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## President's Report



This is the final AuPS Newsletter for 2009 and my report as President of the Society. It has been an honour and privilege to serve the Society which will celebrate its 50<sup>th</sup> Anniversary at the combined ANS/AuPS meeting in Sydney January 31<sup>st</sup> – February 3<sup>rd</sup>, 2010. I have thoroughly enjoyed my tenure as President of the Australian Physiological Society during which time I believe the Society has been revitalized with increased growth and participation of members in our annual meetings. The quarterly Newsletter has also improved communication to members of the Society's activities and I trust that this will continue into the future. I am delighted that Professor David Allen, University of Sydney, has accepted nomination by the Council to be the next President of the Society.

The annual AuPS meeting this year was suspended due to the IUPS Congress held during July in Kyoto, Japan. As reported by the National Secretary, Professor Joe Lynch, Australian physiologists were well represented and featured prominently on the scientific program. Congratulations to Professor Denis Noble, University of Oxford, who was elected as President of IUPS (2009-2013) and to Professor Caroline McMillen, University of South Australia, who was elected to the IUPS Council. The 37<sup>th</sup> Congress of IUPS will be held at the International Convention Centre, Birmingham, UK 21<sup>st</sup>-26<sup>th</sup> July, 2013 and with the financial support of the The Physiological Society (UK) should be a resounding success.

The AuPS meeting to be held together with the Australian Neuroscience Society (ANS) in Sydney January 31<sup>st</sup> – February 3<sup>rd</sup>, 2010 will celebrate the 50<sup>th</sup> Anniversary of the Society. The occasion will be marked with an Historical Seminar followed by a Cocktail Party, on the evening of Monday 1<sup>st</sup> February 2010 in the Anderson Stuart Building, University of Sydney. The seminar, chaired by Professor Geoffrey Burnstock, will be presented by Emeritus Professor Paul Korner and Professor Uwe Proske, all Honorary AuPS Members. They will talk about the early history of the society and its influence on the later development of physiology, pharmacology and neuroscience disciplines in Australia. The AuPS/ANS meeting currently has about 900 registrants and promises to be an outstanding meeting, with Professor David Attwell, University College London, as The Physiological Society UK Exchange Lecturer, the Presidential Symposium AuPS speakers, Paul Gregorevic and Renae Ryan and numerous symposia with AuPS speakers. The Council has nominated Professor Fred Mendelsohn and Professor George Stephenson for election to Honorary Membership in recognition of their significant contributions to the Society and Australian physiology and they will be recognised at this meeting. Finally, my sincere thanks to the Local Organising Committee, AuPS representatives: Anuwat Dinudom, Jamie Vandenberg, Trevor Lewis, co-chaired by Roger Dampney, University of Sydney, for their tireless efforts together with the ANS representatives in the planning and organization of this meeting.

This year the Council has sought nominations for Treasurer, Editor, Webmaster, 3 Councillors and a Student Council member whose terms expire at the January 2010 AGM. I am delighted that Associate Professor Peter Thorn, University of Queensland, has been appointed as Treasurer, Honorary Associate Professor Dave Davey as Editor, and Dr Annick Anselin as Webmaster. I wish to express my sincere thanks to Professor Stefan Broer, (Treasurer), Dr. Anuwat Dinudom, (Editor), Associate Professor Derek Laver, (Webmaster) and Councillors, Livia Hool, Giuseppe Posterino, Jamie Vandenberg and Stefan Gehrig, student Councillor for their commitment and valuable contributions to the Society. We have received 10 nominations for the vacant Council positions and the elections are currently open with a closing date of Friday 25<sup>th</sup> December. I encourage AuPS members to vote and become involved in your professional Society.

In 2009, there has been considerable activity at the national level with regard to Australian science policy and funding. Federal, State and Territory Innovation Ministers have adopted a set of national innovation principles to guide policy development and increase the consistency of government innovation programs across Australia. The Framework of Principles for Innovation Initiatives is available (see link 1 below) and this forms part of the Government's response to the Cutler review. Other items of potential interest to members include the recently released consultations on the Excellence in Research for Australia (ERA) framework and indicators for the full ERA evaluation (link 2 below) and the public consultations on the NHMRC's Funding and Peer Review Processes (link 3 below) and a proposal to establish an Australian Research Integrity Committee (link 4 below).

Professor Stefan Broer and I have represented AuPS at the FASTS AGM and the AAS National Committee for Biomedical Sciences, respectively, during the past month. Professor David Allen will succeed me as a member on the AAS National Committee for Biomedical Sciences.

The vitality of the Society arises directly from the efforts of its members, which are very much appreciated. In particular, I would like to thank AuPS Council members for their commitment, advice and service. In the current climate, the role of the Society grows ever more important in promoting research, research training and teaching in physiology.

Thank you again for your support and best wishes for a healthy and productive 2010.

