

NEWSLETTER

NEWS

ARC FUTURE FELLOWSHIP SUCCESSES

In the recently-announced Future Fellowship round, four Fellowships were awarded to current or future members of RSB.

Lucas A Cernusak, PS, *Reading the isotopic archive: carbon and oxygen stable isotope ratios as recorders of plant physiological processes*. Lucas, a former student and long-term colleague of Graham Farquhar, PS, will be joining the School from Charles Darwin University where he is presently a Research Fellow in the School of Environmental and Life Sciences.

Janine E Deakin, EEG, *Tracking the evolution of devil facial tumour disease*. Janine is currently a postdoctoral Fellow with Jenny Graves, EEG.

Ulrike Mathesius, PS, *The role of auxin in root organ specification - from symbiont to parasite*. Uli is currently an ARC Fellow and lab leader in PS.

Adrienne B Nicotra, EEG, *Phenotypic plasticity in plants: evolution, adaptation and its relevance in a changing climate*. Adrienne is currently a lab leader in EEG.

NHMRC PROJECT GRANTS

The following members of the School were awarded NHMRC project grants in the current round.

Ruth Arkell and **Allison Cowin** (WCHRI, Adelaide) \$ 550,312.00. The role of the actin remodelling protein, Flightless i, in tissue regeneration

Francis Carbone (U. Melb.) and **David Tschärke**

\$ 555,048.00. Anti-viral immunity and the survival of cells infected with herpes simplex virus in vivo

Rowena Martin

\$ 467,373.20. Interactions between the malaria parasite's chloroquine resistance transporter and antimalarial drugs

Naresh Verma

\$ 329,208.00. Structural and functional analysis of glucosyltransferases (Gtr) involved in O-antigen modification of *Shigella flexneri*.

NHMRC POSTDOCTORAL FELLOWSHIPS

The following two members of the School have been awarded NHMRC Postdoctoral Fellowships in the current round:

Richard Allen (Kirk lab, BSB), an Australian-based biomedical Fellowship, through the University of Queensland.

Jonathan Tan (O'Neill lab, BSB), an Overseas-based biomedical Fellowship, through RSB.

OTHER GRANTS

Garvey, G Bryant and **Thomas Lenné**. Localisation of trehalose in oriented DOPC bilayers by neutron diffraction. NIST Center for Neutron Research in Maryland, USA (grant for beam time and logistic support).

CONGRATULATIONS

Tegan Dolstra (Martin lab, BSB) has been awarded first place and a prize of \$1500 for her entry in the [New Scientist Prize for Science Writing](#) for her piece

"Buying time: fortifying our last antimalarial drug".



David Tschärke, BSB, has been appointed to the editorial board of the *Journal of Virology*, an ARC A* ranked publication.

Pam Gan, Hardham lab, PS, has submitted her PhD thesis entitled "Translocation of the fungal effector AvrM into host cells". Pam will take up a postdoctoral fellowship in Dr Ken Shirazu's lab in Japan in January.

Brendan Choat, Marilyn Ball lab, PS, has been awarded an Alexander von Humboldt Fellowship for Experienced Researchers for his project "Fundamental aspects of water transport in plants" in collaboration with Dr Steve Jansen (Ulm University, Germany).

Richard Carter, PhD student, Crisp lab, EEG, has accepted a postdoctoral position in the lab of Prof Peter Linder at the University of Zurich to work on the project "Angiosperm phylogeny and Cenozoic radiations". He expects to submit his thesis in January and then travel to Switzerland to start the new job.

EPIGENETICS OF BEES

A recent paper from the Maleszka lab, conducted in collaboration with the German Cancer Institute in Heidelberg, has been receiving world-wide media attention. The paper was also highlighted in *Nature* and has had over 7,000 downloads in the first three weeks since publication. The study represents an important step forward in unravelling the role of epigenetic settings in generating contrasting phenotypes and behaviours from the same genome. Importantly, it has reinforced the value of the bee system as an easily manageable model for epigenetics.

Lyko, F, Foret, S, Kucharski, R, Wolf, S, Falckenhayn, C, Maleszka, R (2010) The Honey Bee Epigenomes: Differential Methylation of Brain DNA in Queens and Workers. *PLoS Biol.* 8, e1000506.

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WELCOME

Yuan Yuan Hu, PhD student at Shihezi University in Xinjiang Province, China, has arrived to work with Fred Chow, PS, for six months on photosynthetic characteristics on non-leaf organs of cotton plants. In this way, she achieved two summers of work on cotton per year.

