

# Yeast SIG: an ASBMB Special Interest Group



The Yeast Special Interest Group (SIG) was established in 2006. It aims to bring together ASBMB members with an interest in yeast. The major impetus was that the International Conference on Yeast Genetics and Molecular Biology (ICYGMB) (a major international yeast conference) was to be held in Australia in 2008. The Yeast SIG draws its members from all over Australia. Yeast is a versatile organism. It was developed as an experimental model eukaryotic organism and has been used to make discoveries relevant to human health recognised with several Nobel Prizes for Medicine or Physiology. Yeast is also used for the brewing of beer, fermenting of wine, baking of bread and biotechnology, so some Yeast SIG members work in industry. The Yeast SIG now also has members who work on non-yeast fungi.

The Yeast SIG officer-bearers are Alan Munn (President), Birgita Ebert (Treasurer) and Ben Schulz (Secretary). Yeast SIG members organise conferences, most recently the 37th International Specialised Symposium on Yeast (ISSY37) was held from 27 November to 1 December 2023 at the National Wine Centre, Adelaide. This event was co-chaired by Yeast SIG member Vladimir Jiranek (University of Adelaide and University of Southampton, United Kingdom) and Sakkie Pretorius (Macquarie University). The Local Organising and Session Planning committees also included Jennie Gardner, Jin Zhang, Krista Sumbly and Jacqui McRae (University of Adelaide), and Jenny Bellon and Cristian Varela (Australian Wine Research Institute). The professional conference organiser was All Occasions Group (Adelaide).

ISSY37 began with an evening welcome reception, featuring a Welcome to Country from Cliffy 'Tangku Munaitya' Wilson, a Kurna, Narungga, Ngarrindjeri, Ngadjuri and Arrente Man. Canapes and beverages from local producers were enjoyed by all, whilst the overseas visitors were particularly pleased to have the opportunity to see several native animals up close.



*Welcome to Country:  
Cliffy 'Tangku  
Munaitya' Wilson  
(left) and ISSY37  
Co-Chair, Vladimir  
Jiranek.*

Peter Høj (Vice Chancellor, University of Adelaide) opened the meeting. This was followed by a keynote address from Brenda Andrews (University of Toronto, Canada) entitled 'Using budding yeast to map the spectrum of possible morphological phenotypes in a model eukaryotic cell'. Keynote addresses opened each

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subsequent day and included: 'Next generation strains, vectors and methods for gene expression employing *Komagataella phaffii* (*Pichia pastoris*)' (Anton Glieder, Graz University of Technology), 'Competing with complexity: unlocking nature's potential using synthetic biology' (Tom Williams, Macquarie University), and 'In vivo directed evolution for metabolic engineering' (Verena Siewers, Chalmers University of Technology).

From the 113 poster abstracts submitted, some were given the opportunity to also present their work as a talk. Session themes included 'Yeast in Medicine', 'Bioprospecting & Collections', 'New Knowledge via Yeast', 'Yeast Interactions & Microbiomes', 'The Yeast Bioeconomy', 'Yeast Cell Factories', 'Yeast in Food & Beverages', 'Yeast as a Source of Ingredients in Plant-based Foods', 'Genomics & Evolution', 'Systems/Synthetic Biology', and 'Yeast in Space & Extreme Environments'. Ten abstracts were selected for five-minute presentations in the Posters Alive! session. Delegates viewed posters in two evening sessions, the second of which included a Celebration of Yeast featuring yeast foods and beverages.