**David Adams**  
**President, Australian Physiological Society**

- 1) <http://www.innovation.gov.au/Section/Innovation/Pages/FrameworkofPrinciplesforInnovationInitiatives.aspx> .
- 2) [http://www.arc.gov.au/era/current\\_consult.htm](http://www.arc.gov.au/era/current_consult.htm)
- 3) [http://www.nhmrc.gov.au/guidelines/consult/consultations/review\\_NHMRC\\_funding\\_peer\\_review.htm](http://www.nhmrc.gov.au/guidelines/consult/consultations/review_NHMRC_funding_peer_review.htm)
- 4) [http://www.nhmrc.gov.au/guidelines/consult/australian\\_research\\_Integrity.htm](http://www.nhmrc.gov.au/guidelines/consult/australian_research_Integrity.htm)



**FASTS** Federation of Australian Scientific and Technological Societies

## **MEDIA RELEASE**

### ***FASTS announces new President & new Executive Members***

Dr Cathy Foley, an Australian leader in Applied Physics, commenced her two-year term as President at the FASTS AGM on 24 November, the second woman to be elected to this role in FASTS 24 year history. Dr Foley was recently awarded the National Telstra Women's Business Award for Innovation and has been appointed to the Questacon Advisory Board. Dr Foley's brief biography is available [HERE](#).

**50<sup>th</sup> Anniversary Meeting, Jan 30<sup>th</sup> – Feb 3<sup>rd</sup> 2010.**



The banner features the Australian Neuroscience Society (ANS) logo on the left, the text 'ANS / AuPS 2010' in large green and blue letters in the center, and the Australian Physiological Society (AuPS) logo on the right. Below the main text, it states 'Sydney Convention & Exhibition Centre' and 'Sunday, 31 January - Wednesday, 3 February 2010'. At the bottom, it reads 'The 30th Annual Meeting of the Australian Neuroscience Society, in conjunction with the 50th Anniversary Meeting of the Australian Physiological Society' and provides the website 'http://www.sallyjayconferences.com.au/sydney2010'.

Program details including plenary speakers and symposia details can be viewed at

<http://www.sallyjayconferences.com.au/sydney2010/program.html>

Online registration and abstract submission can be made easily at:

<http://www.sallyjayconferences.com.au/sydney2010/registration.html>

<http://www.sallyjayconferences.com.au/sydney2010/abstracts.html>

**Satellite Meetings**

Six exciting satellite meetings are being held around the main meeting as follows:

Vision: from Photoreceptors to Behaviour

Neuroscience of Fear and Anxiety

7th Australasian Auditory Neuroscience Workshop

Dementia, Ageing and Neurodegenerative DISEases Group (DANDIS)

Sensorimotor Control of Movement

Automated Neurite Tracing and Image Analysis for Neurobiology

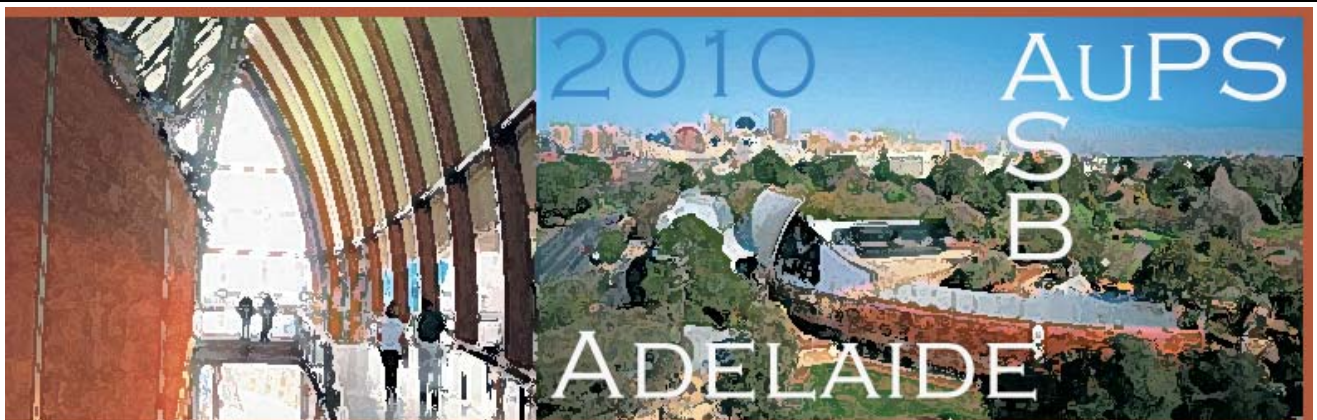
Details can be found at: <http://www.sallyjayconferences.com.au/sydney2010/satellite.html>

**AuPS Historical Lecture and 50th Anniversary Cocktail party**

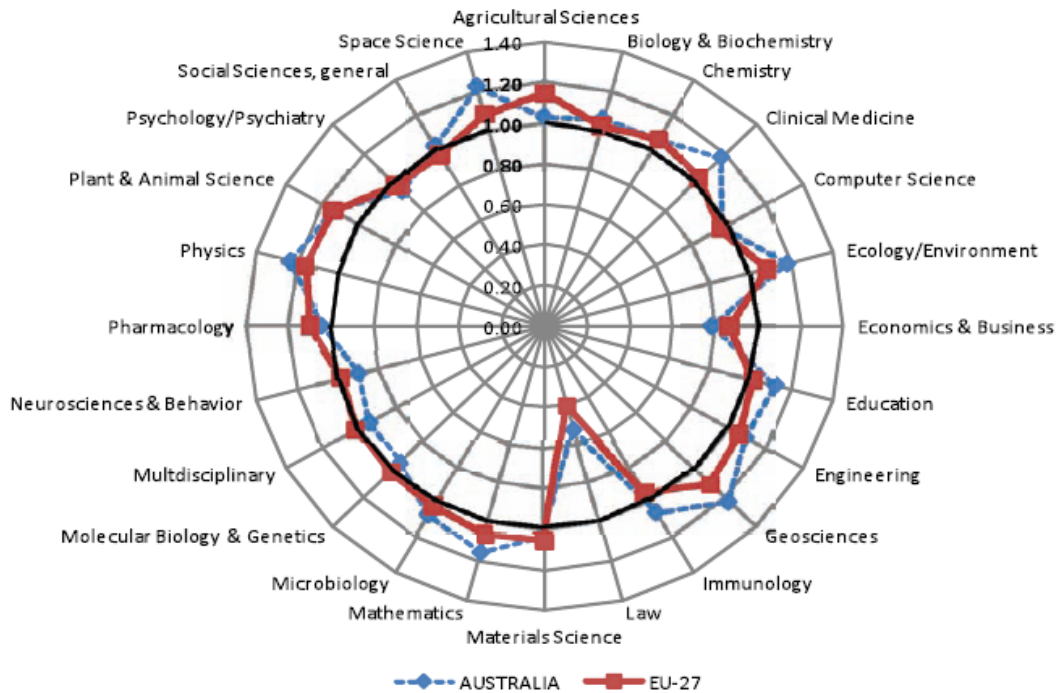
On the evening of Monday 1<sup>st</sup> February 2010, to celebrate the 50th Anniversary of our Physiological Society, there will be a seminar from 6:30 pm until 7:30 pm in the Eastern Avenue Auditorium followed by a Cocktail Party in the Common Room and Courtyard of the Anderson Stuart building.

