

Q&A

Rudi Balling is to be the first director of the planned Centre for Systems Biology, Luxembourg, at the University of Luxembourg.



How did you become a systems biologist?

Having managed large genomics programmes in Germany and seeing their complexity grow, I realized we needed a systems approach that could capture the scale and dynamics of the whole genome. But modern biology lacked engineering technology skills, so I tried to follow the connection between technology and the biological system.

What sparked this interest?

In 2005 I was reading a paper by David Baltimore about the identification of the molecular and cellular mechanisms of host–pathogen interaction when I stumbled across a formula crucial to understanding gene regulation. I had no clue what it meant, so I enrolled in a course in mathematics. I then became more and more aware of the similarities and interdependencies between mathematics and biology.

What are your current projects?

I've just spent seven months at the Massachusetts Institute

of Technology in Boston, working on large-scale mycobacteria sequencing and attending mathematics lectures.

Why are you going to the University of Luxembourg?

Small is beautiful. The university is young, dynamic and industry-friendly. Part of its strategy is to become a big player in biomedical research. Over the next five years it is laying out more than €140 million (US\$200 million) to develop programmes in human and mouse genetics and genomics, establish a biobank and create a Centre for Systems Biology, which I will direct. I couldn't resist this opportunity to build something from scratch.

What's your goal in comparative genomics of humans and mice?

Having tried for years to demonstrate how similar the mouse is to the human, I feel it might be time to explain why the mouse is not like the human, particularly when it comes to clinical symptoms. We need to understand these

differences if mice are to be more reliable models of human disease.

What has your proudest scientific moment been?

In 1986 I linked the mouse development gene *Pax* with Waardenburg syndrome, which is an inherited disease characterized by skull abnormalities and often accompanied in humans by deafness.

Was it challenging to build a large science programme in mainland Europe?

Research funding in Europe, including in Luxembourg, is very good. Europeans cooperate well with each other and have built large-scale biology programmes that could not be done by any single European country. The challenge is that many international research funding programmes require major efforts in coordination and organization. Filling out a European Union form to apply for a significant grant is an art in itself. ■

Interview by Flora Roenneberg

POSTDOC JOURNAL

Am I still a postdoc or not?



Our time in California is coming to an end. My husband has finished gathering deformed frogs by the bucket-load, and we are now off to Colorado for the remainder of his postdoc. California has been good to us, but living in a research house for the summer has presented some personal challenges.

One has been accepting my fate as housewife, mom and the only adult non-researcher in the house. While Brett and the PhD students went about their field and lab work, I sat on the sidelines, cooking

and cleaning. In my weaker moments I wanted to scream out: "I'm not just a housewife, I'm a postdoc too — and by the way, your analysis is wrong!"

But then I began to wonder: can I still call myself a postdoc? Or am I just clinging to that label to feel better about surrendering my career?

Feverishly trawling the web for definitions, I try to reassure myself. Surely a postdoctoral scientist includes all those who engaged in some sort of research after earning their doctoral degree in science? Alas, to my chagrin, all the

definitions point to the fact that, to be a 'postdoc', you actually do have to be employed, working in some type of research.

So I guess I'm not officially a postdoc anymore. But maybe that's OK. Through the peaks and troughs of this chaotic year, I am slowly realizing that my career does not define me. I define my career. ■

Joanne Isaac was a postdoc in climate-change effects on biodiversity at James Cook University, Townsville, Australia. She is now in the United States so that her husband can complete a postdoc.

IN BRIEF

How to talk to a politician

The Federation of American Societies for Experimental Biology (FASEB) has launched an online 'toolbox' to help scientists establish relationships with US congressional representatives.

The toolbox (<http://tinyurl.com/kt8mg8>) includes templates for meeting requests and follow-up letters; brochures and articles that promote research funding; and talking points on the importance of biomedical research.

FASEB argues that there is a critical need for science advocacy in the United States, especially with stimulus-funded biomedical research investments expiring next year. "The economic times right now are quite difficult and we are concerned about the need to sustain growth," says president Mark Lively.

No ethics, no grant

After this year, institutions that receive funds from the US National Science Foundation (NSF) must provide training and oversight in research ethics for their undergraduate and graduate students and postdocs. NSF grant applications must show that young scientists funded by the grants will receive formal training in what the NSF calls "responsible conduct of research (RCR)".

The NSF defines RCR as issues related to publication and authorship, the use of human subjects in research, conflicts of interest and intellectual-property rights. The US National Academies and the National Postdoctoral Association offer RCR training guidelines.

Lucrative industry links

Life-science researchers in US universities receive \$33,000 a year on average from the medical drug and device industry, according to a survey of 1,663 researchers published this month (D. E. Zinner and E. G. Campbell *J. Am. Med. Assoc.* 302, 969–976; 2009). The study found that some receive as much as \$110,000 from industry. More than half (51.9%) said they maintain a relationship with industry. The study found that such relationships provide significant benefits both to the researcher and to science. Among faculty members most involved with industry research, nearly half said it "contributed to their most important scientific work and led to research that would not otherwise have been possible".