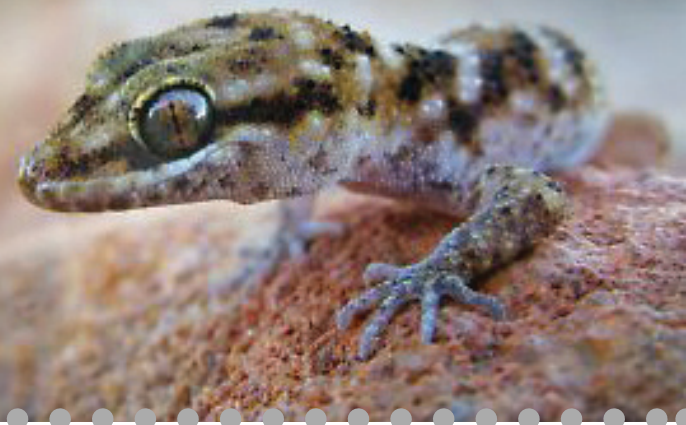


RESEARCH SCHOOL OF BIOLOGY NEWSLETTER



From the Director

I have had a lot of feedback on the proposal to restructure the School and have, as well, discussed it with Vice-Chancellor. Many thanks to all who provided comments. The responses have been largely supportive, notwithstanding the fact that there are a lot of details yet to be worked through. We will proceed with the proposed restructure, forming three Research Divisions - (i) Plant Science (ii) Evolution, Ecology and Genetics, and (iii) Biomedical Science - together with a Biology Teaching and Learning Centre that will encompass staff both from within and outside RSB.

The Operations, Administration, IT and Workshop Working Parties are beginning to work up detailed proposals and the Transitional Planning Group is discussing alternative budget models which will be discussed more widely in due course.

Over the coming fortnight we will work out the distribution of labs between Divisions and will begin a process of extensive consultation regarding the general staff structure within the School.

As ever, all input is welcome.



CONGRATULATIONS

RSB Success in ANU and national teaching awards.

Of the seven ANU recipients of the recently announced national ALTC Citations for Outstanding Contributions to Student Learning four are staff of RSB - Pat Backwell, Susan Howitt, Kiaran Kirk and Helen O'Neill. Kiaran also received an ANU Vice-Chancellor's Citation, and Lindell Bromham a Vice-Chancellors Award for Excellence in Teaching.

Bernard Lineham has been appointed to the position of RSB IT Manager.

Students graduating this week.

Congratulations to PhD graduates Justin Billing (Foley lab), Brendan Conlan (Wydrzynski lab), Robert Rapkins, Marko Premzl and Katherine Thompson (Graves lab), Hooman Salari (Masle lab), Stuart Cooney (Cockburn lab), Jane DeGabriel (Foley lab), Jonathan Tan (O'Neill lab), Hayley Sharp (Rowell lab), and to Masters graduate Senilolia Tuiwawa (Crisp lab).

Warwick Hillier, Brendon Conlan and Tom Wydrzynski (Photobioenergetics) were all invitees at this year's Gordon Research Conference on the Physico-Chemical Aspects of Photosynthesis. The group's latest research results on the photosynthetic water oxidation mechanism and in the design and production of an artificial photosynthetic reaction center were highlighted at the meeting.

Shaun Cloherty, Visual Sciences, has been elected as a representative for the Asia Pacific region on the Administrative Committee of the IEEE Engineering in Medicine and Biology Society. His term begins on January 1st, 2010.

Jean Drayton's PhD work (in the Jennions Lab) on inbreeding and immunity was featured in an article in the Sunday Canberra Times (June 28).

WELCOME

Lindsay Popple, who joins Mike Crisp's lab as a research assistant.

Raymond Wong, a new PhD student in the Visual Sciences group. Raymond will be working with Brendan O'Brien & Shaun Cloherty developing the bionic eye.

Sawang Petvises, a new PhD student in the O'Neill Lab. Sawang comes from Thammasat University, Bangkok, Thailand where he lectures in hematology.

Olivia Wyss who joins the Tschärke lab as a research technician. Olivia is finalising her PhD thesis in the field of reproductive biology and at the same time turning herself into an immunologist.

