ANZSCDB Newsletter

Australia and New Zealand Society for Cell and Developmental Biology INCORPORATED

Read Up On:

President's Report

Dear Friends and Colleagues

Welcome to the ANZSCDB 2014 Summer Newsletter. With Xmas and the end of the year fast approaching it's time to reflect on the past year and to think about plans for the year ahead. This newsletter is packed with news of meetings, awards, paper highlights and other events relevant to our members. We also hear from our state reps about what's been happening in cell and developmental biology in your region.

Changes to the committee

We had a great response to our call for new members of the ANZSCDB committee and at the AGM it was agreed that Joan Heath from WEHI would replace Richard Harvey who retired from the committee this year. We welcome Joan, and thank Richard for his contribution during his time on this committee. We also thank the others who put their hand up for this job. In the future we plan to rotate two people from the committee each year and will be calling for nominations next year so please watch out for the email broadcast on this.

News from the states and New Zealand

Our state and NZ representatives are playing an increasingly important role in the society, with a major responsibility being the organisation of the state meetings. Annual Cell and Developmental Biology Symposia are held in Victoria, Queensland, SA and NSW, while WA and NZ attach their efforts to established meetings. All state meetings were highly successful and the reps do an amazing job of organising speakers and other sponsorship. These meetings have become a major focus for ANZSCDB and I thank our reps and other helpers for the huge effort they put into the organisation of these events.

At this time I would like to thank our retiring state reps for the effort they have put into the society over the past two years. With increasing demands on our time it's great that these members go out of their way to help further the society and raise our profile around Australia and NZ. Our retiring state reps are Kelly Smith (Qld), Matt Naylor (NSW), Donna

Denton (SA), Megan Wilson (NZ) and Evan Ingley (WA). In Victoria both state reps (Jan Kaslin and Louise Cheng) will continue for another year as both were elected last year following the early retirement of a previous rep. Our ACT rep Kristen Barratt agreed to stay on for another term and was re-elected at the AGM. I would also like to welcome our new state reps and thank them for volunteering their time. I look forward to working with you all in this last year of my Presidency. Incoming state reps are: Annette Shewan (Qld), Kazu Kikuchi (NSW), Michael Lardelli (SA) Fiona Pixley (WA) and Elizabeth Duncan (NZ).

I would like to give a particular vote of thanks to our outgoing NZ rep Megan Wilson who established our facebook page and twitter account. I personally find the ANZSCDB facebook page a great source of information and I encourage all members to like us on facebook and follow us on twitter. Fortunately Megan has agreed to continue to maintain these valuable resources.

ComBio

ComBio2014 was held in Canberra from September 28 to October 2. The meeting was extremely successful and those who attended were impressed with the quality of the science and interactions both scientifically and socially. The conference chair was Edna Hardeman, and the success of the meeting was a credit to her, the Programme Chair Jacquie Mathews, the rest of the committee and

President's Medal

of course Sally Jay and her team for superb organisation. The cell and developmental biology streams were organised by ANZSCDB representatives Kat Gaus and Richard Harvey respectively and we thank them for their efforts in making Combio a great showcase for cell and developmental biology both nationally and internationally. Plenary speakers included Nobel Laureate John Gurdon, Jennifer Lippincott-Schwartz, Marino Zerial, Aki Kusumi, Kateri-Moore and Tom Rando. You can read more about the meeting in Edna's report later in the newsletter.

This year the society also ran a session entitled "Making cell and developmental biology attractive in the current funding climate". This session was designed to give members the opportunity to discuss strategies we can use to capitalise on funding opportunities in what were widely acknowledged as trying times for research funding. The panel consisted of Melissa Little (UQ), Sharad Kumar (Centre for Cancer Biology, SA), Peter Gunning (UNSW) and Richard Harvey (VCCRI, NSW) who all did a great job of keeping the discussion on track and sharing their insights from various perspectives. While there was much inevitable discussion about the process of allocating grant funding, it was acknowledged that we should all be considering other avenues for research funding outside the more traditional government funded granting options. These include commercialisation and philanthropy, and there was a useful discussion around how we could tap into those options. While there were no magic solutions it was a useful way to begin discussions and get people thinking about alternative forms of funding. Thanks to our panel members and everyone who came along and participated in the discussion.

Another regular feature of ComBio is the ANZSCDB Dinner, which offers our members the chance to socialise and network in an informal environment. This is also an opportunity to get to know our international speakers and to thank them for their contributions to the meeting. This year's

dinner returned to the site of the very first dinner instigated by Alpha Yap and Helena Richardson at the Chairman and Yip restaurant. Thanks to Ruth Arkell, Kristen Barratt, Annemiek Beverdam and Jo Bowles for their help in choosing a restaurant and organising this event, and to our Treasurer Rohan Teasdale for handling the finances.

Organisation for Combio 2015 is well underway and will be held in Melbourne from 27 September to 1 October. The conference chair is Marie Bogoyevitch (University of Melbourne), programme co-chair (ANZSCDB) is David Jans (Monash University) and ANZSCDB representatives on the local organising committee are Edwina McGlinn (ARMI, Monash) and Paul Gleeson (University of Melbourne). We look forward to seeing many of you in Melbourne in 2015.

Farhad Shafiei (left) and Reich Webber-Montenegro (right) from Sigma-Aldrich with our President's Medal winner David James

Sharing the moment with Ian Smyth, the 2014 ANZSCDB Young Investigator award winner

Society Awards

One of the more pleasant roles as President is the presentation of our awards at ComBio. I would like to thank the committee for helping out with the decisions for the President's Medal and Young Investigator Awards, and our sponsors Sigma-Aldrich and Carl Zeiss respectively for their continued generous support of these awards. Also thanks to Leica for supporting the Leica International PhD Student Travel Award. The winners of these awards were announced in our winter newsletter and you can read more about our President's Medallist (Professor David James, Charles Perkins Centre and The University of Sydney) and Young Investigator Award Winner (Associate Professor Ian Smyth, Monash University) in profiles by our newsletter editor Fiona Wylie later in this newsletter. One of our Leica Student Award winners Jordan Follett (The University of Queensland) also shares his experience of attending the Gordon Research Conference on Neurobiology of Brain Disorders.

Just an advanced warning that we will be calling for nominations for these awards much earlier than normal next year, so please keep an eye on our email broadcasts and start thinking now about people you would like to support.

ComBio also saw the award of poster and oral presentation prizes to our student and post-doc members. These awards are vital in supporting and encouraging our more junior members as they embark on their research careers.

Congratulations to this year's winners:

ANZSCDB Cell Biology Poster Prize: Peyman Obeidy, The University of New South Wales. Snapshots of early actin-tropomyosin assembly intermediates
ANZSCDB Keith Dixon Prize for a Developmental Biology Poster: Diana Vidovic, The University of Queensland. Analysis of the development of hydrocephalus in mice lacking the transcription factor NF1X.
David Walsh prize for the best student talk: Greg Redpath, University of Sydney. Calpain: an overdrive switch for dysferlin membrane repair.
Toshiya Yamada prize for the best postdoctoral talk: Kim Lieu, Monash University. The P53-induced factor EI24 inhibits nuclear import through an importin-β binding-like domain; and Sarah Creed, Monash University. Beta2-adrenergic signalling regulates invadopodia formation and invasion of breast cancer.

Membership
Membership continues to be an issue for our society and as always we ask you to encourage lab members, students and colleagues to join up. There are many advantages to being a member of ANZSCDB, including regular email broadcasts on relevant jobs, conferences etc, student travel awards, Combio poster and oral prizes and our major President's Medal and Young Investigator Awards. As of earlier this year membership is now based on a calendar year so that all memberships are now up for renewal on 1st January (members joining in the last quarter of any year receive membership for the following year). This brings us in line with many other societies, makes it much easier to keep track of membership renewal reminders, and allows more accurate budget planning. We thank you all for you patience while this change was put in place. Joining up is easy online at http://www.anzscdb.org/.

I would like to thank the current executive Jo Bowles (Secretary), Rohan Teasdale (Treasurer), Sally Dunwoodie (President-Elect) and Peter Currie (Past-President) for their help and support over the past year. Finally thanks to our Newsletter Editor Fiona Wylie for yet another mammoth effort pulling this newsletter together.

I hope you all enjoy a relaxing time with your family and friends over the holiday period and I wish you all a happy and successful year in 2015.

Regards

Carol Wicking

President ANZSCDB

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President's Medallist - David James

What was the journey to becoming Professor David James?

My father died when I was 5 years old and this had a tremendous impact on me. We were not well off, but fortunately my mother had a strong belief in the value of a good education, which I received. I set out to use this to improve my lot in life and to do it fast because with my father's untimely passing at an inappropriately young age, I realised that the plan could come to an end unexpectedly without reaching completion.

After graduating with a Bsc (Hons) from the University of New South Wales in the late 70s, I did my PhD at the Garvan Institute of Medical Research, sending me down the research road of metabolism and insulin action - a road I have been travelling ever since. In Boston and then later St Louis (during which time he discovered the insulin-responsive glucose transporter GLUT4) I decided to become a cell biologist because although I knew zero about it, I realised this was the future. In the US, I became acquainted with some of the heroes of cell biology including people like Tom Sudhof, John Heuser, Mike Sheetz, Morrie Birnbaum and the list goes on. Many of these people have remained my closest of colleagues.
Returning to Australia in 1993 I set up camp at what would become the Institute for Molecular Bioscience at The University of Queensland. My single-minded goal at that time was to help put cell biology on the map in Australia. With the aid of key individuals such as Rob Parton, Peter Gunning, Paul Gleeson and Jenny Stow this became a reality and the rest is history.

In 2002, it was time to take it full circle and return to the Garvan, where I led the Diabetes program for 12 splendid years. Then Sydney University built the Charles Perkins Centre and the lure was too great. A brand new building with a bold and ambitious vision - I couldn't resist the temptation to join colleagues there, in particular Steve Simpson, to help develop what we envision to be one of the most advanced and unique research enterprises in this country. Personally I saw this as a way to put some serious grunt behind my newest challenge to develop systems biology into a new and exciting discipline that I now refer to as Cybernetics. So my latest milestone is to actually have become a Metabolic Cyberneticist.

Throughout this path I think the major attributes that stood by me were energy, passion and a desire to make a difference with the realisation that I could be a leader in scientific endeavour.

What do you see as your biggest research achievement to date and/or what are you most proud of?

The first would be discovery of the glucose transporter GLUT4 and delineating key steps in insulin-regulated GLUT4 biology.

And more broady, mapping key nodes in the insulin signalling pathway and teasing apart components in this system that contribute to insulin resistance.

How would you summarise your current research?

I am currently studying metabolic cybernetics. This is a comprehensive analysis of the many layers that defines the metabolic system combined with mathematical approaches to assemble this into one coherent data set with the view to defining key control points.

How have things changed (for the better or worse) since you started in research and what advice would you give people building a career in cell and developmental biology today?

Things have changed for the better in every possible way. This is without question the best time in history to be involved in medical research. We know a lot, the technology is incredible and the capacity to answer really important questions quickly is boundless. My advice to young people is to immerse yourself in your science, have fun and be positive about the future. If things are not going your way, change them for the better. Take control of your own destiny and don't blame other people or the system if things don't turn out the way you thought they would. Make the best out of every single situation!

Who inspires you in science and in life?

Too many people to mention here so I will just recount a few.
Steve Jobs was one person who I found inspirational – not the person so much, but his ability to change the world. He set out on a journey to do this and his creative capacity and his ability to connect the dots was extraordinary.
Jan Willem Slot, my long time cell biology collaborator. Jan was at the top of his game - he was a magician with the microscope and a pioneer. Yet to know him, you would never know it. He was not ambitious, he was mild mannered and he was a gentlemen. He taught me not only about cell biology, but also how to be a good person. He will be a life-long friend.
John Lawrence, a close collaborator when I was at Washington University in St Louis. John sadly passed away several years ago, but he helped me along my path to independence. He taught me how to write grants, the art of precision in biological method and how to think critically. A great, yet under-appreciated man.
So strange, you might say that I, someone who is so gregarious and outspoken, would be drawn to such humble people – but what can I say.

What excites you in cell and developmental biology at the moment?

New technology and interdisciplinarity.
The speed of technological development is extraordinary and this offers the most immense possibilities that one can imagine. Mass spectrometry, light microscopy particularly in terms of high resolution, high throughput single cell approaches, stem cells, CrispR knock out technology. This stuff is happening before our very eyes. Come on board. It's a really fun ride!
How do you see the ANZSCDB playing a role in your science?

