

ANZSCDB Newsletter

Australia and New Zealand Society for Cell and Developmental Biology INCORPORATED



December 2010



Ian Smyth and Peter Farlie, November, Monash.

● **Society Awards:** The President's Medal is the highest honour that our Society bestows and I was delighted to announce that the 2010 recipient is Professor Emma Whitelaw from the Queensland Institute of Medical Research. Emma is an internationally recognised geneticist and this award recognises her ground break-

Dear friends and colleagues,

Over the past year we continued our focus on re-invigorating our activities at the state and regional level and to foster support of our students and emerging leaders.



President's Medal

● **State/NZ Chapter Activities:**

Our program to support local and state Cell and Developmental Biology themed activities continues to grow with sponsored conferences and symposia taking place in NSW, QLD, VIC and WA, with some states having a number of activities. NSW held its 16th Cell and Developmental Biology Meeting, Melbourne its 3rd and we are very pleased that QLD held its 1st in October. The state/local chapter meetings supported in 2010 included: 16th NSW Cell & Developmental Biology Meeting – Thomas Fath and Bill Phillips, March, University of New South Wales; 20th Annual Combined Biological Sciences Meeting – Megan Lloyd (organising member), August, University of Western Australia, Perth, WA (student poster prize); Biomedical Imaging Symposium "From seeing to believing: Quantitative Microscopy" – Thomas Fath, Biomedical Imaging Facility, Lowy Cancer Centre, UNSW; 1st Brisbane Cell and Developmental Biology Symposium – Dagmar Wilhelm and Eva Kovacs, October, Institute for Molecular Bioscience, University of Queensland; 4th Cell and Developmental Symposium –

ing contribution to the discovery of the epigenetic regulation of inheritance. Her work has far reaching implications for how we understand both the regulation of transcription and the very meaning of biological inheritance. Emma received the medal prior to her plenary lecture at OzBio2010 entitled 'Epigenetics and the determination of phenotype'. We gratefully acknowledge Sigma-Aldrich's role in establishing this award together with the Society and were pleased that Kathryn Carey, Sigma-Aldrich Australian and New Zealand Marketing Manager presented Emma with the award.

The Young Investigator Award was initiated to acknowledge achievement and the successful establishment of an independent career in our disciplines, with a deciding factor being past or current service to the Society. The YIA entered its 3rd year with nominations taking place in November and the selection committee convening in January. As with previous years, the applicants were outstanding. The committee selected Kat Gaus, an Assoc/Prof in the Cen-

Read Up On:

OzBio 2010

2010 President's Medalist ~Emma Whitelaw

Prime Minister's Prizes for Science

Meeting Notifications

ANZSCDB Sponsored Meetings

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Regional Round Ups

Member Publications

Executive Team and Representatives

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tre for Vascular Research, University of New South Wales. Her work has been at the forefront of the revolution in light microscopy both in terms of developing new microscopes and exploiting their capacity to provide new insights into membrane function. Kat received her award, a beautiful hand blown & cold worked glass artwork, at OzBio2010 and spoke in the Symposium, 'Dynamic Subcellular Compartments'. Ruth Arkell, one of two recipients from 2009 chose to accept her award this year at OzBio2010 and spoke in the Symposium 'Patterning & Morphogenesis'. We are indebted to Carl Zeiss Australia who were instrumental in establishing this award and to Simon Kinder for presenting the awards to Ruth and Kat.

To acknowledge, encourage and assist our up-and-coming young Cell and Developmental Biologists we awarded the Toshiya Yamada Early Career Award to Catherine Itman (Monash University), the Keith Dixon Prize in Developmental Biology to Johana Simkin (Murdoch Children's Reserach Institute), the David Walsh Student Prize to Vicki Metzis (IMB University of Queensland) and the ANZSCDB Cell Biology Student poster prize to Fran Eversson (Children's Hospital, Westmead), Libby Thomas (University of Western Australia) and Heidi Wong (Melbourne University) at OzBio2010, Melbourne.

• **Scientific Meetings:** COMBIO: ComBio continues to be our Annual Scientific Meeting and this year it took the form of OZBIO2010, which encompassed ComBio2010, the 12th IUBMB and the 21st FAOBMB, and was held at the Melbourne Convention and Exhibition Centre in Melbourne VIC. ANZSCDB members on the organising committee Helen Abud, Joy Rathjen, Marie Bogoyevitch and David Jans organised brilliant Cell Architecture & Trafficking and Developmental Biology Streams and we are indebted to them for securing top plenary and invited symposia speakers. We also thank the symposium chairs for their hard work. There were approximately 1600 registrants at OZBIO and ANZSCDB was the second largest society present. Well done!

The Executive approved the awarding of 20 Student Bursaries to cover the cost of registration at OZBIO. They were awarded contingent on the supervisor registering for OZBIO. This is the largest response we have had to COMBIO student

bursaries. We anticipate that this scheme will be supported for future COMBIOs.

An integral part of OZBIO2010 was the Young Scientist Forum (YSF), a conference of 50 international and 8 Australian PhD/early postdoctoral scientists that preceded OZBIO. ANZSCDB sponsored 2 fellowships and ASBMB sponsored 6, which covered attendance at YSF as well as OZBIO. Of the total number of applicants, 40% were ANZSCDB members which indicated that we were meeting a need for our student/postdoc members. Congratulations to Stephanie Bannister (Murdoch Inst, VIC) and Cassy Spiller (IMB, QLD) who were awarded fellowships.

The day prior to OZBIO, the ANZSCDB Council met with the intention of formalising this activity prior to each COMBIOs. Future Council participants will consist of the Executive, State/NZ Representatives and the Committee, which will be established in the near future.

The Society Dinner at COMBIO/OZBIO is now well and truly established and a great success and 58 members, national and international speakers gathered for the Society dinner at 'The Deck'. This provided an excellent venue to catch up with colleagues in a relaxed and lovely setting. Thanks go to Ros Barrett-Lennard for making this such a success.

The organisation for COMBIO2011 that will be held at the Cairns Convention Centre is well underway and Carol Wicking and Rohan Teasdale are our members on the organising committee.

Hunter Meeting: Our relationship with the Hunter Meeting is solid. After the end of our 3-year commitment to the Hunter Meeting in 2009 to sponsor an international speaker, with associated visits to members' laboratories, the Executive decided to extend our commitment indefinitely under the auspices of ANZSCDB's Distinguished Visiting Lectureship in Cell & Developmental Biology Program. The 2010 ANZSCDB HCBM International Speaker was Ed Munro from the University of Chicago, an expert in mathematical modelling of basic Cell & Developmental processes including cell fate, morphogenesis, cell polarity and asymmetric cell division. Ed delivered brilliant and different talks at the Hunter and at the 16th Annual NSW Cell and

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ComBio 2011

www.asbmb.org.au/combio2011
Active in mid-March 2011

**Research and recreation
amid the reef and rainforests**

Cairns Convention Centre **25 to 29 September 2011**
Further information: combio@asbmb.org.au

Developmental Biology. Peter Cullen from the University of Bristol (UK) will be the 2011 ANZSCDB Hunter Meeting International Speaker. Peter's lab has made a major contribution to our understanding of endosomal sorting. His group has defined the role of sorting nexins in diversifying endosomal pathways. Of particular interest is the discovery of the ability of sorting nexins to participate in endosomal signalling.

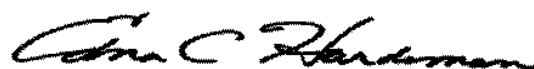
Developmental Biology Workshop: We were delighted to support the 6th Developmental Biology Workshop that took place Oct 24-27, 2010 at the Yarra Valley Convention Centre. This workshop was run by our eminent Developmental Biologists: Peter Currie, Peter Koopman, Richard Harvey, Rob Saint and Patrick Tam.

- **Corporate Sponsors:** Sigma-Aldrich have been instrumental in supporting the prestigious President's Medal. Carl Zeiss have generously sponsored our Young Investigator Award, and we are grateful for their past support in our recognition of Australasia's brightest, emerging Cell and Developmental scientists. We thank all of our sponsoring companies for their support of our State/NZ-based meetings mentioned above, including Qiagen, GeneWorks, Roche, Millipore, Life Technologies: Applied Biosystems, Invitrogen, Genesearch, InVitro, Integrated Sciences, Merck, Becton Dickinson, Millenium Science.

- **Society Affiliations & Outreach:** ANZSCDB continues to be a member of the Federation of Australian Scientific and Technological Societies (FASTS), an affiliate member of the Australian Society for Medical Research (ASMR), and a full member of the International Federation for Cell Biology (IFCB) and the International Society for Developmental Biologists (ISDB). Through FASTS, Marie Bogoyevitch (VIC) and Aleksandra Filipovska (WA) represented the Society at "Science Meets Parliament" in March 2010. As a member society of the National Committee for Biomedical Sciences (NCBMS) of the Australian Academy of Science, we were able to nominate student members to attend the 60th meeting of Nobel Laureates in Lindau, Germany in 2010. Two of our students were chosen by the international committee and we congratulate Duncan Mortimer (QBI, UQ) and Denise Miles (Murdoch Childrens Research Institute). Also, I was elected Deputy Chair of the NCBMS. Our other corresponding Societies include ASCEPT, ASBMB, ESA, ASMR, AACB, ASI, ANS an ASB.

