

## Australian National University

# Research School of Biology Newsletter

#### Issue 128 | July 2021

### Congratulations



New ARC Training Centre for Accelerated Future Crop Development.

An RSB-PS led bid for an ARC Training Centre for Future Crop Development has been successful. Congratulations to **Barry Pogson**, **Anthony Millar (PS) and Lauren DuFall (pictured above)** and the Research Services Team for their efforts.

The Centre was awarded \$5M from the ARC with matching cash from ANU, the University of Adelaide and partners, plus \$8.5M in-kind which includes real contributions such as access to expensive field trials. This Centre involves eight Chief Investigators from Plant Sciences and Joan Leach (CPAS). This will do much to sustain the strong momentum of research and training in Plant Sciences, and our collaborations with CSIRO, University of Adelaide and industry partners.



This year's Honours cohort was of exceptional quality with **Kate O'Hara** (Moritz Group, E&E), **Soraya Zwahlen** (van Dooren Group, BSB), **Sacha Pulsford** (Price Group, PS) and **Matthew Mortimer** (Pogson Group PS) (pictured above) all winning the RSB Director's Prize in Honours for achieving a final mark of 90% or higher.

## PhD submitted

**Pamodha Somasiri** (Verma Group, BSB) Caenorhabditis elegans *as a potential animal model to study the pathogenesis of Shigella flexneri.* 

## **Masters submitted**

**Zhuzhi Zhang** (Head Group, E&E) Effects of water on mating and fitness in seed beetles.

**Recent papers from the Keogh Group (**E&E) are amongst the most read in the top international journal *Systematic Biology* which is the journal of the Society of Systematic Biologists.



Keogh Group members; Ian Brennan, Siwanon Paphatmethin, Mitzy Pepper, Carlos Pavon Vazquez, Scott Keogh, Ying Yuo, Damien Esquerre.

RSB Honours student **Sacha Pulsford** (Price Group, PS) has been awarded the University Medal. The University Medal recognises students who have obtained First Class Honours and demonstrated exceptional academic excellence across their studies.



Craig Moritz (Director,) Dean Price, Sacha Pulsford and Ben Long (PS)

**Emily Roycroft** (Moritz Group, E&E) has been awarded the <u>D.G. Catcheside Prize</u> from the Genetics Society of Australasia.





**Yun Hsiao** (Rowell Group, E&E) was awarded the <u>Society of Australian Systematic Biologists (SASB)</u> student travel grant.

**Yi Yang Alex Chen** (Jennions Group, E&E) was awarded People's Choice prize at the RSB 3MT (Three Minutes Thesis) competition.





**Angus Rae** (Mathesius Group, PS) was awarded Runner Up in the College of Science 3MT (Three Minute Thesis) competition.

#### News

#### Building genomics capacity in Africa

Ashley Jones (Schwessinger Group, PS) and **Benjamin** Schwessinger took part in a three day webinar series to build genomics capacity in Africa at the *3rd Generation Genomics*  and Bioinformatics in Africa Workshop in Nairobi, Kenya. Ash and Benjamin instructed participants on how to extract high-molecular weight DNA from all sorts of bugs, plants, and bacteria for long-read sequencing in agriculture. Benjamin organized this specific subsection of the workshop with colleagues from Plant and Food New Zealand Research (NZ) and the John Innes Centre (England). The webinar series was extremely well received. All talks, recordings and resources are available on protocols.io.

#### **Faculty Teaching Forum**

A teaching forum was held this month to discuss two big issues:

The Biology Curriculum including how we adjust to our reduced staffing, implications of changing budget models and the resulting future challenges and opportunities;
What we can learn from our switch to online learning last year, how we can use technology better to support and complement face to face learning, and how to make the most of our students' lab and field practical experiences.

There was vigorous discussion throughout the forum, with lots of examples of innovative teaching being considered and discussed. While we do have some significant challenges coming up, the enthusiasm and commitment to teaching demonstrated was a good sign for the future. A follow up forum is planned to discuss assessment and feedback.

