation, the government has established several grant programs to support postdoctoral work and new independent laboratories within India (such as the Wellcome Trust/Department of Biotechnology India Alliance and other prestigious fellowships). But the major challenge is to change the mindset of expatriate scientists whose picture of Indian science is often one of poor laboratory facilities remembered from their undergraduate days.

For the past 2 years, bioscientists in India have been involved in a community-building effort directed at uniting its young scientists to promote their success. The centerpiece is an annual Young Investigator Meeting (YIM) that brings together ~40 postdoctoral fellows who are considering establishing careers in India with a similar number of young faculty who are already facing the realities of setting up a research program in India. Mid-career and junior scientists from across the country organize the meeting, which is held in a different region of India each year. Leading international scientists, senior Indian faculty, and government leaders are also invited to provide mentorship on both India-specific as well as more universal hurdles facing those setting up a research program. The topics under discussion include how to obtain grants, pick research problems, publish papers, guide trainees, and resolve conflicts.

This meeting offers a forum in which junior scientists unite and gain a sense of their important roles and responsibilities in building Indian biology. Social networking is strongly encouraged as a means of sharing solutions to problems and creating research collaborations. The postdoctoral fellows who attend obtain a realistic picture of the challenges and prospects in India, while forming a network with their prospective colleagues. This creative nationwide initiative is aimed at recruiting scientists into multiple institutions, thereby benefiting the country as a whole.

To complement this effort, a central IndiaBioscience Web portal (www.indiabioscience.org) has been created to provide information on grants, jobs, and special programs, as well as opinion pieces on issues such as managing family and work, combining teaching with research, and hiring couples. Both the meeting and the Web site, managed by junior/mid-career faculty, help to instill a sense of responsibility among India's younger scientists to take ownership of their future and lead efforts to improve the scientific environments at their home institutions.

These initiatives represent a model that can be translated to other countries. Scientific success cannot emerge from new buildings and equipment alone. The best guarantee for future success is to imbue young scientists with a sense of a mission, to nurture not just the science but a culture that fuels the will to succeed in countries long thought of as second-choice options for research careers.

– Shubha Tole and Ronald D. Vale

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