- **Membership of the Society:** This continues to be our challenge. Our society membership needs to grow. I ask that all heads of labs take a simple first step – encourage your students to join. Increased revenue will be used in the first instance to support PhD/postdoc travel scholarships to national and international meetings. JOIN US!

Finally, I want to acknowledge my colleagues on the ANZSCDB Executive, Geraldine O'Neill, Kat Gaus, Alpha Yap and Peter Currie, and ANZSCDB Secretariat, Ros Barrett-Lennard (MTCi), Liz Orfanos (MTCi) and the Editor of our newsletter Megan Chircop, and thank them for their dedication, support and advice.

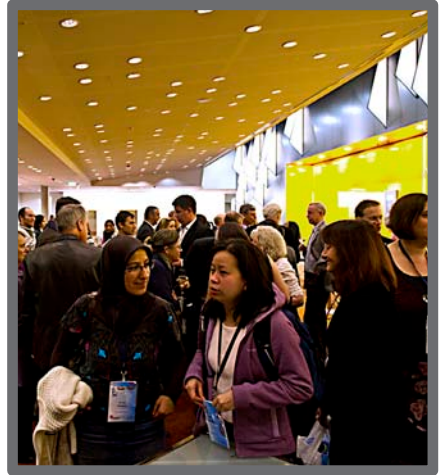


Edna Hardeman
President
Australia and New Zealand Society for Cell and Developmental Biology



<http://www.anzscdb.org/ANZSCDB-Membership.html>

[Click here to be redirected to the AGM Minutes](#)



OzBio 2010



OzBio 2010

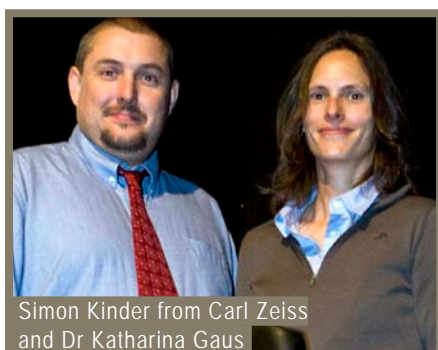
And the Winner is...

The President's Medal celebrates excellence and distinction in the fields of Cell and Developmental Biology. This year this honour has been conferred upon Prof Emma Whitelaw for her outstanding contribution in epigenetics. The President's Medal was presented by Katherine Carey who represented Sigma Aldrich who established this eminent award together with the Society.



The Young Investigator Award acknowledges the transition to independence which is one of the most challenging and critical stages in the development of a career research scientist. This award was established to encourage and support emerging talent in Australia and New Zealand. The award is an imprimatur of scientific accomplishment. Recipients of this award are judged on the quality of their research and their ability to build and sustain an independent career. This award was generously established by Carl Zeiss together with the Society.

We were proud to announce that the winner of the 2010 Young Investigator Award was Dr Katharina Gaus of the CVR, UNSW. Dr Ruth Arkell, who was one of two recipients of the 2009 prize, also received her award at OZIO2010.



Congratulations to all of the winners of Society prizes at OZBIO2010:

- The Toshiya Yamada Early Career Award : Catherine Itman (Monash University)
- The Keith Dixon Prize in Developmental Biology : Johanna Simkin (Murdoch Children's Research Institute)
- The David Walsh Student Prize : Vicki Metzis (Institute of Molecular Biosciences, UQ)
- ANZSCDB Cell Biology Student Poster Prize : Fran Eversson (Children's Hospital at Westmead), Libby Thomas (University of Western Australia), Heidi Wong (University of Melbourne)

EMMA WHITELAW

Epic Career In Epigenetics

Thrill seekers are generally considered to be those of us who physically challenge boundaries, they are the sky-divers and the down-hill skiers. The risks they take are often times regarded as reckless, fearless, yet this not a term that is often used to describe a scientist. Emma Whitelaw is one such individual. She has been a traditional thrill seeker and something of a 'scientific cowboy'.



Although Emma hailed from a background of educational enlightenment, she was no different growing up from teenagers today. Both of her parents had been to university themselves and they therefore took an interest in her academic development. What they may not have known is that as well as gaining a higher education Emma was also gaining a tough reputation as a self confessed "bikies mole". She says, "I have always been a risk taker. In my late teens I was riding around the country as a part of a motorbike gang. As a pillion passenger I had the most important job, I was the one who carried the beer."

So it is fortunate that when Emma arrived at her watershed moment she chose science over rebellion, benefiting mankind ever since.

At high school in Canberra, she

proved talented at both science and mathematics and later, while studying zoology at the Australian National University, she discovered the then new and exciting field of biochemistry. Her Honours looked at the level of biochemical maturity of wallaby pouch young in comparison to that of other newborn mammals.

Encouraged by her supervisor, Peter Jansen, Emma successfully applied for a Commonwealth Scholarship to study at the University of Oxford in the laboratory of Nobel Prize winner, Sir Hans Krebs, working under the direct supervision of Dr Dermot Williamson. Although she continued to develop her skills as a researcher, she found the very detailed study of metabolic biochemical pathways lacked excitement and sought more stimulating avenues of research. She found this in her postdoctoral position within in Professor Robert Williamson's laboratory at St Mary's Hospital Medical School in London where

the earliest cloning of copyDNA was taking place. With Williamson Emma found more than simply her scientific niche, she found a philosophy she could embrace. His conviction that 'we should give back' led her to recognise how privileged she was in contrast to so many others as well as instilling in her the importance of "educating" in the broadest sense of the word. These insights have stayed with Emma her whole life.

Taking time off to have two children, she returned to work on how genes are regulated at the William Dunn School of Pathology in London. She was greatly inspired by a talk by one of the first scientists to create transgenic mice, a technology that allows genes to be added to the genome of a living organism thereby modifying them permanently. Emma saw this as a powerful way of understanding what genes do, how they switch off and on and how they influence behaviour and physical traits. With the support of the Director of the school, Emma purchased a microscope worth half a million pounds and undertook a course at Cold Spring Harbour in New York, USA, learning how to inject DNA into mouse ova. She began creating transgenic mice, establishing a fully functional transgenics facility at the University of Oxford and training staff to operate it before returning to Australia

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in 1992.

Back in Australia Emma commenced work at the University of Sydney. Despite a full time teaching load Emma continued her transgenic research. Unexpectedly, she observed that the injected genes were not always being switched on, although the DNA remained intact. This led to the exciting discovery of what is now known as epigenetic gene silencing, a phenomena known in other organisms, but not believed to occur in mammals. While she experienced some of the antagonism that always greets a new discovery, she also received much support from the non-mammalian fraternity. A number of very good students were attracted by this exciting new work and it was with the help of these enthusiastic young scientists that Emma was able to achieve so much with so little funding. Many of these students have since attained positions in high profile overseas laboratories because of their work during their time in Emma's laboratory.

Emma's relocation from the University of Sydney to the Queensland Institute of Medical Research (QIMR) in 2005 was the beginning of a highly beneficial mutual relationship. Moving from the relatively anonymous environment of a large university to a smaller institution has given Emma more personal involvement and recognition. In particular, she credits Director Michael Good as a motivational force behind her achievements at QIMR. He has encouraged her to apply herself to more diverse and challenging goals than ever before. In 2008 Emma led a collaborative team of

QIMR scientists in a successful bid for a \$2.7 million grant from the Australian Cancer Research Foundation to open the ARCF Centre for Cancer Epigenetics at QIMR. The centre houses two major pieces of equipment needed for cancer epigenetic research and has had flow-on benefits for other researchers by providing new capacities in both DNA sequencing and preclinical imaging for the entire Institute.

More recently, Emma was awarded a National Medical Health and Research Council Australia Fellowship, a prestigious award that will fund an ambitious five-year research program aimed at unravelling the epigenome. This will give her the resources to retain her current highly qualified staff as well as attract a number of exceptional young researchers back to Australia from overseas.

Her staff cannot speak highly enough of their mentor and supervisor. Dr Suyinn Chong, who moved interstate to keep working with Emma said "She not only does exceptional science, but deals with her people in an exceptional way. Because she keeps both an open door and an open mind, her staff are enthusiastically encouraged to grow and develop, and to present their own scientific thoughts and ideas with confidence. Emma has a way of walking around the laboratory, thinking out loud, drawing others in, wanting everyone's ideas, valuing all opinions and creating an atmosphere of intellectual excitement that is quite electric. She is also well aware that victories come along rarely in science and is always first to congratulate and celebrate even the smallest

achievement or success within the laboratory". PhD student Nadia Whitelaw will be sorry to leave Emma's laboratory when she completes her degree. She knows that Emma's assistance with publishing articles in scientific journals, including student authors in her own review articles and opportunities to present at high profile conferences adds enormous value to a student's training and future prospects.

Emma's advice to scientists starting out in their careers is, "Don't get bogged down in one area of science. Genuine steps forward are often made at the interface between two disciplines. So go to talks outside your comfort zone and consider how this information or technology could help you solve your problems."

