



AuPS News

June, 2007

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President's Report

An extraordinary meeting of the AuPS Council was held in Newcastle on the 24 April, primarily to discuss the planning of the joint AuPS and Australian Society for Biophysics (ASB) meeting with the Local Organising Committee, chaired by Derek Laver. Details of this exciting meeting follow in this Newsletter and are now posted on the AuPS web site. It is pleasing to see that our Special Interest Groups have taken a proactive role in organising symposia, each one of which includes an overseas speaker. A Plenary lecture is to be given Professor Andy Marks (Columbia University) the Physiological Society Exchange Lecturer is Professor Mark Dunne (University of Manchester) and the AuPS Invited Lecture is to be given by Professor Don Robertson (University of Western Australia). Overall, the programme is shaping up to be outstanding in its breadth of coverage of physiological research and education.

Given that many AuPS members are likely to be attending the IUPS 36th World Congress in Kyoto, Japan in July-August 2009, there will not be an AuPS Annual Meeting in 2009.



The AuPS Council have agreed to hold the 2010 Annual Meeting and 50th Anniversary of AuPS jointly with the Australian Neuroscience Society (ANS) in Sydney. Given that many physiologists are members of both societies and that ANS evolved from AuPS in

1980, it is a wonderful opportunity to make it an occasion of celebration of the achievements of Australian physiology and, in particular, neurophysiology.

An Exchange Lecturer programme has recently been agreed to with the Scandinavian Physiological Society. The Scandinavian Physiological Society (SPS) was founded in 1925 and is a society for researchers in physiology and related sciences in the Nordic countries: Denmark, Finland, Iceland, Norway and Sweden. The Society has more than 800 members and a number of AuPS members have long-standing research collaborations with members of SPS. It is proposed that an Australian physiologist will attend the SPS Annual Meeting to be held in Oulu, Finland in August 2008 as the Exchange Lecturer and a Scandinavian physiologist will attend the AuPS Annual meeting in 2010.

David Adams
President

Newcastle 2-5 December 2007



Joint ASB - AuPS Scientific Meeting

Planning is well underway for the joint meeting between the Australian Society for Biophysics and the Australian Physiological Society. The meeting will be held in the convivial atmosphere of the Newcastle City Hall, which is centrally located and within walking distance of the river foreshore, beach, hotels and restaurants.

KEY DATES

1 Sep 2007 Registration and abstract submission opens.

28 Sep 2007 Abstract deadline.

28 Sep 2007 Early registration deadline.

2-5 Dec 2007 Scientific meeting.

Abstracts from Society members and sponsored non-members are welcome for presentation as free communications or posters. In addition there is a line-up of lectures, ten AuPS symposia across a variety of topics and a trade display.

There is a wide variety of accommodation, ranging from luxury hotels to hostels, within walking distance (1 km) of City Hall. Newcastle City Council offers an accommodation service and registrants will be able to access this service via a web link on the conference registration page. A dinner will be held on the Tuesday night in the Harbourview function centre, Queens Wharf, located on the river foreshore just a few hundred meters from City Hall.

To keep up-to-date with the planning for the meeting, visit the conference web page at:

<http://www.aups.org.au/Meetings/>

LECTURES

AuPS Lecturer

Prof. Don Robertson, University of WA

Plenary Lecturer

Prof. Andrew Marks, Columbia University

Physiological Society Exchange Lecturer

Prof. Mark Dunne, University of Manchester

SUMMARY OF AUPS SYMPOSIA AND ORGANISERS

Amino acid transport and signaling

(Stefan Bröer)

Potassium channels (Jamie Vandenberg)

Influencing factors in the fate of cardiac myocytes in heart disease (Lea Delbridge, Livia Hool and David Allen)

EC coupling and fatigue (Graham Lamb and Angela Dulhunty)

Exercise, Free Radicals and Skeletal Muscle (Mark Hargreaves and Mike McKenna)

New insights into insulin signalling in health and disease (Mark Febbraio)

Calcium channels, microdomains and vascular function (Caryl Hill, Dirk Van Helden and James Brock)

Endocrinology, reproduction and fetal development (Chen Chen)

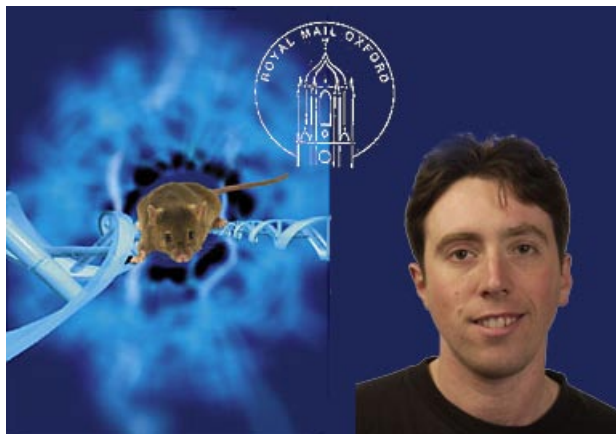
TRP channels (David Cook and Anuwat Dinudom)