Societies such as this are crucial. They are the vehicle for integration and collaboration, and it is essential that they continue to represent the science of the members and that they move with the times. Most importantly, they are the place where young scientists can come and learn…and network - so crucial.

What would you do if you were not in research?

You know I reckon I could do anything. I just don't know what I would find interesting. I have always been naturally attracted toward stuff that is fun to do, but it has to make some sort of contribution. So not a finance guy or a real estate agent.

What do you do to relax?

Science, hang out at the beach and laugh as much as I can.

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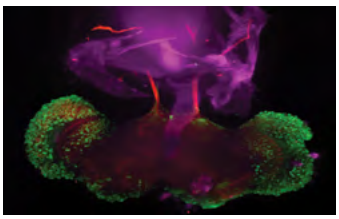

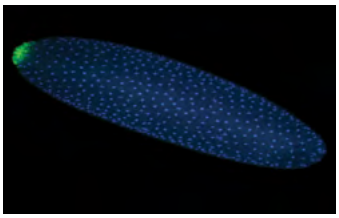

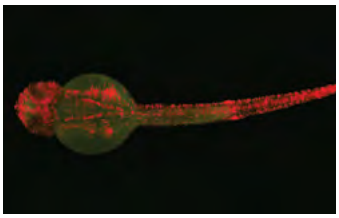

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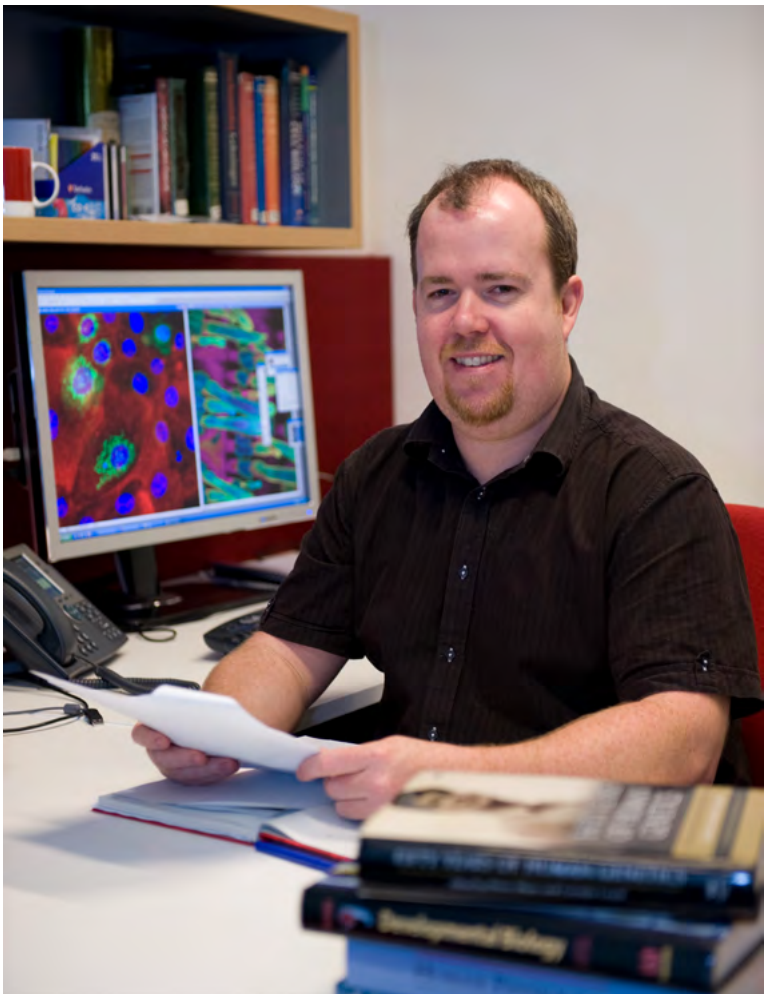
Young Investigator Award - Ian Smyth

What was the journey to becoming Associate Professor Ian Smyth?



I always wanted to be a scientist of some sort or other. I had a great high school biology teacher who was very encouraging and while I imagined I'd be a marine biologist, "molecular biology" was rather topical in 1990 so that won out. So, after a rather conventional undergraduate science degree at UQ I did my Honours research year in Brandon Wainwright's lab, working on cystic fibrosis. I think the first thing I did in the lab was to pronounce that the painstakingly genetically engineered mouse I was working on had the wrong mutation…I was incorrect of course (sorry Steve). I then did a PhD in Brandon's group with Carol Wicking as my direct supervisor (she was a postdoc at the time). We were working on cloning the gene for Gorlin Syndrome (inherited skin tumours and congenital malformations). I signed up because Kas said we'd clone the gene within a year, then I'd do a bunch of characterisation experiments, and then we'd all publish wonderfully exciting papers and sail off into the sunset. Of course we then cloned the PATCHED genes, characterised a bunch of human mutations and made some nice mouse models – the result of a balance between Kas' skills and sheer luck.

At the end of my PhD I found myself with a general interest in genetics, development and disease, but no particular direction. I then got in touch with Ian Jackson and Nick Hastie at the MRC Human Genetics Unit in Edinburgh, partly because it is such a cool town, partly because they were doing some good mouse mutagenesis screens coupled to some cutting-edge genome sequencing and partly because they both said I'd be a shoe-in for a Wellcome Trust Fellowship. Of course I got there and failed to get the fellowship, but the Trust let me apply again and in the interim I sojourned in fat city (Houston) at the Baylor College of Medicine to continue our collaborative mutagenesis project with Monica Justice. The Wellcome finally came to the party, I moved back to Edinburgh and then spent three years working on the screen and a number of ECM proteins involved in skin biology and human disease.

At the end of my stint in Scotland, I was keen to keep working on the same genes and Ian very generously let me take them with me to Fiona Watt's lab at the Cancer Research UK (CRUK) London Research Institute. However, three weeks before starting that job, Fiona called to say that she had been prohibited from hiring new people and did I have any ideas? I suggested I work for her, but in Pete Scambler's group at the Institute of Child Health-UCL, and so I spent a couple of very happy years working at London's Great Ormond St Hospital for Sick Children and (eventually) at the CRUK Lincolns Inn Fields laboratories, spending Fiona's money in both establishments.

In 2006, I returned to Australia on an NHMRC RD

Wright Fellowship, ostensibly to the Murdoch Childrens Research institute, but then Monash made me an offer I couldn't really refuse and I've been there ever since. The work we've done there has been varied and always enjoyably collaborative.

Over time I'd become somewhat jaded with the skin – particularly with respect to stem cells – where the field seemed increasingly petty and reductionist. So, when the opportunity arose to spend more time working in kidneys, and in particular to examine some fairly fundamental developmental principles associated with branching morphogenesis, I grabbed it…and we've not really looked back. Monash were enormously supportive of this and we've been lucky to get funding from the ARC, NHMRC and HFSP to continue our work.

What were the key steps along the way?

Travelling to the UK and US and working there were central to my research journey – both the scope of what was being done and the realisation that combining mouse genetics and genomics as a tool to study disease was incredibly powerful. Perhaps that's taken for granted these days, but back then everything in that space was just coming together.

Getting enough support to establish my own group was also clearly important and while whatever stars aligned at the NHMRC to bring me back was fortunate, the support of Monash was crucial. Indeed, I'm still impressed by the capacity of this organisation to invest in something they think is worthwhile without the tedious process-driven garbage at play in so many other more august, but less flexible institutions.

What was the hardest thing about setting up as an independent researcher and what advice would you give people embarking on a career in cell and developmental biology?

Jeez! I think the transition from bench monkey to manager is a tricky one – and certainly a shift for which you receive almost no training. The pressure to support people's livelihoods as well as your own research interests just adds to the level of difficulty.

In terms of advice – go overseas, go to the best lab you can find, speak to as many people as you can and make the best use of the resources available to forge your own way. Getting the approval of your boss to take it all with you when you're done is also helpful. I'd also make the observation that learning a technique or occupying a field that is emerging and is transformative is a huge bonus in establishing yourself back in Oz, should you wish to do so. If you become the go-to person for something, then you are already a step ahead.

Who inspires you in science and in life?

My parents (not scientists I should add) have excelled in their fields, which is inspiring. In particular I am constantly staggered by my mother's work ethic. To this day I carry a vague sense of guilt at how much my brother and I held her career back by virtue of our being born, although the Federal government recognised her professional efforts with an AM.

All of the PI's I've worked for have attributes that I've found inspiring. Interestingly, this group comprises very different people, spanning the politicking spectrum from 0 to 100, but they all share a profound love of science and of asking questions. More importantly they believe in encouraging people to follow their own path and interests, and they were generous in encouraging me.

The previously mentioned biology teacher, Bill Stephenson, also deserves a gong. Bill brought great passion to his teaching and the biology labs were filled with tanks full of various organisms and jars full of various bits and pieces. His often-played video of knee reconstruction surgery, frequently aired on school open days, was justifiably famous.

Finally, my partner Jane's efforts in raising our kids and remaining sane are remarkable.

What are the best and worst things about what you do?

There are very few jobs where you can know something that no one else does…or at least think that no one else does. I think that is a remarkable thing and also a great privilege – seeking knowledge for knowledge's sake and also asking questions you find profoundly

interesting. Watching people succeed is also special, especially if you've managed in your own clumsy way to help them do so (or at the very least, not to have stymied their attempts).

The worst things? The demands that science can place on your family – particularly through travel and effectively becoming sub-human for the three months or so before grant deadlines. The seemingly never-ending rejection of grants and papers also becomes a little tedious after a while. You pretend to become numb to it, but as much as you try and shrug your shoulders and get on with life, it still hurts.

What is your burning question in science right now?

There are three actually. Firstly, how do organs like the kidney actually develop (we scientists have merrily glossed over this one for years)? Secondly, how does maternal health and behaviour impact on this process? And finally, what can we learn from rare inherited diseases about the genes that dictate normal organ development? I think this last one is prescient because we live in an age when finding these mutations and modelling them in mice is increasingly approachable.

How do you see the ANZSCDB playing a role in your science?

It's great to feel part of a community of similarly interested souls, and for me the ANZSCDB represents that. The Society has also acted as a focal point for me in making connections and developing collaborations, and I think that's very important.

What would you do if you were not in research?

I've never given much thought to alternate careers – something where I could be outside and I didn't need to wear a suit?

What do you do to relax?

I'm most relaxed sailing around on a boat or fishing, neither of which I get to do much of these days. A warm sunny summer's day on a remote backcountry NZ trout stream with a fly rod in hand is pretty much my idea of paradise.

Preferred epitaph?

Here lies Ian Smyth, used to be alive but now has died.

Ian after a weekend indulging his love of fishing and boats. Looking remarkably similar to today despite the intervening 18 years!

The 2015 Hunter Meetings

Changes are underway to ensure that the next Hunter Meeting you attend will be a bigger and even better event.

The major change in 2015 is the introduction of the **1st Hunter Systems Meeting** that focuses on the science of biological systems and its associated enabling technologies. This meeting will be held from March 16 - 17, 2015, before the **15th Hunter Cell Meeting** held March 17 - 20, 2015. The Hunter meeting is the premier annual meeting for Australia's cell and developmental biology community and is traditionally broad in scope covering various topics in cell biology. The Hunter Cell Meeting will also incorporate the **8th National Imaging Workshop**.

The new venue, the **Crowne Plaza Hunter Valley**, accommodates all participants on site, while still retaining the spectacular backdrop and the relaxing atmosphere associated with the Hunter Valley.

For those new to the Hunter Meetings, these meeting are well known for their excellence in the science presented and providing an ideal networking opportunity in one of Australia's premium wine growing districts. The 2015 program includes 10 high profile international speakers confirmed and over 50 invited national presenters. The 2015 **EMBO Keynote Lecture** is delivered by **Jean Gruenberg**, Geneva.

Scientists and students at all levels are encouraged to attend the Hunter meetings. If you would like to be considered for a presentation please submit an abstract when registering. Full details about the meeting are available at http://hcbm.mtci.com.au/about.htm Important dates and deadlines are noted over, and on the website.

Expanded opportunities for **Exhibition and Sponsorship in the new Exhibition Suite**. Please see the website for full details or eMail the Secretariat.

Hope to see you at either or both of the Hunter Systems or Hunter Cell meetings in 2015.