Throughout her career, Emma has seen transgenics evolve from an early model for gene therapy to a much more dynamic field that explores the fundamental development of human beings. A major difficulty with using transgenics for gene therapy is that the body's immune system regards injected genes in the same way as it does a virus – against which it has developed defences. Gene silencing, or the switching on and off of particular genes is a process used in defending the body against viruses.

Emma is inspired by the fact that one small cell – the egg – can develop into such a complex organism as an adult human that can think and feel. Even more amazing is that the process is entirely self-directed. One of the great puzzles to scientists is how so many different tissue types

and functions develop during the process, with each cell containing the same genetic information. While gene silencing is part of this differentiation process, environmental influences such as different diets during pregnancy can also bring about permanent changes in embryos. Some of these changes result in disease, and this is where Emma's work focuses today – in the complex interactions between genes and environment.

With her team, she is currently investigating diseases of concern to all Australians - including obesity, cancer, heart disease, and foetal alcohol syndrome. Their work aims to develop tools that can estimate a person's risk of these diseases and identify new targets for drug discovery. As pathology in the future turns increasingly towards molecular analysis, Emma Whitelaw's work will stand out as a notable contribution.

Now in the autumn of her gallant career she is able to engage in personal reflection with unflinching candour. While the scientific community celebrate Emma's achievements she wonders if she perhaps sacrificed too much for these accolades. Of the personal costs in benefiting mankind, she says, "Although Society needs people doing this job and it is not easy, not well rewarded financially and quite risky as a career." It takes thousands of hours at the bench and this is time that is taken away from the family. "I found being a new mother difficult. I lived in a foreign country where everyone around me was an academic. I went back into research after two years but this

may have been a mistake. In retrospect, I gave too little time to my children and husband (now ex) over those years." Nowadays, when Emma has a free moment, and she doesn't get many, she can be found pottering in the garden, reading for pleasure or playing with her cat, Toast.

There can be no doubt that many find the achievements of Emma to be inspiration. She, herself, finds it is her "small, spontaneous acts of kindness to others" that she is most proud of, and it is when she sees others performing selfless deeds she is able to recharge her spirit and find her own inspiration to begin again.

There is little doubt that Emma has become an enlightening force at QIMR and an absolute boon to the Queensland medical research community. She is a rare and thoroughly genuine mix of wisdom, understanding and intellect that leaves an enduring impression on all who meet her ■

Professor Emma Whitelaw is the 2010 winner of the ANZSCDB President's Medal.

This award is presented to reward and recognise individuals who have made major contributions to the fields of Cell and Developmental Biology.

The President's Medal has been awarded since 2002 and Emma is the ninth person to be honoured in this way. She sits amongst esteemed company, such as last year's winner, Richard Harvey and the inaugural winner in 2002, Don Metcalf.

Hearty congratulations to Emma Whitelaw.



ComBio 2011

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**You are invited to take
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scientific conference
among some of the most
spectacular scenery on
this planet at the best
time of the year**

WEBSITE:
www.asbmb.org.au/combio2011
(to be activated in mid March)

FURTHER INFORMATION:
combio@asbmb.org.au

ComBio2011 will be held in Cairns at the Cairns Convention Centre from the 25th to the 29th September. The venue is world class, the accommodation close by and the timing of the conference coinciding with the best time (weatherwise) to visit Cairns and surrounds.

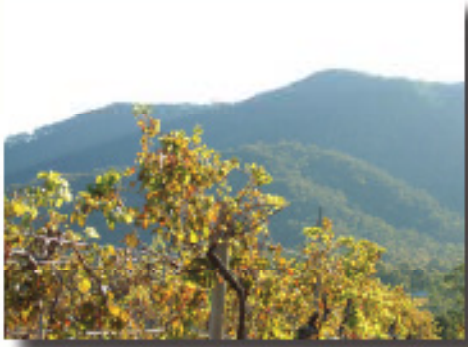
Cairns offers one of the world's most desirable convention locations and includes

- Australia's best Aboriginal cultural experiences
- World Heritage Great Barrier Reef & Australia's Tropical Rainforests
- International standard 5, 4 & 3 star accommodation
- A wide range of hotels within walking distance of the Cairns Convention Centre
- The conference centre, accommodation and restaurants are within an easy commute to the International and Domestic airport.

The scientific program will include ten streams including

- Cellular Architecture and Biology
- Developmental Biology
- Gene Expression and Regulation
- Macromolecular Structure and Function
- Medical and Translational Research
- Plant Function and Environment
- Plant Genetics and Development
- Signalling
- Systems Biology
- Tropical Related Topics





The 11th **Hunter Meeting** 2011

The Sebel Kirkton Park, Pokolbin, NSW, Australia

*Australia's Premier Meeting of cell and developmental biologists
~ in NSW's Premium Wine-growing district ~*

March 22-25, 2011

*on-Line Abstract submission for Podium/Poster consideration until December 3, 2010
Early-Bird close January 21, 2011*

Kai Simons

Max-Planck-Institute of Molecular Cell Biology
and Genetics/ Dresden

Jean-Paul Thiery

Institute of Molecular and Cell Biology (IMCB)
Singapore

Pete Cullen

School of Biochemistry, University of Bristol,
UK

*Pete Cullen's attendance at the Hunter Meeting
is generously sponsored by the ANZSCDB*



Volker Haucke

Institut für Chemie und Biochemie, Freie Uni-
versität Berlin, Germany

Andras Nagy

Samuel Lunenfeld Research Institute, Toronto,
Canada

Caroline Hill

Developmental Signalling Laboratory, London
Research Institute, UK

Jens Rettig

Saarland University, Homburg, Germany

Peter ten Dijke

Leiden University Medical Center,
The Netherlands

Daniel Constam

ISREC-The Swiss Institute for Experimental
Cancer Research, EPFL, Switzerland

George Banting

MRC Centre for Synaptic Plasticity, Bristol
University, UK

Convenors:

Phil Robinson, Peter Gunning

Registration <http://hcbm.mtci.com.au>

Australia & New Zealand Zebrafish Meeting

6-9th February, 2011

Tangalooma Resort,
Moreton Island,
Queensland,
Australia

Keynote Speakers:

Scott Fraser, Caltech, USA

Andrew Oates, MPI, Dresden, Germany

Lalita Ramakrishnan, University of Washington, USA

Stephen Wilson, UCL, UK



Website:

www.uq.edu.au/zebrafish/seminars-and-events

Fifth Barossa Meeting

Cell Signalling and Molecular Medicine

23–26 November 2011
Barossa Valley, South Australia

SCIENCE AMONGST THE VINES®



CONFERENCE THEMES

MicroRNAs, cytokine receptor signalling, Autophagy, Cancer stem cells, Signalling circuits in immunity, Phospholipids in cell signalling, Signalling in vascular development, Novel therapeutics, Global regulation of signalling.

The Barossa Meetings have an established reputation for quality, with its aim of bringing together leading scientists across different disciplines in a convivial atmosphere conducive to open and energetic discussions.

The Barossa Valley, arguably Australia's finest and most picturesque wine growing region, is about one hour's drive from Adelaide, and offers marvelous oenological and gastronomic delights. This year's theme of Cell Signalling and Molecular Medicine aims to continue this tradition, discussing how signalling pathways are triggered, regulated and integrated, and how these pathways interact and intersect in health and disease.

ORGANISING COMMITTEE

Greg Goodall, Convenor; Stuart Pitson, Convenor; Angel Lopez, Convenor; Claudine Bonder; Michael Brown; Michele Grimbaldston; Mark Guthridge; Tim Hughes; Yeesim Khew-Goodall; Sharad Kumar; Quenten Schwarz; Anna Nitschke.

Conference Secretariat

Should you have any questions or require further information about sponsoring or exhibiting at this event, please contact:

Renee Jolly, sapmea, 12/202 Glen Osmond Road, Fullarton SA 5063.

T +61 8 8274 6048 F +61 8 8274 6000 email – rjolly@sapmea.asn.au

Conference Website

www.sapmea.asn.au/signalling2011

For information on the 2009 Meeting, please visit the 2009 website www.sapmea.asn.au/signalling09



Centre for
Cancer Biology

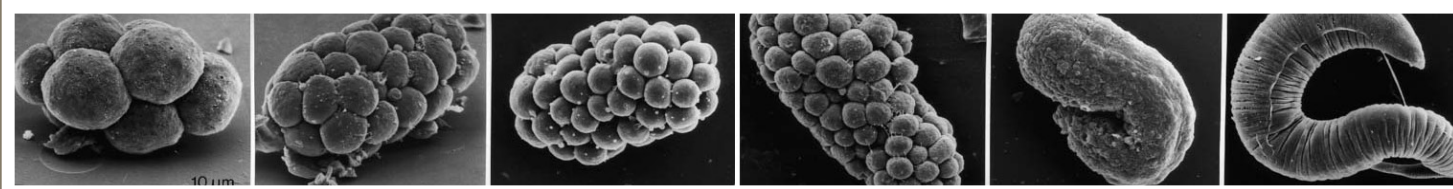
SPONSORS



SA PATHOLOGY

The First Brisbane Cell & Developmental Biology Meeting

Dagmar Wilhelm, Eva Kovacs, Kelly Smith, Lindsey McFarlane and Arnaud Gaudin



The first Brisbane Cell & Developmental Biology meeting was held in October at the Institute for Molecular Bioscience, University of Queensland. This gathering of approximately 100 cell and developmental biologist from all over Brisbane, including the Queensland Brain Institute, Queensland Institute of Medical Research, Diamantina Institute, School of Biomedical Science, School of Biological Sciences, Mater Medical Research Institute, and the IMB, was held as a joint event of the ANZSCDB and the BDBG (Brisbane Developmental Biology Group), a monthly seminar series supported by the Faculty of Science and the Institute for Molecular Bioscience at the University of Queensland. We were extremely lucky to have three outstanding plenary speakers, Jeff Hardin from the University of Wisconsin, Steven Cohen from the Institute of Molecular and Cell Biology in Singapore and Ian Smyth from Monash University, Melbourne.