Chaired by Professor Geoffrey Burnstock,

The speakers, Emeritus Professor Paul Korner and Professor Uwe Proske, will talk about the early history of the society and its impact on the later development of physiology, pharmacology and neuroscience in Australia.







**Figure 3: Radial diagram showing the RCI performance of Australia versus the EU-27**

Source: THOMSON REUTERS® National Science Indicators®

Published by the

## Forum for European–Australian Science and Technology cooperation



These interesting data provide a snap shot of Australian research efforts, relative to the world (black line). There is an earlier paper at the <http://www.feast.org/> web page which has more detailed stats.

**Editor.**

### **Professor Geoff Burnstock honoured by:**

The Copernicus Gold Medal from the Università Degli Studi di Ferrara (Italy) in 2009 (right).

The British Neuroscience Association Award for 'Outstanding Contributions to British Neuroscience' at the Annual BNA Meeting at the Royal Society in December 2009.



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## ***Election of Honorary Members***

Members may be nominated for Honorary membership at any time.  
Current Nominations; Fred Mendelsohn and George Stevenson

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### ***Fred Mendelsohn***

Fred Mendelsohn graduated in medicine from Melbourne University in 1965, followed by physician training at the Royal Melbourne Hospital. He then shifted to the Department of Medicine at the Austin Hospital, Heidelberg, where he undertook an MD and later PhD in basic research on the renin-angiotensin system, which remained his major interest.

In 1972 a Nuffield Foundation Travelling Medical Fellowship took him to the Middlesex Hospital Medical School where he worked under James and Sylvia Tait on the control of adrenocortical aldosterone secretion. This was followed by an Australian National Heart Foundation Medical Fellowship at the Physiology Institute, University of Munich, Germany, where he worked under Professor Klaus Thurau on the local actions of angiotensin in the kidney.

He returned to the Department of Medicine at the Austin Hospital in 1975 where his basic research focussed on the local actions of angiotensin in target organs, particularly the adrenal, kidney, cardiovascular system and brain. At that time angiotensin was regarded purely as a circulating hormone. The work of Mendelsohn and colleagues was influential in establishing key roles for locally-produced angiotensin in target tissues and their key pathophysiological roles in hypertension, now a widely accepted concept. This work culminated in novel receptor mapping that led to the discovery a number of new actions of angiotensin in regulation of blood pressure and fluid and electrolyte balance.

This work has had a major impact on the field and underpins the widespread use of ACE inhibitors and angiotensin receptor blockers. He has delivered one hundred and twenty invited presentations at international scientific meetings and has more than 280 peer-reviewed publications.

He was appointed a Senior Physician at the Austin Hospital in 1978 and awarded a Personal



Chair in Medicine at Melbourne University in 1990. He was influential in the introduction of Positron Emission Tomography into clinical research in Australia as the Founding Scientific Director of the PET Centre at the Austin & Repatriation Medical Centre in 1996

In 1996 he became Director of the Howard Florey Institute of Experimental Physiology and Medicine and was appointed to the R Douglas Wright Chair of Experimental Physiology and Medicine at The University of Melbourne. At the Florey Institute he focussed research on neuroscience and increased collaboration with basic and clinical neuroscience groups. The Institute grew markedly and amalgamated with two other research institutes to form Florey Neuroscience Institutes which will occupy new purpose-built facilities at Parkville and Heidelberg.

He has held overseas appointments as Visiting Professor, Green Centre, University of Texas Southwestern Medical School, Dallas, 1993; Maitre de Conferences, College de France, Paris, 1994; Visiting Professor, Department of Pharmacology, Osaka City University, 1992 & 1996; Visiting Scientist at the National Institutes of Health, Bethesda, Maryland, 1982-83 and National Heart Foundation Overseas Medical Research Fellow, Physiologisches Institut, University of Munich, 1974-75.

His Awards and Distinctions include the Selwyn Smith Prize, Melbourne University 1985, for best contribution to medicine over the previous 3 years; E Graeme Robertson Lecturer to the Australian Association of Neurologists, 2000; President of the Australian Neuroscience Society, 2002-2004; Fellow Australian Academy of Science, 2001. He was awarded an Order of Australia, Officer in the General Division in 2004 for contributions to science.

