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MOVERS

Mahendra Rao, vice-president, research, stem cells and regenerative medicine, Invitrogen, Carlsbad, California

2001–present: Associate professor of neuroscience, Johns Hopkins School of Medicine, Baltimore, Maryland
2001–05: Section chief, stem-cell division, neuroscience laboratory, National Institute of Aging, Washington DC
1999–present: Associate professor, National Centre for Biological Sciences, Bangalore, India

Poor eyesight quashed Mahendra Rao's early ambitions of becoming an air-force pilot, but his training as a medical officer at Bombay University steered his path to the United States — and a new vision of using stem cells in medicine.

While a resident in clinical medicine and neurology, Rao realized there were few treatments for his patients, so he turned to research. He left India for a PhD in neurobiology at the California Institute of Technology in Pasadena. Although a difficult career decision, given the change in lifestyle and income, it gave him the chance to work with leading biologists such as Paul Patterson. In Patterson's lab, Rao isolated neural-crest stem cells, the cells that regulate development of the peripheral nervous system.

Patterson also helped Rao forge future collaborations, notably conducting his postdoc at Case Western Reserve University in Cleveland, Ohio, with Story Landis, now director of the National Institute of Neurological Disorders and Stroke. There, Rao focused on factors affecting the fate of stem cells. Finding opportunities to exploit new technology was also part of Rao's strategy. Rao joined the University of Utah's school of medicine as an assistant professor, in part because it housed the first centre to generate transgenic mice using embryonic stem cells — a logical fit with his work demonstrating the relationships between the stages of stem-cell development.

After five years at Utah, Rao became an adjunct faculty member at the National Centre for Biological Sciences in Bangalore, India, where he continues to teach courses. It was his 2001 move to the US National Institute of Aging, however, that paired his stem-cell research with studies of mortality. The signalling mechanisms that regulate stem cells' ability to escape death change during ageing and age-related neurodegenerative disorders.

But federal restrictions on the use of stem cells slowed his work and eventually triggered a move to Invitrogen, where he will have freedom to pursue his research interests. "It's unlikely that I would have gone to industry without the current policy decisions," says Rao. "But, in California, I saw people who wanted to make it work rather than worrying about breaking the law."

Rao remains hopeful that one day the US federal government will support stem-cell research. Until then, he hopes others won't be deterred from pursuing their own interests in that area. "Do what you love, because it's what you will do best," he says. ■

Virginia Gewin

SCIENTISTS & SOCIETIES

International view from Japan

Young scientists need to communicate with their peers worldwide, but there is little opportunity to do this in Asia. Most international scientific meetings are held in the United States or Europe, so the long distance and the expense, as well as difficulty communicating in English, make it hard for young Asian scientists to take part.

To deal with this problem, a group of graduate students in Kyoto brought some young Western scientists to Kyoto University's Graduate School of Biostudies and the Institute for Virus Research in March. We organized a seminar to provide an opportunity for young scientists from all over the world to exchange scientific experiences and form friendships and, perhaps, collaborations with each other.

We invited 15 graduate students and five postdoctoral fellows from abroad. All were the same generation as us, and had similar interests in fashion, sports and career goals, so we could enjoy talking with them in addition to exchanging scientific experience.

The first half of the four-day symposium focused on scientific presentations. We showcased 40 oral presentations and 110 posters covering a range of life-science topics.

In the second half, we held a group discussion at Ninna-ji temple in Kyoto, focusing on similarities and differences in science, culture and lifestyle between Japan and other nations. Common concerns included balancing scientific and personal life, but cultural differences led to different approaches to dealing with this. Many Western participants said they came to the lab very early in order to have free time after supper, whereas many Japanese scientists tend to work very late.

The scientific ideal was the same for all of us: a love of science, an interest in problem-solving and a desire to improve communication with society as well as with colleagues.

This seminar was organized as part of the 21st Century Center of Excellence Program at Kyoto University, funded by the Japanese government. The focus on student presentations and collaborative relationships provided a valuable experience for both Japanese and foreign students. The seminar let us form collaborations and discuss the future of many scientific fields from an international perspective. We hope that international communication among young scientists will increase through more such seminars. ■

Keiko Muraki is a graduate student at the University of Kyoto, Japan.

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GRADUATE JOURNAL

The many legs of fear

This week, at various intervals, I have become withdrawn, irrational and emotional. I have screamed as in a horror movie. No, not because my PCR didn't work. Because of wasps in the lab.

It may seem surprising to some, but despite doing a degree in biology, I am petrified of insects. As an undergraduate I remember getting my twin sister (who studied English) to tape over the pictures of insects in my textbooks. Open windows in summer exams scared me more than the questions did.

Having tried very hard, I have learnt to hide my fear. In lectures with *Drosophila* pictures I just dip my head, or lower my glasses so I can't focus. Walking down the fly-geneticists' corridor in the zoology department I make sure not to catch a glimpse of the posters. It's the eyes and legs that really scare me.

This week in Oxford the sky is blue, the grass is green and my colleagues have discovered my fear. In reaction to this they did not agree to close all the windows. Nor did they swear to swat all the wee beasties. Instead they put a picture of a wasp on my computer desktop, and then sent me a photo titled 'Interesting fern mutant' showing the magnified head of a fly.

So this week I have learnt to try to overcome my fears, to raise my problems with my lab colleagues, and to persevere with something I don't like — all skills that would be handy in a PhD. Now I am planning my revenge... ■

Mhairi Dupré is a first-year PhD student in evolutionary developmental biology at the University of Oxford, UK.