The day started off with a superb talk by Jeff Hardin combining cell and developmental biology and using the *C. elegans* embryo as a model for investigating cell movement and cell adhesion during embryonic development. Understanding how cells move, and how they make and break adhesions has important implications for understanding birth defects during human development and for understanding cancer progression. Following a number of excellent postdoc and student talks from

the Institute for Molecular Bioscience, the Queensland Brain Institute, Diamantina Institute and the Queensland Institute of Medical Research, Steve Cohen shared his newest data on the role of microRNAs in *Drosophila* development. After the combined lunch and poster session, the national domestic plenary speaker Ian Smyth took us on a journey from forward to reverse genetics in mice to understand cellular and developmental processes of our largest organ, the skin. The rest of the afternoon went by very quickly due to another series of terrific and engaging talks by students and postdocs from the different Institutes and Schools, followed by a relaxing, well-earned get-together over beer and pizza and most-importantly the announcement of the best-poster and best-oral presentation prizes. And the winners were.... Michael Piper (QBI) - best postdoc talk, Eva Kovacs (IMB) - runner-up postdoc talk, Caroline Hopkins (IMB) - best student talk, and most remarkably, Ashley Cooper, an Honours student from the IMB was the runner-up for the best student talk. The poster prize in the postdoc category went to Markus Kerr (IMB) and the best student poster came from Sabine Mangold (IMB).

This one-day meeting was made possible only through the generous support of the ANZSCDB with additional support from the UQ Faculty of Science, the IMB and a number of sponsors (Invitrogen, Millennium Science, Merck, IDT, Pall Life Sciences,

Millipore, Genesearch, Integrated Sciences, In Vitro Technologies, BD, Roche, Sapphire Biosciences, Bioline and Fisher Biotech). The inaugural BCDBM 2010 added something special to the scientific and scholarly atmosphere at UQ, and we all hope that this will be but the first of a regular series.

Melbourne Cell & Developmental Biology Symposium

Ian Smyth and Peter Farlie



The ANZSCDB sponsored 3rd Melbourne Cell and Developmental Biology meeting was held on Friday 19th November at Monash University in the shadow of this year's grant and fellowship announcements from NHMRC and ARC. Congratulations to all whose applications were funded. The site is significant in that the newly renamed Department of Anatomy and Developmental Biology offers one of the very few majors in developmental biology within Australia. The meeting was a resounding success due to the high quality of presentations from the 16 student and post-doctoral speakers and was attended by 102 registrants as well as a number of "informal" guests. Attendees were also fortunate to hear fantastic presentations from our two plenary speakers for 2010, Peter Koopman (IMB, Brisbane) who spoke about lymphatic vessel development and David Thomas (Peter Mac, Melbourne) who gave us an account of his group's work on tumour suppressors and osteosarcoma. Talks encompassed a wide array of systems including flies, fish, chicks, mouse and humans and addressed issues as diverse as "Hippo signalling" and "puberty in malaria". There was also a strong contingent of disease focussed presentations including talks on muscular dystrophy, ciliopathies and Down's syndrome. Attendees came from a broad cross-section of institutions from across Melbourne including La Trobe, Melbourne, Deakin and Monash Universities and medical institutions including Peter MacCallum,

Ludwig, Walter and Eliza Hall Institute, Murdoch Childrens Research Institute, St Vincent's, Prince Henry's and the Australian Regenerative Medicine Institute. While all the student and post-doc talks were excellent and deserving of special recognition, the winners of the Geneworks student prize was Sabine Jurado (St Vincent's Institute) while the winner of the Millipore post-doctoral fellow prize was Elizabeth Fitzpatrick (Murdoch Children's Research Institute). The diversity represented at this meeting is a strong indicator of the growth in cell and developmental biology research sweeping through Melbourne at present. Finally, we would like to warmly thank our sponsors Roche, Geneworks and Millipore for their continued support and participation in our meeting.

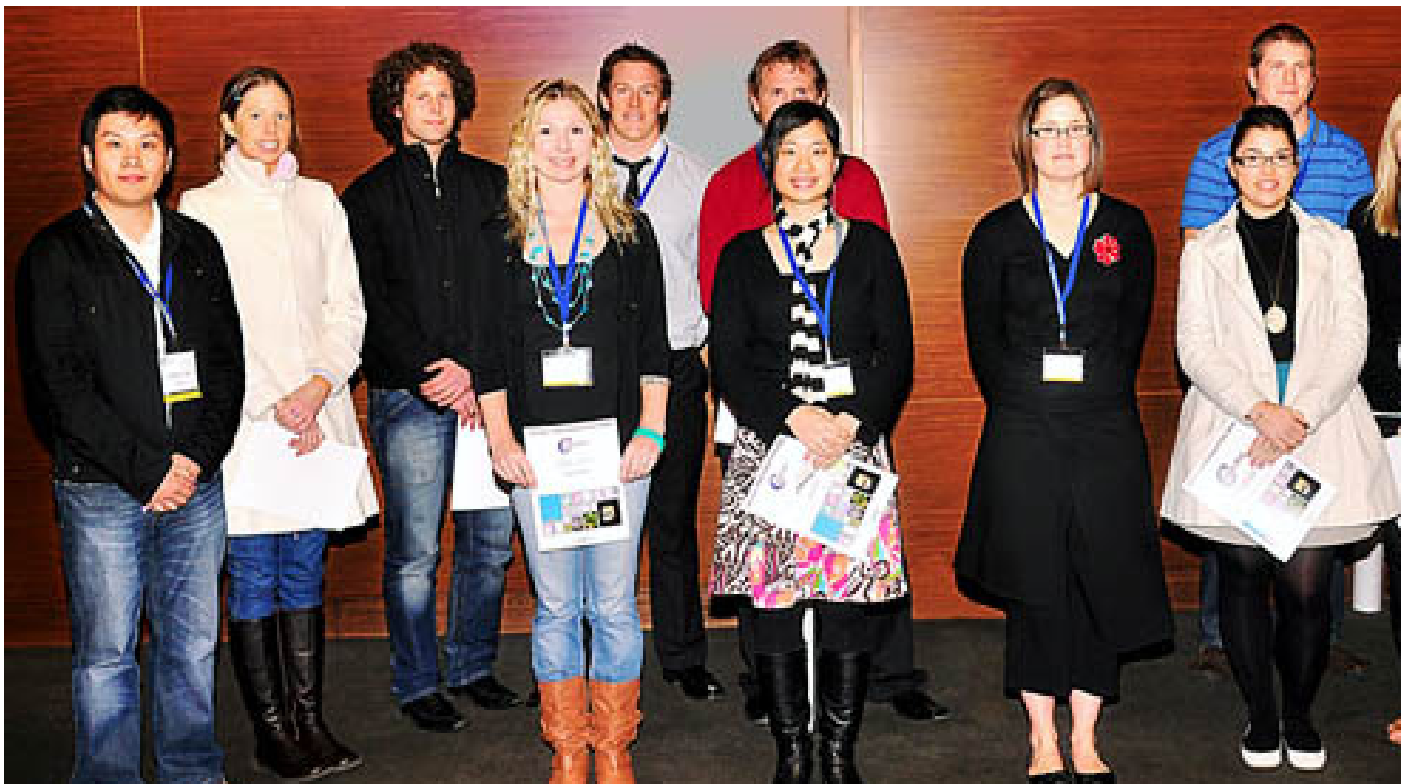
Combined Biological Sciences Meeting

Megan Lloyd

20th Annual Combined Biological Sciences Meeting was held in Perth on the 27th August 2010. This meeting is designed to facilitate the exchange of ideas and expertise within the biological sciences community of Western Australia. The organising committee are drawn from many different tertiary institutions and related Research Institutes. We seek to provide scientists with dynamic presentations from well established researchers at the cutting edge and also to provide a platform for emerging scientists to present their research in a collegiate atmosphere. To this end the

ANZSCDB kindly provided a \$300 student poster prize in 2010 which was won by Elizabeth Thomas from the School of Biomedical, Biomolecular and Chemical Sciences from the University of Western Australia for her pres-

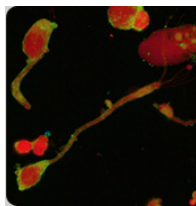
entation titled: Multipotent mammary epithelial cells isolated from the lactating epithelium are different to the non-lactating epithelium. Elizabeth is currently a member of the ANZSCDB.



