

GRADUATE JOURNAL

Losing control

Now that I've settled on Paris as my postdoc destination, the hard part begins — the mad rush towards graduation. As I'm working feverishly in the lab and on my computer, trying to compile four years' data into a cohesive 'story', I pray that my thesis committee decides that I've done enough. But how much is enough?

Only my thesis committee can answer that question. I am completely at their mercy. Counting on them to guide me through my defence feels like falling backwards with my eyes closed and trusting the four committee members to catch me before I hit the ground. This abdication of control is a little hard to swallow, but I have no choice other than to go with the committee's collective judgement.

For some students, this does not come easily. I've heard horror stories about hard-line advisers black-balling students for years over seemingly frivolous details. As my decisive committee meeting approaches, I feel fortunate because I respect my committee members and have grown quite close to some of them. I'm grateful for their guidance, and I just hope they steer me through a smooth defence and let me move on by this summer. There's a chocolate croissant with my name on it somewhere in Paris and I'm anxious to take a bite. ■

Tshaka Cunningham is a fifth-year graduate student at Rockefeller University in New York.

Arizona plots a course

The next six years will see the University of Arizona in Tucson expand its life-sciences capabilities. As part of a broader initiative to boost bioscience research in the state, the university plans to take on some 100 new faculty members in medicine, pharmacology, public health, agriculture and engineering.

The recruitment strategy, submitted to the university's vice-president for research at the beginning of the month, follows hot on the heels of a ten-year 'road-map' for the state unveiled last month. This was assembled by a statewide consortium of leaders from Arizona's government, education and business sectors who want to see the state focus its research efforts on cancer, neuroscience and bioengineering. The consortium's plan, which encompasses both the

private sector and the state's universities, anticipates generating up to 32,000 bioscience jobs in Arizona by 2014.

A committee at the University of Arizona reacted to this vision with its own plan, which adds increases in research into diabetes, obesity and asthma to the state's core areas. Michael Cusanovich, the committee's chairman and director of the university's Arizona Research Laboratories, foresees hiring 30 members of staff in the first year of the plan.

Some of these new recruits will be in what Cusanovich calls the "crosscutting" disciplines of bioimaging and mathematical biology. These positions would support work being done in the three targeted research areas.

Although the committee is still discussing the improvements needed to house the new faculty

members, it is likely that some space currently under construction will come into play. The university broke ground on two life-science projects this year — the \$60-million Institute for Biomedical Science and Biotechnology, which will emphasize interdisciplinary research, and the \$54-million Medical Research Building, which will house translational research. Both are scheduled for completion in 2005 and there are tentative plans for a third life-sciences building on the campus.

The six-year plan does not yet have an estimated cost, and it is also unclear how many of the proposed new positions would be net gains, as opposed to a reallocation of existing faculty slots.

Nevertheless, the university's expansion would complement other efforts in bioengineering, neuroscience and cancer research across the state. ■

Paul Smaglik is editor of Naturejobs.

MOVERS Emilio Emini, senior vice-president, International AIDS Vaccine Initiative, New York



A broad interest in biology and economic necessity combined to steer Emilio Emini into graduate school. He had cultivated a general interest in the life sciences during his undergraduate years, but when he graduated, he wasn't sure what to do with it. With a recession under way, employment opportunities were scarce.

"What do you do when job prospects are bleak?" asks Emini. "You go to grad school." He won a National Science

Foundation pre-doctoral fellowship and headed for Cornell University. Passing through a number of labs during his first year, Emini ended up in one working on a strain of Venezuelan encephalitis virus. He found exploring the pathogenesis of different strains fascinating and became hooked on virology.

For his postdoc, Emini moved to the State University of New York at Stony Brook, primarily because Eckard Wimmer, an expert on poliovirus worked there. At the time, polio was one of the most understood viruses, so it made a good starting point to explore virology further.

When Emini arrived, Wimmer was finishing the genome sequence of poliovirus. That, coupled with the advent of monoclonal antibodies, meant that Emini could explore biological questions with brand new tools — a chance that had him feeling "like a kid in a candy shop".

Emini switched to industry in 1983 when Merck's expansion in vaccine

research matched his rising interest in the field. He didn't expect to stay in industry, but "the science kept getting interesting", he says. He worked on HIV as the company moved into AIDS research during the mid-1980s and helped to develop the multidrug cocktails that now allow many people to live with the virus.

He rose through the ranks at Merck, but found that as a senior vice-president of vaccine research, he could no longer focus on HIV. And, as a manager, his schedule often kept him from the lab.

As he approached his fiftieth birthday, he realized that he wanted to focus on HIV, and that he needed 10–15 years to make an impact. "It was an alignment of the planets," Emini says.

Taking over as senior vice-president at the International AIDS Vaccine Institute in New York, he is in some ways back where he started — looking at a big problem and hoping he can use new technologies to crack it. ■

CV 1983–2004: Merck Research Laboratories, West Point, Pennsylvania (starting as senior research microbiologist, rising to senior vice-president of vaccine and biologics research in 2002)

1980–83: Postdoctoral fellow, Department of Microbiology, State University of New York at Stony Brook

1980: PhD in microbiology, Cornell University, Ithaca, New York