

June 2005

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AuPS Website

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

President's Message

Professor David Cook, Dr. David Saint and I, as representatives of the Australian Academy of Sciences and AuPS, attended the General Assembly of the International Union of Physiological Sciences (IUPS) held in San Diego on 31 March 2005. The meeting was attended by 71 delegates and 18 observers from more than 50 different countries.

The President's Report given by Professor Alan Cowley, highlighted that "despite the growing number of physiologists who are successfully integrating modern genomic techniques into physiological studies at the cellular, organ and whole animal levels, US and international surveys show that there is a growing demand for physiologists which is not being met by existing training schemes." The IUPS Council had reviewed the re-organisation of the Commission and Committee structure and the Assembly voted to combine Commissions IV (Senses) and VI (Neural Control) into a single Commission IV entitled



Neurobiology and to create a new Commission VI to cover the area of Molecular and Cellular Physiology. Given the strength of Australia in both Neurobiology and in Molecular and Cellular Physiology it is hoped that Australia is represented on both these new Commissions. The Assembly elected the new Officers and Councillors and the Executive Committee consists of Prof. Aki-

michi Kaneko - President, Prof. Irene Schulz - 1st VP, Prof. Pierre Magistretti - 2nd VP, Prof. John Hall - Treasurer, and Prof. Ole Petersen - Secretary General. Professor Ann Sefton is in her second term representing Australia on the Council. The Assembly confirmed that the XXXVI IUPS Congress will take place in Kyoto, Japan from 27 July to 1 August 2009 and that the Physiological Society (UK) will host the XXXVII Congress in Birmingham in July 2013.

I wish to thank the Local Organising Committee and in particular Dr. Stefan Bröer, ANU

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CALENDAR OF EVENTS 2005

28 September -1 October, Joint AuPS and ASB Meeting, Canberra.

25-29 September, ComBio2005, Adelaide Convention Centre

8 July, Institute of Biomedical Research, "Receptors, channels and transporters." The University of Sydney.

President's Message

(from page 1)

in the organisation of the upcoming joint AuPS/ASB meeting to be held in Canberra, 27 - 30 September 2005. The programme promises to be outstanding with numerous international physiologists and biophysicists either giving Plenary Lectures or participating in Symposia (details given below).

I am delighted that Professor Angela Dulhunty, ANU, will continue the tradition of

prominent Australian physiologists giving the AuPS Invited Annual Lecture. The young physiologists will be hosting an event on the Wednesday evening at which Dr. Alan Finkel, former CEO of Axon Instruments and Vice President and Chief Technology Officer of Molecular Devices, is an invited speaker. I encourage Australian physiology researchers, educators and students to submit abstracts and attend the upcoming meeting.

David Adams



Joint ASB / AuPS Meeting Canberra 27 – 30 Sep 2005

The joint Annual Meeting of the Australian Society for Biophysics and the Australian Physiological Society will be held in Canberra from the evening of September 27 to 30 (Tuesday evening until Friday). Our venue is the Rydges Lakeside Hotel, which will also provide the day catering during the meeting. The Rydges Hotel is located on the shores of Lake Burley Griffin and offers stunning views over the lake if you decide to stay in the Hotel. Rooms can be booked at Rydges for a price of \$147 per night. As the meeting coincides with Floriade, we recommend to book accommodation well in advance.

The organisation of the meeting is now at an advanced stage. We were able to attract a number of high-profile plenary speakers to the meeting.

PLENARY SPEAKERS

- **Francisco Bezanilla** (Voltage-gated ion channels)
- **Nigel Unwin** (Structure of the Acetylcholine receptor)
- **Angela Dulhunty** (2005 AuPS Invited Lecture)
- **Peter Tieleman** (2005 ASB Plenary Lecture, "Pores, Channels and Transporters: Computational Studies of Membrane Transport")

We will have eight symposia and nine free oral communications sessions assembled from abstracts submitted to the meeting. These will reflect the thematic variety in both societies.

SYMPOSIA

- **Ion channel gating** (Chair: Shin-Ho Chung)
- **Physiology teaching in the 21st century: trends, challenges and innovations** (Chair Kay Colthorpe)
- **Epithelial transport of ions and metabolites** (Chair: David Cook, Stefan Bröer, Daniel Markovich)
- **Membrane associated proteins that regulate muscle contraction** (Chair: Angela Dulhunty)
- **Membrane Protein Structure and Interactions** (Chair: Frances Separovic)
- **Functional Roles of Potassium Channels in the Vasculature** (Chair: Mike Hill)
- **Ion pump function and regulation** (Chair: Ron Clarke)
- **Regulation of Membrane Transport** (Chair: David Adams)

The conference Dinner will be held at the Australian National Museum only a short walk from the Hotel. The meeting will offer the opportunity to visit the Australian National Mu-

seum and/ or to visit Floriade, which runs from mid September to mid October. Registration and abstract submissions will open 1 July and the deadline for final registration is 29 July. Submission of abstracts will require prior registration.