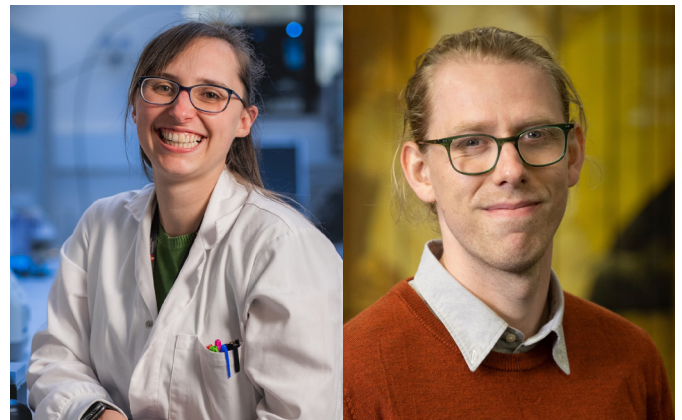
The symposium dinner was held on the last evening at the Playford Hotel. As well as excellent food and beverages, the attendees had the opportunity to dance the night away to the sounds of the Baker Boys Band.

A €250 prize (donated by *FEMS Yeast Research*) went to Christiane Glitz (Technical University of Denmark) for the poster 'Fifty shades of red – production of natural food dyes with yeast cell factories'.

Sponsors included Lallemand, Coopers, Lesaffre, the University of Adelaide, Microbiogen, Eden Brew, Main Sequence, Nourish Ingredients, Fermentis, ASBMB, Yabby Lake Vineyard, Greenhill Wines, Yalumba, Jacob's Creek, Treasury Wine Estates, Fermentation, and Metabolomics Australia.

The Yeast SIG offers awards to early career researchers (ECRs). The ECR Award winner receives financial support to present at the ASBMB conference. The 2023 and 2024 winners were Paige Erpf and Ed Kerr, respectively.

Paige Erpf had an early interest in science and was the first in her family to attend university. Paige completed her PhD at the University of Queensland (UQ) under the supervision of James Fraser on the pathogenic yeast *Cryptococcus* and looking at infectivity using a mouse model. One of her career challenges was continuing the animal work during the COVID-19 lockdowns – Paige once worked in the lab for 83 days straight, including weekends! Her greatest discovery is a fungal protein with homology to proteins that function in a pathway known to exist only in bacteria. After her PhD, Paige moved to Sydney to work on the Yeast 2.0 project to build a yeast artificial chromosome at Macquarie University with Ian Paulsen and Sakkie Pretorius. Paige has a forthcoming publication in *Nature Communications* based on this



Yeast SIG ECR Awardees, Paige Erpf (left) and Edward Kerr.

work. Paige also works on a synthetic biology project engineering synthetic microbial communities to help tackle problems arising from climate change. She also works on the upcoming industrially relevant yeast *Yarrowia lipolytica*. Paige is involved in science outreach and performs science comedy gigs. Her advice to people interested in a research career is to be open minded about research topic, to develop transferrable skills and to take any opportunities.

Edward Kerr was unsure of where his interest lay, but his hobby of home brewing beer led him to take an undergraduate course in fermentation science at UQ. This fermentation science course stimulated Edward's interest in microbiology and all things yeast. Edward then went on to complete a PhD with Ben Schulz at UQ partnering with Newstead Brewing Co focussed on isolating and characterising wild yeast for beer brewing. As part of this project, Edward successfully characterised and commercialised novel yeast strains that have subsequently been used by Newstead Brewing Co in Brisbane. After his PhD, Edward continued at UQ as a postdoc with Ben Schulz continuing work on wild yeast and utilising omic technologies to better understand their molecular diversity. In 2023, Edward joined the CSIRO and is developing novel vaccines against fly strike (blowfly) and other parasites for the livestock industry. Although he has changed fields, Edward still uses yeast, but now to produce key antigens for ecto and endoparasite vaccines. Edward sees networking, presenting his work, and collaboration as keys to success. His advice to those pursuing a career in science is to do what interests you most and never say no to an opportunity. Getting outside your comfort zone is key to growing as a scientist.

**Alan L Munn (Griffith University, Gold Coast) and  
Vladimir Jiranek (University of Adelaide and  
University of Southampton, United Kingdom)**  
Yeast SIG President Email [a.munn@griffith.edu.au](mailto:a.munn@griffith.edu.au)  
Yeast SIG Website [www.ayeastgroup.org](http://www.ayeastgroup.org)