Rohan Teasdale
Convenor 1st Hunter Systems &
15th Hunter Cell Meeting | March 16 - 20, 2015

Important dates:
December 7, 2014:
- Close of discount registration and abstract submission for selection for podium/poster presentation
- Sessions have slot/s reserved for talks selected from abstracts

January 16, 2015:
- Cancellation unused hotel rooms

February 22, 2014:
- Close of abstract submission for inclusion in the Poster program

Topics and themes:
The provisional Program is on-line at
http://hcbm.mtci.com.au/program.htm

The 15th Hunter Cell Meeting
- Biological Systems
- Cell Based Screens
- Cellular Polarity and Tissue Organisation
- Intracellular Transport
- Neuronal Development and Degeneration
- Organisation of Cell Signalling and Gene Expression
- Organelle Focus – Mitochondria
- Regeneration
- Therapeutics and Disease Models

8th National Imaging Workshop
- Super resolution imaging
- Sponsored international Imaging Lecture
- Demonstrations

1st Hunter Systems Meeting
- Biological Systems
- Cell Based Screens
- Computational Biology, Modelling and Enabling Technologies
- Human Variation
- Proteomics & Protein Networks
- Systems approaches to chronic and infectious diseases

hcbm.mtci.com.au

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ANZSCDB

EMBO 50 years

The Hunter Meetings

ComBio goes to Canberra

Edna Hardeman, Convenor

ComBio2014 was held at the National Convention Centre in Canberra from September 28th to October 2nd. It incorporated the annual meetings of ASBMB, ASPS and ANZSCDB, which also held their respective Annual General Meetings during ComBio. In addition, we welcomed the participation of SCANZ (Society of Crystallographers in Australia and New Zealand) in recognition of 2014 as the International Year of Crystallography.

The presidents of the three societies involved in Combio and the 2014 (Edna Hardeman - centre) and 2015 (Marie Bogoyevitch-right) Combio Chairs

I took it upon myself to open the conference with what I hope was a timely reminder of the value of ComBio in these times of increasing small specialist meetings as well as concerns about our peer review system. There is no other meeting in Australia which provides such depth and breadth of topics in molecular mechanisms of biology. I described ComBio as a 'Big Picture' conference and a 'one-stop shop for what is state-of-the art in the life sciences' and hope that these messages resonated with both newcomers and the ComBio faithful. The meeting attracted 727 delegates who submitted 498 abstracts. The program consisted of 23 plenary presentations, 251 symposium presentations, 36 colloquium presentations and 188 poster presentations. We are particularly grateful to the companies many of whom are long-standing supporters of ComBio. There were 35 companies in attendance with a total of 37 booths and 2 table trade displays.

By all accounts the quality of the science at ComBio2014 was outstanding. I am indebted to the members of the Executive Committee, Co-Chair, Ulrike Mathesius, the Chair of the Program Committee, Jacqui Matthews, the Deputy Program Chair, Thomas Preiss, and the Treasurer, Terry Piva. We are indebted to our Stream Coordinators who secured our excellent line-up of plenary speakers, and symposia chairs and speakers: Tony Tiganis and Chris Mitchell (Signalling), Richard Harvey (Developmental Biology, Stem Cells & Regeneration), Nick Dixon (Protein Structure, Function & Proteomics), Kat Gaus (Cell Biology & Imaging), Yong-Ling Ruan and Uli Mathesius (Plant Biology, Plants and Global Change), David Tremethick and Sudha Rao (Genome Biology & Bioinformatics), and to Janet Macauley who organised the education symposia. We are fortunate to have excellent organisational support and corporate memory provided by Sally and Chris Jay. The meeting attracted registrants from all

over the world and the uniform response was an appreciation of the high quality of research and education presentations. The wide range of plenary talks and symposia covered the breadth of interests of our 3 core societies and provided an opportunity to catch up on the forefront of research in fields as diverse as plant-microbe and animal interactions, plant-water relations, plant vasculature, macromolecular crystallography, tissue architecture, signaling and growth, gene regulatory networks, epigenetics and small and noncoding RNAs, advances in human genomics, stem cells and regenerative medicine, drug design, mechanobiology, lipids and membranes, advances in bioimaging, and education. We hope all who attended came away with new ideas and collaborations and a clear appreciation of the diversity of research

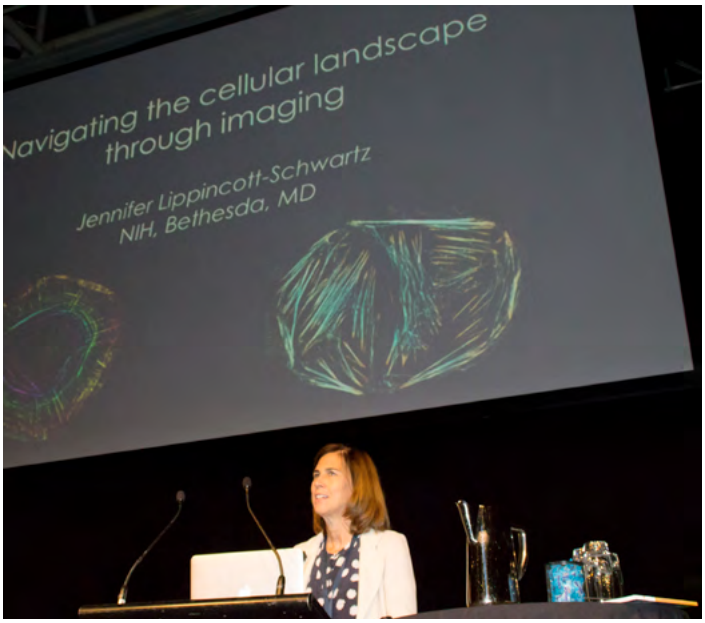
Professor Richard Harvey and Sir John Gurdon

excellence in Australia.

The official opening of ComBio2014 was preceded by three special and associated events: a public lecture by the 2012 Nobel Laureate, Sir John Gurdon, at the Shine Dome sponsored by the Australian Academy of Sciences; the Career Development Forum which was held at the Australian National University and organized by Jean Finnegan and Uli Mathesius; and the Women in Science Dinner organized by Anne-Sophie Dielen. Sir John provided an excellent historical perspective and overview of nuclear plasticity and the promise of stem cell therapy that was well-received by the public, who engaged in a lively question and answer session. We are fortunate that the Career Development Forum has become a pre-conference feature of ComBio. This provides an opportunity for students and early career researchers to become aware of the range of career opportunities which lie ahead of them. The topics covered ranged from principles of career development and applications for awards to working in different bioscience sectors through to getting papers published and teaching at all levels. This is an important part of ComBio aimed at helping up-and-coming members of our society to think through their options ahead of time. The Forum was followed by the Women in Science Dinner that included an excellent discussion panel lead by successful women scientists.

Among the many highlights was the presentation of the ASBMB Lemberg Medal to Marilyn Anderson who took us through the highlights of her career. She gave a vivid insight into how asking fundamental questions about plant development has led to our understanding of plant reproduction that gave rise to commercial applications and a company of which she is the CEO. It has been a career of remarkable achievements which serves as a great role model to our younger members. She also provides another excellent case for the funding of basic research as the foundation for major advances in industrial applications. We were also treated to a most impressive presentation by the ANZSCDB President's Medallist, Professor David James, who took us into the future of cell biology with the application of a systems biology approach to understanding the mechanisms responsible for the regulation of glucose transport in a mammal. We are grateful that Ian Chubb, Chief Scientist of Australia, was able to attend our education symposium where he delivered a timely message about not resting on our scientific successes, but instead look forward to building a stronger science infrastructure starting with a firm education base.

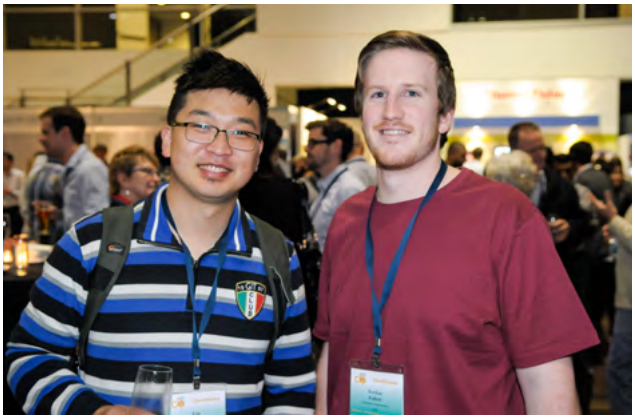
The conference was characterised by stunning presentations by our plenary speakers. Sir John Gurdon gave the opening plenary address on the stability and reversal of cell differentiation. He provided new insights into mechanisms of differentiation, particularly with respect to locking in the differentiated state, and how this can be manipulated to return the cell to a more pluripotent state. He was followed by one of the pioneers of advanced cell imaging, Jennifer Lippincott-Schwartz, who took us through the mechanisms underlying cell organisation and movement visualised with a range of different imaging approaches. We also had a stunning presentation from the current President of the US equivalent of our ASBMB, Steve McKnight, who gave us a biochemical dissection and reconstruction of neuronal granules that constituted a paradigm shift in our thinking about translational regulation that encompassed polymer biology and intracellular trafficking.



One of the pervasive themes was the use of advanced microscopy techniques to image molecular events in biological systems. This ranged from single molecule imaging to using sensors to monitor the activity of signalling processes to imaging of subcellular events in live animals and on to morphogenesis. Microscope technology is taking us into an understanding of biological processes which were not imagined 10 years ago. Similarly stem cells and epigenetic regulation, two themes introduced by John Gurdon, continued to pervade a range of different symposia and served to remind us of the commonality of underlying principles of biology.

As ever with ComBio, one of the tricks is to get organised early so that you could catch talks in parallel sessions. Fortunately most of the rooms were close so movement from one to another parallel session could be managed efficiently. The organising committee took care to organise more cross discipline sessions that were supported well by the venue. Also, additional time was allocated to the end of talks, especially the plenaries, which was justified by the extensive question time that followed most presentations. The stream coordinators and session chairs did a great job of assembling excellent sessions which were

stimulating and well-attended. This reaffirmed that ComBio is a great environment in which to give talks and receive feedback. For many students and postdocs, this is their first chance to give an oral presentation at a national meeting and plays an important part in their development as a young scientist. In particular, the Colloquia provide opportunities to both showcase the rising talent in Australia and provide them with a professional development opportunity.



On the social front, the Mixer on Monday night and the Cocktail Party on Tuesday ensured a great opportunity for all to make new friends and catch up with old friends. This continues to be an important tradition for ComBio and the interaction with the trade displays is also critical for the long term support of ComBio by the companies. We want to thank all who visited the trade during the conference. The Conference Dinner at the National Arboretum was a highlight. What a perfect location for the Dinner and the dance floor was full of enthusiastic research scientists trying to compete with the high standard set by the Program Chair. Special thanks are due to the Rohan Baker-led band which managed to drive an infectious beat well into the night.

We all look forward to ComBio2015 in Melbourne led by Marie Bogoyevitch and are certain that it will continue the tradition of successful meetings.