FEE STRUCTURE

Members of AuPS or ASB:

- Full registration \$295
- Student concession \$150

Non-members:

- Full registration \$400
- Student concession \$250

Online registration and abstract submission will be available at the AuPS web site, where a preliminary program of the meeting can also be found. We are looking forward to seeing you in Canberra for this exciting meeting.

Stefan Bröer
(on behalf of the
organising committee)



The challenge of funding medical research

The AuPS is an affiliate member of the Australian Society for Medical Research (ASMR), which is co-ordinating a campaign to lobby the government for further investment in health and medical research. The President of the ASMR, A/Prof Bronwyn Kingwell, has issued a statement to members, urging them to take up this campaign.

The doubling of the NHMRC budget (\$613.7 million over five years) instigated by the Howard Government in response to the 1999 Health and Medical Strategic (Wills) Review is now complete. The Investment (Grant) Review of Health and Medical Research released in December of last year has validated the investment made, with both health and economic returns to the Australian community.

The Investment Review also recommended a number of reforms to the medical research sector and further strategic investment to develop better health outcomes. Currently neither the Government nor the opposition have com-

mitted support for these recommendations. The ASMR is coordinating the presentation of a coherent case to both Government and the private sector (industry and philanthropic), pinpointing the precise details of how further medical research investment will make a difference.

While Australia performs highly in medical research, there is insufficient funding to translate very many exciting discoveries into health practice or products that could deliver both health and economic gains to Australia. Further investment would allow the translation of discoveries into health policy and practice, and the targeting of important health issues including the development of our scientific workforce to cover ALL areas of health and ensure that we retain our medical researchers in Australia

This investment is crucial to ensure that Australians continue to reap the benefits of medical research. The ASMR, the medical research community and patient groups have joined to impress the critical importance of this issue on our politicians, in a campaign to influence the federal 2006 budget process. The agenda for the budget is set in October 2005. We have until then to make our case.

Members are encouraged to discuss these issues in relation to your own research area with your local member through both face-to-face meetings and through letters. In addition, you are encouraged to write to the Health Minister (Tony Abbott), the Treasurer (Peter Costello) and the Prime Minister regarding these issues. All the facts, sample letters and relevant contact details are available on the ASMR web site. The future of health and medical research in Australia is at stake!

AProf Bronwyn Kingwell
President, ASMR

For further information, please check the ASMR website:
<http://www.asmr.org.au/Campaign/campaign.html>

AuPS represented at Science Meets Parliament

In March, I had the honour of representing AuPS at the annual Science Meets Parliament (SMP) event, organized by the Federation of Australian Scientific and Technological Societies (FASTS)¹. Participation in SMP is important for both our Society and for the entire medical research community. Investment in medical research in Australia is 40% below the average of OECD nations, despite the fact that we enjoy an overall rate of return of approximately 500% on every dollar spent (Access Economics report²). Moreover, career prospects for many of our talented scientists are at crisis point, as the system is overloaded. There is a danger that Australia will become a service economy, with insufficient emphasis on academic research, innovation and commercial development. These concerns are perhaps reflected in the fact that this year's SMP was oversubscribed many months before the closing date. The event involved over 200 scientists who participated in more than 150 scheduled meetings face-to-face with parliamentarians in their offices at Parliament House.

Prior to the meetings, we were briefed by Jane Glatz (Research Australia³) and Mark Bellingham⁴ prepared a synopsis of highlights from the Access economics report. This provided us with the key points that could be conveyed succinctly in the short time available with the parliamentarians. We were then divided into groups of 3 to 4 scientists or industry representatives. My first meeting was with Sylvana Catalano, an advisor to Julia Gillard (ALP, Vic), who expressed alarm at the plight of scientists in maintaining funding for their research and establishing a career. In our meeting with Senator George Brandis (LP, QLD), we discussed the current routes to commercialization and the shortcomings that exist. Our final meeting was with Senator Peter Cook (ALP, WA), who had been a Science Minister in the Hawke/Keating era and under-

stood many of the pitfalls we face. He was stimulated by our figures that related to Australia's level of finance in R&D at below OECD levels. Senator Cook realizes the importance of science as an international enterprise and our need to establish and maintain our position in that premier level.

