

GRADUATE JOURNAL

A little Canadian goes a long way

Apart from the obvious win in landmass size, Canada has a smaller population, smaller economy, smaller-sized buffets and much smaller military and research budgets than our big brother to the south. However, Canadian pilots pull off Top Gun wins, and Canadians continue to forge ahead in their labs with MacGyver-like ingenuity.

Lord Rutherford, who graced the physics labs of McGill University at the turn of the century, is credited with the battle cry: "We haven't the money, so we've got to think." I would add, "and get out the duct tape". My master's thesis setup used duct tape to retrofit an old pump to avoid buying a new one. Fellow Canadian researcher Paul Campbell cooked up a unique mouse stereotaxic-mount-cum anaesthesia box that incorporated a latex glove with a hole cut out. He admits that a bit of gas leaked into the room, but argues "that's why you start with extra brain cells, isn't it?"

Walking to the local hardware store where they retooled the dusty pump I found at the back of the lab, dreaming up high-tech/low-cost solutions, staying with local friends at foreign conferences — the eternal Canadian search for thrift in research adds yet another educational angle to my graduate student experience.

Sidney Omelon is a PhD student in bone biomaterials at the Samuel Lunenfeld Research Institute, Mount Sinai Hospital, Toronto, Canada.

Two-body problem

When my spouse got an offer in January to teach at a small college, the biggest advantage had to be the location. Ninety minutes from Princeton, Philadelphia and New York, the number of biotech companies in the area was staggering — key for me because I am opting for industry. So, after she accepted the position in January, all we had to worry about was finding me a job.

Several months, one phone interview and one pseudo-offer later, I am still networking away. Making phone calls, sending e-mails, calling in favours and blanketing the area with my resumé has so far landed me little more than compliments on my CV. And puzzlement from academic colleagues. "You would be a great asset to any biotech company," they say. "Why don't you have a job yet?"

This reaction shows how little academics know about how to get into a career in biotech. Luckily, my institution has a great careers centre. And my experience with the Washington University Postdoc Association has exposed me to industry contacts and career advice. So over the past few months, I've been educating myself.

I soon realized that a biotech company is first and foremost a business. My contacts at the bigger companies tell me that interviewing and hiring moves slowly. And it's influenced by many factors — often nothing to do with science. For all I know, I may be in consideration for a job I applied for three months ago. Because of the number of applicants, you rarely hear back from a company unless they are interested in you.

Also, companies hire to fill very specific needs. If you are working in

an area that pharma is interested in at the moment, you are more likely to get noticed. Throughout my career I have made an effort to diversify my training. So I learned X-ray crystallography in graduate school, NMR spectroscopy at my first postdoc, and am currently working in a microbiology department. But most industry PhD positions want individuals with deep training in one area. For those jobs, my broad range of expertise could be seen as unfocused.

So the move date is approaching, and my spouse and I are now considering living in different cities until I find something. My advice to postdocs looking for a real job? Start looking at least a year before you have to leave.

Jeramia Ory is acting president of the Washington University Postdocs Association and a fellow in the Department of Molecular Microbiology, Washington University School of Medicine.

MOVERS

Ruedi Aebersold, Professor of Systems Biology, University of Zurich and the ETH



When proteomics pioneer Ruedi Aebersold moves to Zurich this November, it will be both a homecoming to his native Switzerland and a departure — as he leaves the Institute for Systems Biology in Seattle, Washington, although he will retain a research group there.

But the new position will allow Aebersold to stick to his multidisciplinary roots. As chair of systems biology in a new joint program between the Swiss

Federal Institute of Technology (ETH) in Zurich and the University of Zurich, he will contribute to a multidisciplinary environment much like the one at the Institute for Systems Biology, where a life scientist can regularly work with an astrophysicist or an information technology specialist. Aebersold wants to nurture an environment that will drive both technology and science forward.

The two have gone hand-in-hand for Aebersold ever since he tried to sequence proteins more or less manually for his thesis project: "a painful, tedious and slow process," he says. So after his PhD he jumped at the chance to work at Caltech, where Leroy Hood was developing faster and more sensitive ways to address the same problem.

After four years, Aebersold left for a tenure-track post at the University of British Columbia, in Vancouver, Canada, where he continued to improve protein purification while mass spectrometry for

protein analysis — which requires very pure proteins — took off. But when Hood moved to the University of Washington, Seattle, Aebersold jumped at the opportunity to be reunited with his mentor. Years later Aebersold had another tough decision — leave the university with Hood to co-found the Institute of Systems Biology, or stay put. "Once you're in a tenured position at a great university it's not so easy to walk away," Aebersold says.

But the leap proved worthwhile, as it enabled him to work with computational specialists who are fully integrated into the research plans — not a separate support arm. "It's the way many research institutions will have to go," Aebersold predicts. Working with different groups "shakes up" your thinking and helps create new connections, he says. It also prevents you from getting too enamoured of a particular technique or problem.

CV

2000: Co-founder, Institute for Systems Biology, Seattle, Washington

1993–2000: University of Washington, Seattle: professor of molecular

biotechnology (1998–2000) associate professor (1993–98);

1988–93: Assistant professor of biochemistry, University of British Columbia, Vancouver, Canada

1984–88: California Institute of Technology (1984–86 postdoc, 1986–88, senior research fellow)

1984: PhD in cell biology, University of Basel