Recipients of Student Oral and Poster presentation prizes at the 20th Annual Combined Biological Sciences Meeting held in Perth in August 2010. Elizabeth Thomas (ANZSCDB poster prize) is 2nd from the left

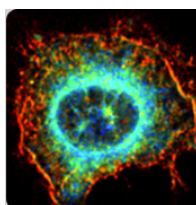
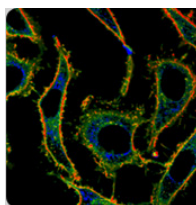
Biomedical Imaging Facility

Inaugural Symposium, UNSW

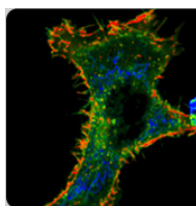


Thomas Fath

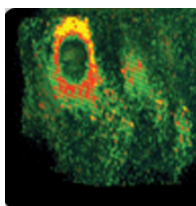
On September 24th the Biomedical Imaging Facility (BMIF) at UNSW held its official opening symposium entitled: "From Seeing to Believing: Quantitative Microscopy". The symposium was jointly sponsored by ANZSCDB and ASBMB. The BMIF is a newly established facility at the University of New South Wales offering a large number of high end microscopy imaging systems including Total Internal Reflection Fluorescence (TIRF), 2-photon and Intravital and Super-resolution Fluorescence (PALM) Microscopy (for more information see: <http://www.bmif.unsw.edu.au>).



The Biomedical Imaging Symposium covered a wide variety of high end microscopy approaches ranging from single molecule imaging and molecular interactions to advanced imaging in different fields of cell biology. The quantification of dynamic processes were also discussed at this meeting.



The Symposium opened with an exciting keynote lecture on "Fluorescence Photoactivation Localization Microscopy" by Samuel Hess (University of Maine, USA). Samuel Hess is one of the pioneers and leading researchers in the field of high resolution microscopy and introduced microscopy approaches that are at the leading edge of in this field.



Following the keynote lecture the first session was entitled "Imaging of single molecules and molecular interactions". Presentations in this session were given by Slobodan Jergic (University of Wollongong), Pierre Moens (University of New England, Armidale) and Darren Saunders (Garvan Institute of Medical Research, Sydney).

The second session addressed "Imaging in cell biology and cell biochemistry". Invited speaker and former president of ANZSCDB, Alpha Yap (University of Queensland, Brisbane) began this session by sharing his recent work on cadherin function in his talk entitled "Cadherin dynamics

and the cytoskeleton". This talk was followed by invited speaker Danny Hatters (University of Melbourne) who gave new insights in pathological processes of Huntington's Disease in his talk entitled "Harnessing tetracysteines tags and biarsenical dyes as sensors for conformational change and protein oligomerisation". Other presentations in this session were given by Dylan Owen (University of New South Wales, Sydney) and Nicole Bryce (University of Sydney).

In the third session themed "Quantifying dynamic processes in vitro and in vivo" the invited speaker Pascal Valloton (CSIRO, North Ryde) gave a comprehensive outline on different aspects of image processing in his talk entitled "Transformational Image Analysis". Other talks in this session were given by Till Boecking (University of New South Wales, Sydney), Katarina Mele (CSIRO, North Ryde), Tatyana Chtanova (Garvan Institute of Medical Research, Sydney) and Gavin Chapman (Victor Chang Cardiac Research Institute, Sydney)

As a special feature at this Symposium, the opportunity was given to four young researchers to present the highlights of their research in form of brief one minute presentations. The students selected for short presentations were Janice Hui, Guillaume Le Saux, Gee Ling and Jia Liu (all from University of New South Wales, Sydney).

Special thanks also go to Zeiss, Leica and Coherent Scientific who were generous co-sponsors of this symposium.



Keynote Speaker
Assoc Prof Samuel Hess

6th Australian Developmental Biology Workshop



Pete Currie

The 6th Australian Developmental Biology Workshop was convened at the Yarra Valley Conference centre on the 24th to 27th of October. 24 hand-picked budding Developmental Biologists, who spanned early phase PhD students to Heads of Departments seeking inspiration, were given a feast of research excellence. The invited international star speakers were Prof Margaret Buckingham (Institute Pasteur, Paris France), Prof Steven Cohen (A* Singapore) and Prof Austin Smith (Wellcome Trust Centre for Stem Cell Research, Cambridge UK) who treated the attendees to a full immersion of Developmental Biology. The program was supplemented by the local invited speakers, Prof Nadia Rosenthal and Prof Christophe Marcelle (Australian Regenerative Medicine Institute) with the "old hands" of the organizing committee, Profs Peter Koopman (IMB Queensland), Richard Harvey (Victor Chang, Sydney), Patrick Tam (CMRI, Sydney) and Peter Currie (AMRI) filling out the program. As always the two hour lectures by the invited speakers were the highlight, which allowed the speakers to drill down into the details of miRNA regulation (Cohen), stem cell pluripotency (Smith) and the genetics of cardiac and skeletal myogenesis (Buckingham). Much discussion was made around new techniques and the advantages of differing model systems to study Developmental Biology: *Drosophila*, zebrafish, chick and mouse. As always a particular highlight was the career advice session, which in a new format for the workshop, in-

involved a question and answer session with all the invited speakers and the workshop attendees. Real life skills of presentation techniques, how to write a scientific paper and how to approach a potential post doc mentor were all discussed. The attendees really made the meeting, interacting intensively with all the invited speakers (and themselves). The environment was very conducive, the weather spectacular, the wine flowed freely and much discussion occurred around the beautiful grounds of the conference centre. Feedback was positive from the attendees and we look forward to the next chance to interact with some of the world's best Developmental Biologists in two years time. Many thanks must go to the ANZSCDB whose sponsorship was critical to obtaining such high profile speakers.

13th Annual Australian Cell Cycle Workshop

Rose Boutros

on behalf of the organising committee (Liz Musgrove, Megan Chircop, Liz Caldon, Marcelo Sergio, Jane Barraclough, Rose Boutros)

This year, the 13th Annual Australian Cell Cycle workshop was co-hosted by the Garvan Institute and the Children's Medical Research Institute. The workshop was held in Katoomba NSW on the 8th-9th November, and attracted around 35 delegates from around Australia and 3 international speakers. A range of topics were covered, including centrosomes, G1 phase and cell growth, mitosis, transcription and cancer, DNA damage, protein turnover, and animal models of the cell cycle.

Our invited, keynote speaker was Stephen Doxsey from the University of Massachusetts. Steve is a renowned international authority on centrosome biology and cytokinesis. At the cell cycle workshop, Steve presented an excellent overview of his lab's recent work entitled: "Centrosome and midbodies: emerging roles in asymmetric division, stem cells, 'cancer stem' cells and ciliopathies". In particular, Steve has found that asymmetric inheritance of the midbody, required for the final separation of the two daughter cells during cytokinesis, confers stem cell properties to differentiated cells. Steve showed that the midbody is inherited by one of the two daughter cells, the one that has the older (grandmother) centrosome. The grandmother cell was found to have low autophagic activity, which allows the midbodies to evade degradation by this machinery. The

cell therefore continues to inherit midbodies over progressive cell divisions, and their accumulation through this asymmetric division confers properties of stem cells and cancer stem cells. In the second part of Steve's presentation, he demonstrated a requirement for cilia proteins in orientation of the mitotic spindle and alignment of the cell division plane. He raised the provocative idea that ciliopathies may in fact be caused by centrosome defects, rather than cilia defects per se. We were very pleased to have Steve join us and his participation in this workshop was made possible by the generous support of our sponsors, including the ANZSCDB.

Our other international delegates were Andrew Burgess from Montpellier in France, who kicked off the mitosis session with the "greatwall of mitosis", a critical regulator of the protein PP2A, whose inhibition is essential for mitotic entry, and Lakshmi Gopinathan from Singapore, who is investigating the role of cyclin A2 throughout cell division using knock-out mice.

From amongst the local group leaders, Jörg Heierhorst presented his exciting new "breathtaking phenotype" whereby loss of the 2-faced DNA repair protein ASCIZ causes lethal defects in development of the respiratory tract in mouse embryos; Patrick Humbert reported on the functional analyses of the Scribble complex using a novel conditional Scribble mutant mouse model; Liz Musgrove presented her lab's recent work on characterising

the role of G1/S phase cyclins in endocrine resistance in estrogen receptor-positive breast cancer; Brian Gabrielli presented an overview of the ARVEC high throughput screening facility at the Diamantina Institute along with some of their initial results from a screen to identify genes involved in cell cycle progression; Derek Richard presented evidence that HSSB1 is essential for ATM and ATR DNA damage repair signalling following ionising radiation-induced DNA double strand breaks; and Boris Sarcevic presented his recent findings on the mechanisms that regulate mono- and poly-ubiquitination of proteins targeted for degradation by the SCF complex.

The intimate size of the cell cycle workshop meant that all delegates, including PhD students and post-docs, had the opportunity to present and discuss their work during the 2-day oral sessions. Overall, it was a very enjoyable and successful workshop.

Thanks to all our sponsors: ANZSCDB, Garvan Institute, Olympus, Bioscientific, GE Healthcare, Edwards Instruments, PLP, ThermoFisher Scientific, Qiagen, BD, Genesearch and John Morris Scientific, for your generous support.