ComBio 2015

MELBOURNE

Melbourne Convention and Exhibition Centre
27 September to 1 October 2015

ComBio2015 will be held in the world class Melbourne Convention and Exhibition Centre in the centre of Melbourne. The scientific programme of the conference will include multiple Streams integrated by different Threads as follows:

Provisional Conference Streams:

- Cancer Biology
- Global Change Biology
- Infection and Host
- Metabolic Diseases
- Neuroscience
- Plant Cell Biology
- Plant Ecophysiology
- Regenerative and Developmental Biology

Provisional Threads:

- Advanced Structural Methods
- Chemical Biology and Drug Discovery
- Emerging and Enabling Technologies in the Biological Sciences
- Genomics and Transcriptomics
- Molecular and Cellular Imaging
- Proteomics and Metabolomics
- Systems and Computational Biology

Early Registration and Abstract Deadline:

Friday, 26 June 2015

Combined ASBMB, ASPS, ANZSCDB, NZSBMB and NZSPB Annual Meetings

- Australian Society for Biochemistry and Molecular Biology
- Australian Society of Plant Scientists
- Australia and New Zealand Society for Cell and Developmental Biology
- New Zealand Society for Biochemistry and Molecular Biology
- New Zealand Society of Plant Biologists

Further information:

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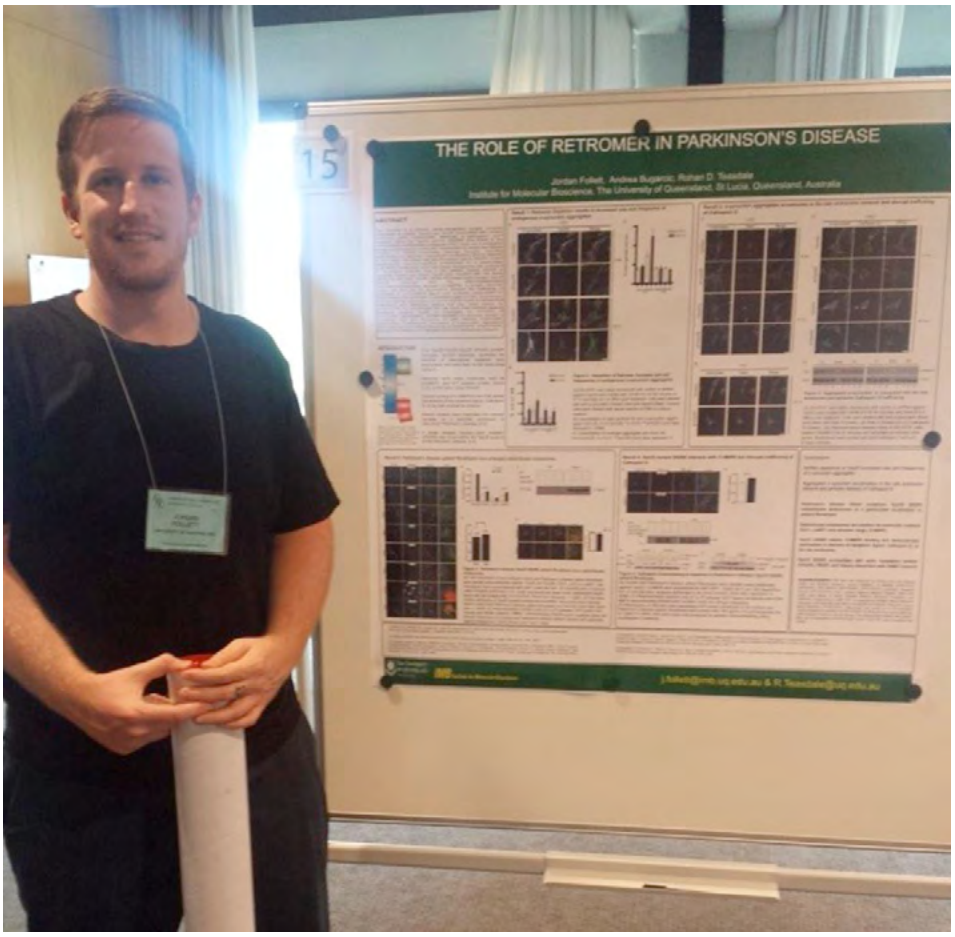
LEICA STUDENT TRAVEL AWARD

Jordan Follett, Institute for Molecular Bioscience, UQ



Earlier this year I was fortunate enough to attend the Neurobiology of Brain disorders Gordon Research Conference (GRC) in Girona, Spain. From the moment I arrived, I knew that my 20 plus hour flight sitting in a small, annoyingly uncomfortable seat next to a snoring stranger was going to be worth it. During my time at the conference I met leading scientists and clinicians from the neurobiology field who had congregated to share and debate their work. At the time of attendance I had hit a wall regarding a certain part of my PhD project and was unsure of how to approach it or what experiments would help put me in the right direction. I chose to attend the Neurobiology of Brain disorders conference with the hope of getting insight into what other researchers are doing and to help better understand my findings.

Upon arriving at the conference I proceeded to find the poster room and immediately noticed there was roughly 100 other attendees, with very little physical space to escape to. We were staying outside the small town of Girona, which resides 150km North of Barcelona in a secluded hotel at the back of a golf course. So even if I wanted to escape the science and explore Europe, there was very little possibility of me doing so.

I initially thought that I was attending an under-populated conference, however despite the tremendous jetlag, by dinner (3hrs after putting my poster up) I had question after question being fired at me about my work and soon realised I was in for one of the most intense scientific weeks of my life. Despite the broad background and differing opinions of those attending, I quickly accumulated a long list of experiments that would get the ball rolling once I returned to Australia. Little did I know that by the time the conference closed, I would have a list of experiments long enough to double the length of my PhD.

Following dinner, Joachim Herz from UT Southwestern opened the conference and soon after Ji Shen, a well-known neurobiologist from Harvard Medical School, delivered a talk surrounding synaptic function and disease. As I sat in astonishment, my jetlag was no longer overpowering me and I was ready to watch presentation after presentation however, there were no more scheduled until the next day. After leaving the presentation, I followed the crowd of tired scientists to the poster room which had now be transformed to house a small bar, of which became heavily abused on a nightly basis by everyone attending. Before I knew it, it was after midnight, I had been awake for over 35 hours and I had to be up in 6 for breakfast. Day after day I committed myself to this process of intense

science and very little sleep; however I have never been to a more rewarding, more inspiring conference.

By being given the opportunity to attend an international conference I was able to meet and connect with other PhD students, post-docs, medical school students and Lab heads on both an academic and social level, several of which I have remained in contact with months after attending the conference. I was fortunate enough to witness firsthand the science being conducted in multiple labs around the world, an experience that would not have been possible by attending a domestic conference.

Not always does bigger correlate with better. My attendance at a small, highly specialised international conference changed my perspective on the much larger, multi-disciplinary scientific meetings that often occur here in Australia and other parts of the world. I was able to interact and converse with all of the attendees at the Neurobiology of Brain disorders conference, a networking opportunity that is not always feasible at larger meetings.

Lastly, I would like to thank the ANZSCDB and Leica for the PhD International Travel Award that is available to PhD students. Being selected for this award was a fantastic personal achievement and tremendous help with the costs that accumulate while traveling to an international location on a PhD salary. I would strongly encourage all current PhD students to find international and national meetings of interest and apply for the 2015 travel award, you will not regret it.

Living up to Life

Leica
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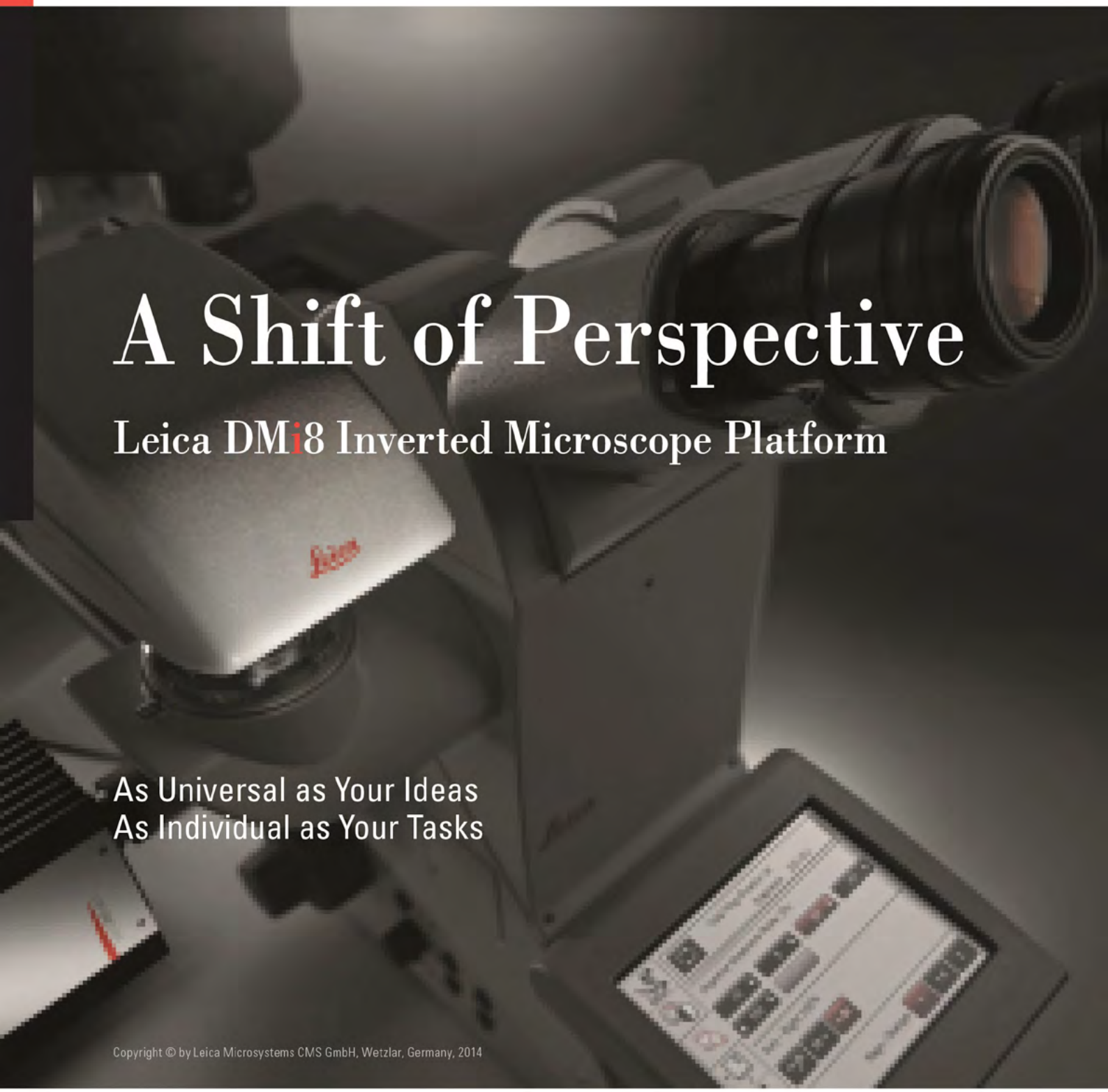

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Mind-controlled genes, DNA origami .... Science fiction material or close reality for therapeutics?

Clarissa Rios Rojas
October 23-25, EMBL Heidelberg

A proof of principle is understood as the realization of a certain method or idea to demonstrate its feasibility. It was also the term with which many Keynote speakers described their work at this year EMBL PhD symposium: "Inspired by Biology, Exploring Nature's Toolbox".

In my eyes, the most exciting studies presented at this symposium where given by Martin Fussenegger (Swiss Federal Institute of Technology, Switzerland) a pioneer in mammalian Synthetic Biology with biomedical applications; and by Ido Bachelet (Bar Ilan University, Israel) a multidisciplinary visionary with interests ranging from nanorobots with biomedical applications to self-healing clothing using bacterial biofilms.

In the same way Luke Skywalker managed to use the force (his own thoughts) to bring his lightsaber to his hand or lift up ships from the swamp, Fussenegger's lab have managed to switch on genes with the power of thoughts (ok, perhaps not in the same way). They have combined cybernetics (technology used on mind-controlled artificial limbs or monkeys operating robotic arms with brain–computer interfacing) with optogenetics (engineered genes that can respond to light) to create a device that contains cells responsive to near-infrared light able to be controlled by the participant's mind. This light-inducible device is linked via Bluetooth to a monitor that collects brainwaves by an

electroencephalography device (EEG) placed in the foreheads of human participants. Once implanted in mice, the optogenetic device (**pictured below**) can be "lit up" and genes within the implant cells are expressed and proteins are secreted into the mouse circulation. Depending on the user's thoughts (researchers asked participants to perform one of three mental exercises: gaming, concentrating or meditating), the device can produce various amounts of a desired molecule. Fussenegger expects that this technology will provide new treatment opportunities in future gene- and cell-based therapies. He expects that in a decade or so this technology will be feasible and we will be having smartphones that via Bluetooth could power the devices implanted in our own brains (thrilling and scary!).

Equally exciting was to hear Ido Bachelet explain to us how to combine designing, engineering, physics and biology to produce custom DNA nanorobots. These robots are design and assembled with a technique that he describes as DNA origami, in which complex 3D objects are constructed by folding strands of DNA. Nanorobots with shell-like structures turn into machines that are programmed to autonomously target specific cells that have the right combination lock (combinations of cell-surface proteins) that allow them to "open up" the nanorobot and allows them to deliver its payload. Because the nanorobots communicate with molecules on a cell's surface, they achieve a specificity that other drug-delivery methods lack. Furthermore, they are quickly excreted and cleared by enzymes that recognize and destroy DNA, which presents an advantage in the sense of toxicity, but represents a pitfall due to their reduced time in the circulation. However, it is possible to coat them with substances such as polyethylene glycol, which has been used to extend the length of other type of drugs in our bodies. This work represents a major breakthrough in the field of nanobiotechnology and biomedicine where nanorobots capable to seek out and destroy only cancer cells in the body could be created in the near future.

