



From the Director

Hello all

Welcome to another edition of the RSB newsletter celebrating new arrivals, grants, publications and awards to current and former staff, attesting to the ongoing strength of research and training in RSB.

I also note the reports on recent outreach activities, including ANU Open Day and engagement with a regional high school. It is all too easy to rest on our laurels and assume that the public understands the value of the research and education that we do. Sadly, recent political events in the US and elsewhere suggest that public support for higher education has declined. For example, the only mention of higher education in the current political campaigns in Australia is to blame our international students for increased costs of housing. Hence the importance of strong engagement and clear explanations of how we contribute to society. Over recent months we (mostly Charlie & Vienna) have been updating the RSB website to provide examples of the impact of our research – visit [Research Impact](#). If you have examples that you would like us to highlight, please let [Vienna](#) and [Charlie](#) know.

Finally, and rather shamelessly, I remind you of the opportunity to support innovation in RSB's research, teaching and events that promote a collegial environment via donations to the [Biology Future Fund](#). No gift is too small...

Craig

Welcome



Welcome to **Tejas Tagra** (Sequeira Group, E&E), who has joined the Sequeira Lab as the new Communications Assistant. Tejas is studying Cybersecurity at ANU and brings a strong interest in digital storytelling and science communication. He will support the Group's communications and outreach efforts.

The Sequeira Group would also like to welcome **Tasmin Engelhard** (Sequeira Group, E&E), a PhD student joining the lab for her semester research project. Tasmin is pursuing a Bachelor of Mathematics and Statistical Biology and will be working on tracking dugong movements in Shark Bay (Gathaagudu).



Welcome to **Alice Temara** (Atkin Group, PS) who has joined the Atkin Group as a PhD Student from Belgium. She will be working on a project that aims to improve our understanding of biochemical factors underlying variation in leaf respiration in trees exposed to warming and elevated atmospheric CO₂.

Welcome to **Monmi Pangging** (Solomon Group, PS) who has joined the Solomon Group as a PhD student. She will be working on using genetic approaches to discover new pathogenicity genes in the wheat pathogenic fungus *Zymoseptoria tritici*. Monmi completed her Masters in Korea before working in Taiwan as a Research Technician.

The Solomon Group also welcomes **Haoran Li** (Solomon Group, PS) who has started his PhD working on LysM effector proteins in the wheat pathogenic fungus *Zymoseptoria tritici*. Haoran completed his Honours here at ANU last year in the Danilla Group.

Welcome to **Cara (Yu-Wen) Huang** (Melonek Group, PS) who has joined the Melonek Group as a PhD student. Cara will be working on the molecular characterisation of Restorer of Fertility proteins for hybrid breeding in wheat. Cara completed her Master's project at the National Taiwan University in Taipei, where she studied genes that modulate flowering time in *Arabidopsis* under short-day conditions. Cara will also be affiliated with the ARC Training Centre for Future Crops Development.

Grants awarded

Peter Solomon (PS) and **Simon Williams** (PS) were recently awarded a Proof of Concept grant from the [Grains Research and Development Corporation](#) to work on the "Resurrection of defeated wheat resistance genes".

Yuxin Hou (Langmore Group, E&E) was awarded a Research Grant by the [Canberra Birds Conservation Fund](#) valued at \$4,545.

Megan Outram (Tham Group, BSB) was awarded a [Thomas Davies Research Grant](#) by the Australian Academy of Science (AAS) valued at \$12,974.

Erick Tjhin (Spry Group, BSB) was awarded a Research Grant by the [Medical Advances Without Animals Trust](#) (MAWA) valued at \$19,660.

Congratulations



On behalf of the whole School, it is my very great pleasure to officially congratulate Associate Professor **Daniel Noble** (E&E) on his award of the prestigious Australian Academy of Science [Fenner Medal](#) 2025.

This award recognises outstanding research in biology (excluding the biomedical sciences) by researchers up to 10 years post-PhD.

Dan was jointly awarded the medal with Associate Professor Katherine Moseby from UNSW. Dan follows in the footsteps of **Ana Sequeira** (E&E), who was awarded the Fenner Medal 2024, and two earlier RSB winners, **Uli Mathesius** (PS) and **Barry Pogson** (PS).

