

Message from the Head of School

Dear colleagues,

A delegation from UNSW, including the VC, just returned from Shanghai Jiao Tong University. BABS comprised the largest contingent from a single School, with Ian Dawes, Rob Yang, Torsten Thomas, Mike Manefield, Shaun Nielsen and myself all participating. This visit was aimed at reviewing and cementing collaborations forged during SJTU's visit to UNSW in August last year, and certainly highlighted to me the impressive and rapid development of China as a scientific superpower.

In August, the NHMRC informed applicants if their project grant application was deemed non-competitive (bottom 40-50%), adopting the rather brutal "ripping off the band-aid" approach in announcing bad news. The results for BABS were grim, which should spur us all to start early on applications for the next round with a view to improving quality and ultimately our success rate. Towards this end, we are currently devising an internal peer-reader program for NHMRC and ARC schemes.

At the last two staff meetings, I encouraged all teaching staff to examine and work on improving CATEI scores. Providing our students with a rich and fulfilling experience should be at the heart of our teaching practice, and the student experience will only become more important in a fee-deregulated future. Thanks to the ongoing review of our curriculum, we are now taking concrete steps towards revamping our course offerings, and I am grateful to Louise Lutze-Mann for driving this and to all of the staff who have been actively engaged in these discussions.

We have employed a teaching assistant until the end of the year to help academics revise teaching material for next year. Please contact Louise if you have a relevant job to be done. We have also employed a bioinformatics point-person on a trial-basis until the end of the year. Please contact Rich Edwards if you have a small "Binfy"-type task you would like some help with.

Congratulations to Torsten Thomas and Mark Tanaka for securing ARC Future Fellowships in the latest round, bringing our total number of ARC Future Fellows to four.

One of our Future Fellows, Suhelen Egan, should also be commended for creating a network of academic women in BABS (NAWiB). Women are woefully under-represented in the higher echelons of academia and BABS is no exception. This forum can provide a model for other Schools across the university to follow, and hopefully will help to precipitate change.

The Honours Evening on September 10 was well-attended by students and academics alike, as was the inaugural "meet and greet" session held the following day in BIBS (BABS Interactive Breakout Space). Our undergraduate students are making good use of BIBS. And so I encourage all academics to wander through every now and again to show some interest in our students. Remember, the student you choose to talk to on your way through, could be the student who consequently chooses you as their Honours supervisor.

With best wishes,
Andrew

RAT News

Research

- Associate Professors **Mark Tanaka** and **Torsten Thomas** were each awarded one of the few prestigious ARC Future Fellowships in the 2014 round announced in July.
- Scientia Professor **Brett Neilan** was awarded an ARC Linkage Grant in the latest round totalling \$402k, partnering with Diagnostic Technology Pty Ltd.
- The **2014 BABS Research Symposium** will be held in the Grand Ballroom at Randwick Racecourse on Wednesday 5 November.

Admin

- School office staffing change: **Kylie Jones**, our long-serving postgrad administrator/HOS exec assistant/marketing officer, will commence maternity leave at the end of November. We wish Kylie all the best, and will welcome **Avril Clarkson** on 3 November to fill Kylie's big shoes for the duration of her leave.

Teaching

- Deputy HOS and Director of Teaching **Louise Lutze-Mann** has announced the BURET scheme: *BABS Undergraduate Research Experience and Training*. Academics are invited to nominate research concepts directly to Louise.
- Championed by Dr **Chris Marquis**, BABS is planning to enter a team of 4-8 students in the 2015 iGEM (International Genetically Engineered Machines) competition to be held in October at MIT in Boston. The team will be assisted by current Honours student **Robert Oppenheimer**, who has participated in iGEM in the past.
- A trial of electronic lab books is being run by Jani O'Rourke.

A history of the “E25” Recombinant Products Facility, written by RPF Director Dr Chris Marquis.

By the time this BABSQ has been published, the demolition of Building E25, known as the Recombinant Products Facility (known otherwise as the Microtechniques Lab) will have commenced. I thought it appropriate to give a brief history of the building as it played an important role in the development of biotechnology at the University of New South Wales.