All in all, the 16th EMBL PhD Symposium was a great success with really amazing and inspiring stories from researchers all over the globe. This year's goal was to delve into the creative and multidisciplinary uses of existing biological mechanisms to solve problems in basic and applied sciences. I was quite inspired by the innovative science that was presented and also quite encouraged and motivated after attending the informal blackboard sessions given by the keynote speakers, which offered us an exciting mean to discuss the topics directly with the leading experts. I would like to thank EMBL Australia who granted me with a travel grant to assist in attending the 16th EMBL PhD Symposium, which is organized every year by first-year PhD students of all EMBL outstations. I encourage all PhD students to apply for it next year!

Club EMBO Cable Beach - Wnt Signalling Takes a Trip South of the Equator

Elizabeth Vincan, Convenor
October 6-9, 2014

The EMBO Workshop on "Wnt Signalling: Stem Cells, Development, Disease" was held recently on Broome's magnificent Cable Beach. EMBO workshops are small, intimate meetings where delegates generally stay, socialise and take meals at the conference venue. This maximises opportunities for informal discussions and gives students and early career researchers ample access to experts in the field. The Cable Beach Club Resort lends itself perfectly to this ethos. The sessions were held in the Sam Male auditorium equipped with state-of-the-art audio-visual, sound and lighting. Meals were in the Sunset Bar and Grill or poolside; full-fee delegates stayed at the resort, while an inexpensive option for students and early career researchers was provided at Palm Grove, an eight minute walk from the Resort. The program included generous lunch breaks and free time for delegates to socialise and enjoy what this region has to offer.

This was the first EMBO workshop to be held in Australia, and the first time that the Wnt meeting has been held anywhere in the Southern Hemisphere. It was a truly global Wnt meeting with approximatly 2/3 of the 130 delegates coming from the US/Europe/UK and 1/3 from Australia/Asia. We were fortunate to attract an impressive group of stellar speakers which ensured a captivating scientific program – the last session of the meeting was as well attended as the first. The meeting was opened with the EMBO keynote delivered by Hans Clevers. He reported on the discovery of Lgr5 as a stem cell marker and functional receptor of the Wnt agonist R-spondin in adult stem

cells, and the advances this discovery has made to regenerative medicine and anti-cancer treatment. The keynote was followed by the first of two vibrant poster sessions. Over the next 3 days, the latest in Wnt signalling mechanisms, stem cells biology, development and disease was delivered by experts in the Wnt field.

Wnt signalling encompasses so many fields, thus more recent Wnt meetings tend have some sort of focus. As might be expected, given the keynote (Hans Clevers) and plenary (Tony Burgess) speakers, and the research background of the co-convenors, much of the stem cell focus was on adult epithelial stem cells, and much of the disease focus was on cancers of epithelial origin, in particular gastrointestinal cancers. The highlights of reports at this Wnt meeting include: identification of the multipotent adult mammary stem cell; characterisation of the context dependent nature of Wnt signalling; the intricacies of achieving the "just right" level of Wnt signalling that drives efficient adenoma formation – or the "Goldilocks" effect; also several "bench to bedside" reports – therapeutic targeting via Wnt pathway components, especially the Frizzled receptors but also the intracellular components. A summary report of the meeting will be published soon.

Importantly, 96% of the delegates said that the Australian Wnt meeting was as good as previous EMBO workshops they had attended. This is a very rewarding result for all involved. The Australian Wnt meeting was my tenth Wnt meeting; all the meetings have been inspirational. I am delighted that we could bring the Wnt meeting to Australia and maintain this high standard. On behalf of the co-convenors (Nick Barker, Owen Sansom, Beric Henderson and Matthias Ernst) and MTCI, I thank all our sponsors, particularly ANZSCDB for sponsoring and endorsing the meeting.

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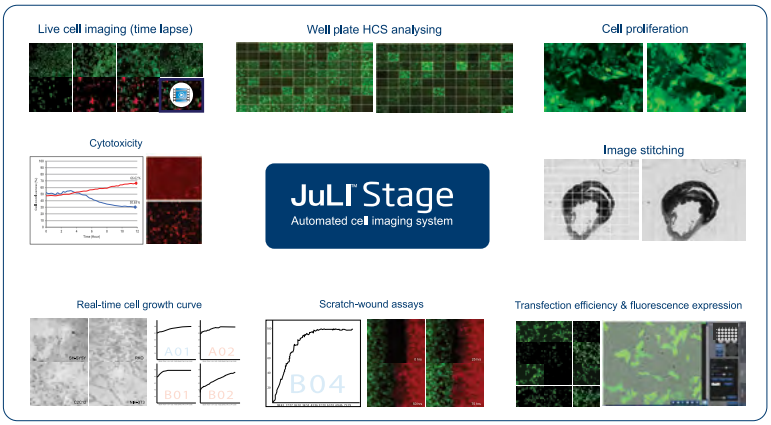
- Cell cytotoxicity
- Scratch-wound assays
- HCS cell imaging analysis (6 to 384 well)



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Sand, sun and development

Claudio Cortes

With the breathtaking backdrop of the world's third largest sand island, Moreton Island, a group of 20 highly motivated scientists from all corners of Australia and New Zealand came together under the banner of Developmental and Cell Biology to attend the 7th Australian Developmental Biology Workshop this last November. Thanks to the major efforts of the organising committee (Drs Ben Hogan, Melissa Little, Edwina McGlinn and Ian Smyth), we were also joined by a group of outstanding local and international speakers that lead us on a tour de force through both the history and the cutting-edge questions that they are asking their different developmental models.

We started by going through some of the fundamentals of body patterning, from flies to mice. Thomas Lecuit (IBDM, France) gave us an overview of Drosophila development and establishment of segmental identity at both the mRNA and protein levels, and how cell behaviour is shaped accordingly. One of his key points was the network dynamic and the robustness of development. Moving on to zebrafish, Mary Mullins (UPenn, USA) shared her perspective on the maternal regulation of development, with the essential segregation of components in the early zygote, the Balbiani body and how the subsequent chain of events establishes the anterio-posterior and the dorso-ventral axes.

Sally Dunwoodie (VCCRI, Australia) brought us to the early development of mouse embryo and the cell lineage restrictions that take place, leading to the formation of the embryo and its extra-embryonic structures from the epiblast, the trophectoderm and the primitive endoderm. Closing this first session, Robb Krumlauff (Stowers, USA) led us through the knowns (and unknowns) of vertebrate somite development, its clockwork mechanism and how evolutionary conserved this mechanism is.

The EMBO plenary lecture was next, with Thomas Lecuit now discussing the forces that govern embryonic development and how local/cellular relocation of components can generate remodelling at the tissue level. Different aspects of Myosin-II, Rho and ROCK came together in a coherent picture of a biochemical feedback system regulating tension in the Drosophila embryo. This already intense start was followed by dinner and a mixer/poster session, where we all got to present our posters in a 3 minute format. This meant that we all got exposed to what everyone else is doing, promoting interest and friendly discussion.

The following day brought us sunshine and camaraderie, with people getting to know each other and chatting over breakfast before jumping into a plenary lecture with Robb Krumlauf and his passion for Hox genes and rhombomere development. Starting with mice and then backtracking on the evolutionary tree, he showed us how his lab identified evolutionarily conserved long distance enhancer sequences and other key features that tightly regulate Hox cluster gene expression. Organogenesis took over the rest of the morning, where we learned about heart development, organ asymmetry and the all-too-common Congenital Heart Disease (Sally), the nooks and crannies of signalling gradients in limb development and a newly proposed Turing mechanism for digit formation (Edwina) and finally Phil Crosier (UAuck, NZ) on advantages of zebrafish hematopoiesis that make it a very attractive model from both a basic and an applied perspective.

Cell-cell interactions were the focus of the after-lunch session, with tension and adhesion in a highly dynamic Drosophila epithelium (Thomas), use of FRET sensors to measure tension in the developing zebrafish vascular system (Ben) and self-organisation capabilities of cells in the developing mouse kidney (Melissa). We wrapped up the day with Sally Dunwoodie discussing the environmental and genetic factors that cause congenital malformation. She used the example of hypoxia and how it relates to congenital scoliosis and can also predispose to congenital vascular malformation.

We started the next day with the Company of Biologists Lecture, by Mary Mullins. She walked us through the establishment of the D/V axis in zebrafish embryos, mediated by a BMP gradient. Morphogen diffusion, receptor hetero/homodimers and activity readouts were some of the topics that she touched on, with a special mention to the heat-map analysis of BMP activity analysis that she

presented. The following session took us into disease and regeneration territory, where we covered NextGen sequencing to identify disease genes (Sally), stem cell work using induced Pluripotent Stem Cells and organoids for disease modelling (Melissa), metabolic reprogramming of immune cells in zebrafish (Phil) and cell plasticity/fate choice in the developing embryo (Robb). The afternoon session kicked off with the effectiveness of chemical screens in zebrafish (Phil), followed by the design of forward genetic screens and the reasoning behind a higher throughput pipeline in zebrafish (Ben), closing with the power of Drosophila genetic tools like mosaic screens and allele engineering, optogenetics and protein complementation (Thomas). The focus then moved on to Genome Editing, with Peter Koopman (IMB, Australia) showing us the success that his lab has had generating mutant mice, editing enhancers and putting tags in endogenous loci. We then learned about the great work and services that the Australia Phenomics Network provides, with CRISPR

services at cost for academics and very high success rates (and fast turnaround) for generating mutant mice, with the array of possibilities that this opens for Australian researchers (Ian). Then came optimisation of zebrafish genome editing, including CRISPR multiplex and how very high rates of homozygozity can be achieved and then quickly screened (Mary).

After this very busy day, we were very lucky to be able to feed some of the wildlife (dolphins!) before feeding ourselves over dinner. We then had a long-winded roundtable on career development and the many challenges that the scientific path holds, both in the bench and in the public eye.

Our final day was opened by our second Company of Biologists Lecture, by Phil Crosier. He provided us with insights on the zebrafish immune system and how he models a number of diseases, including inflammatory bowel disease, and uses novel tools for infection such as Mycobacterium marinum. The last session was one of the most diverse, since it focused on the technical aspects of quantitative biology and imaging.

Simultaneously quantifying several parameters in a developing organ is no easy task, and Ian Smyth presented us with a combination of light sheet fluorescence microscopy and optical projection tomography data from the developing kidney that tackles this issue with astounding success. Mary Mullins told us about what that her lab is doing in zebrafish embryos using microscopy coupled with Matlab, trying to quantify but also remove part of the observer's bias from the analysis. Robb Krumlauf took the spotlight then, to show us his lab's experience with single molecule quantification of transcripts, mainly the Stellaris and the Hybridisation Chain Reaction methods, followed by some recent advances on chromatin immunoprecipitation that they have been trying out, mainly ChIP Nexus. With the technological advances coming up to speed with the burning questions that researchers have been/are asking, the future looks very promising indeed.

On the ferry back to the mainland after spending 4 non-stop days of Cell and Developmental Biology, we could all look back on the great experience we had just had. The amazing local and international speakers (conquering jetlag), the top-quality science from the attendees, the conversations until the wee hours, the beautiful setting...it all came together making for a highly enjoyable and academically fulfilling Workshop, not to be missed in its future iterations by anyone interested in Developmental Biology this side of the Pacific.

Regional Round-up

New South Wales

Annemiek Beverdam and Kazu Kikuchi

On 31 March, the NSW Cell and Developmental Biology was held at the Lowy Cancer Research Centre, UNSW in Sydney. The goal of this low-threshold meeting was to give young ECRs a unique chance to hear about cutting edge research happening globally during the plenary lectures by high profile international researchers, but mostly to allow them to showcase their own work, to hear about research happening locally, and to interact with other NSW-based researchers to find help with their own research projects, and to start new collaborations.

The 2014 plenary speakers, Prof Denise Montell, Dr. Megan Wilson, Prof Freddy Radtke, with meeting convenors Drs. Annemiek Beverdam and Matt Taylor.

This year, the meeting attracted an unprecedented 180 registrants from all over NSW including Children's Medical Research Institute, Garvan Institute, Victor Chang Cardiac Research Institute, Centenary Institute, University of Sydney, UNSW, University of Newcastle, University of Wollongong, and also from ANU and one researcher from UQ in Brisbane.