As an evolutionary ecologist, Dan was recognised for his far-reaching research which is developing models and tools to reveal how climate change, invasive species, and human activity shape biodiversity with the goal to find evidence-based solutions.

Watch the following wonderful [short video](#) featuring Dan and his research.

It also includes some footage of Dan with his Group, catching lizards in the netted enclosures out the back of RSB. If you ever wondered what those enclosures are for, now you know! Written by **Rod Peakall** (E&E)

We are also pleased to offer fulsome congratulations to **Emily Roycroft** (formerly Moritz Group; now DECRA Fellow and lecturer at Monash University) on the award of the **Dobzhansky Prize**. This prize is awarded annually by the Society for the Study of Evolution “to recognize the accomplishments and future promise of an outstanding early-career evolutionary biologist”. Past prize winners are a who’s who of evolutionary biologists, and Emily is well placed to join this pantheon. The award recognises her diverse and high impact contributions to our understanding of the evolution of Australian native rodents, starting with her PhD work at Museums Victoria (with Kevin Rowe) and continuing through her time with us and then her current ARC supported research.

In the Media



Ashley Jones (Schwessinger Group, PS) represented the Australian Society of Plant Scientists (ASPS) this year at Science Meets Parliament 2025. He met with various members of parliament, discussing political support for plant science research and translation, with applications in conservation genomics and maintaining biodiversity of Australian native plant species.

Benjamin Schwessinger (PS) spoke to ABC Radio about mushroom foraging, listen to [ABC Drive](#).

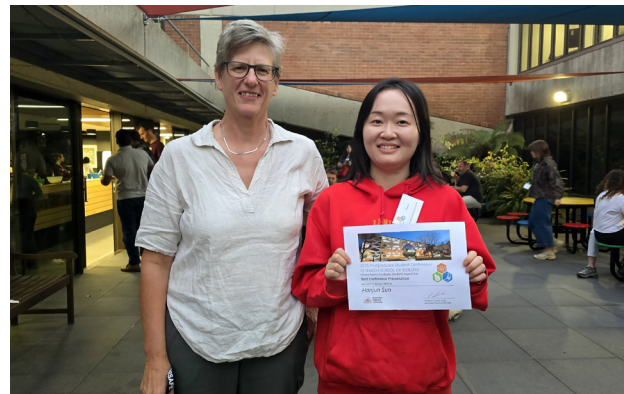
News

The Science Educators’ Association of the Australian Capital Territory (SEAACT) gathered for their annual conference at RSB on Saturday 22.3.25. More than 80 educators from ACT and NSW could choose from 23 workshops and presentations on different aspects of science teaching.



Amongst other key players like the Academy of Future Skills, Questacon, the Australian Academy of Science and Geoscience Australia, RSB also made some strong contributions: **Sonja Brodersen** (Schwessinger Group, PS) and **Benjamin Schwessinger** (PS) presented a workshop on “Fungal spores are all around us” and **Alex Maier** (BSB) gave a keynote presentation on “The Good, The Bad and The Ugly – learning to appreciate parasites”. **Scott Keogh** (E&E) took on the role of the conference genie, working tirelessly and making sure that everything ran smoothly. The participants left the conference inspired and eager to apply the newly acquired ideas to the classroom.

HDR Conference 11 April



Congratulations to all the HDRs presenting at the April HDR conference. As usual, the quality of talks was excellent. It was a small number of speakers, but extremely well attended by all. Special congratulations to our **Hiroto Naora best presenter award winner, Hanjun Sun** (Whitney Group, PS).

A special thank you to all the organisers and caterers of the event including HDR representatives, HDR convenors, session chairs and helpers. Special thanks to **Nils Kreuter** (Keogh Group, E&E), **Brendah Nyagah** (Farine Group, E&E), **Arslan Mahmood** (Millar Group, PS), **Wendy Lee** (Peakall Group, E&E), **Chenke Zang** (Jennions Group, E&E), **Fatema Akhter** (Head Group and Jennions Group, E&E), **Muhammad Farooq** (Head Group, E&E), **Mahmud Al Hasan** (Head Group and Jennions Group), and **James Klarevas-Irby** (Farine Group, E&E). It would not have been possible without you.