Penny Gullan and **Peter Cranston**, who have returned to the ANU after retiring from the University of California at Davis. Penny was formerly Head of BoZo and Peter was a Research Scientist in CSIRO Entomology, and they have both had distinguished careers in entomology. Together they authored the best selling textbook of Entomology ("The Insects: An Outline of Entomology"; Blackwell). They have returned to Canberra as adjunct professors in EEG and will help maintain the strong relationships between ANU and CSIRO.

FAREWELL

Rebecca Hinton, O'Neill Lab, BSB, who recently graduated with a Doctorate in Philosophy has left the lab where she has been working as a Research Officer for 6 months and joined Australian Quarantine Services.

Jiancun Kou has completed a productive year of research, funded by the China Scholarship Council, on photosynthetic cyclic electron flow and on photoinhibition in Fred Chow's lab, PS. She has returned to her teaching position at the North-west Agriculture and Forestry University, near Xian, China.

Matt Doulgeris, programmer, will finish his 10 month term with RSB on December 23.

VALE

Emeritus Professor **Frank Fenner** AC died on the 22nd of November. [\[ANU media release\]](#).

INTRODUCING JASON POTAS

Jason Potas has just been appointed as a Lecturer in the ANU Medical School and is establishing his lab in the RSB Division of Biomedical Science and Biochemistry.

Jason commenced his scientific career at The University of Sydney, examining how different sensory (somatic and visceral) information affects blood pressure, by studying the spinal and brainstem functional and anatomical connections to autonomic control centres. He also examined haemodynamic and anaphylactic shock responses and the associated central mechanisms affecting these responses.

During his first post-doc at the Humboldt University, Berlin, Jason studied the cellular responses to cerebral ischemia. He later returned to Australia, where he investigated the cellular responses and the role of the immune system on reducing functional outcomes after spinal cord injury at the University of New South Wales.

In his more recent work, conducted at the Federal University of Rio de Janeiro in Brazil, Jason examined the electrophysiological properties of regenerating nervous tissues in response to peripheral nerve and spinal cord injury, and he investigated the efficacy of cellular therapies on regeneration.

Jason also devised new injury models and evaluation techniques, including computational techniques for automated evaluation of peripheral nerve function, and for differentiating nervous fibre types based on their electro-morphological characteristics.

Jason has returned to Australia after working for three years in industry in Brazil, to join the ANU Medical School. His new laboratory will work on neural control systems and nervous tissue regeneration.



PAPERS ACCEPTED

Crisp, M.D., Trewick, S.A. and Cook, L.G. Hypothesis testing in biogeography. *Trends in Ecology and Evolution*.

Drayton, J.M., Jennions, M.D. Inbreeding and measures of immune function in the cricket *Teleogryllus commodus*. *Behavioral Ecology*

Hinton, Petvises, O'Neill, H. Myelopoiesis in perinatal spleen. *Immunology & Cell Biology*

Mautz, B., Detto, T., Wong, B.B.M., Kokko, H., Jennions, M.D., Backwell, P.R.Y. Male fiddler crabs defend multiple burrows to attract additional females. *Behavioral Ecology*

Pasquale, L., Hendrickson, L., Corelli Grappadelli, L. and Chow, W.S. Quenching partitioning through light-modulated chlorophyll fluorescence: a quantitative analysis to assess the fate of the absorbed light in the field. *Environmental and Experimental Botany*

Price, G.D., Badger, M.R., von Caemmerer, S. The prospect of using cyanobacterial bicarbonate transporters to improve leaf photosynthesis in C3 crop plants. *Plant Physiology*

Robinson, A.L., Boss, P.K., Heymann, H., Solomon, P.S. and Trengove, R.D. Development of a sensitive non-targeted method for characterizing the wine volatile profile using headspace solid-phase microextraction comprehensive two-dimensional gas chromatography time-of-flight mass spectrometry. *Journal of Chromatography A*

Takahashi, S. and Badger, M.R. Photoprotection in plants: a new light on photosystem II damage. *Trends in Plant Science*

Tazoe, Y., von Caemmerer, S., Estavillo, G.M., Evans, J.R. Using tunable diode laser spectroscopy to measure carbon isotope discrimination and mesophyll conductance to CO₂ diffusion dynamically at different CO₂ concentrations. *Plant Cell & Environment*

Waters, J.M., Lindo, J., Arkell, R. and Cowin, A.J. Regeneration of hair follicles is modulated by Flightless I (Flii) in a rodent vibrissa model. *Journal of Investigative Dermatology*

This newsletter is distributed fortnightly by email and hard-copy, and is archived at <http://biology.anu.edu.au/Newsletter>. Please contact [Sharyn Wragg](#) to submit material for future issues.

Editing: Kieran Kirk & Sharyn Wragg. Design & layout: Sharyn Wragg. Banner image: Alison Knight, Behm lab, BSB., *C. elegans* gonads, GFP fluorescence.