Plenary speakers at the meeting were Professor Freddy Radtke (EPFL, Switserland), Professor Denise Montell (UCSB, USA) and Dr. Megan Wilson (University of Otago, NZ). Professor Radtke kicked off the meeting with a spectacular seminar on his exciting work on the role of Notch signaling in lineage specification and stem cell biology and how Notch functions in cancer. Professor Montell spoke about her research on Drosophila oogenesis, and wowed the audience with amazing images and videos displaying E-Cadherin dependent migration of border cells through the nurse cell cluster to arrive to the anterior pole of the oocyte. Dr. Wilson took the audience on a journey along some fascinating animal models, including the sea squirt *Botrylloides leachi*, honeybee and mice, in an Evo-Devo approach to investigate developmental pathways.

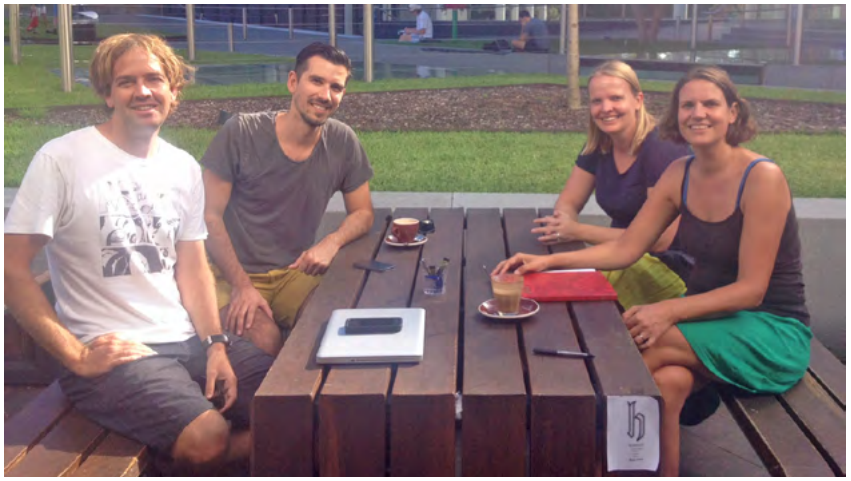
Best PhD student oral presentation winner Clarissa Rioz (UQ) and Prof Nicholas Hawkins, Head of The School of Medical Sciences, UNSW.

The meeting also hosted 10 fantastic presentations of ECRs, and 2 very well-attended sessions with over 70 posters and trade displays by IDT Technologies, Sapphire Biosciences and BGI Tech. Prizes were awarded to Dr. Thomas Owens (Naylor lab, USyd) and Clarissa Rioz (Koopman lab, UQ) for best oral presentations. And best poster prizes went to Dr. Gonzalo del Monte Nieto (VCCRI) and Anne-Marie Mooney (Naylor lab, USyd).

Best postdoc presentation winner Dr. Thomas Owens (USyd) and ANZSCDB President-elect Professor Sally Dunwoodie.

The meeting committee is very grateful to the ANZSCDB, the Hunter Meeting conveners and UNSW for their support. We would also like to thank our sponsors The School of Medical Sciences (UNSW), the Garvan Institute, CMRI, IDT Technologies, Sapphire Biosciences and BGI tech, and our judges for their fantastic job to mark the oral presentations and especially the very many posters. And lastly, a very big thank you to all meeting participants for their huge enthusiasm. You generated the spectacular buzz that made this a highly inspiring and fantastic day! We very much look forward to seeing you all again at the next meeting in March 2015.

The Committee: *Annemiek Beverdam (UNSW), Matt Naylor (USyd), Caroline Ford (UNSW), Nicolas Fossat (CMRI) and Will Hughes (Garvan).*



Matt Naylor, Nico Fossat, Caroline Ford, Annemiek Beverdam.

Queensland

Kelly Smith

On 26th September 2014, the one-day ANZSCDB State meeting was held at the Translational Research Institute in Woolloongabba, Brisbane. This meeting was made possible by the generous support from the ANZSCDB, the Institute for Molecular Bioscience and The School of Biomedical Sciences at UQ, as well as sponsorship from many supporting companies.

We attracted a record number of registrants, figuring in at 189 delegates, and it was a real thrill to see so many enthusiastic supporters of Cell & Developmental Biology across Brisbane. Leveraging off two successful meetings, namely the 2014 Cutaneous Biology Meeting and Combio 2014, we were fortunate to host two international plenary speakers, Professor Fiona Watt (King's College London, England) and Professor Marino Zerial (Max Planck Institute, Dresden, Germany), as well as one of own, Dr Patrick Humbert (Peter MacCallum Cancer

Poster session for the Brisbane Cell and Developmental Biology Meeting, 2015.

After the welcoming address by the ANZSCDB President A/Prof Carol Wicking, Marino began proceedings with a seminar on early endosomal fusion and signaling within early endosomes. Before lunch, Patrick presented his work on the role of polarity regulators, such as Scribble, on tumorigenesis and to wrap up the day, Fiona presented her work on epidermal stem cells and the genetic regulators involved in patterning the skin. These three plenary talks were interspersed with a series of presentations from PhD students and Postdocs covering various topics of cell and developmental biology.

Plenary talk from Professor Marino Zerial.

The poster session was also well attended by researchers from across the Brisbane region. This year prizes were awarded to Dr. Brent Neumann (QBI; best talk by a post doc) and Dr Andrea Bugarcic (IMB; runner-up), Ms Lucy Heap (SBMS, best talk by a student) and Claudio Cortes (IMB, runner-up), Dr. Kaska Koltowska (IMB; best poster presentation by a postdoc) and Dr. Mark Adams (QUT, runner-up), Swati Iyer (SBMS, best poster presentation by a student) and Joan Rohl (QUT, runner-up). Overall, it was a great event and couldn't have happened without the dedicated work of the organizing committee: Eloise Dray, Samantha Stehbens, Michael Piper, Guillermo Gomez, Greg James, Rehan Villani & Mathias Francois.

For other activities in the region, the biennial Developmental Biology Workshop recently took place on 12th-15th November at Tangalooma Island Resort on Moreton Island in Queensland. This boutique meeting offers postdocs and students the opportunity to interact with leaders in the field of Developmental Biology in an intimate setting, including long seminars, round-table events and professional discussions. This year, the event workshop hosted the invited speakers Robb Krumlauf (Stowers Institute for Medical Research, USA), Sally Dunwoodie (VCCRI, Sydney), Mary Mullins (Perelman School of Medicine, USA), Phil Crosier (University of Auckland, New Zealand), Thomas Lecuit (Development Biology Institute of Marseille Luminy, France) and Peter Koopman (IMB, UQ). This successful event was organised by Melissa Little (IMB, UQ), Ian Smyth (Anatomy and Developmental Biology, Monash University), Ben Hogan (IMB, UQ) and Edwina McGlinn (ARMI, Monash University).

On the 24th November, the 5th Annual Early Career Researcher Symposium was held at the IMB, The University of Queensland. This was a great opportunity for the 180 ECRs who took part to discuss great science and interact. Events of the day included more 80 poster presentations, 6 talks by ECRs and an invited career development talk from Dr. Mehdi Mobli. Award winners included Karrera Djoko (School of Chemistry & Molecular Biology, UQ) for best oral presentations and Fazren Azmi (SCMB,UQ), Rhiannon Werder (School of Biomedical Science, UQ) and Daniel Nielsen (IMB, UQ) for best poster presentation. This event was made possible through the combined efforts between the ECR committees from IMB, AIBN, SCMB and SBMS.

In addition to these events, we are looking forward to our last Brisbane Developmental Biology Seminar for the year, to take place on the 2nd December. This year we have been fortunate enough to host speakers covering a range of Developmental Biology topics, including Andrew Pask (Marsupial sex development; University of Melbourne), Sean Millard (Drosophila neurodevelopment; SBMS, University of Queensland), Linda Richards (mouse cerebral cortex development; QBI, University of Queensland); Melissa Little (Kidney development in Mouse and iPSCs; IMB, University of Queensland), Jose Polo (Transcriptional and epigenetic control of iPSCs; ARMI, Monash University), Robb Krumlauf (Segmentation of the hindbrain by Hox genes; Stowers Institute, USA), Mary Mullins (shaping BMP gradients in zebrafish; UPenn, USA); Thomas Lecuit (Biomechanical control of tissue morphogenesis; IBDM, France) and Jan Kaslin (Mechanisms of cellular brain plasticity; ARMI, Monash University).

And congratulations must go to our current ANZSCDB QLD State representative, Dr Mat Francois, who this year was awarded the inaugural Larysa Pevny Prize for excellence in Sox research. This award was recently bestowed at the International Sox Research Conference and is a mark of Mat's contribution and standing in this large field. Well done, Mat!

Finally, as a retiring State Representative, I want to take this opportunity to thank all the people who've helped me out with the role and running the meetings, particularly the energetic committee members who've helped run the State Meetings as well as the tireless ANZSCDB executive. I hand over the reigns to Mat Francois, now joined by the newly elected QLD State rep, Annette Shewan and I look forward to taking part in what are sure to be great events you guys run in future.

Organising committee and prize recipients from the Early Career Researcher Symposium

South Australia

Donna Denton and Michael Samuel

The fourth meeting of the Adelaide Cell and Developmental Biology community was held on the 18th of November at the University of South Australia. The two outstanding plenary speakers were Associate Professor Carol Wicking from the Institute for Molecular Bioscience, Brisbane, and Associate Professor Ian Smyth from Monash University, Melbourne. The meeting was attended by more than 50 members of the South Australian Cell and Developmental Biology community, with the University of Adelaide, Centre for Cancer Biology, Flinders University, the South Australian Health and Medical Research Institute (SAHMRI) and the University of South Australia all represented.

Our program began with plenary speaker, Carol Wicking, who beautifully demonstrated the combined power of genetics, molecular and cell biology by demonstrating the identification of genes involved in ciliopathies using patient samples through to the molecular dissection of their functions. The first plenary talk was followed by six short presentations from post-doctoral fellows. The high quality of presentations made it difficult for the judging panel to select the most outstanding of these. The deserving recipients were Simon Conn from Centre for Cancer Biology for his talk entitled "Quaking is a major regulator of circular RNA production in EMT" and Lachlan Jolly from The University of Adelaide for his talk "HCFC1 gain- and loss-of-function mutations cause neurodevelopmental disorders, and affect neural progenitor cell behaviour and neuronal growth".

The lunch break provided a great opportunity for interaction among Adelaide scientists at the poster presentations that showcased the variety and depth of biological science research being undertaken in Adelaide. Awards for outstanding student posters were presented to Claire Homan from the University of Adelaide and Tianqi Xu from the Centre for Cancer Biology and for outstanding post-doctoral posters to Genevieve Secker and Sophie Wiszniak, both from the Centre for Cancer Biology.

The second plenary speaker was Ian Smyth whose presentation "Global quantitation of cell and tissue dynamics during kidney development" provided a fascinating insight into branching morphogenesis and the development of new technology to quantitatively analyse this important physiological process in vivo. Following Ian's presentation, there were six short talks from PhD students. Once again, all were excellent, with the judges awarding the most outstanding to Amanda Choo from the University of Adelaide for her talk "Novel functional interactions between non-classical tumour suppressor WWOX and mitochondrial respiratory complex genes" and to Houng Taing from the Centre for Cancer Biology for his talk "Mast cell protease 4 protects against chronic ultraviolet B-induced skin tumourigenesis".

Many thanks must go to our sponsors of the meeting: Centre for Cancer biology, University of South Australia, QIAGEN, GeneWorks, Transnetyx and Carl Zeiss Australia. We would also like to thank all who attended for an interactive and stimulating day showcasing excellent science. We look forward to building on this success at next year's event!

Victoria

Jan Kaslin, Louise Cheng, and Sebastian Dworkin

The 7th annual Melbourne Cell and Developmental Biology Symposium (MCDB7) was held on Wednesday 5th November at the Alfred Medical Research and Education Precinct (AMREP) at the Alfred Hospital, Prahran. Talks and posters were presented at the new AMREP education and lecture theatre, which had excellent and ample space for conference attendees as well as trade exhibits. More than 120 people came together from a broad range of Melbourne and Victorian research institutions to present and discuss their latest findings. As is usual for these meetings, the program consisted of invited plenary speakers, as well as postdoc and student talks selected from submitted abstracts.