## ***Dimitrie George Stephenson***

Over the last 32 years D. George Stephenson has made a major contribution to physiological research and teaching in Australia, in particular to our current knowledge of the complex role played by Ca<sup>2+</sup> in muscle contraction. His research has been prolific and inspiring, and has been continuously supported by ARC and NHMRC since 1978 when he took up his first academic appointment in Australia as a Lecturer in Physiology in the Zoology Department at La Trobe University. George received his first degree in Biophysics from the University of Bucharest (a 5 year course), which he completed in 1968 with equivalent first class Honours/MSc. He received his PhD from the University of Bristol in 1974, and was awarded a DSc by that institution in 1992. George was appointed to a personal chair in his present department in 1992, in recognition of his eminent research work. Over his career George has trained more than 20 honours students, 16 PhD and MSc students and 10 postdoctoral fellows, many of whom now occupy senior positions in the academic and



research community. He has published more than 20 scientific reviews and in excess of 140 refereed papers in international journals including *Nature* (3); *Science* (2); *PNAS* (1); *The Journal of Physiology* (50 full papers); *The European Journal of Physiology* (14); *The American Journal of Physiology* (12), *Journal of Muscle Research and Cell Motility* (14); *Biophysical Journal* (3); *Biochimica et Biophysica Acta* (5).

In 1995 he delivered the *Invited Lecture* to The Australian Physiological and Pharmacological Society and was elected to the Editorial Board of the *Journal of Physiology* on which he served for 7 years. In 1999 George was elected to the Australian Academy of Science, and in 2002 awarded the Centenary Medal by the Australian Government. Of great importance George has always been a stalwart supporter of physiological research in Australia, endlessly encouraging and supporting not only his many students and colleagues but many others in the scientific community as a whole.



**VNI COLLABORATES WITH NHMRC ON  
2010 PROJECT GRANT FUNDING ROUND**

See <http://www.nhmrc.gov.au/grants/apply/projects/index.htm> for the NHMRC Project Grant Funding Policy for funding commencing in 2011.

**AIM Overseas, Australia-wide competition to win a free place in summer school** (July/August 2010) at the University of Oxford, targeted at academic and administrative staff of universities.

### **The winner of the competition will receive:**

A free place at a 2010 Oxford summer school; the winner can choose from the following summer schools - *Creative Writing, English Literature, International Politics* or *History, Politics and Society*.

A return flight from Australia to London, flying AirAsiaX premium class

A domestic airfare sponsored by AIM Overseas to an AirAsiaX departure city in Australia

A free Lonely Planet pack

Publication of their account of their experiences and photos on AIM Overseas website, blog and newsletter.

To enter go to [www.aimoverseas.com.au](http://www.aimoverseas.com.au) and fill out the competition entry form.

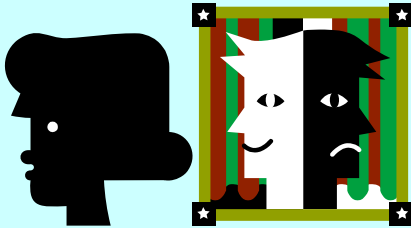
The Australian Physiological Society is an Incorporated Association in the State of Victoria. Reg. No. A0021266A



Mr. Stefan Gehrig will complete his term as the Student Representative on the AuPS Council at the AGM in Sydney. Stefan has provided terrific service to student members, by coordinating student events at each scientific meeting.

## WANTED

### One (1) Student Councillor



Interested in Science administration?  
 Fancy yourself in boardrooms making decisions on the future?  
 Want to know what prizes are on offer?  
 When conferences are planned?  
 To have a say in your society?

Have a go on the AuPS council

Send your contact details to the AuPS Secretary.  
[secretary@AuPS.org.au](mailto:secretary@AuPS.org.au)



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# Australian Synchrotron Postgraduate Award (ASPA) Application Form



Please return Application Form together with supporting documentation (evidence of enrolment in postgraduate course) to:

Ms Sonya Sivaraj  
 Senior HR Officer  
 Australian Synchrotron  
 800 Blackburn Road  
 CLAYTON VIC 3168

Fax: 03 8540 4210  
 Email: [sonya.sivaraj@synchrotron.org.au](mailto:sonya.sivaraj@synchrotron.org.au)

Applications close: 23 December 2009

#### Funding Details

DESCRIPTION	Year 1 AUD (\$)	Year 2 AUD (\$)	Year 3 AUD (\$)
Living Allowance p.a.	7,500.00	7,500.00	7,500.00
Travel / Minor Equipment Purchases / Consumable p.a.	5,500.00	5,500.00	5,500.00
<b>TOTAL (\$)</b>	<b>13,000.00</b>	<b>13,000.00</b>	<b>13,000.00</b>

- Funding is paid to, and administered by, the university in which the student is enrolled.
- Responsibility for establishing taxation liability lies with the Award recipient.

## AuPS Council Concerns

The Annual General Meeting (Sydney, 3<sup>rd</sup> January, 2010) will see a large turnover of Council membership.

### **Current nominations for the vacant Council positions are;**

Dr. Michelle Gibson - La Trobe University  
Dr. Deanne Skelly - Victoria University  
Dr. Glenn McConell - University of Melbourne  
Prof. Daniel Markovich - University of QLD  
Dr. Renae Ryan - University of Sydney  
Dr. Yue-kun Ju - University of Sydney  
Prof. Kaneez Fatima Shad - University of Karachi  
Dr. Robyn Murphy - La Trobe University  
A/Prof. Matthew Watt - Monash University  
Dr. Gina Ravenscroft - University of WA

Please vote for them by placing a number from 1 (for your first preference) to 10 (for your last preference) before their names and return the list via email to Prof Joe Lynch (AuPS Secretary).

