

# Australian Biochemist Students' Page

## Hello fellow students!

This is the very first Students' Page for the *Australian Biochemist*! This page will feature articles and information relevant to honours and PhD students studying biochemistry and molecular biology in Australia.

We have asked two previous ASBMB Fellowship awardees, Dr Samantha Richardson and Dr Kaye Truscott, to outline their career paths since completing their PhDs in

the 'Post-PhD Opportunities - Where Fellowships Can Take You' segment. We hope this segment will give you ideas for developing your career after completing a PhD in Australia.

We want to make the page interesting to students, so please provide us with feedback about the page's contents, or your ideas for future issues, by contacting either:

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## Post-PhD Opportunities - Where Fellowships Can Take You

### "Soft" Money: Life on a Rollercoaster

Samantha Richardson,  
Museum National d'Histoire Naturelle, Paris



Barbara Demeneix (left) and Samantha Richardson (seven months pregnant) playing Vivaldi's concerto for two violins in A minor. Fete de la Musique, Paris, June 2006.

I completed a PhD in the Department of Biochemistry and Molecular Biology at the University of Melbourne in 1995. Submitting my thesis was the biggest anticlimax of my life. I had about ten papers, had been fired up all the way through, and then just felt deflated. I had been overseas for postdoctoral interviews, but I was burnt out, and wanted to be with friends and family, earn a salary and do some travelling. I did a postdoc in the lab where I completed my PhD, then had an ARC Postdoctoral Fellowship (1998-2000), followed by an ARC Research Fellowship (2001-2005). During that time I supervised several Honours students and three PhD students, which was exciting, thrilling, frustrating and down-right scary at times! Where along the way was I supposed to have learnt all the skills for supervising?

In 2001, I started at Tim Cole's laboratory at the Baker Heart Research Institute. During my PhD, I had worked on protein biochemistry, and I felt my experience of molecular biology was inadequate. What better way to get thrown in at the deep end? I started off side by side with the Honours students in Tim's lab, which reminded me of my Honours year, having to find someone to ask about each step of the way. Feeling so dependent was amusing on good days, but often frustrating.

A collaboration with Barbara Demeneix was instigated in 2001, whilst I was in Portugal for a meeting of the European Society for Comparative Endocrinology. I met Barbara in the sewer. It was a Roman sewer in Faro, which we visited as part of the conference excursion. She had not been to my talk, but

had heard about it and asked "Why do you work on thyroid hormones outside the cell, when their site of action is inside the cell?" to which I replied "They have to get there!" Barbara responded, "Right. You have a point. I never thought about that. Would you like to work with me for a couple of months as a visiting professor?" Surprised, I asked, "Where do you work?" Barbara answered, "Paris!"

It turned out that aside from thyroid hormones, Barbara and I had violin, red wine and whiskey in common. At around 7pm each evening, we would pull out a couple of glasses and the violins and drive the rest of the lab mad with double violin concertos of Vivaldi and Bach. The labs and offices are in the Menagerie of the Museum, and we were joined every evening by the squawking of the macaws and the cries of the cranes.

I knew of Veerle Darras initially through the literature, and wrote to her asking if one of my PhD students could visit her lab to carry out some experiments. This research resulted in several publications, and I realised that Belgium was a country I knew little about. So I got a couple of small grants and flew off to learn about thyroid hormones and avian physiology. Veerle enjoys hiking, so I got to see the Ardennes. My (now) husband was most impressed that she has a WWII bunker in her back garden that her husband uses as his shed!

For me, being on "soft" money is hugely stressful. What happens next? Will I get another grant? Another job? What will I do if I don't? Coming up to the middle of 2005 and not having a gig for 2006, some days I was feeling like giving up. I told myself that I had hit 50 publications, had received a few grants, successfully supervised several PhD students, had a few gongs, been invited to speak at an international meeting, and been on an couple of editorial boards, and so should be happy with that. But finally, a gig for 2006 came through - as research-only Associate Professor in Barbara's lab! By the end of 2005, I was feeling really zonked. At a conference in New Zealand, it finally dawned on me what the reason might be...

I booked into the British Hospital in Paris, thinking they would speak English, but *non*. I thought I could work up until I went into labour, but ran out of energy on Bastille Day. Benjamin Thomas Radelczyk was born on 17 August 2006. I had to go back to work, ostensibly full time, six weeks after Ben was born. My first experiments after giving birth involved injecting into the cerebral ventricles of partially anaesthetised newborn mice. It was too much - the mice had the same movements as Ben, and my hormones were still raging. Now just when I have embraced becoming a mum and am learning to cope with the guilt of not working ten hours per day and possibly working part time as somebody's RA, I was successful in two job applications to return to Melbourne...