Physiology education (Phil Poronnik and Kirsten Farrand)

Derek Laver

on behalf of the
Local Organising Committee





Postcard from Harwell, UK

Sometimes in life you have to take a chance, and many of us know just how much luck plays a part in scientific careers. At the Medical Research Council centre at Harwell, the saying ‘you make your own luck’ is taken at its most literal. One of the principal aims of the centre is to identify novel genetic determinants of a wide range of diseases and physiological functions including diabetes, circadian rhythms, development and hearing loss. All this is done using a random mouse mutagenesis study and a variety of phenotyping screens. The chemical N-ethyl-N-nitrosurea (ENU) is injected into male mice to create random germline mutations of approximately 30 mutations per genome. Mice are then mated to a genetically different strain of mice, C3H for example, to create a set of founder mice with mutations on different parts of the genome. From here one needs to design a simple screen to find mice with the strongest phenotype, for example a plasma blood test for diabetes. The mice that are then found to be the most strongly affected can then be continually bred back to C3H mice with affected individuals. The power that we researchers have by knowing the entire mouse genome is invaluable, as we use this knowledge to map the mutation to the phenotype and identifying a gene involved in your physiological process of interest. The fascination behind this method of research is that the mutations created are random, so there is always a possibility that you can discover a gene underlying a disease that no-one could ever have guessed. As I said, we make our own luck...

Nathan Absalom

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NEW APPOINTMENTS

AProf. Kemal Türker (The University of Adelaide) has recently been awarded a prestigious Marie Curie Chair of the European Union. Kemal will be returning to Turkey, where he will be setting up a laboratory in the Center for Brain Research, Ege University in Izmir. One of the aims of the Marie Curie Chair program is to lure distinguished researchers back to Europe. The European Union provides three years support, after which time the host institute agrees to appoint the Chair holder to an equivalent position in the faculty.



Ege University is where Kemal began his academic career as a graduate of the Dental Faculty. This was followed by a PhD at the Institute of Physiology, The University of Glasgow, investigating the mechanical and reflex properties of the jaw muscles. He then returned to a lecturship in the Department of Physiology, Hacetteper University, Ankara, Turkey. In 1983, Kemal joined the Department of Physiology (now Discipline) at The University of Adelaide, where he has advanced his research career, supported by the NHMRC fellowship scheme.

In setting up his laboratory at Ege, Kemal will continue his research in the quest to establish a functional ‘wiring diagram’ of the human brain and spinal cord. The challenge is how to correctly interpret the indirect recording methods that are necessary in human studies. Kemal has been instrumental in the development of ‘rate’ based methods (peristimulus frequencygram), which have been validated in animal models, for estimating the properties of neuronal circuits.

Kemal has also been actively involved in the Turkish community in Australia and co-chaired the ‘Spirit of Gallipoli’ project from its foundation and hosted Turkish War Veterans for Anzac Day activities. This has resulted in the book ‘Victory of Friendship’ which covers the special relationship between the Turks and Australians.

Trevor Lewis

AuPS Represented at Science Meets Parliament 2007

Science Meets Parliament (SmP) 2007 was held on the 27-28 March and coincided with the release of the Review of Public Support for Science and Innovation by the Productivity Commission. This was the eighth SmP organized by FASTS and over the two days 160 scientists met with 120 politicians to discuss the benefits of science to Australian society and to our economy. AuPS was represented by Prof. Stefan Bröer from the Australian National University.



Prof. Stefan Bröer in discussion with Dr. Mark Bellingham, in preparation for visiting the parliamentarians.

The first day was spent at University House, ANU, and was primarily a briefing on how to bring science to the attention of politicians. A number of great points were made by Bradley Smith (FASTS), Andrew Nette (National Tertiary Education Union), Jennifer Doggett (Client Solutions) and Dr Richard Denniss (advisor to Senator Bob Brown) who all work at the interface between science and politics. The main message was to be positive and enthusiastic about the science you do. Moreover, not to waste the time but explain your point to the politician concisely, in understandable language, free of jargon and acronyms.

There were four great guest speakers on the first day, including Senator Kim Carr (Shadow minister for Industry, Science, Innovation and Research) who outlined the science initiatives of



the labour party, Prof Peter Schofield (CEO of the Prince of Wales Medical Research Institute) reported about the work of the Lockhart committee on stem cells, Dr Jim Peacock (Chief Scientist) talked about his role as a science advisor for the government and Michael Woods (Productivity Commission) gave a summary of the Review of Public Support for Science and Innovation.