The 2011 Hunter Meeting

Phil Robinson and Peter Gunning
(Convenors)

The Hunter Meeting is the landmark Australian conference for our Cell and Developmental Biologists to exchange ideas and set up collaborations. The glorious setting of the Hunter Valley certainly promotes this outcome. The 2011 meeting will be held from March 22-25 and continues the highest standard of invited international speakers. The meeting will be preceded, as in recent years, with a workshop this year focussed on imaging associated with high content screening and drug discovery. This is a growth area which is bringing together the findings of cell and developmental biology with the potential for clinical application in a range of human conditions.

The meeting will formally commence on the Tuesday evening with the Keith Stanley Lecture. We are happy to announce that the 2011 lecture will be given by Pete Cullen (ANZSCDB Sponsored Plenary Speaker) from the



Pete Cullen

University of Bristol. Peter has made a major contribution to our understanding of the regulation of endosomal function. His discovery of the role of the sorting nexins has provided critical insights into the choreography of endosomal sorting and signalling.

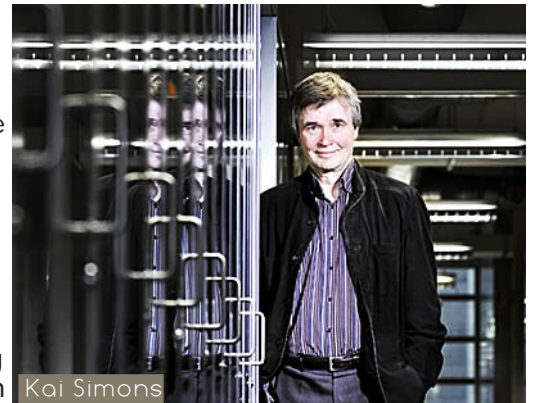
The Hunter Plenary Lecture will be given by Kai Simons

from the Max-Planck-Institute of Molecular Cell Biology and Genetics, Dresden. Kai has been at the forefront of membrane organisation from the beginning and his contributions to the discovery and structure of lipid rafts have transformed our understanding of membrane function. We are all looking forward to hearing the latest developments in mechanisms of formation of rafts.

In addition to Kai Simons and Pete Cullen, our other international speakers include Jean-Paul Thiery (Institute of Molecular and Cell Biology, Singapore), Volker Haucke (Freie University, Berlin), Caroline Hill (London Research Institute), George Banting (University of Bristol), Jens Rettig (Saarland University), Peter ten Dijke (Leiden University), Andras Nagy (Samuel Lunenfeld Research Institute, Toronto) and Daniel Constam (Swiss Institute for Experimental Cancer Research).

Some of the themes that will be covered at the meeting will include Tumorigenesis and Cell Division which will feature Peter ten Dijke. Peter's recent work has involved the study of mechanisms of action of TGF- β in cancer metastasis. The TGF- β superfamily will also be featured in the Signalling, Genes and Development session. Caroline Hill has used this system to define pivotal mechanisms of signalling in development. Her work has informed both mechanisms of specification and patterning in the germ layers and their role in tumorigenesis.

We are delighted to have both Jean-Paul Thiery and Daniel Constam speaking in the Morphogenesis session. Jean-Paul has pioneered our understanding of epithelial-mesen-



Kai Simons

chymal transition and its role in cancer, whereas Daniel has been breaking open new territory in the role of the microenvironment in the coordination of differentiation along distinct lineages.

Membrane trafficking and exocytosis sessions will feature Volker Haucke and Jens Rettig. Volker has been defining the mechanisms of membrane trafficking to the neuronal synapse with a focus on the role of membrane lipids, whereas Jens has used the integration of electrophysiology and imaging in genetic model systems to understand synaptic transmission.

Finally we have one of the founders of embryonic stem cell genetic manipulation, Andras Nagy, speaking in the Stem Cell Biology session. Andras has been a leader in developing experimental approaches for the use of stem cells to study development as well as for their potential use in stem cell-based therapies.

We are looking forward to seeing you in 2011.

Australian Academy of Science 60th Meeting of Nobel Laureates

Connie Berridge (AAS)

The 60th Meeting of Nobel Laureates was held in Lindau, Germany from 27 June to 2 July, 2010. More than 650 young researchers had the chance to interact with 59 Nobel laureates from the fields of physiology or medicine, physics and chemistry, as well as peers from around the world. The Australian Academy of Science supported the attendance of 14 young Australian scientists, with the delegation being lead by Professor Kurt Lambeck FAA, Immediate Past President of the Australian Academy of Science.

Included in the Australian delegation were Duncan Mortimer and Denise Miles, both recommended for nomination by the ANZSCDB. Duncan and Denise were also awarded Robert Bosch Fellowships and supported to attend the Euroscience Open Forum in Turin, Italy, held directly following the Lindau meeting. Both Duncan and Denise indicated that they found the meetings very exciting and beneficial, with Duncan commenting "the Lindau meeting brought home to me the importance of being involved in a strong scientific community and

of working on important problems that you find personally motivating. It was an inspiring experience."



Photograph by Joel Pedro



Prof John Shine

Edna Hardeman

It was my pleasure to represent ANZSCDB, a member society of the Australian Academy of Science, at the 2010 Prime Minister's Prizes for Science on November 18 in the Great Hall, Parliament House, Canberra.

The Prime Minister Julia Gillard and Senator Kim Carr, the Minister for Innovation, presented the awards and the awardees and their stories were truly inspirational.

The 2010 recipients are:

Dr John Shine, director of the Garvan Institute in Sydney, received the \$300,000 Prime Minister's Prize for Science for his science – discoveries of key gene sequences that led to cloned medicines – and his research leadership.

Dr Katherine Trinajstic received the \$50,000 Malcolm McIntosh Prize for Physical Scientist of the Year. This Perth palaeontologist from Curtin University is rewriting the story of the evolution of our deep ancestors and contributing to oil and gas exploration.

Dr Benjamin Kile from Walter and Eliza Hall Institute in Melbourne received the \$50,000 Science Minister's Prize for Life Scientist of the Year. His discoveries will extend the life of blood transfusion products and help explain how cancer starts.

Dr Matthew McCloskey, director of studies at Sydney Grammar's Edgecliff Preparatory School received the \$50,000 Prime Minister's Prize for Excellence in Sci-

ence Teaching in Primary Schools for bringing real science experiments back into the classroom, building on his own experience as a research scientist and zoologist.

Ms Debra Smith, head of science at Centenary High School in western Brisbane received the \$50,000 Prime Minister's Prize for Excellence in Science Teaching in Secondary Schools for inspiring thousands of students and helping to redefine the senior science curriculum in Queensland and across Australia.

An interview with distinguished Australian developmental biologist and ANZSCB member Patrick Tam was published in the December 15 issue of the journal *Development*, one of the most prestigious journals in the field (*Development* 2010 137:4111-4112; doi:10.1242/dev.059337). This is the latest in a series of interviews with eminent developmental biologists, and in it Patrick reflects on the events that shaped his career, where his research is currently heading and what the future holds. The choice of Patrick for this series underlines the respect the developmental biology community has for Patrick, which members of ANZSCDB will no doubt agree is well deserved and brings added profile to our Australian research efforts in developmental and cell biology.

The interview can be read at:
<http://dev.biologists.org/content/137/24/4111.full>



Professor Patrick Tam

By Peter Koopman

Membership News



Cynthia Jensen

I have recently become an International Associate Editor for the journal, *Anatomical Record*. Last month I attended my first editorial board meeting held in Shanghai in association with the annual meeting of the Chinese Society for Anatomical Sciences. *Anatomical Record* is attempting to increase its articles in the area of cell/molecular biology and imaging. The journal has no colour or page charges and there is no cost for online supplementary materials. EarlyView publication of all articles is available online within four weeks of final acceptance. I encourage

you to consider submitting your next manuscript to *Academic Record*. When you submit your manuscript, on line via: <http://mc.manuscriptcentral.com/ar-wiley> email me at the same time so that I may follow the progress of its review on your behalf.

Cynthia Jensen
Department of Anatomy with Radiology, University of
Auckland, New Zealand.
c.jensen@auckland.ac.nz



Development

announces the launch of

the
NODE

A new community website for developmental biologists

<http://thenode.biologists.com>

Regional Round Up

New South Wales

Thomas Fath and Bill Phillips

In March 2010, the Hunter Cellular Biology Meeting had its 10th Anniversary (convenors: Alpha Yap and Phillip Robinson) showcasing a truly exceptional range of International (Sandy Schmid, Martin Schwartz, Ed Munro, Cayetano Gonzalez, Keith Jones, Terrance Johns, Margaret Frame, Michael Way, Frances Brodsky and Carl-Philipp Heisenberg) and National speakers. It is now well established as Australia's premier Cell and Developmental Biology meeting. The 2011 Hunter meeting has an equally stellar lineup of international and national speakers. Members are encouraged to register now for the 2011 meeting.