The first plenary lecture was given by Prof. Jane Visvader (WEHI) who gave an inspiring presentation on the cellular origin and genetics of breast cancer. She beautifully demonstrated the power of genetic lineage tracing and three-dimensional imaging, which enabled her to decipher the lineage relationship between stem and progenitor populations in the mammary gland. Our second plenary lecture was given by Prof. Emma Whitelaw (La Trobe University) who gave her thoughts on recent developments in the field of epigenetics. It was an insightful overview of the complexity and misconceptions in how epigenetics contributes to inherited phenotypic changes.

Professor Jane Visvader, Joint Division Head, Stem Cells and Cancer, WEHI.

Professor Emma Whitelaw, Head of Department of Genetics, La Trobe University.

Lively discussions during the talks

Twelve selected talks were presented from students and post-doctoral fellows covering a broad range of topics, methods and model organisms. Overall the standards of talks were very high. Numerous prizes were available for the presenters throughout the day. Dr. James Goodwin from the Australian Regenerative Medicine Institute (ARMI) was awarded the best post-doctoral oral presentation prize. James gave an excellent overview of the regenerative mechanisms in the salamander. He in particular highlighted the role of the immune system in controlling wound healing and scarring. Hannah Vanyai from the Walter Eliza Hall Institute won

the best student oral presentation award for her talk on the role of the histone methyl transferase, MOZ, in craniofacial development. The special ANZSCDB oral presentation prize was awarded to Dr. Francesca Froldi from the Peter MacCallum Cancer Institute. Francesca presented her work on neural de-differentiation in tumor genesis in Drosophila. We were also very impressed with the comprehensive talks presented by three talented honours students (Harley Owens, Celia Vandestadt, Prusothman Yogananthajah).

We had 50 posters that were housed in a separate adjoining area where attendees participated in lively discussions. The best Postdoc poster prize was won by Dr. Denny Cottle, for his poster titled "p53 activity contributes to psoriasis-like features in murine skin". Denny has recently moved to Monash University, working with A/Prof. Ian Smyth. Lee Miles (Monash University) won the best student poster prize for his poster titled "The requirements of PCP signalling in early endodermal morphogenesis", encompassing much of his Ph.D. work in the lab of Dr. Heather Verkade. Michelle Henstridge, a Ph.D student from the lab of A/Prof. Coral Warr, at Monash University, won the prize

Wouter Masselink explaining his poster on the evolutionary emergence of limbs.

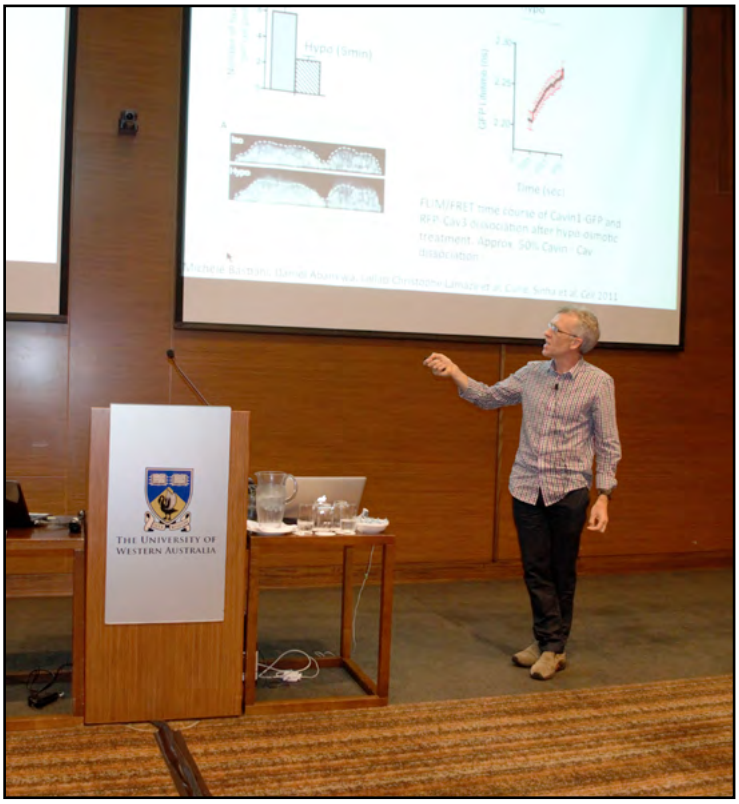
for best ANZSCDB member poster presentation for her presentation titled "Localised control of Torso receptor tyrosine kinase activation in Drosophila terminal patterning", showcasing her elegant Drosophila models, and the strength of this organism as a tool to demonstrate genetic and phenotypic rescue during development.
Overall the meeting was a great success and it concluded with drinks and nibbles at the atrium where participants continued to interact and discuss long after.

Celia Vandestadt spoke on cellular mechanisms of regeneration in zebrafish CNS

We would like to thank everyone involved in making the symposium a great success: In particular: Julia Veitch and Bonnie Dopheide for their invaluable effort in organising the programme, the poster judges on the day, as well as support from both Monash University and the AMREP board for the use of the lecture theatre, foyer and seminar room. We are also grateful to our loyal and generous sponsors, and for their effort in providing the trade tables and displays.

Western Australia

Nathan Pavlos and Evan Ingley



It has been another exciting year for the WA branch of the ANZSCDB with cell and developmental biology leading the charge at this year's local annual Combined Biological Sciences Meeting (CBSM). The 24th CBSM held on Friday 29th August at the University Club of Western Australia provided an excellent opportunity for students and early career researchers of cell and developmental biology to showcase their research as oral or poster presentations to a wide biological sciences community. The CBSM continues to be one of our most successful local events, with the 2014 meeting our biggest yet, attracting over 270 delegates from WA's leading research institutions.

The 2014 plenary line-up welcomed an esteemed panel of local and international speakers including Dr Timo Lassman (RIKEN) "Large scale transcriptomics form a computational perspective", Prof Euan Harvey (UWA) "Challenges and opportunities in WA marine science" and Prof Robert Parton (IMB, UQ) (**pictured**) who put cell and developmental biology in the spotlight with his elegant overview of "the formation and function of calveolae: new insights into an enigmatic organelle". The 2014 CSBM also held 5-concurrent breakout sessions including a dedicated Cell Biology and Genetics Symposium at which Local member Ast/Prof Archa Fox (Harry Perkins Institute of WA, UWA) delivered an excellent keynote presentation entitled "Studying the structure and function of subnuclear 'paraspeckle' bodies: new insights into neurodegeneration, stress and cancer".

This year's ANZSCDB sponsored CBSM student poster prize was awarded to Ms Rebecca Weselman (UWA), for her poster presentation entitled "Sorting-Out Protein Trafficking in Bone Disease".

Plenary Speaker Rob Parton presenting the ANZSCDB poster prize to Rebecca Weselman (UWA) at the 24th CBSM

Beyond CBSM, it is with great pleasure that we congratulate local members Ast/Prof Archa Fox and A/Prof Aleksandra Filipovska (Harry Perkins Institute of WA, UWA), who both were recently named among the inaugural recipients of the 2014 University of Western Australia Vice-Chancellor's Research Awards. Archa and Aleksandra were awarded the two Vice-Chancellor's Mid-Career Research Awards for Medical and Health Sciences, for distinguished achievement in research or scholarship. Archa's major discoveries have changed the face of cell biology, and opened up new paradigms for how we understand specific structures inside the nucleus of mammalian cells. Aleksandra is a leading light in the field of mitochondrial biology globally, making significant contributions both to our understanding of mitochondrial gene expression and in the development of new genomic technologies.

Finally, as we look to continue to expand our member base in 2015 we will also see a change of guard for WA Representatives with terms ending for both A/Prof Evan Ingley and Ast/Prof Archa Fox. A/Prof Nathan Pavlos will continue his role as a WA representative and will be joined by new WA recruit and resident macrophage cell biologist Prof Fiona Pixley (UWA). It is with much appreciation that we thank Evan and Archa, both who have worked selflessly to place cell and developmental biology firmly on the map in WA.

New Zealand

Julia Horsfield and Megan Wilson

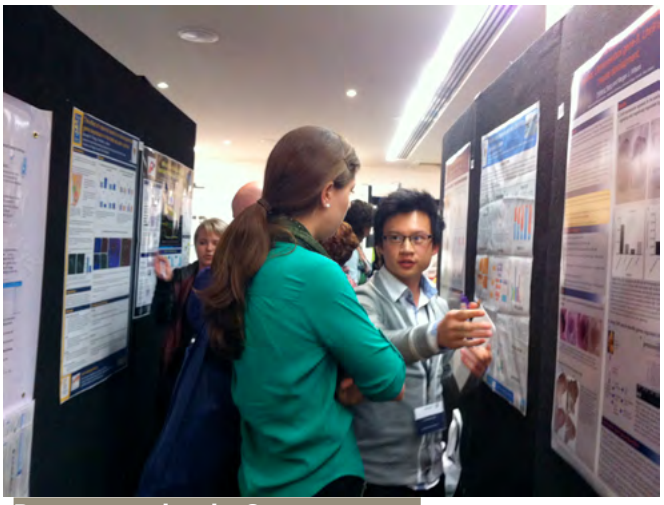
Research news

A Reproductive and Developmental biology satellite meeting was held as part of the very popular Queenstown Research Week (QRW) at the end of August. Sessions included neurodevelopment, regeneration, reproductive biology, organ development and infertility. Over the two days we heard about diverse model systems from plants to honeybees and sea squirts. Invited Australian speakers included Annemiek Beverdam, Matthew Naylor, Joel Rothman and Michael Piper in addition to a line up of fantastic local speakers, providing a great overview of ReproDevo research in Australasia. This was a successful meeting with plenty excellent discussions/questions as well as beautiful scenery and even a few brave attendees taking the budgee jump plunge. ANZSCDB sponsored the best student speaker prize, awarded to Lisa Zondag for her talk on her PhD work studying whole body regeneration in Botrylloides leachi (Supervisor Dr Megan Wilson, Otago).

Lisa Zondag (ANZSCDB prize), Yisheng Yang (Otago Genetics Otago poster prize) and Hui Lui (Otago, Genetics Otago student speaker prize).

Professor Phillip Crosier (ANZSCDB committee member) from the University of Auckland was awarded an HRC project grant - Uncovering mechanisms and inhibitors of tumour-induced lymphangiogenesis. His team will use the

zebrafish model to identify new genes and pathways that regulate lymphatic vessel growth. ANZSCDB member Dr Christine Jasoni (Anatomy, University of Otago) is part of a recently funded HRC Programme Grant entitled "Healthy pregnancy, healthy babies". This 5-year programme will examine how pregnancy hormones (prolactin and placental lactogen) induce changes to the mothers brain to help it adapt to pregnancy. Find out more about this new research programme on Dr Jasoni's SciBlog (http://sciblogs.co.nz/nervynomad/2014/06/15/healthy-pregnancy-healthy-babies/).

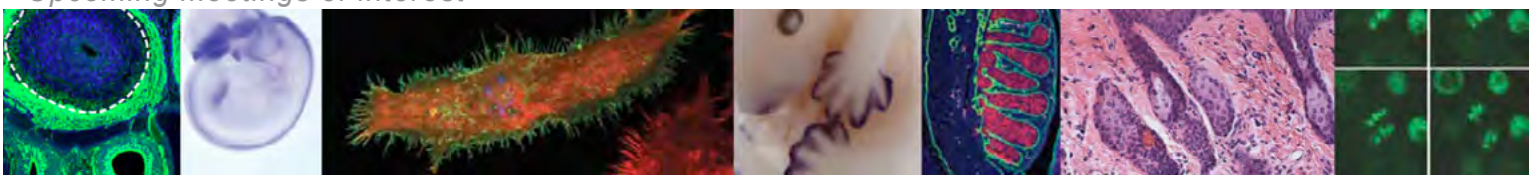


Poster session in Queenstown .

Other News

The Annual very popular Genetics Otago Symposium was held again this year. This year included two workshops. The first workshop was on Te Mata Ira Project, a HRC funded project to develop guidelines for medical genomic researchers working with Maori communities.

Genetics Otago also organized a Women in Genetics Lecture Series with sold out events in Queenstown, Invercargill and Wellington. ANZSCDB members Dr Julia Horsfield (Deputy Director of Genetics Otago), Dr Christine Jasoni and Dr Elizabeth Duncan (also the new 2015 ANZSCDB NZ rep) took part in this lecture series. Each event also included a visit to local schools to discuss science and careers with students.