## From the German President to Queen Elizabeth II

**Kaye Truscott, La Trobe University, Melbourne**

For my doctoral studies at La Trobe University, under the supervision of Professor Bob Scopes, I examined the properties of molecular chaperones isolated from thermophilic bacteria. After completing my PhD in 1998 and following a brief stay in the lab of Professor Nick Hoogenraad, I was awarded an Alexander von Humboldt (AvH) Research Fellowship. This took me to the beautiful city of Freiburg at the foothills of the Black Forest, where I worked in the lab of Professor Klaus Pfanner in the Institute for Biochemistry and Molecular Biology at the Albert-Ludwigs University. As a von Humboldt Fellow, I took the opportunity to meet with the then President of Germany, Professor Roman Herzog, at his residence in Berlin (Schloss Bellevue) together with scholars from over 60 different countries. But it wasn't all just parties with the president - most of my time was devoted to working in the lab largely free of distraction. This enabled me plenty of time to dissect the function of several components of the protein import machinery within the inner membrane of yeast mitochondria. Upon completion of the AvH Fellowship, I briefly held a postdoctoral position to continue my work on the TIM translocases and in less than a year I was fortunate enough to secure a long term position in the institute as a Project Leader within Klaus' group. During the next three years, the group assigned five proteins of unknown function to protein import including the first direct evidence of a protein assembly complex in the mitochondrial intermembrane space. This was a really stimulating, exciting and productive time and provided an excellent environment for developing personnel and project management skills under the guidance of Klaus, who is a truly outstanding researcher and leader.



*Kaye Truscott.*

After more than five years in Germany and despite having been awarded my first research grant together with Dr Peter Rehling, by the German Research Foundation, thoughts of my long term future occupied my mind, ultimately leading to an application for a fellowship and research grant in Australia. I was delighted to be given an opportunity to continue my research career in Australia (in collaboration with Dr David Dougan) through the award of an ARC Queen Elizabeth II Fellowship and Discovery Project. This allowed us to pursue our combined research interests and start an independent group in the Biochemistry Department at La Trobe University. Effectively, the QEII Fellowship brought me back home to new challenges determining how, when and why bacterial and mitochondrial proteins are targeted for degradation by proteasome-like machines. Fellowships of all kinds can bring wonderful opportunities and experiences, but encouragement, support and good advice from colleagues can make a world of difference.

## Fellowship Funding Opportunities

*Also check for fellowships awarded by your university and by other professional bodies of which you are a member.*

### NHMRC Fellowships for Postdoctoral Biomedical Research

<http://www.nhmrc.gov.au/fellows/apply/granttype/training.htm>

Eligibility: Australian citizen or permanent resident; hold a doctorate or will submit a thesis by 31 December 2007; no more than two years postdoctoral research experience. Applications close: 7 July 2007.

#### CJ Martin Fellowships

Annual stipend of \$62,250 (plus allowances, plus travel) for four years, the first two of which are spent overseas and the last two spent in Australia.

#### Peter Doherty Fellowships

Annual stipend of \$62,250 (plus allowances) for four years, spent in Australia.

#### NHMRC/INSERM Exchange Fellowship (France)

Annual stipend of \$62,250 (plus allowances, plus travel) for four years, the first two of which are spent in France (at an INSERM laboratory) and the last two spent in Australia.

### Endeavour Research Fellowships for Short-Term Overseas Research

[http://www.endeavour.dest.gov.au/individual\\_awards/endeavour\\_research\\_fellowships.htm](http://www.endeavour.dest.gov.au/individual_awards/endeavour_research_fellowships.htm)

Eligibility: Australian citizen or permanent resident with demonstrated English language proficiency. Applications close: 31 July 2007. Up to six months research in a participating country in Asia, the Pacific and the Middle East. Value: up to \$25,000.

### Australian Federation of University Women Scholarships

<http://www.afuw.org.au/ScholarshipsFS.htm>

<http://www.ifuw.org/fellowships/international.htm>

### General Scholarship Databases

<http://www.jason.edu.au>

<http://www.myfuture.edu.au/services/default.asp?FunctionID=6001&Action=Advanced>