The Hunter Cell Biology Meeting was preceded by the 16th Annual New South Wales Cell and Developmental Biology Meeting on March 15, organised by the NSW state representatives Thomas Fath (UNSW) and Bill Phillips (USyd) and jointly sponsored by ANZSCDB and ASBMB. With over 100 attendees this year, the meeting provided an excellent platform for researchers around NSW and the ACT with an interest in Cell and Developmental Biology to share their newest research outcomes. We were pleased to welcome Ed Munro (Uni Chicago) as plenary speaker at this year's meeting themed "Cell Polarity and Systems Biology". Invited plenary talks also featured Miles Davenport (Centre for Vascular Research, Lowy Centre, UNSW) and Patrick Humbert (Peter Mac-Callum Cancer Centre, Melbourne). Further talks were given by Vladimir Sytnyk (School of Biotechnol-

ogy and Biomolecular Sciences, UNSW) and PhD students and post-docs from institutions around Sydney, selected from abstract submissions. For the first time prizes were awarded for the best presentations by young investigators (sponsored by ANZSCDB and ASBMB). The inaugural ANZSCDB prizes were awarded to Nikki Curthoys (UNSW/USyd; for the best PhD presentation) and Romaric Bouveret (Victor Chang Cardiac Research Institute; best Postdoctoral presentation). The positive feedback ensured these awards will be continued at the next Annual meeting. Please see the ANZSCDB website for further announcements of the next Annual New South Wales Cell and Developmental Biology Meeting which will be planned for March 2011.

The ANZSCDB has also sponsored together with ASBMB the official Opening Symposium of the Biomedical Imaging Facility (BMIF) at UNSW on September 24th entitled: "From Seeing to Believing: Quantitative Microscopy". The meeting organised by Thomas Fath and Till Boecking (UNSW) brought together researchers using a number of different high-end microscopy techniques in order to analyse Biological processes on the level of single molecules up to the observation of processes in vivo. The opening lecture was presented by Sam Hess (University of Maine, USA) one of the pioneers and world leaders in the field of high resolution microscopy. We were delighted to welcome the invited speaker, and former president of ANZSCDB, Alpha Yap (University of Queensland, Brisbane). Alpha shared his recent work on cadherin function. Other invited speakers included Danny Hatters (University of

Melbourne) and Pascal Valotton (CSIRO, North Ryde). There were also presentations by researchers from around Australia including the University of Wollongong, the University of New England (Armidale) the Garvan Institute of Medical Research (Sydney) the Victor Chang Research Institute (Sydney), the Universities of New South Wales, and Sydney.

November witnessed the 3rd Advanced Bio-Imaging Workshop "Tracking Molecules with Light" at the Hawkesbury Campus of University of Western Sydney. The workshop featured a host of overseas and local speakers applying the latest fluorescence imaging techniques to solve biomedical problems. For information about future workshops contact Dr Anya Salih (a.salih@uws.edu.au).

On November 29 the Annual Bosch Institute Scientific Meeting was held at the University of Sydney. The meeting focused on the cell- and developmental-biology of cancer with featured talks by Nick Barker (Singapore), Gail Risbridger and Andrew Scott (Melbourne), Michelle Hill (Brisbane) as well as prominent Sydney-based researchers. This year's meeting was sponsored by the Cancer Institute of NSW. This was followed on November 30 by the Bosch Young Investigators Symposium. The annual BYIS is organised and presented by volunteer post-graduate and postdoctoral researchers affiliated with the Bosch Institute. It provides a great sampling of where the next generation of biomed researchers are heading.

Regional Round Up

Queensland

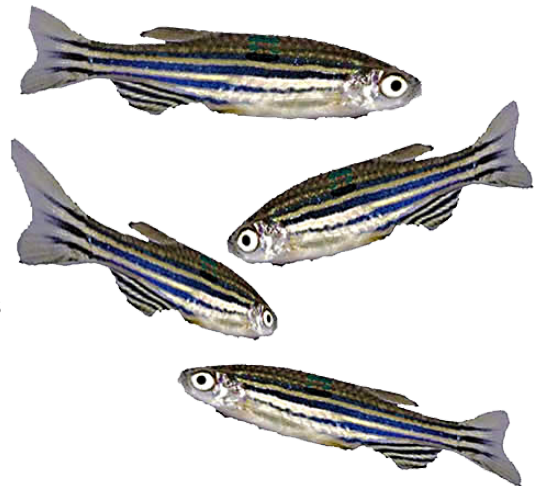
Dagmar Wilhelm and Eva Kovacs

In October 2010 we held for the first time the Brisbane Cell & Developmental Biology Meeting. This one-day symposium not only featured outstanding plenary speakers with Jeff Hardin from the University of Wisconsin, USA, Steve Cohen from the Institute for Molecular and Cellular Biology in Singapore and Ian Smyth from Monash University, Melbourne, but also gave young scientists from Honours student to postdoc level the opportunity to present their work. With approximately 100 participants from all over Brisbane (School of Biomedical Sciences, School of Biological Sciences, Institute for Molecular Bioscience, Queensland Brain Institute, Diamantina Institute, Mater Medical Research Institute, Queensland Institute of Medical Research) the symposium was a great success! We thank the ANZSCDB, the UQ Faculty of Science, the Institute for Molecular Biosciences as well as a number of sponsors (Invitrogen, Millennium Science, Merck, IDT, Pall Life Sciences, Millipore, Genesearch, Integrated Sciences, In Vitro Technologies, BD, Roche, Sapphire Biosciences, Bioline and Fisher Biotech) for their generous support that allowed us to keep the event registration free. The inaugural BCDBM 2010 added something special to the scientific and scholarly atmosphere at UQ, and we all hope that this will be but the first of a regular series.

The field of Developmental Biology has been strengthened by the Brisbane Developmental Biology seminar series (BDBSS), which is now it is 13th year. These monthly seminars, organized by the

Brisbane Developmental Biology Group successfully draw together Developmental Biologists from UQ and other campuses and Institutes in Brisbane. They provide an opportunity to hear from top Australian and international speakers in an informal setting involving beer and pizza. We were fortunate to have ANZSCDB sponsorship to invite the recipient of the ANZSCDB Young Investigator Award 2009, Dr Ruth Arkell, to present her work on the function and mechanisms of regulation of the Zic gene family during early embryonic development.

Finally, the 2011 Australia and New Zealand Zebrafish Meeting will be held on the 6-9 February at Tangalooma Island Resort, with world-class speakers such as Stephen Wilson from University College London, England, who will be giving the EMBO lecture, Scott Fraser, California Institute of Technology, USA, Andrew Oates, Max Planck Institute of Molecular Cell Biology and Genetics, Dresden, Germany and Lalita Ramakrishnan from the University of Washington, USA. This conference is a 'must' for anyone interested in using zebrafish as a model organism.



Regional Round Up

Victoria

Ian Smyth and Peter Farlie

The ANZSCDB sponsored 3rd Melbourne Cell and Developmental Biology meeting was held on Friday 19th November at Monash University in the shadow of this year's grant and fellowship announcements from NHMRC and ARC. Congratulations to all whose applications were funded. The site is significant in that the newly renamed Department of Anatomy and Developmental Biology offers one of the very few majors in developmental biology within Australia. The meeting was a resounding success due to the high quality of presentations from the 16 student and post-doctoral speakers and was attended by 102 registrants as well as a number of "informal" guests. Attendees were also fortunate to hear fantastic presentations from our two plenary speakers for 2010, Peter Koopman (IMB, Brisbane) who spoke about lymphatic vessel development and David Thomas (Peter Mac, Melbourne) who gave us an account of his group's work on tumour suppressors and osteosarcoma. Talks encompassed a wide array of systems including flies, fish, chicks, mouse and humans and addressed issues as diverse as "Hippo signalling" and "puberty in malaria". There was also a strong contingent of disease focussed presentations including talks on muscular dystrophy, ciliopathies and Down's syndrome. Attendees came from a broad cross-section of institutions from across Melbourne including La Trobe, Melbourne, Deakin and Monash Universities and medical research institutions including Peter MacCallum, Ludwig, Walter and Eliza Hall Institute, Murdoch Childrens Research Institute, St Vin-

cent's, Prince Henry's and Australian Regenerative Medicine Institute. While all the student and post-doc talks were excellent and deserving of special recognition, the winners of the Geneworks student prize was Sabine Jurado (St Vincent's Institute) while the winner of the Millipore post-doctoral fellow prize was Elizabeth Fitzpatrick (Murdoch Children's Research Institute). The diversity represented at this meeting is a strong indicator of the growth in cell and developmental biology research sweeping through Melbourne at present. Finally, we would like to warmly thank our sponsors Roche, Geneworks and Millipore for their continued support and participation in our meeting.

Victorian State report

This year has been a busy one for Cell and Developmental biologists in Victoria. In November the society hosted the 3rd Annual Cell and Developmental Biology Symposium at Monash University, which was attended by nearly 100 delegates. This meeting has grown every year since its inception and is quickly becoming a headline event for cell and developmental researchers in the state. Generous support from the Society once again allowed us to host this meeting at no cost to participants and delegates were able to hear excellent plenary talks from Peter Koopman and David Thomas. Future meetings will continue to promote the Societies research interests as well as providing an informal and important way to promote the professional development and research of up-and-coming doctoral and postdoctoral researchers. A meeting report is to be found elsewhere in this Newsletter. In 2010 Victoria has also played host

to a wealth of large national and international meetings of interest to the Society. These included the OzBio forum in September, the AH&MRC Congress in November and the Society-supported 6th Developmental Biology Workshop in the Yarra valley in October. These meeting brought such research stars as Stephen Cohen, Margaret Buckingham, Austin Smith, Brigid Hogan, Reinhard Fassler and Lee Niswander to Victoria (amongst a host of other luminaries). The EMBL Australia program has also seen the return to Australia of talented young developmental biologist Dr Edwina McGlenn from Cliff Tabin's Lab in Boston. Eddy will be based at ARMI and continue her work on the role of microRNA's in development and disease. 2011 promises to be another year of exciting developments in a many research centres in the State. We welcome Dr Julian Heng, from the Australian Regenerative Medicine Institute, as the new State representative in place of outgoing member Ian Smyth.