Markus Winterberg, who joins the Kirk Lab as a postdoc on an NHMRC-

funded project. Markus has just arrived from Marburg in Germany, having just completed his PhD on malaria parasite biology. He joins his wife Britta, who has recently taken up a research post in Uli Mathesius's lab.

Also returning to the Kirk lab, **Jandeli Niemand**, a PhD student from the University of Pretoria, spending the remainder of the year here as part of a collaborative project.

FAREWELL

Many thanks to **Megan Van Der Velde** who has been working in the animal house. Megan has been filling in for Sarah Talbot who has been touring Europe and who returns on Monday.

Philippa Gibson is leaving RSB at the end of next week. In 2007 Philippa did a 3rd year research project with the Arkell Lab and stayed on in 2008 to do Hons. Since then Philippa has been working as a research assistant

in the lab and is leaving to return to university to do a Graduate Diploma in Secondary Education with the aim of becoming a high school Science teacher.

GRANTS / FELLOWSHIPS

Lisa Alleva has been awarded an NHMRC grant in the "Call for research on H1N1 influenza 09". The grant, for \$159,903, is for the project "Trialling agents that could limit influenza disease and improve resistance to secondary infections".

Bill Foley's lab is part of a team that has just been awarded NZ\$9m for research into the impacts of invasive species on biodiversity.

This newsletter is distributed fortnightly by email and hard-copy, and archived at <http://insider.rsbs.anu.edu.au/RSBNewsletter>. Please contact Diane Whitehead to be added to the mailing list and to submit material for future issues.

Vale Carolyn McKinlay
(16th April 1963 – 28th May 2009)

It is with great sadness that we mark the passing of Carolyn McKinlay.

Carolyn had a long association with the ANU, almost twelve years, starting with her employment at JCSMR, then Biotron Pty Ltd, and for the last five years at RSBS in the Mass Spectrometry Facility (MSF). Carolyn made a major contribution to the successful operation of the MSF and played a very active role in the organization and running of the Analytical Workshops and the Annual Symposium put on by the MSF. She was a worker with considerable initiative in the Facility and it was at her instigation that a successful collaboration with the



conservationists at the Australian War Memorial, investigating firstly the chemistry of canvas wing coverings and, most recently, paint on steel helmets, was established. Carolyn was also happy to volunteer a helping hand in the RSBS store and in manning the front desk if needed.

Her work in the MSF, as a First Aid Officer and as deputy Chemical and Radiation Safety Officer in RSBS broadened her network of friends and colleagues across the school and campus. This was greatly valued when needing to track down particular instrumentation or expertise.

Carolyn was a very caring person who took a genuine interest in the people around her. She went out of her way to welcome new staff and students and to actively promote a community feeling within RSBS, regularly involving herself with school social events. The high regard in which she was held was evidenced by the very large attendance from across the campus at her memorial service

on the 5th June. Her combination of technical expertise and commitment to university life will leave a large gap that we will struggle to fill.

Message from David McKinlay and Family

On behalf of Mitchell, Alexander and myself, thank you for your support and kind wishes during the tragic circumstances which led to our beloved Carolyn's sudden passing. Each of us has found some comfort in how well she was regarded by everyone who knew her, and your show of support is greatly appreciated.

David McKinlay

PAPERS ACCEPTED

Angelika Bröer, Sarojini Balkrishna, Gabor Kottra, Sarah Davis, Aaron Oakley, Stefan Bröer. Sodium Translocation by the Iminoglycinuria associated Imino Transporter (SLC6A20). Molecular Membrane Biology.

Stefan Bröer, Hans-Peter Schneider, Angelika Bröer, and Joachim W. Deitmer Mutation of asparagine 76 in the center of glutamine transporter SNAT3 modulates substrate-induced conductances and Na⁺-binding. J Biol Chem.

Brendon Conlan, Nicholas Cox, Ji-Hu Su, Warwick Hillier, Johannes Messinger, Wolfgang Lubitz, P. Leslie Dutton, **Tom Wydrzynski**. Photo-catalytic oxidation of a di-nuclear manganese centre in an engineered bacterioferritin 'reaction centre'. Biochimica et Biophysica Acta.