Other activities included lunch at the National Press Club, in which we were addressed by Dr Brendan Nelson, Government Minister for Science, Education and Training, and the Government-Industry-Science Dinner that was held in the Great Hall of Parliament House. The guest speaker was Dr Caroline Kovac, General Manager, IBM Healthcare and Life Sciences (USA) and was hosted by Robyn Williams (ABC Radio National). Opportunities to participate in formal discussion forums and attend Parliamentary Question Time were also available.

Overall, this was a very rewarding experience. The event provides an important opportunity to increase the

profile of research and provide researchers with a perspective on the decision-making processes that directly affect our ability to conduct research in this country. I hope that the relationships between researchers and politicians will be further developed at next year's meeting.

Craig Neylon

Notes:

1. AuPS is a member society of the Federation of Australian Scientific and Technological Societies. For further information, see <http://www.fast.org>
2. Access Economics report "Exceptional Returns: The value of investing in health research and development in Australia" which was commissioned by ASMR and tabled in the parliament in December 2004. The full report is available from either the Access Economics site: <http://www.accesseconomics.com.au/reports/asmreport.pdf> or from the ASMR site: <http://www.asmr.org.au/general/Except.pdf>
3. See <http://www.researchaustralia.com.au>
4. Mark Bellingham (University of Queensland) is a FASTS board member, representing the medical sciences cluster of societies.



Dr Craig Neylon with Senator Cook

AuPS Council

We have at present three positions vacant on the AuPS Council. These are: 1) the Council position vacated by David Adams when he became president, 2) the Assistant Editor and 3) the AuPS Archivist. These positions will need to be filled at the next AGM. Don Robertson and Lea Delbridge, both of whom have provided valuable service to AuPS, will finish their term as Councillors at the next AGM.

The terms for three members of the executive will also end at the AGM. These are the National Secretary, David Saint, who is eligible for another term; the Treasurer, Craig Neylon, who is eligible for another term but has indicated he will not stand; and the Editor, Dave Davey, also eligible for another term, but he has suggested that new appointee should be sought.

The success of the AuPS relies upon the contributions of the councillors and executive in serving the members. Now is the time for members to consider whom they would like as representatives on the AuPS Council. Further details and a call for nominations will be circulated before the AuPS meeting in Canberra.

The editorship and web site management

In the past few years, the Society has adopted network technology as the primary form of communication. Email is the basis of all notices, including this newsletter and even voting in elections or on changes to the Constitution. The web server holds the membership database, which members can access and modify, subscriptions are paid through it, we have an on-line Proceedings, on-line registration for our meetings, and even on-line application for membership. It also handles all our mailing lists.

When I was appointed as Editor in 2002, part of my brief was to fully implement the Proceedings of the Society on-line. This meant taking over the web site. However, with other services moving to a web basis, running the web site has become a task much greater than that of being Editor. The membership database used to be managed by the National Secretary; the payment of subscriptions used to be handled by

the Treasurer; registration for meetings used to be handled by the meeting Local Secretary. The task of being "Editor" has grown, and yet the editorial tasks have not reduced. In essence, there really are now two jobs: Editor and Webmaster. For the past two years, I have provided separate Editor's and Webmaster's reports to the AGM.

The Society's Constitution calls for the appointment of an Associate Editor. The Associate position was intended to provide continuity of Editorial activities when the Editor was unavailable, e.g. on study leave. When the Society moved to one meeting per year, and later appointed an Editor who had retired from academia, the need for an Associate declined, and one has not been appointed since 1993.

I believe there is now need for an associate. Between the demands of the various on-line services, the database, the mailing lists and the real editorial tasks of the Proceedings, there are no quiet periods in the year. With only one person able to maintain the web services, it has become difficult for that person to be away from internet access. It also makes the Society vulnerable to the proverbial Bus.

I propose that the two editorial positions be changed to "Editor" and "Webmaster", to take account of the changes in practice since the Assistant Editor was added to the Constitution.

The Editor would have responsibility for

- Processing abstracts
- Dealing with the meeting programme with the local committee
- Handling papers from symposia and invited lectures
- The on-line proceedings content
- Acting as the CEPP society editor

The Webmaster would have responsibility for:

- The on-line membership database
- The on-line membership application system
- Sending requests for subscription payments
- The various email lists
- The web site
- The on-line proceedings management (but not content)

Depending on the nature of the web server, which at present is hosted on a University machine running Linux, which in principle allows access by more than one person and from any-

where on the internet, some of the items on these lists could be shared between the two people, making travel without a laptop feasible. If the web server moved to a different environment, for example a commercial site, some of the list would probably have to be handed over to commercial operators, and some of the way the editorial tasks are handled at present markedly changed.