Regional Round Up

Western Australia

Aleksandra Filipovska

This has been my first year in the role of a WA representative for the ANZSCDB. During the year I started to identify groups that carry out cell and developmental biology research in WA in a bid to bring us together and help organize an annual meeting next year. Together with Dr Evan Ingley who became the second WA representative for the ANZSCDB in the second half of the year we plan to organize a state meeting in May 2011. We hope to learn more about the cell biology work that is carried out in WA and how we can facilitate better interaction and collaboration between our groups.

At the start of the year I attended the Science meets Parliament in Canberra as the ANZSCDB representative, which gave me an insight into how the public and parliamentarians view scientists. The goal of the Federation of Australian Scientific and Technological Societies has been to facilitate better communication between scientists and government officials. The message from the meeting was clear, scientists will benefit from making their science more accessible to the public and government officials. This will help build public interest and support of scientific endeavours thereby making it worthwhile for our government to invest more into scientific research and the researchers.

The second half of the year was quite busy for WA researchers with the hosting of several meetings including the Combined Biological Sciences Meeting and the ASMR WA Medical Research Symposium. The 2010 Annual ASB-MB WA Branch Symposium

focused on RNA biology was particularly successful and attracted a number of high profile interstate speakers and attendance. These meetings have proven to be very stimulating and supportive of students and early career researchers giving them a chance to share their exciting findings with the local scientific community and win prizes. The goal of our WA branch of ANZSCDB for next year is to organize a similarly successful meeting and help us bridge our research interests to colleagues from other states in Australia. We look forward to an exciting year in 2011.

Regional Round Up

New Zealand

Maria Vega Flores

This year, two members of the Society, Profs Phil Crosier and Louise Nicholson, both from the Faculty of Medical & Health Sciences, The University of Auckland, gave their Professorial Inaugural Lectures, to mark reaching the peak of the academic ladder.

Dr. Enid Lam's thesis entitled "Regulation of stem cell development by Runx transcription factors" was awarded The University of Auckland Best Doctoral Thesis for 2009. Enid's research, conducted in the zebrafish model at the Department of Molecular Medicine & Pathology, was supervised by Dr Maria Vega Flores and Prof Kathy Crosier.

Excerpts for all three items from the The University of Auckland News below:

Professor Phil Crosier "Lessons from Medicine from Model Organisms"

Professor Phil Crosier is the Department of Molecular Medicine and Pathology and co-directs the Developmental and Cancer Genetics Research Group.

"Model organisms have emerged as systems to explore, not only biological pathways relevant to embryonic development but also, human disease processes. They have opened up new and informative research fields that have been difficult to access until recent times.

Bony fish are one such system, and despite a significant evolutionary gap to human, they are being used to provide significant insights into many aspects of human disease. The zebrafish model is now providing an in vivo system for drug discovery,

with an early success already in clinical study".

Professor Louise Nicholson "The Next Generation"

Professor Louise Nicholson is in the Department of Anatomy with Radiology and the Centre for Brain Research. Louise is the Associate Dean - Research in the Faculty.

"The Brain is a complex organ not only responsible for what, why and how we do things, but defining who we are. Understanding normal brain function and changes that occur following damage or disease is an important challenge. Although neurodegenerative diseases are characterised by cell death in specific regions of the brain, recent evidence suggests that inflammation is a major contributor to these disorders and to acute injury such as stroke and spinal cord damage. Interrupting the inflammatory cycle provides a target for treatment of these Central Nervous System disorders."

Top doctoral theses acclaimed
19 April 2010

Three PhD theses from the Faculty of Science have been rated among the most outstanding successfully examined at The University of Auckland in 2009.

The Vice-Chancellor's Prize for Best Doctoral Thesis has gone to Dr Jeremy Corfield and Dr Richard Espley (both studying in the School of Biological Sciences) and Dr Jennifer Kruger (Department of Sport and Exercise Science) in the Faculty of Science. They are joined by Dr Enid Lam (Department of Molecular Medicine and Pathology, Faculty of Medical and Health Sciences) and Dr Samuel Veres (Department of Chemical and Materials

Engineering, Faculty of Engineering).

Each year the prize is awarded to the five most exceptional theses successfully examined, judged on their demonstrable significance, the originality and excellence of the research, exceptional academic and intellectual achievement, and timely completion. A total of 246 PhD theses were successfully examined in 2009 and faculties nominated 14 for the Vice-Chancellor's Prize for Best Doctoral Thesis.

Dr Enid Lam (main supervisor Dr Maria Vega Flores, co-supervisor Professor Kathryn Crosier):

"Regulation of stem cell development by Runx transcription factors". This thesis breaks new ground in the study of the physiology of the blood. It shows for the first time in a living organism formation of blood stem cells from the layer of cells lining the aorta.

Member Publications

LM Ittner, YD Ke, F Delerue, M Bi, A Gladbach, J van Eersel, H Wölfling, BC Chieng, MJ Christie, IA Napier, A Eckert, M Staufenbiel, E Hardeman, J Götz
Dendritic function of tau mediates amyloid- β toxicity in Alzheimer's disease mouse models
Cell. 2010 Aug 6;142(3):387-97. Epub 2010 Jul 22.

M Smutny, HL Cox, J Leerberg, EM Kovacs, MA Conti, C Ferguson, NA Hamilton, RG Parton, RS Adelstein and AS Yap (2010)
Myosin II isoforms identify distinct functional modules that support integrity of the epithelial zonula adherens
Nature Cell Biology (In press, published online June 13, 2010)

Lai D, Forrai A, Liu X, Wolstein O, Michalick J, Ahmed I, Garratt AN, Birchmeier C, Zhou M, Hartley L, Robb L, Feneley MP, Fatkin D, HarveyRP
Neuregulin 1 sustains the gene regulatory network in both trabecular and non-trabecular myocardium
Circulation Research 2010, 107:715-727 [journal cover] (IF=9.21)

Granados JT, Pope M, Eason J, Bu'lock F, Cox J, Kirk EP, Fatkin DA, Feneley MP, Harvey RP, Armour JAL, Brook JDB
A-myosin heavy chain (MYH6) mutations affecting myofibril formation are associated with congenital heart defects
Human Molecular Genetics (IF=7.73) [in press 20.07.10]

Medioni C, Bertrand N, Mesbah K, Dupays L, Wolstein O, Washkowitz AJ, Papaianou VE, Mohun T, Harvey RP and Zaffran S
Expression of Slit and Robo genes in the developing mouse heart
Developmental Dynamics (IF=3.08) [in press 07.09.10]

Marius Sudol and Kieran F. Harvey (2010)
Modularity in the Hippo Signaling Pathway
Trends Biochem Sci. In press

Felix A. Grusche, Helena E. Richardson and Kieran F. Harvey (2010)

Upstream Regulation of the Hippo Size Control Pathway
Curr Biol 20: R574-82

Chircop M, Malladi C, Lian A, Page SL, Zavortink M, Gordon CP, McCluskey A and Robinson PJ (2010)
Calcineurin activity is required for the completion of cytokinesis
Cell. Mol. Life Sci. 67:3725-3737

Hill TA, Gordon CP, McGeachie AB, Venn-Brown B, Odell LR, Chau N, Quan A, Mariana A, Sakoff JA, Chircop M, Robinson PJ, and McCluskey A (2009)
Inhibition of dynamin mediated endocytosis by the dynoles – synthesis and functional activity of a family of indoles
J. Med. Chem. 52(12): 3762-73

Han SP, Kassahn KS, Skarszewski A, Ragan MA, Rothnagel JA, Smith R
Functional implications of the emergence of alternative splicing in hnRNP A/B transcripts
RNA. 2010 Sep;16(9):1760-8. Epub 2010 Jul 22

Han SP, Friend LR, Carson JH, Korza G, Barbarese E, Maggipinto M, Hatfield JT, Rothnagel JA, Smith R
Differential subcellular distributions and trafficking functions of hnRNP A2/B1 spliceoforms
Traffic. 2010 Jul 1;11(7):886-98. Epub 2010 Apr 16

Carilla-Latorre S, Gallardo ME, Annesley SJ, Calvo-Garrido J, Graña O, Accari SL, Smith PK, Valencia A, Garesse R, Fisher PR and Escalante R (2010)
MidA is a putative mitochondrial methyltransferase required for mitochondrial complex I function
J. Cell Sci. 123, 1674-1683

Heath JK (2010)
Transcriptional networks and signaling pathways that govern vertebrate intestinal development
In Current Topics in Developmental Biology Volume 90. Organogenesis in Development. (Ed. Peter Koopman, Elsevier) pp 159-192.

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