Outreach

ANU Open Day

The wet weather did not dampen the high spirits of TEAM RSB during ANU Open Day. A group of enthusiastic staff and students highlighted the enormous spectrum of activities and interests in RSB: from molecules to organisms, from biomedical to ecological research, from laboratories to the field (including marine work), from histology to evolution.



The visitors were not only provided with comprehensive guidance and answers to study options, but were also treated to displays, including live organisms such as bees, nematodes, leeches, cockatoos, plants and much more. The free chocolates were also a big hit! Judging by the interest of the prospective students, we will see many of them in our first-year classes next year. To quote a visitor after leaving the RSB stall: "Biology goes straight to the top of the list."



A big thank you to the following people for their help and enthusiasm in making the RSB stand interesting and exciting, especially the students and postdocs: **Maja Adamska** (BSB), **Olga Azevedo** (Sequeira Group, E&E), **Kai Chan** (PS), **Giel van Dooren** (BSB), **Shelfali Dorepalli** (Aplin Group, E&E), **Aude Fahrner** (BSB), **Jaiden Lane** (Sequeira Group, E&E), **Alexander Maier** (BSB), **Ulrike Mathesius** (PS), **Joanna Melonek** (PS), **Craig Moritz** (E&E), **Daniel Noble** (E&E), **Rod Peakall** (E&E) and **Julia Penndorf** (Aplin Group, E&E).

A special thank you to **Farid Rahimi** (DSTO, BSB) and his team and to **Angela Chan** (DA, BSB), who - despite being sick - made sure that everything was well organised. Watch the [2025 ANU Open Day](#) video filmed by the CoSM media team.

Outreach at Ulladulla High - To save humanity from a deadly parasitic outbreak



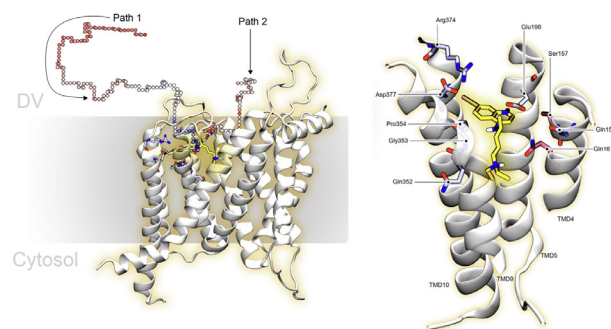
Earlier this month, members of the Maier Group, brought an immersive Escape Room experience to Ulladulla High School in NSW. Our "A Race for the

Antidote" activity transformed their ordinary science classroom into a high-stakes research lab, where students worked together to save humanity from a deadly parasite pandemic. Through solving puzzles, breaking codes, and trying hands-on lab tasks - including using microscopes and pipettes for the first time - participants got to experience what it's like to be real scientists.

The event sparked excitement for parasitology while demonstrating how researchers tackle global health threats. We're pleased to report that every team cracked the code, meaning humanity remains safe... for now! This innovative approach bridges classroom learning with real-world science applications, and we hope it has inspired some future researchers.

Later in August, we plan to bring this exciting event closer to home, running it at both the ANU Canberra campus and our Kioloa coastal campus as part of National Science Week celebrations. This escape room was run by the following PhD Students - **Sabina Morgan** (Maier Group, BSB), **Lizzy Durban** (Maier Group, BSB), **Cecilia Nie** (Maier Group, BSB) - and Group Leader **Alex Maier** (BSB) in collaboration with **Samantha Kneeshaw** (high school science teacher and science coordinator at the South Coast) and **Shane Paul** (Kioloa campus site manager).

RSB Spotlight - Biomedical Science and Biochemistry



A recent paper in *Nature Communications* (published 27 March, 2025) by PhD student **John Tanner** (Corry Group, BSB) demonstrated how the malaria parasite gained resistance to chloroquine, the once frontline antimalarial. Using molecular simulation, John showed how mutations in a membrane transporter known as PfCRT enabled the parasite to move the drug away from its site of action, the parasite digestive vacuole. However, these mutations affect the ability of the protein to move its natural substrates - small peptides derived from the digestion of host haemoglobin - yielding a fitness cost. This study provides insight into drug resistance mechanisms and how diverse molecules can be transported by a single protein, aiding in rational, structure-based inhibitor design.



Papers

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