ASBMB's Yeast Special Interest Group

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The Yeast Special Interest Group (SIG) was established to represent the growing number of ASBMB members who are active in research and/or education related to yeasts and other fungi. Ian Macreadie first floated the idea of a Yeast SIG in 2004 and there was strong support from John Wallace, ASBMB President at the time. The Yeast SIG was approved by ASBMB Council in 2005, with Alan Munn as the founding Chair. Elections for the Yeast SIG office-bearers were held in 2010. Alan Munn (President), Rob Learmonth (Secretary), and James Fraser (Treasurer) volunteered their services and were duly elected.

The Yeast SIG is an outgrowth of the Australasian Yeast Group (AYG): www.ayeastgroup.org. The idea of developing an Australian yeast group had its origins, appropriately enough, in conversations over one or two glasses of a favourite yeast product – beer. In 1998/1999, Ian Macreadie (RMIT, formerly CSIRO), Peter Rogers (retired, formerly Carlton & United Breweries), Grant Stanley (Central Queensland University, formerly Victoria University) and Paul Chambers (Australian Wine Research Institute, formerly Victoria University) had conversations about how our research on yeast would benefit from opportunities to collaborate with fellow scientists closer to home than Europe or the USA. They thought there were enough scientists working on yeast in Australia to justify organising a conference that would attract the interest of scientists known to us and others who would surface as word got around. The inaugural conference 'Yeast: Products and Discovery' (or YPD – the abbreviated name of the most commonly used nutrient medium for culturing the yeast *Saccharomyces cerevisiae*) was held in 2000 on South Stradbroke Island, Queensland, and attracted about 60 delegates and a high level of enthusiasm for a follow-up.

The first Yeast Products and Discovery Meeting, held in 2000.

The same core group of organisers ran a second meeting, YPD 2002, two years later, this time at CSIRO in Melbourne. There were over 70 delegates in attendance and the high level of engagement and enthusiasm ensured that this newly identified Australian scientific community had a future. Indeed, the turnout at YPD 2004, held in the Barossa Valley, was over 80 delegates. The great wine and relaxed atmosphere made this a conference to remember. It was decided that we should aim to host an international yeast conference in Australia. Specifically, we thought that the biennial International Conference on Yeast Genetics and Molecular Biology, for which Ian Dawes (UNSW) was Chair of the International Organising Committee, was an appropriate choice. Hence, in 2007, the AYG hosted the 23rd International Conference on Yeast Genetics and Molecular Biology in Melbourne, which was a spectacular success drawing almost 450 delegates from over 40 countries. AYG membership expanded in 2009 to include members from New Zealand and Asia and the group underwent a name change to become the Australasian Yeast Group. The 2009 YPD meeting was held at the Australian Wine Research Institute in Adelaide and attracted 88 delegates. The next YPD meeting will be held in New Zealand in February 2013.

One of the many benefits of SIG status is that we now have a symposium dedicated to yeast and fungal biology at the annual ComBio conferences. The first Symposium on Yeast Biology, chaired by Alan Munn and Ian Dawes, was held at OzBio2010 in Melbourne. It featured international speakers Charlie Boone (University of Toronto), who spoke about genome-wide genetic interactions, and Snezhana Oliferenko (Temasek Life Sciences Laboratory, Singapore), who spoke about dynamic interactions of the cortical endoplasmic reticulum and actin cytoskeleton. It also featured national speakers Marc Wilkins (UNSW), who spoke about proteomics, and Ana Traven (Monash University), who presented work on *Candida albicans*. The second Symposium on Yeast Biology (again chaired by Alan and Ian), held at ComBio2011 in Cairns, featured international speakers Michael Breitenbach (University of Salzburg, Austria), who spoke about aging of yeast cells, and Terrance Cooper (University of Tennessee, USA), who spoke about the complexities of transcriptional control of nitrogen utilisation genes. It also featured Jörg Heierhorst (St Vincent's Institute for Medical Research, Melbourne), who described a novel scaffolding (i.e. kinase independent) role for the protein kinase Rad53 in replication of DNA not subjected to exogenous damage in yeast. In addition, two PhD students (Suresh Nair, UNSW, and Chayanika Biswas, Westmead Millenium Institute) were selected to give short presentations on their research on genes that impact on amyloid-β toxicity in yeast and identification of the target of the anti-fungal miltefosine, respectively.

Although all Yeast SIG members have in common an interest in yeasts and other fungi, our research topics are diverse. Some Yeast SIG members use yeast (e.g. *S. cerevisiae*) as a model organism to elucidate basic mechanisms by which all eukaryotic cells function. Other Yeast SIG members have interests in the pathogenic yeast *C. albicans* or the filamentous fungus *Cryptococcus neoformans*. The interests of AYG members are even more diverse than Yeast SIG members and include winemaking, beer brewing, clinical mycology, and applications of yeast in the biotechnology and pharmaceutical industries.

Yeast research has long been known to be important in the wine, beer, and bakery product industries. However, yeast research is rapidly gaining prominence in medicine and biotechnology. In 2001, the Nobel Prize for Physiology or Medicine was awarded to yeast researchers Leland Hartwell and Paul Nurse for discoveries that help explain the uncontrolled proliferation of cancer cells. The vaccine developed in Australia by Ian Frazer and colleagues to immunise women against papilloma virus-associated cervical cancer was made possible through their choice of yeast as protein expression system. In 2006, a pharmaceutical giant (Merck & Co) purchased a yeast-based biotechnology company (GlycoFi) that had engineered strains of yeast to perform human-specific glycosylation of therapeutic proteins for US$400 million (at the time, the world's highest price for a biotechnology company). In early 2012, a yeast geneticist (Chris Kaiser) will become Director of the NIH- National Institute of General Medical Sciences – a funding agency that every year awards ~US$2 billion in medical research grant funding. This worldwide expansion of interest in yeasts and other fungi for medical research and commercial biotechnology applications has been reflected locally in the membership of the Yeast SIG, growing from 30 members in 2005 to 54 members in 2011. We encourage more ASBMB members who have an interest in yeast or other fungi (or who use yeast as a tool) to consider joining the Yeast SIG as we continue to grow into the future.

Alan Munn and Paul Chambers