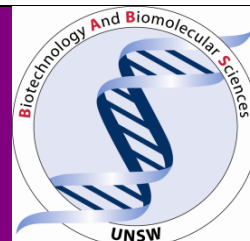


BABS Quarterly

June 2011 Issue 11



Message from the Head of School

Dear colleagues,

It is that time of year when we wait with bated breath for our Australian Research Council and National Health & Medical Research Council grant reviews. Responding to these reviews is an important part of the process, and I encourage individuals to respect the comments of the reviewers. In only a very small set of cases are the reviewers "hostile". As they say in America, we all need to "cowboy/girl-up".

Peter White is travelling to sunny England in Semester 2 for a well-deserved sabbatical. Peter has served on the School Executive for 39 months and has co-ordinated the postgraduate and honours programs with efficiency and decorum. I wish Peter all productivity in England. Ruiting Lan will replace him on the School Executive.

As many know, a very specific goal of mine is to revise the teaching programs and the majors within the School. This is not a trivial matter, and I have asked Noel Whitaker to complete this complex task during 2011. In an effort to reduce his administrative load so he can focus on this revision, I have agreed to take over as Chair of the Biotechnology search committee. Michele Potter and I will keep you updated on the interview dates as they are scheduled. The CV of each individual will be available in the School office one week before each interview.

It was with a mixed set of emotions that I have accepted the request of Andrew Collins to move to 40% time from January 2012. Andrew has made an important decision aimed at balancing his life and I wish him every success. He will continue to teach into the Medical Program but his involvement in BABS1201 and in Immunology I will cease. Of course, this brings up important questions in regard to the School's teaching portfolio that will need to be addressed.

Best
Bill

RAT News Research

- The Festschrift for Ian Dawes will be held on 22 & 23 September. The symposium still has places available but numbers are limited. Details at: <http://www.babs.unsw.edu.au/festschrift.html>
- The winner of the BABS award for best PhD thesis for the first quarter of 2011 was Helen McGuire, supervised by Dr Cecile King at the Garvan Institute. The award consists of \$100 Westfield gift voucher and certificate. Assessment is made on examiner's scores and number of published papers.



Teaching

- On 7 June, Year 12 biology students from Carlingford High School visited BABS, with Sven Delaney presented an entertaining lecture on Genetics, complete with mints and fruit lollies to demonstrate Hardy-Weinberg in action.
- The UNSW Science High School Information Day was held on 9 June. Around 250 Year 10, 11 and 12 students currently studying science subjects in 67 network schools sampled various fields of science via lectures and hands-on activities, guided by Louise Lutze-Mann and Anne Galea.
- The annual Biology Teachers Professional Development day hosted by the Faculty of Medicine was held on 24 June. Louise Lutze-Mann gave a lecture on DNA fingerprinting, and she and Noel Whitaker ran a workshop on screening for genetic disease, using Duchenne's muscular dystrophy as an example.



PNG Connection – A/Professor Andrew Collins

I recently travelled to Papua New Guinea to visit key collaborators and to give presentations describing my '1000 Immunomes Project'. In Port Moresby, I visited Professor Lohi Matainaho at the University of Papua New Guinea. Lohi is the Director of the Centre for Biodiversity and Natural Products at UPNG, and is also Dean of Research and the head of the pharmacology department in the School of Medicine and Health Sciences. He has been collaborating with Brett Neilan for some years, and is a mentor to Jeff Noro, who is completing his PhD studies in Brett's lab.

I also travelled to Goroka, where I spoke at the PNG Institute of Medical Research. In recent years I have established a productive collaboration with Dr. William Pomat of the PNGIMR. Willie will be remembered by older staff of BABS, as he completed his Master of Science degree in my lab in 1997 before undertaking further postgraduate studies at UWA. Both Willie and Lohi will be working with me to characterise individual variation in immunoglobulin genes, within populations of our geographical region.

I stayed outside Goroka town, in Masilakaiufa village, where I lived for several years in the early 1980s, and where I still maintain a house.



With my PNG papa, Ilae Genoli, and other members of my family, outside my house in Masilakaiufa village

Sydney Lipid Meeting Hosted by BABS – A/Professor Andrew Brown

After many years relegated to the sidelines of the biological world, overshadowed by the likes of DNA, RNA and proteins, there has been a recent burst of interest in lipids. UNSW has developed considerable strengths in this research area, with a number of researchers spanning the

Faculties of Science and Medicine, as well as affiliated institutions. On 14 and 15 June, Rob Yang and I hosted the inaugural Sydney Lipid Meeting (SLM) in the Rountree Room.



Logo design by Andrew Brown



Conference dinner, Doyle's at Watson's Bay

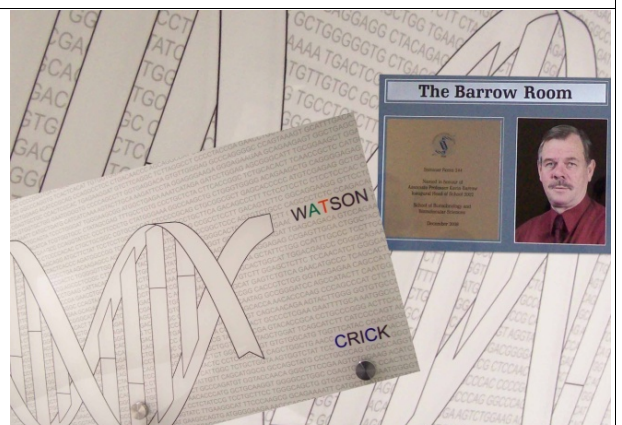
This meeting was made possible by a contestable funding grant from UNSW. While celebrating the strengths UNSW has in this area, a key goal of this meeting was to tap into the booming Chinese lipid scene. To this end, we invited 7 leading Chinese lipid researchers to speak, many hailing from top institutions (including the Chinese Academy of Sciences and Peking University). These were complemented by 9 excellent local speakers, for 1.5 days of scintillating science. We'd like to

thank Bill Ballard for opening the meeting, and staff and students in our respective laboratories for chipping in to assist when needed. It was gratifying to hear several speakers say that this should become a yearly event, perhaps rotated between various institutions in Sydney and its surrounds.