The most important issues raised in these and in later presentations were: maths and science education; the need to engage the public to talk about science; and the need to re-focus universities' policy away from the commercialization



Prof. Stefan Bröer with Ms. Julie Owens, Member for Parramatta.

and back to their primary aim and obligation of training and education. This point was most vocally raised by the Productivity Commission and senator Kim Carr. In relation to maths and science education, the general consensus was that there is a need to make improvements from primary school level through to university courses and the importance of science for the future of Australia should not be underestimated. Therefore, it is important to engage the public, to talk about science in wide forums and explain what are the benefits coming out of science.

The first day concluded with the SmP 2006 Dinner in the Great Hall of Parliament House and that provided the opportunity for the attending scientists to mix socially with a wide range of politicians. The guest speaker at the dinner

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was Prof. Will Steffen, an environmental scientist from ANU.

Throughout the second day groups of 2-3 scientists met with interested politicians of all political persuasions. Stefan Bröer met with Senator Guy Barnett (Tasmania; interested in nutrition and diabetes), Julie Owens (Member for Parramatta; basic research) and David Jull (Member for Fadden; science and education). All politicians showed a genuine interest in scientific research and education. It was not anticipated to achieve direct actions and outcomes from the meetings with Senators and Members of Parliament. SmP rather wants to foster the notion that investing into research, development and education is worthwhile and produces benefits in the future.

Prof. Stefan Bröer

Notes:

1. AuPS is a member society of the Federation of Australian Scientific and Technological Societies. For further information, see <http://www.fastso.org>

2. The Review of Public Support for Science and Innovation is available for download from the web site of the Productivity Commission at:

<http://www.pc.gov.au/study/science/index.html>

3. Dr. Mark Bellingham (University of Queensland) is a FASTS board member, representing the medical and cognitive sciences cluster of societies.

AuPS Announcements



New server to back-up AuPS website

A new computer, jointly funded by the AuPS and the Department of Physiology at the University of Sydney, has been installed in the Anderson Stuart Building at the University. This computer will provide the development site for the AuPS web site operating on Dreamhost. It will also provide a nightly backup of a number of items, including the membership and other databases from the Dreamhost site. Thanks go to Dave Davey for putting this important infrastructure in place.

AuPS Exchange Lecturer to the UK



Prof. David Allen has been working with the Physiological Society (UK) to put together an itinerary for his visit in September as the Exchange Lecturer. So far David has plans to present a lecture entitled "Of muscle damage in mice and men: stretch-activated channels and reactive oxygen species" at the Physiological Society meeting at the University of Manchester (5-6 September 2007). This meeting will have a focus on "Cardiac electrophysiology: with a special celebration of the centenary of the discovery of the sinoatrial and atrioventricular Nodes." David also has invitations to visit Leeds, Liverpool, Glasgow, Aberdeen, Dundee, Oxford, University College London, Bristol and Imperial College London to present his lecture. It looks like it will be a busy couple of weeks.

Physiological Society Exchange Lecturer to Australia

Prof. Mark Dunne from the Faculty of Life Sciences, University of Manchester will be attending the Newcastle scientific meeting as the Physiological Society Exchange Lecturer. Prof. Dunne had originally planned to attend the meeting in Brisbane last year, but was unable due to circumstances involving industrial action by academics in the UK.



Prof. Dunne's research interests revolve around the endocrine pancreas. His research group has followed the development of the human pancreas, from the differentiation of the ductal epithelium through to the appearance of insulin containing islets. He is also interested in the derivation of human insulin-secreting cells from human embryonic stem cells to provide an alternative transplantation therapy for diabetes.



Kyoto, Japan, July 27 - August 1, 2009
Function of Life : Elements and Integration

**XXXVI International
Congress of Physiological Sciences**



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 Roger Evans and Ding Feng Su
 (New Editors in 2007)

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Frontiers in Research Series!

Issue Three:

Arterial Function

Vol. 34 Issue 7 July 2007

This special series of eight review articles examines the current status of arterial function measures as surrogate biomarkers of cardiovascular disease. The international panel of authors from Australia, France and the United Kingdom are leaders in the field, and the series provides an up-to-date analysis of the role of arterial biomarkers in the evaluation of vascular health as well as an authoritative reference source.

Highlights from this special issue include:

Genetic influences of the arterial wall

Dr. P Boutouyrie, B Kingwell

Glucose, Insulin, Diabetes and Mechanisms of Arterial Dysfunction

J Cameron, K Cruickshank

Age, Hypertension and Arterial Function

Dr CM McEniery, Dr Ian Wilkinson, Albert Avolio

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 Issue 4 - Vol. 34 Iss.9 Sep 2007**



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AuPS Announcements



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In parallel, he is investigating the potential of adult pancreatic progenitor cells.