**The election closing date is Friday, 25th December.**

The Council congratulates: Associate Prof Peter Thorn from University of QLD., elected unopposed as AuPS Treasurer, Dr Annick Ansselin as Webmaster and Associate Prof. Dave Davey for his recent appointment as Editor and continuing IT Manager.

The Presidential nominee for election at the next AGM is Prof David Allen.

### **Changes to the constitution:**

As foreshadowed at the last AGM, the Council has proposed that the Society institute a 'President-elect' system to facilitate the transfer of corporate knowledge from one President to the next.

This requires a change to the Constitution, which in turn requires a vote of the membership.

We propose to hold this vote at the next AGM.

The relevant section of the Constitution is reproduced below with the draft changes approved by the Council in red. The two main things to note are that the President-elect would be a member of the Executive and that the President's term would be decreased by one year in consideration of the fact that one year will be served as President- elect.

#### **4. Organization**

- 4.1 The governing body of the Society is a Council consisting of: the Officers; an Associate Editor who shall assist the Editor and be responsible for the Society Newsletter; a Webmaster responsible for the Society's web site; an IT Manager responsible for technical aspects of the web site, on-line Proceedings, membership database and mailing lists; and six Councillors elected by the Ordinary Members and a seventh Councillor elected by the Student Members, together with such members as may be co-opted to Council in accordance with sub-clause 12 of this clause.
- 4.2 The Officers of the Society shall be the President, **the President-elect if applicable in accordance with sub-section 4.1 and 5 of this clause**, the National Secretary, the Treasurer and the Editor, who shall constitute the Executive Committee.
- 4.3 The first Council consists of the persons whose names, offices and term of office are set out in the Second Schedule to this Constitution.
- 4.4.1 The President-**elect** shall be elected at an Annual General Meeting on the nomination of the Council. **This election will take place one year before the due date for the retirement of the President.** In the event that the Annual General Meeting should not wish to accept the Council's nomination, the matter shall be referred back to the Council who shall make a further nomination at the next business meeting of the Society.
- 4.4.2 The National Secretary, the Treasurer and elected Councillors shall be elected by ballot among the members of the Society, conducted in accordance with the rules set out in the Third Schedule.
- 4.4.3 The Council shall appoint the Editor, Associate Editor, IT Manager, and Webmaster.
- 4.5 The President may hold office for the period between **four** Annual General Meetings, and may be re-elected for a further period of two years. After expiration of continuous tenure of office, the President will not be eligible for re-election until the period between four annual general meetings has elapsed. **The office of President will, upon the retirement of the incumbent President, be assumed by the person who occupies the office of President-elect.**



## New Products



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- Chaos Analysis
- Correlation Coefficient
- Electrodermal Activity
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- Ensemble Average
- Epoch Analysis
- Hemodynamic Analysis
- Impedance Cardiography Analysis
- Magnetic Resonance Imaging
- Median Filter Artefact Removal
- Neurophysiology
- Principal Component Denoising
- Remove Trend
- Respiration
- Spectral Subtraction
- Stim-Response
- Waterfall Plot
- Wavelet Denoising



### Inspira (ASV) New Advanced Safety Ventilator

**HARVARD**  
APPARATUS



This is Harvard Apparatus' first ventilator that can ventilate animals from mice to cats using the same machine. It provides respiration rates from 5 to 200 bpm. The tidal volume is adjustable from 0.1 ml to 100 ml. It is no longer necessary to purchase one ventilator for mice and another for large rodents. The Inspira can do it all!

### THE A K McINTYRE PRIZE SPONSORED BY SDR CLINICAL TECHNOLOGY

This prize, named in honour of the Society's first President, is awarded annually to members of the Society who are judged to have made significant contributions to Australian physiological science over their pre-doctoral and early post-doctoral years.

Applicants must be financial Ordinary Members of the Society, and must normally have completed their doctoral degree not more than 5 years prior to the time of their application (although they may apply during their 6<sup>th</sup> postdoctoral year). Think about applying for the 2011 meeting now.

The prize winner will be announced at the AGM.

**The Prize consists of a medal and the sum of \$1000.**

More information can be found on the following webpage:

<http://www.aups.org.au/Prizes/McIntyre.html>

## Professor JRS Hales (1943-2009)



When a boy's given names are Juhl Robert Stanley, it is little wonder that he prefers to be called, simply, "Bob". In any case, Professor JRS Hales, who died recently of an aggressive cancer (related, perhaps, to his intensive use of radioactive isotopes throughout his scientific career), was by temperament a "Bob", not a "Robert" and **certainly** not a "Juhl". Yet, though his down-to-earth manner and his deliberate way of speaking stamped him as a rural "Aussie", he had interests and skills, let alone a substantial international scientific renown, which belied any simplistic stereotype. As well as being an accomplished physiologist, he was a skilled craftsman with wood, a lover and practitioner of Japanese gardens (including bonsais) and, in retirement, a breeder of Giant Schnauzer dogs.