There are pressures to move the web server to a different machine, mostly arising from security concerns. My preferred option would be for the Society to purchase a machine to allow the present structure to continue. Some members of Council oppose the Society investing in hardware, so the possibility of a move to a commercial site is quite likely.

If there are members who are experienced with working in that form of web server environment, they should consider one of the editorial positions. My term of appointment ends at the AGM.

Dave Davey

Biomedical and Medical Science Programs

Biomedical and medical science programs in Australia and New Zealand represent a thriving and growing sector at universities in the two countries. The earliest of these named degree programs have been available for a decade now and the demand for places in these programs is very high and growing. Although each institution that offers an undergraduate biomedical or medical science degree is likely to cite a slightly different rationale, it is fair to say that these programs were conceived to fill a niche for specialised programs that go beyond the ordinary BSc. In the case of biomedical science, the tailored educational and technical experiences characterising the curriculum are intended to advantage graduates and enhance their prospects in specific career pathways, including postgraduate research, postgraduate education in clinical or allied health sciences, employment in the biotechnology sector or other specialist areas (eg patent law and pharmaceutical marketing).

The novel curricula devised for these programs may constrain the students' options

within a narrower scope of subjects than the ordinary BSc, but this is often balanced with specialty, multidisciplinary and advanced subjects, professional placements, problem-based learning or specialist honours programs. The named degree programs are likely to have smaller enrolments than the conventional degree programs, which enhance the opportunities for interactions among students, student-instructor interactions, and greater feedback from students. These features are usually the result of a conscious effort to provide novel opportunities, the ability to cater to a relatively small cohort of students within a single program and are a part of providing a distinct identity for the program and its graduates.

In December 2004, coordinators of named undergraduate programs in Australia and New Zealand were invited to the University of Adelaide to participate in a one-day forum to discuss issues of common purpose and concern. One result of the meeting was the formation of an association to facilitate sharing of ideas and information. The provisional name of the association is Biomedical and Medical Science Programs in Australia and New Zealand (BAMSPANZ). The group will also establish a web site to act as an information node and portal to the individual programs.

One common concern raised by coordinators at the meeting, was that the success of the programs has made it difficult to maintain a small-group environment in teaching, mentoring and practical laboratory experiences. There is an increasing demand from students for entry into the programs and pressures from universities to accommodate more students. Another often voiced concern, also related to demand pressure, is the challenge of creating and maintaining a separate identity for biomedical students and for the degree itself. Although research is the underlying theme in the biomedical programs, students on a pre-clinical pathway are welcome and at least one program even promotes itself as a step to a medical degree. The last major challenge raised at the meeting is that of providing unique practical opportunities that are relevant to students. This challenge is an indicator of the personal attention offered to students in these programs, in finding ever new and exciting placements on research projects, or providing other relevant

practical experiences for students who are looking for a career outside of research.

As the programs mature and assume a more distinct identity, they appear to be ever more popular. If the students and administrative officers of the universities keep telling us that the programs are worthwhile, they are also providing the means and incentives for us to face the challenges. In a future edition of this newsletter, I hope to further describe the work of BAMSPANZ and innovations among the member programs.

Jeff Schwartz



Any errors or misrepresentations of BAMSPANZ or any member institution in the present essay are inadvertent and I accept full responsibility. For more information about the Association or the biomedical science program at the University of Adelaide, please contact me at jeff.schwartz@adelaide.edu.au. I

gratefully acknowledge the following individuals at the University of Adelaide for support in development of the biomedical science degree and for backing efforts to promote named degree programs, including assistance with BAMSPANZ: Vice Chancellor, Deputy Vice Chancellor (Education), Dean of Sciences and Head of the School of Molecular and Biomedical Science. I also sincerely thank my colleagues on the Adelaide BSc (Biomed Sci) oversight committee and BAMSPANZ.

RECENT APPOINTMENTS

Boris Martinac has been appointed as Foundation Chair of Biophysics in the School of Biomedical Sciences at The University of Queensland, after 14 years in the Department of Pharmacology at The University of Western Australia.

Margaret Morris (Department of Pharmacology, The University of Melbourne) has accepted the position as Chair of Pharmacology at the School of Medical Sciences, The University of New South Wales. Prof. Morris will take up the position in September.

The next issue of the AuPS News will be distributed in September, before the joint AuPS / ASB meeting. Any contributions for the AuPS News, including news of any recent appointments or movements of people in physiology and allied disciplines please contact Trevor Lewis (t.lewis@unsw.edu.au)

This issue of AuPS has been compiled by Trevor Lewis, with assistance from Dave Davey and David Adams.