B. Conlon, K. Hingorani, W. Hillier, T. Wydrzynski. Elucidating Photochemical Pathways of Tyrosine Oxidation in an Engineered Bacterioferritin 'Reaction Centre'. Australian Journal of Chemistry.

Chakrabarti A, Panter SN, Harrison K, Jones JDG and Jones DA. Regions of the Cf-9B disease resistance protein able to cause spontaneous necrosis in *Nicotiana benthamiana* lie within the region controlling pathogen recognition in tomato. Molecular Plant-Microbe Interactions.

Chen H, Bodulovic G, Hall PJ, Moore A, Higgins TJV, Djordjevic MA and Rolfe BG. Unintended changes in protein expression revealed by proteomic analysis of seeds from transgenic pea expressing a bean α -amylase inhibitor gene. Proteomics.

Clark IA, Alleva LM. Confronting the next influenza pandemic with anti-inflammatory and immuno-modulatory agents: why they are needed and how they might work. Influenza Other Respi. Viruses.

Delannoy, E, Le Ret, M, Faivre-Nitschke, SE, Estavillo, GM, Bergdoll, M, Taylor, NL, Pogson, BJ, Small, ID, Imbault, P, and Gualberto, JM (2009) Arabidopsis tRNA adenosine deaminase (TADA) is responsible for editing the wobble nucleotide of chloroplast tRNAArg(ACG), a modification essential for efficient chloroplast translation. Plant Cell.

Dodds PN, Rafiqi M, Gan PHP, Hardham AR, Jones DA and Ellis JG. Effectors of biotrophic fungi and oomycetes: pathogenicity factors and triggers of host resistance. New Phytologist.

Gresshoff PM, Indrasumunar A, Miyahara A, Nontachaiyapoom S, Biswas B, Lin Y-H, Lin M-H, Reid D, Callahan D, Capon R, Zhang H, Hirani T, Kobe B, Men A, Scott P, Kereszt A., Miyagi M, Li D-X, Chan P-K, Roessner U, Djordjevic MA, Kinkema M and Ferguson B. Functional genomic analysis of systemic cell division regulation in legumes. Induced Mutation IAEA.

Hamzah J, Altin JG, Herringson T, Parish CR, Hammerling GJ, O'Donoghue H. and Ganss R. (2009) Targeted liposome delivery of TLR9 ligands activates spontaneous anti-tumour immunity in an autochthonous cancer model. Journal of Immunology.

Herringson TP and Altin JG Convenient targeting of stealth siRNA-lipoplexes to cells with chelator lipid-anchored molecules. Journal of Controlled Release.

Hocart CH. Mass spectrometry: an essential tool for identification and quantification. In; Modern Methods in Natural Product Chemistry, Vol 9 (LN Mander, ed), Comprehensive Natural Products Chemistry, 2nd Ed. (LN Mander and H-W Liu, editors-in-chief), Elsevier, Oxford.

Ibbotson M.R. and Cloherty, S.L., Visual Perception: Saccadic Omission – Suppression or Temporal Masking? Current Biology.

Isayama T, O'Brien B, Ugalde I, Muller J, Frenz A, Aurora V, Tsiaras W, and Berson D. Morphology of retinal ganglion cells in the ferret (*Mustela putorius furo*). Journal of Comparative Neurology.

Perrine-Walker, FM, Hynes MF, Rolfe BG and Hocart CH. Strain competition and agar affect the interaction of rhizobia with rice. Canadian Journal of Microbiology.

Spry C and Saliba KJ The human malaria parasite *Plasmodium falciparum* is not dependent on host coenzyme A biosynthesis. Journal of Biological Chemistry.

Whitehead, M.R. & Peakall, R. Integrating floral scent, pollination ecology and population genetics. Functional Ecology.

Wulff BBH, Heese A, Tomlinson-Buhot L, Jones DA, de la Peña M and Jones JDG. The major specificity-determining amino acids of the tomato Cf-9 disease resistance protein are at hypervariable solvent-exposed positions in the central leucine-rich repeats. Molecular Plant-Microbe Interactions.

Yang Wang, Inge E.A. Flesch and David C. Tschärke Vaccinia virus CD8+ T cell dominance hierarchies cannot be altered by prior immunization with individual peptides. J. Virol.