Prof. Dunne is in the process of arranging his itinerary while visiting Australia. If you are interested in hosting Prof. Dunne to speak at your institution, please contact the AuPS National Secretary, AProf. David Saint.

A.K. McIntyre Award

Each year the AuPS calls for nominations for the A.K. McIntyre Award that recognises the contributions of members to Australian physiological science in their pre-doctoral and early post-doctoral careers. This Award is generously supported by SDR Clinical Technology, a long time supporting member of the AuPS. Nominations will be called for later in the year, but start thinking now about potential nominees.

Student and Postdoc Publication Prizes

Each year the AuPS awards a prize to the best student and postdoc publications from the members of the Society. The prize has a value of \$500 to assist with attending a scientific conference. For the 2007 prizes, the publication needs to have been published between 30 September 2006 and 1 October 2007. A formal call for nominations will be made later in the year, but keep this prize in mind when preparing your papers for publication.

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Scientists and science communication in Australia

What do you think about communicating your specialised knowledge with the general public? Whatever you think, you're invited to contribute your views and experiences to a national survey of Australia's scientists.

Australia's political and scientific leaders have called for better communication between the scientific community and the general public - to help society make choices about new technologies, limited resources and environmental degradation.

But what do Australia's scientists think about that? Are there differences between the views and actions of scientists about communication with the general public because of their age, gender, scientific discipline or employment sector? What helps or hinders scientists who want or need to communicate with the general public? By completing an anonymous, 15-minute, on-line questionnaire you will help answer those questions.

You will also be contributing to a research project aimed to help scientists and others who want to facilitate a greater understanding of Australia's scientists and their work. I am interested in your views if you live in Australia, have a university or other tertiary degree, and are employed as a scientist, identify yourself as a scientist, or are identified by others as a scientist.

Thank you to those of you from the Australian Physiological Society who have already completed the questionnaire.

The questionnaire will be open until midnight on Friday 29 June 2007. You can access it via:

http://info.anu.edu.au/CPAS/012PP_Research_Projects/_scientists_poll.asp

This project is endorsed by FASTS and supported by the Australian Academy of Science.

I hope you will join in! Your views are very important to our gaining a better understanding of this challenge facing scientists today.

Suzette Searle

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UPCOMING MEETINGS

12 to 17 July 2007

IBRO World Congress Of Neuroscience Melbourne

Online registration and abstract submission is now available. For full details, including the scientific program and satellite meetings see <http://www.ibro2007.org>

25 to 29 August 2007

25th International Australasian Winter Conference on Brain Research

Copthorne Resort Hotel, Queenstown, NZ.
Contact Prof. Cliff Abraham
(awcbr@psy.otago.ac.nz)
Further information <http://www.awcbr.org>

30 November 2007

Cardiac Arrhythmias: A challenge for the 21st century

Victor Chang Cardiac Research Institute. Further information: contact Gabby Thomson (g.thomson@victorchang.unsw.edu.au)

2 to 5 December 2007

Joint AuPS and ASB scientific meeting Newcastle

For further information, check the AuPS website-
www.aups.org.au/Meetings

17-21 February 2008

International Symposium on Resistance Arteries

Hamilton Island, Great Barrier Reef, Queensland, Australia

Organised by Mike Hill (Missouri), Chris Triggle (Calgary), Shaun Sandow (Sydney)
Further information: <http://medalsciences.med.unsw.edu.au/SOMSWeb.nsf/page/9thISRA2008>

27 July to 1 August 2009

XXXVI International Congress of Physiological Sciences

Kyoto, Japan. The theme for the meeting is Function of Life: Elements and Integration. Further information: <http://www.iups.org>

AUPS - SPECIAL INTEREST GROUP COORDINATORS

Muscle

- Graham Lamb
- Gordon Lynch

Smooth Muscle and Autonomic NS

- Caryl Hill
- Dirk Van Helden
- James Brock

Physiology Education

- Phil Poronnik
- Jeff Schwartz
- Anne Sefton

Endocrinology, Reproduction and Fetal Development

- Chen Chen
- Karen Gibson

Cardiovascular

- Livia Hool
- David Allen
- Lea Delbridge

Neurophysiology

- Pankaj Sah

Exercise

- Mark Hargreaves
- Mike McKenna

Metabolism and Signalling

- Mark Febbraio

Cell signalling

- David Cook
- Grigori Rychkov

Channels and Transporters

- Stefan Broer
- Jamie Vandenberg

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