The Recombinant Products Laboratory was established by Professor Peter Gray and opened by the Federal Minister for Science the Hon. Barry Jones in 1985. Prior to that, the building had served as an animal house, and lab specimens were prepared there by Rose Varga (where the building obtained its former name, the Microtechniques Lab). The refurbished building with its associated laboratories was redesigned as a GMP-facility to make therapeutic proteins in Chinese hamster ovary cells, and was the first facility of its type in Australia. The facility was fitted with 3 HEPA-air filtered

pressurised labs, a cold-room, dual-door autoclave, preparation laboratory and office. It was a focal point for animal cell bioreactor research and the development of new cell lines and protein expression vector systems.

In collaboration with CSL and the Garvan Institute of Medical Research, production and purification of recombinant human growth hormone was undertaken in the facility for a Phase I clinical trial. This was the first time such a product had been produced in Australia and used in a human clinical trial. Subsequently, two other protein candidates were produced for human clinical trials. In the early 1990s, one of the facility’s senior scientists, Warwick Marsden (pictured here with George Lovrecz) sadly passed away, and the laboratory was re-named in his honour as The Warwick Marsden Recombinant Products Laboratory. The facility was also a key hub in the CRC for Biopharmaceuticals. During this period and right up until 2006, many postgraduate students and senior scientists undertook work in the facility. A number of these graduates are now to be found in key roles in the biopharmaceutical industry in Australia and around the world.



In 2007, with funding from the NCRIS scheme and the NSW government, the facility was upgraded and renamed the Recombinant Products Facility (RPF). Staff were hired to provide subsidised services in protein expression and purification to the public and private sectors. Despite external funding finishing in 2011, the RPF remains in operation, managed by Helene Lebhar, with its focus now on providing research support for UNSW. Cell culture, protein expression and protein purification services have been provided to groups within the Faculties of Science, Medicine and Engineering, to various research institutes including the Garvan, Applied Medical Research (St. Vincent’s), the Woolcock Institute and Victor Chang, and a number of biotechnology companies.

The RPF infrastructure has now been relocated to Room 329 on Level 3 of BioSciences. The facility has 2 AKTAs, an HPLC, a range of fermenters (from 1 to 15L), a microbioreactor system and a range of other lab resources.

Plaudits for BABS staff

- 👉 Brown Lab postdoc Dr **Winnie Luu** was awarded a \$2k Ian Potter Foundation travel grant to attend the ASBMB Special Symposium in Tahoe City, USA in October.
- 👉 Neilan lab postdoc Dr **Paul D'Agostino** was selected and awarded a fully funded travel grant by the organisers to participate in Research Opportunities Week at the Technische Universität München in Germany in October.
- 👉 At staff meetings during the last quarter, the HOS presented certificates of appreciation to long-serving staff **Kim Nguyen** (37 years), **Sharon Murarotto** (35 years) and **Jani O'Rourke** (36 years), together with an award to **Ned Elkaid** for taking on responsibility for radiation use in the School in addition to his usual responsibilities (matching shirts not planned!).



BABS media coverage

- Research findings from last summer's expedition to the Vestfold Hills in eastern Antarctica led by Professor **Rick Cavicchioli** recently received media coverage in The Herald Sun Melbourne, Perth's Sunday Times and the Hobart Mercury. Using genome sequencing, the project is tracking the DNA of microorganisms from icy lakes to explore how they survive in sub-zero temperatures and hyper saline conditions without food or oxygen.
- DECRA Fellow Dr **Federico Lauro** had an interview on ABC Radio's AM Program on 10 September in relation to the Indigo V vessel and the innovative and cheap way they developed to conduct critical ocean research during their voyage from South Africa to Singapore. The planned strategy is to use recreational sailors as citizen scientists to help collect important data on marine microbiology around the world.