"Bob" Hales was born in Brisbane in 1943 but his peripatetic childhood was spent mostly in NSW and, for his secondary education, he was a boarder at the Yanco Agricultural High School near Leeton, when he showed early signs of entrepreneurship by building up a practice as the class-barber. From there he went to the University of New England in Armidale where, as well as being a diligent science student, he cut quite a dash as a "man about the campus", if not about the town. A colleague recalls his going out at weekends "dressed in the then-fashionable stovepipe pants, with a bit of a shine in them, pointy black

shoes and smart shirts, usually set off by fluorescent socks and tie. He also enjoyed impersonating Elvis, sometimes in a band in one of the local pubs."

At UNE he came under the powerful intellectual influence of Professor Jack Evans and Dr Max Webster in the Physiology Department. He graduated BSc, with honours, in 1963 and MSc in 1966. That Master's degree, under Webster's supervision, set him on the path of his life's work -- understanding physiological responses to hot environments which, while it is of great and obvious importance in Australia -- for humans and animals, alike -- has, surprisingly, never been a popular discipline here.

While working for his MSc he was a Tutor in Physiology but joined CSIRO as an Experimental Officer in 1965, leaving a year later to undertake his PhD at the then-famous Hannah Research Institute in Ayrshire, Scotland (awarded by the University of Glasgow, 1968). He returned to CSIRO as a Research Scientist in 1969 in the Division of Animal Physiology and was made a Senior Research Scientist in 1973, and subsequently Principal Research Scientist (1976 in what, reflecting the organisation's increasing pragmatism, had become the Division of Animal Production), Senior Principal Research Scientist (1983) and Chief Research Scientist (1988). In 1990, disillusioned by what he saw as a seriously diminishing respect by CSIRO management for "pure" (or "curiosity-driven" research as our recent Nobel Laureate, Professor Elizabeth Blackburn would term it), Dr Hales moved to a Personal Chair in the School of Physiology and Pharmacology at the University of NSW on the invitation of Professor Ian McCloskey.

He was especially interested in the functional redistribution of blood flow to the various organs and tissues of the body during heat (and cold) stress and in this enduring project he was one of the first in the world -- indeed he soon became an internationally-renowned expert -- to employ a technique which used microspheres labelled with radio-isotopes. Because of their very small size these would become trapped in the capillaries after being injected into the circulation and their tissue density would be an index of the blood supply; when the spheres were tagged with different isotopes, repeated experimental measurements were possible because the isotopes could later be differentiated through their different energetic properties.

Like all good biologists, Hales was keen to investigate the function of more than one

animal type (livestock, after all, are not all the same size) and was especially interested to examine the influence of variations in body size and shape on animals' capacities to deal with heat stress and he sought, in particular to study Australian marsupials. This was straightforward enough when he could collaborate with the kangaroo expert at UNSW, the zoologist Professor Terry Dawson; sometimes, though other animals (especially wombats which have a propensity to escape and hide in burrows) produced a few chaotic scenes in his laboratory. It sometimes involved field-work (work which he knew the CSIRO administrators did not understand or value: I once heard him say, "It would do them good to get out of their air-conditioned offices and get some sheep-shit on their polished shoes"). Certainly his work contributed to animal welfare as well as to science at the time when high-density cattle feed-lots were being introduced into Australia.

Indeed nationally as well as internationally "Bob" Hales was an enthusiastic collaborator (this can happen when one is a master of a powerful investigative technique, but some scientists are not nearly so welcoming of their colleagues). Those Australian colleagues make a striking list: they include Geoff Thorburn and George Alexander (in CSIRO work dealing with fetal and neonatal physiology), Brian Trudinger (Professor of Obstetrics at Sydney University), Wilf Cliff (ANU), Geoff Molyneux (Anatomy at UQ), Robert Gemmell (CSIRO), Roger Dampney (Sydney University), Bill Lang (Melbourne University), John Yeo (a neurosurgeon at RNSH, Sydney), Graham Faichney (CSIRO), Andrew Foldes (CSIRO), Ruben Rose (the equine physiologist in the Veterinary Faculty at Sydney University), John Ludbrook (Melbourne), Gillian Courtice and Erica Potter (both at UNSW). These experiments were certainly far more than mere data collection across the zoological spectrum, though when he *did* collect data (and some experiments with Professor M. Iriki come particularly to mind -- they collaborated in Germany, Japan and at Prospect) the painstaking attention to detail and the thoroughness of the results are extremely impressive. They recognised, for example, that the vascularity of skin is not homogeneous, notably in the occurrence of arterio-venous anastomoses, and demonstrated a physiological as well as an anatomical diversity, with remarkable subtlety of the operation of the sympathetic nerves in giving effect to the integrated responses to thermal and cold stress. He brought that same comprehensive attention

to detail during a term, from 1973-1978, as Honorary National Secretary of APPS (when, with Liam Burke who acted as National Secretary in 1976 while Bob was on sabbatical leave from CSIRO, I was an officer of APPS and could see Bob's capacities as close hand).

Laboratory experiments with large animals made the safe disposal of carcasses difficult. Though this was not a problem at CSIRO, which had an appropriate incinerator, it was a challenge after Hales's move to UNSW. The Radiation Protection office there eventually located a thick-walled bunker under the administration building, known as the Chancellery, and installed some large freezers there. The load proved too great for them, however, and eventually those carcasses began to decompose. A furious Vice-Chancellor, John Niland, rang Professor Eugenie Lumbers (then the Head of Physiology & Pharmacology) to complain about the intolerable odour in his office. This caused great amusement for Hales's colleagues: it was the only time, they believed, that a stink seeped *into* the VC's office rather than offensive emanations spreading across the campus *from* it.