#### Demonstrator and tutor training

A demonstrator and tutor training session was run by **Rachael Remington** (BTLC) with support from **Maja Adamska** (BSB) and **Susan Howitt** (BTLC). It was interesting to see that much of the discussion about the value of face to face learning, and what students gain from it, was similar between the demonstrators and the Faculty Teaching Forum.

#### Outreach

On Thursday 24 June, **Emma Crean**, **Tavish Eenjies**, **Salome Wilson** and **Benjamin Schwessinger** (PS) ran a workshop for a group of high school students, through the outreach organisation, Youth Leading in STEM.

The title of the workshop was *What did this tick eat for breakfast*? and it used hands-on activities to show how DNA sequencing can be used to answer biological questions.

Moving through a series of activities and discussions kept everyone engaged and it was great to hear the students relate to the content and ask lots of questions. We have placed all the resources for this workshop on <u>protocols.io</u> for other groups interested in creating outreach activities.

#### Farewell

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**Carlos Pavon-Vazquez** (Keogh Group, E&E) recently finished his PhD and he is off to the USA to start a two year postdoc at City University of New York. We will miss him!



## **Grants awarded**

Madison Fink (Head Group, E&E) was awarded a CBA



research grant for her collaboration with CSIRO and ACT Environment assessing variation in the susceptibility of *Eucalyptus blakleyi* to psyllid (*Cardiaspina albitextura*) attack using leaf chemistry traits.

ACT Government 2021. Enhancing the capacity of the ACT to lead environmental surveillance for infectious diseases through sewage testing. \$50K. Aude Fahrer, Pawan Parajuli and Ruth Purcell (all BSB) were among ten investigators to be awarded.

John James Foundation 2021. *Measuring anti-PF4 Antibodies and D-dimers in people post COVID19 vaccine*. \$21K. **George Cavic, Ian Cockburn, Andrew Almonte** and **Aude Fahrer** (all BSB) were among seven investigators to be awarded.

## In the media

Emily Roycroft (Moritz Group, E&E) wrote an article in <u>The Conversation</u> to accompany our new paper published in <u>PNAS</u>, 'resurrecting' the previously extinct Gould's mouse. The findings also receive some media attention by the <u>ABC</u>, <u>The Guardian</u>, <u>The Canberra</u> <u>Times</u>, <u>CNN</u>, <u>BBC</u>, <u>The Times UK</u>, <u>New Scientist</u>, <u>Cosmos</u> <u>Magazine</u>, <u>Smithsonian Magazine</u>, <u>VICE</u>, <u>Tnews</u>, <u>About</u> <u>Regional</u>, <u>The Daily Mail</u>, <u>Yahoo News</u>, <u>CNET</u>, as well as a variety of local Australian and interntional outlets. Emily was also interviewed by ABC Radio nationally, 2CC Canberra and Triple U.

## PhD scholarships

Kirsty Yeates, Abigail Graetz, Hanjun Sun, Hannah Wilson (all PS), Shukla Promite, Elaine Tao, Jiwon Kim (all BSB), Yan Yang, Oliver Webeck, Alan Vincent (all E&E).

#### Welcome



**Jodi Hamilton** joins us from Research School of Chemistry for a 12 month secondment as acting Senior Purchasing Officer.

#### HDR students

**Shukla Promite** (Brock Group, BSB) from UTS will be working on developing a nanobody platform to enable high-resolution structural determination of membrance proteins by cryo-EM.

**Oliver Webeck** (Cardillo Group, E&E) will be working on phylogenetics and macroevolution of Proteaceae.

#### **Honours students**

Emmeline Norris (Cardillo Group, E&E), Kaylee McDonald (Head Group, E&E), Adam Herden (Linde Group, E&E), Sean Broderick (Williams Group, PS), Marvin Jin (Djordjevic Group, PS), Tarryn Myburgh (Byrt Group, PS), Ashley Tan (Evans Group, PS), Ashleigh Thomson (Solomon Group, PS), Rebeccah Tyrrell (Pogson Group, PS).

#### **Masters students**

Na Li (Rathjen Group, PS), Victoria Pfitz (Solomon Group, PS), Ziheng Luo (Schwessinger Group, PS).

#### **Papers**

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