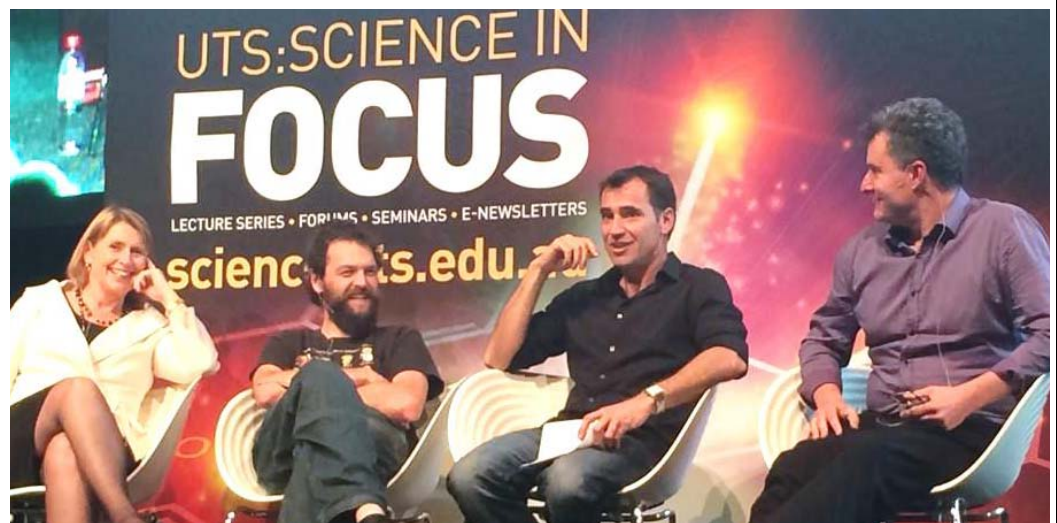
Student achievements

BABS again demonstrated the excellent quality of our students and their skills in presenting their research, with **Alex Knights** (pictured, supervisor Dean Merlin Crossley) a winner, and **Angie Chilton** (supervisor Brett Neilan) a runner-up in this year's Faculty of Science postgrad research competition on 4 August. In addition, **Lifu Sheng** (supervisor Vladimir Sytnyk) took out the People's Choice award for best poster.

HOS at UTS

Professor **Andrew Brown** was a guest panellist at a forum on the science of weight loss hosted by Surfing Scientist Ruben Meerman in September. The event attracted almost 700 people to the Great Hall at UTS. Ruben, who is becoming a regular visitor

to BABS, has been presenting science shows to high school students for many years, and is a television reporter for the ABC's Catalyst program. Andrew's research on lipids, particularly cholesterol, made him an ideal panel member to provide a biochemist's perspective on Ruben's seminal question: *When someone loses weight – where does it go?*



Two very distinguished BABS academics



Emeritus Professor Ian Dawes and Dean Merlin Crossley have been elected Honorary Fellows of The Royal Society of NSW. The Society is the oldest learned society in the Southern Hemisphere and traces its origin back to 1821. The Society's main function is to promote science in all its aspects, and to link the disciplines of science to each other and to other elements of human endeavour.

Schools outreach

As part of the Nura Gili program, 21 indigenous high school students participated in a Genetics and Microbiology Prac class as part of the 2014 Winter School program. The classes were run by Dr **Anne Galea** and Dr **Jani O'Rourke**.



Past Head School Geoff Cooper turns 90

The School Office was recently contacted by a family member of Emeritus Professor Geoffrey Cooper OAM, a past Head of the School of Microbiology and Immunology, one of the three Schools that amalgamated in 2002 to form BABS.

Geoff was turning 90, and the family wondered if there was something the School could provide by way of memorabilia for the occasion. We were happy to send Geoff one of our Faculty of Science jackets, and we received thanks from the family, along with this photo. The comment was "Geoff was thrilled with the gift and couldn't contain his enthusiasm".

BABS Facebook <https://www.facebook.com/UNSWBABS>

The School's fb site is continuing to attract many visitors, with these statistics for the week ending 21 September:

- Total page likes: 398 (last quarter 339)
- Weekly total reach: 232
- People engaged: 61



New addition

Congratulations to **Liz Gazzard** and husband Arthur on the birth of their son Finn, who arrived right on time on his due date – very punctual!



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