Hales's work brought a stream of international visitors to his laboratories, principally to learn his techniques, and took him around the world to innumerable conferences and for many collaborations. In particular, he had strong connections with Japan and Germany, notably with the Max-Planck-Institute for Physiological and Clinical Research in Bad-Nauheim, near Frankfurt, where he frequently worked between 1969 and 1994, especially with Professor Eckhart Simon. The Japanese connection, which was comparably enduring, served him in more than scientific ways: a colleague recalled that Hales took good advantage of several large ponds on the CSIRO property at Prospect (NSW) where he successfully bred exotic carp and "made big bucks" by selling the fish to Japanese collectors.

In 1964 he married Ruth Kemmis, graduate of the Sydney Conservatorium and a high-school music teacher in St Chad's, Cremorne; they had four children, but were divorced in 1986 and he married Judy Malthouse in the Uniting Church, Top Ryde, in that year. He is survived by both Ruth and Judy, as well as by his own four children and Judy's three daughters. His funeral had a significant personal aspect which is often missing: the service was conducted by his eldest child, Stephen, who is a Baptist minister in Sydney.

John Carmody



# NHMRC Funding is Declining and Burden of Disease is Rising

Health and Medical Research in Australia

Key Messages and Facts for Budget 2010–11

## Investment in Health and Medical Research (HMR) returns Exceptional Value<sup>1</sup>

- Australia has the third-highest life expectancy in the world
- HMR provides 117% return on investment, second only to the mining and wholesale/retail sectors
- Australia delivers first-class medical research
- \$30 billion economic benefit of health and medical research

## The burden of disease is rising

- Must keep pace in terms of health and wealth
- Investment in human capital must be protected
- There will be a 4-fold increase in the number of Australians over 85 years old in 3 decades<sup>2</sup>
- Health care costs will escalate from \$96.5 billion to \$246.1 billion by 2033<sup>2</sup>
- PBS expenditure is the fastest-growing item in the health budget<sup>2</sup>
- 70% of health funding is acute care/need for preventions and interventions

## What can health and medical research do?

- Save lives and prevents suffering
- New and better preventative screening strategies and intervention
- Long and more productive lives
- Increase GDP, increase tax revenues through healthy and productive ageing
- Decreases Medicare and PBS costs
- Decrease hospital stays

## What will the decline in health and medical research funding do in Australia?

- Decline in health and economic benefit
- Loss of return on investment
- Erode workforce investment
- Loss of global competitiveness

## What can you do?

- Urge your colleagues and family to take action in support of sustained NHMRC investment, plus a modest increase
- Engage your local member (visits and emails/letters)
- Write to the Prime Minister, Treasurer and Health Minister (use personal examples)

## What to ask for in the pre-budget submission 2010–11?

*Sustaining NHMRC budget, plus a modest increase in investment*

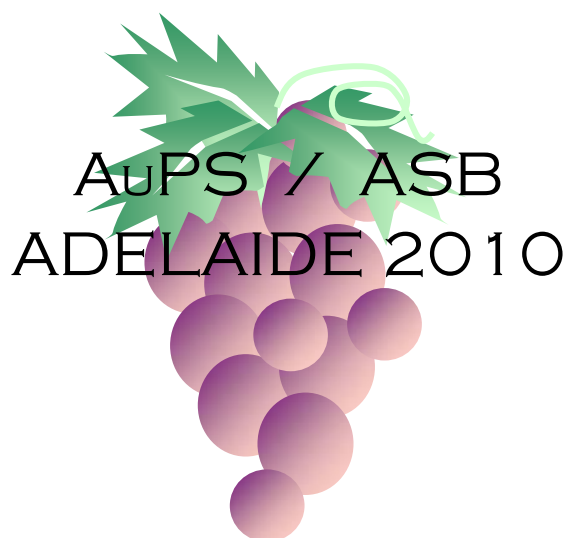
<sup>1</sup> Access Economics, *Exceptional Returns II: The Value of Investing in Health Research and Development in Australia*. In: 2008. <http://www.asmr.org.au/campaign.html>

<sup>2</sup> Intergenerational Report April 2007



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The **December 2010** joint meeting of the **Australian Society for Biophysics** and the **Australian Physiological Society** will be held in Adelaide, South Australia, at the National Wine Centre.

The conference begins with a reception starting at 6 pm on the evening of Sunday 28 November, and features full-day concurrent scientific sessions Monday through to the final close at 5 pm on Wed 1 December.

For more information, please contact the local organiser Prof Andrea Yool, University of Adelaide ([andrea.yool@adelaide.edu.au](mailto:andrea.yool@adelaide.edu.au)). Or visit <http://www.aups.org.au/>

### ***Meetings in 2010***

Something different – related to the article “Reaching for the Higher Growing Fruit”

#### **The con-joint meetings of Biology and Synchrotron Radiation (BSR) and Medical Applications of Synchrotron Radiation (MASR)**



15th-18th February 2010

Melbourne Convention and Exhibition Centre, Australia

#### ***2010 American Thoracic Society International Conference***

May 14-19, 2010 New Orleans, Louisiana

The Advance Program with registration form will be available in January 2010 at [www.thoracic.org](http://www.thoracic.org)