NSW and ACT
Cell & Developmental Biology Meeting

16 March
2015
9am-5pm

Garvan Institute
384 Victoria St
Darlinghurst, NSW 2010, Australia

Confirmed plenary speakers:

Professor Olivier Pourquie, Harvard, USA
http://hsci.harvard.edu/people/olivier-pourquie-phd
Co-hosted by VCCRI, Garvan's Leaders in Science
and the 2015 Hunter meeting (http://hcbm.mtci.com.au)

Professor Daisuke Sugiyama, Kyushu University, Japan
http://hyoka.ofc.kyushu-u.ac.jp/search/details/K003910/english.html

The annual ANZSCDB state meeting is an excellent opportunity to highlight the exciting work of Australia's young cell and developmental biologists, with oral presentations by postgraduate students (PhD and Honours) and post-docs, complementing presentations by 3 senior scientists.

Postdocs and PhD students will be chosen from abstracts to present a 15 minute talk
PRIZES WILL BE AWARDED TO THE BEST TALKS AND POSTERS

REGISTRATIONS ARE FREE AND WILL OPEN IN JANUARY
(http://medicalsciences.med.unsw.edu.au/2015-nsw-cell-and-developmental-biology-meeting)

ABSTRACT SUBMISSION DEADLINE: 16 FEBRUARY 2015

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or Kristen Barratt (kristen.barratt@anu.edu.au)

Refreshments and prizes provided by our sponsors:

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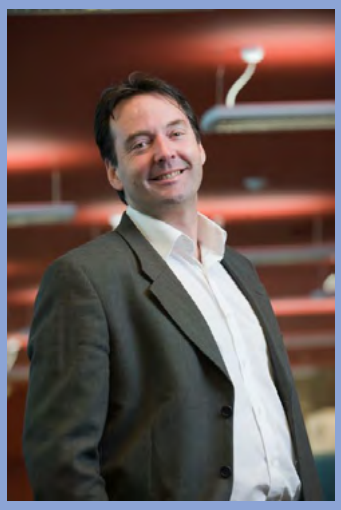
Victor Chang Cardiac Research Institute
ASBMB Australian Society for Biochemistry and Molecular Biology

Member Publications

Yet again we received a flood of papers from our members, attesting to the fact that cell and developmental biology are thriving disciplines in Australia and New Zealand. Below we feature a recent publication from Peter Currie and collaborators in Nature, and also highlight a selection of other papers published by our members in 2014 (following page).

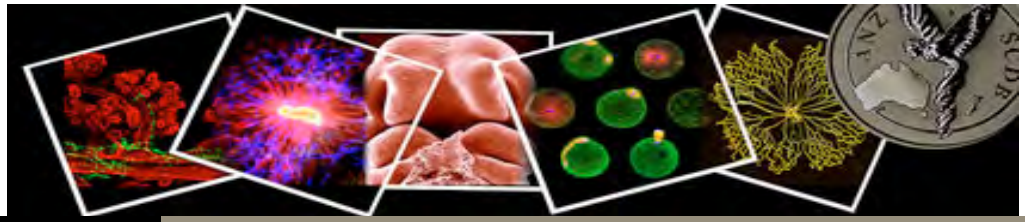
Nguyen PD, Hollway GE, Sonntag C, Miles LB, Hall TE, Berger S, Fernandez KJ, Gurevich DB, Cole NJ, Alaei S, Ramialison M, Sutherland RL, Polo JM, Lieschke GJ, Currie PD. (2014) Haematopoietic stem cell induction by somite-derived endothelial cells controlled by meox-1. Nature 21:314-318

This exciting paper from Peter Currie (ARMI, Monash University) and colleagues for the first time describes mechanisms underlying the generation of haematopoietic stem cells (HSCs). Using high resolution imaging in zebrafish, the group was able to identify a progenitor cell population they called endotome cells, which derive from the somites and are responsible for the formation of HSC's. Using mutant zebrafish they showed that the meox1 and cxcl12b genes are in turn required for endotome formation. This study is one step in the path to production of HSCs in the lab, with important implications for enhanced treatment of various blood disorders.



Peter Currie and Phong Nguyen

Georgina Hollway



Francesca Froldi*, Milan Szuperak*, Chen-Fang Weng, Wei Shi, Anthony T. Papenfuss, Louise Y. Cheng. The transcription factor Nerfin-1 prevents reversion of neurons into neural stem cells. Genes Dev. Accepted Dec 2, 2014. * equal contribution

Ruparelia AA, Oorschot V, Vaz R, Ramm G, Bryson-Richardson RJ Zebrafish models of BAG3 myofibrillar myopathy suggest a toxic gain of function leading to BAG3 insufficiency. Acta Neuropathol. 2014: 128: 821-33.

Lieu KG, Shim EH, Wang J, Lokareddy RK, Tao T, Cingolani G, Zambetti GP, Jans DA. The p53-induced factor Ei24 inhibits nuclear import through an importin β–binding–like domain. J Cell Biol. 2014; 205: 301-12.

Parsons LM, Portela M, Grzeschik NA, Richardson HE Lgl regulates Notch signaling via endocytosis, independently of the apical aPKC-Par6-Baz polarity complex. Curr Biol. 2014; 24: 2073-84.

DiTommaso T, Jones LK, Cottle DL; WTSI Mouse Genetics Program, Gerdin AK, Vancollie VE, Watt FM, Ramirez-Solis R, Bradley A, Steel KP, Sundberg JP, White JK, Smyth IM. Identification of genes important for cutaneous function revealed by a large scale reverse genetic screen in the mouse. PLoS Genet. 2014; 10: e1004705.

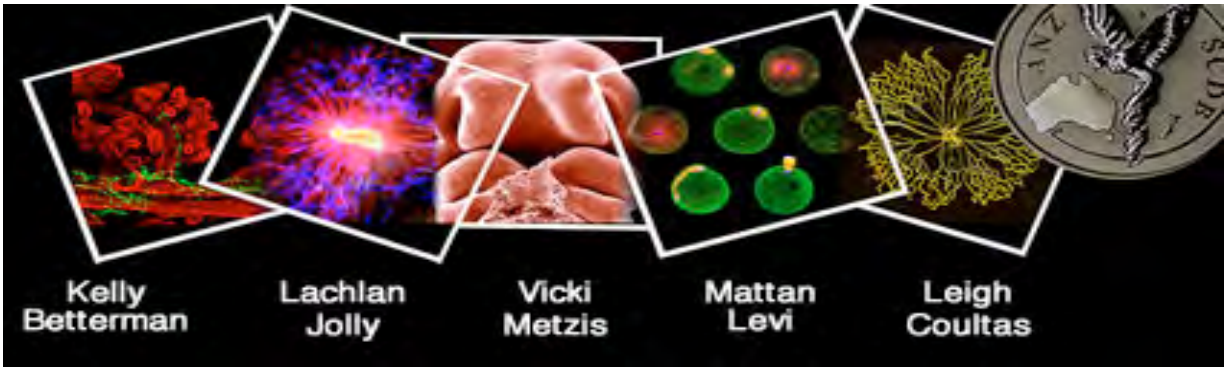
Oleksiy Kovtun, Vikas A. Tillu, WooRam Jung, Natalya Leneva, Nicholas Ariotti, Natasha Chaudhary, Ramya A. Mandyam, Charles Ferguson, Garry P. Morgan, Wayne A. Johnston, Stephen J. Harrop, Kirill Alexandrov, Robert G. Parton, Brett M. Collins. Structural Insights into the Organization of the Cavin Membrane Coat Complex. Dev Cell. 2014; 31: 405-19.

Marshall MS, O'Reilly VC, Shi H, Brown MA, Leo PJ, Zankl A, Dunwoodie SL, Duncan EL. Compound heterozygous mutations in RIPPLY2 associated with vertebral segmentation defects. Hum Mol Genet. 2014 Oct 24. pii: ddu534. [Epub ahead of print]

Zhao L, Ng ET, Davidson TL, Longmuss E, Urschitz J, Elston M, Moisyadi S, Bowles J, Koopman P. Structure-function analysis of mouse Sry reveals dual essential roles of the C-terminal polyglutamine tract in sex determination. Proc Natl Acad Sci USA. 2014; 111: 11768-73.

Moreau JL, Artap ST, Shi H, Chapman G, Leone G, Sparrow DB, Dunwoodie SL. Cited2 is required in trophoblasts for correct placental capillary patterning. Dev Biol. 2014; 392: 62-79.

DiTommaso T, Cottle DL, Pearson HB, Schlüter H, Kaur P, Humbert PO, Smyth IM. Keratin 76 is required for tight junction function and maintenance of the skin barrier. PLoS Genet. 2014; 10: e1004706.



Membership News

ANZSCDB President-elect **Sally Dunwoodie** (Victor Chang Cardiac Research Institute, Sydney) was named as one of the 100 Women of Influence for 2014. This is an initiative of The Australian Financial Review and Westpac. Congratulations to Sally for this very well-deserved recognition of her major contributions to our understanding of heart development and disease, the impact of hypoxia on embryogenesis and the role of Notch signalling in somitogenesis and vertebral column defects. Sally was the recipient of the inaugural ANZSCDB Young Investigator Award in 2008.

Congratulations also to two WA members, **Archa Fox and Aleksandra Filipovska**, as the inaugural recipients of the 2014 University of Western Australia Vice-Chancellor's Research Awards. Archa and Aleksandra were awarded the two Vice-Chancellor's Mid-Career Research Awards for Medical and Health Sciences, for distinguished achievement in research or scholarship. Archa's major discoveries have changed the face of cell biology, and opened up new paradigms for how we understand specific structures inside the nucleus of mammalian cells. Aleksandra is a leading light in the field of mitochondrial biology globally, making significant contributions both to our understanding of mitochondrial gene expression, and in the development of new genomic technologies. She was the winner of the ANZSCDB Young Investigator Award in 2012.

ANZSCDB FYI

Developmental biologist Anne McLaren honoured alongside history's great names

The following email message was sent to ISD members by Jerry Cunha, *Differentiation* Senior Editor and former ISD Board Member. I though it was sufficiently inspiring to warrant reproducing it for the benefit of ANZSCDB members, with Jerry's permission. It is a fitting tribute to Anne McLaren (1927-2007), a friend of many of us, a giant of twentieth century developmental and reproductive biology, a wonderful mentor to many young developmental biologists, and a tireless role model for women scientists everywhere.

Peter Koopman

A little known fact...

After the recent ISD meeting, I spent a few more days in London and had the pleasure of visiting the British Library, which is an immense facility. Within the library is a room designated "The Treasures of the British Library" where one can see the Magna Carta and other historical documents. There is a display case featuring the actual notebooks of distinguished men and women of science.

From left to right are notebooks of the following scientists:

Galileo

Captain James Cook

William Henry Fox Talbot--inventor of photography

Alexander Fleming—Discoverer of penicillin

Anne McLaren

Quite an honor for our dear colleague to be within such a distinguished group.

-Jerry

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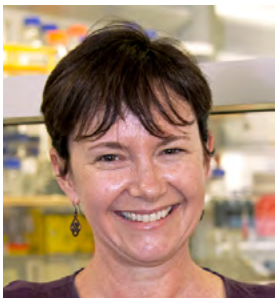

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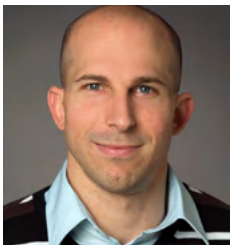

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Masatoshi Takeichi
RIKEN | Japan

Public Lecture

Bob Weinberg
WHITEHEAD INSTITUTE | USA

The EMT (Epithelial Mesenchymal Transition) International Association

TEMTIA-VII

October 11-14, 2015
Pullman Melbourne Albert Park
Victoria, Australia

Keynote and Invited Speakers

Marianne Bronner | USA
Melissa Davis | Australia
Arjun Deb | USA
Erica Golemis | USA
Greg Goodall | Australia
Richard Harvey | Australia
Keith Mostov | USA
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Themes of TEMTIA-VII *include:*

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Mathematical modelling and Biophysics
Partial EMT and modes of migration
Plasticity and tissue morphogenesis
Polarity | MET | Clinical EMT
EMT and stemness
Epigenetic Regulation & Chromatin
Metabolism and EMT / Hypoxia / Stress

Convenors
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