Barrow Room Mural

As part of the recent Level 2 refurbishment, the Barrow Room was relocated and updated to a modern, air-conditioned seminar room fitted out with the latest audio visual equipment. Part of the architect's brief was to install a mural, and after much discussion, design work and production, the mural was installed last week.

But, what gene does the sequence encode ... ?



Phytoplankton Workshop – Dr Shauna Murray

Twenty researchers from around Australia gathered in Sydney for a week from 30 May to 2 June 2011 to participate in a phytoplankton workshop hosted by UNSW and the Sydney Institute of Marine Science.



Participants were instructed by national and international experts to further develop their understanding of phytoplankton diversity, genetics, culturing and techniques for their identification. Postgraduate students, university researchers as well as representatives from CSIRO, local and state government and shellfish industries were enthusiastic about the course.

One student's feedback: "it was an amazing workshop and it fully met my expectations because of the subjects, techniques and genera covered as well as the quality of the information provided by world-renown experts in this field".

The strong interest shown by the marine science community has encouraged the organisers, Dr Shauna Murray (UNSW), Ms Penny Ajani (Macquarie Uni) and Dr Martina Doblin (UTS), to make this an annual event.

Evolution of Photosynthesis and Oxygenation of the Earth Symposium – Prof Brett Neilan and Prof Malcolm Walter

On 28 & 29 June 2011, BABS and the Australian Centre for Astrobiology hosted The Evolution of Photosynthesis and Oxygenation of Earth Symposium. The symposium was truly interdisciplinary and international, and brought together geologists, palaeobiologists, and molecular and evolutionary biologists to discuss significant contemporary issues relating to our understanding of the evolution of oxygenic photosynthesis and the consequent oxygenation of our atmosphere and hydrosphere.

Looming large among these issues, and the subject of much recent debate, is the incongruity between the oldest palaeobiological evidence for the presence of cyanobacteria and the earliest geochemical evidence for an oxygenated atmosphere. Oxygenic photosynthesis in cyanobacteria is thought to have brought about the oxygenation of our atmosphere, but while stromatolites and cyanobacteria-like microfossils are known from rocks as old as 3.5 billion years, increasingly precise geochemical proxies for an oxygenated atmosphere indicate that appreciable concentrations of free atmospheric oxygen existed only from about 2.4 billion years ago. Chemical fossils or 'biomarkers' for both cyanobacteria and eukaryotes are now recorded from rocks as old as 2.7 billion years, yet just as with morphological evidence from ancient stromatolites and microfossils, the significance of these remains controversial. The solution to this and several other related dilemmas now lies at the intersection of many traditionally separate scientific fields and disciplines.



The meeting of minds at this symposium presented a timely opportunity to transmit and develop new approaches to increasingly interdisciplinary problems.

Blue Mountains Ultramarathon May 2011 – A/Lecturer Sven Delaney

The TNF100 is a classic endurance run through the rugged mountains and valleys surrounding Leura in the Blue Mountains World Heritage Area. The 100km course takes in some of the wildest scenery in Australia and is designed to be a challenge: most of it is on dirt tracks or through the bush, and there is lots of climbing over ridges and steep forested hills.

I have been doing endurance events for nearly a decade. I enjoy them because of the physical and mental challenge, the often amazing scenery and the real camaraderie with fellow participants. The events are technically races but most treat them simply as a personal challenge. (Those out to impress generally get humbled!) I had completed several marathons (generally 42.2km), but I had never tried running 100km. The TNF100 seemed like an excellent opportunity to step up to a longer distance.

Race day (14 May) was bright and clear. We started at 7am, dropped down over the cliff line and passed through rainforest before climbing the very steep Golden Stairs up to the first checkpoint (where water, fruit etc. was available) at the 18 km mark. I then experienced something I had never had while training: extreme cramping. Luckily, this diminished when I ate salt and drank electrolyte, and I was able to keep going.



The course then wound through the Megalong Valley and past the Three Sisters before a long and difficult stage to (appropriately!) the Queen Victoria Hospital. Fortunately, there was lots of food and encouragement at checkpoints (one of which even boasted a jazz band). I completed the final stages in darkness (with headlamp), with the cold keeping me moving.

I reached the finish line at 1 am after about 18 hours. It was surreal getting to the end: a few last steep climbs (just for fun), then lots of glowsticks and lights and cheering. I stumbled inside and basically fell over. After recovering a bit, I noticed a strange physiological effect: my increased circulation produced a huge amount of radiant heat, meaning instant hypothermia when I stepped outside (despite warm clothing). However, I felt better after a while and could limp to the car (and then bed!).

Overall, the race was an amazing experience and I'm looking forward to doing more (and hopefully getting faster). I'd also like to say a big thank you to Clare (who helped me organise and recover) and all of the race organisers and participants.

Life outside BABS

The Head of School has a hobby — breeding and showing Australian Cattle Dogs. This year at the 2011 Sydney Royal Easter Show, his dogs won the Australian Cattle Dog breed trifecta: best female, best male and best puppy (dog 6-12 months of age).

The picture shows Bill and Gabby winning best puppy in the Working Dog Group (Collies, Kelpies, German Shepherds, Corgies, etc).



If you would like something included in the next BABS Quarterly please email Michele at m.potter@unsw.edu.au