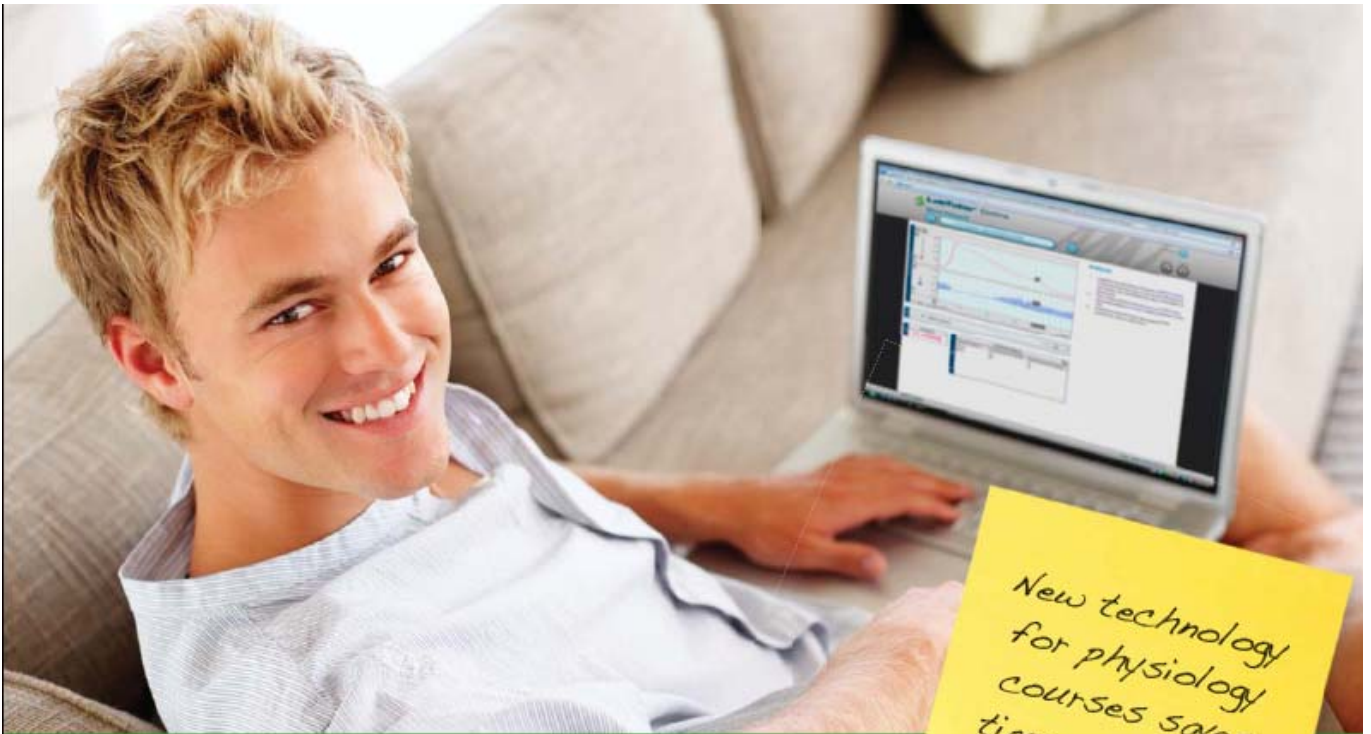
For more information, please contact the ATS International Conference Department [conference@thoracic.org](mailto:conference@thoracic.org).

The Bureau of Animal Welfare seeks **expressions of interest** for the voluntary position of Chair, Wildlife and Small Institutions (WSI) AEC.

The WSI AEC was formed in 2004 to service the needs of Victorian scientific procedures licence holders and Department of Sustainability and Environment Wildlife Research Permit applicants seeking AEC approval for scientific proposals involving wildlife.

To express your interest in this position, please provide a curriculum vitae and a brief introductory letter via email to [dani.maver@dpi.vic.gov.au](mailto:dani.maver@dpi.vic.gov.au).

Expressions of interest close at 5pm January 29th 2010.



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### *AuPS Sustaining members*

This issue of AuPS News was compiled by Simon Potocnik with many thanks to the generous contributors. The next issue of AuPS News will be distributed to members in March 2010. All contributions for AuPS News should be sent to: [newsletter@auaps.org.au](mailto:newsletter@auaps.org.au) by March 1<sup>st</sup>, 2010.

## Meetings in 2011

### **Perth AuPS meeting 2011**

This will be a combined meeting with ASCEPT and HBPRCA and so should be a week of scientific presentations of considerable interest to a wide range of AuPS members. The meeting is planned for the week beginning Sunday 4<sup>th</sup> December and there will be a number of shared sessions and symposia as well as dedicated sessions for the individual societies involved. AuPS and ASCEPT will run as is traditional, from Sunday to Wednesday. The local organizing committee consists of staff from The University of Western Australia (Associate Professors Livia Hool and Lynette Fernandes and Professor Don Robertson).

We urge all AuPS members to support this meeting. AuPS meetings in Perth have traditionally been an opportunity for participants to not only attend the meeting but to go on to enjoy the climate, beaches and many other tourist attractions that "The West" has to offer.

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  - c) PC-RS-232, RS-485, USB-connect to a computer
  - d) I/O +/-5V have the pump start or stop a program with a signal from pH, balance, reward platform, biosensor etc.
- **Autofill:** synchronisation of two pumps, each having an external reservoir connected to the syringe. One pump infuses until the syringe is empty, then the second pump starts pumping to maintain the flow while the first pump refills. This alternating process repeats creating continuous flow
- **Pulse Profile:** set-up a continuous pulsing flow

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