

AuPS News

June 2008

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President's Message

An extraordinary meeting of the AuPS Council was held in Melbourne on the 9th May 2008 to discuss the upcoming elections of Council members, membership matters and planning of the future AuPS meetings. The Council will call this month for nominations for two regular Council positions and hold an election prior to the AuPS Meeting in December. The experience level of the Council will be maintained by the continued presence of Gordon Lynch (as Chair of the Local Organising Committee for the

Melbourne AuPS Meeting) and Graham Lamb (as Public Officer overseeing the Special Interest Groups). It was agreed that Student Members who were beyond the initial 4 year Student Membership period would be required to pay an annual subscription fee of \$25 for each year until they submit their thesis. Appropriate modifications will be made to the Domestic Rules.

The AuPS Council nominated AuPS members Professor Geoffrey Burnstock, Professor Colin Gibbs and Professor Uwe Proske for election to Honorary Membership in recognition of their significant contributions to the Society and physiology research and teaching in Australia. They together with Professor Elspeth McLachlan who was nominated in 2007 will be recognised at the AuPS meeting in December. I wish to thank the Local Organising Committee and in particular Gordon Lynch and Graham Lamb in the organisation of the upcoming AuPS meeting to be held at the University of Melbourne, 30 November-3 December 2008. The programme promises to be outstanding with numerous distinguished physiologists either giving Plenary Lectures or participating in Symposia. I am delighted that Professor Graham Lamb, NHMRC Senior Principal Research Fellow, La Trobe University will continue the tradition of prominent Australia physiologists giving the AuPS Invited Annual Lecture. The Physiological Society (UK) Exchange Lecturer is Professor Colin Sibley, (http://www.manchester.ac.uk/research/mhs/Colin.sibley/) Maternal Health Centre, University of Manchester, who will also be available to visit Physiology departments around the country willing to host his visit.

Although the deadline for abstract submission has passed, I wish to draw members attention to the Beijing Joint Conference of Physiological Sciences is to be held in Beijing, China 19-22 October 2008. This promises to be an exciting meeting presenting 16 symposia with speakers from the participating societies (Chinese Association for Physiological Sciences, The Physiological Society UK, the American Physiological Society, the Canadian Physiological Society and AuPS) including six from Australia. Details of the programme are on the website: http://www.beijingphys2008.org/program.htm and the deadline for Registration is July 15, 2008. I also wish to remind members that the IUPS 36th World Congress will be held in Kyoto, Japan in July-August 2009 with Abstract Submission September 1 - December 10, 2008. Further details about the Congress can be obtained at the website: http://www.iups.org

Planning is underway for the 2010 Annual Meeting and 50th Anniversary of AuPS which will be held jointly with the Australian Neuroscience Society (ANS) at the Sydney Convention Centre, 31st January – 3rd February, 2010. The Chair of the Local Organising Committee is Professor Roger Dampney, Sydney University, and he is assisted by Council members Jamie Vandenberg, Anuwat Dinudom and

Trevor Lewis together with ANS representatives.

Finally, the Society continues to remain vibrant and financially healthy but it is dependent upon your participation and subscription dues. I encourage you to maintain your membership current and ensure that your annual dues are paid. Let us work together to continue to grow the membership of AuPS and ensure that it is the professional society for all Australian physiologists.

David Adams



Physiological Society

Annual Meeting

The University of Melbourne Victoria, Australia 30th Nov – 3rd Dec 2008

The 2008 meeting of the Australian Physiological Society will be held at The University of Melbourne's Parkville Campus. The Conference proceedings will take place in several spacious lecture theatres in the tri-radiate Medical Building of the Faculty of Medicine, Dentistry and Health Sciences (corner of Grattan Street and Royal Parade).

It will include presentations from leading national and international scientists in the fields of cardiac muscle and cardiovascular physiology, skeletal muscle and exercise physiology, ion channels and electrophysiology, metabolism and diabetes, neuroscience and molecular physiology. The meeting will include plenary lectures, symposia, free communications, poster sessions and trade displays.

The meeting will have a special focus on students; offering opportunities to showcase Ph.D. research, to participate in symposia related to research fellowships and career development, and to meet other students in the related social activities.

For more information please visit http://www.aups.org.au/Meetings/200811/ or contact the Local Secretary, Gordon Lynch (gsl@unimelb.edu.au).

Please advertise the meeting to colleagues and encourage their attendance and participation at our annual meeting. The full program including invited speakers and symposia will soon appear on the Australian Physiological Society website.

When: Sunday November 30th - Wednesday December 3rd

Where: The University of Melbourne, Corner of Grattan St and Royal Parade

Registration Fees: Includes

- · access to all sessions
- · welcome reception on Sunday evening
- student mixer on Monday evening
- lunches Monday to Wednesday
- morning/afternoon teas

Fees (early registration)

- Full member: \$320
- Student member \$160
- Full non member \$450
- Student non member \$290
- Honours student presenters (non member) \$160

Late registration levy is an additional \$50 in all cases.

Registration and Abstract submission opens: 1st September

Abstract Deadline: 26th September

AuPS Biography: John Carmody

John Carmody studied medicine at the University of Queensland where he was also active in the musical, political and journalistic life of the university (editing the student paper, Semper Floreat, in his fifth year). His friends and fellow students included Barry Baker (later Professor of Anaesthesia at Otago Medical School [NZ] and Sydney University) and Felix Bochner (later Professor of Clinical Pharmacology at Adelaide University). In final year, he edited the university's literary magazine, Galmahra, with Barry Baker.

After a year as an RMO he joined the new School of Physiology at the University of NSW which had been established under the dynamic leadership of Professors Paul Korner and Ian Darian-Smith. There he met and was energized by such fellow graduate students as Mark Rowe, Barry Sessle and John Chalmers and such inspiring academics as Geoff Thorburn and Robert Holland. The abilities of them all were just as intimidating as they were galvanizing.

After a faltering beginning as a research student (medical students had little real education in research then), he collaborated congenially with Mark Rowe and eventually came under the influence of Peter Gage who really educated him in synaptic physiology. Several periods of research in Germany (the first in the renowned Max-Planck-Institut for Psychiatry in Munich) were of enormous importance to his modest development as a medical scientist, as was his meeting with Professor Robert Schmidt who encouraged a growing interest in pain physiology.

He was actively involved with APS (later APPS and now AuPS) from his earliest years at UNSW and with the late John Young edited the society's Proceedings for some years. He served several terms as a member of the society's Council and was also actively involved in the organization of the 1983 IUPS congress and the 1987 IUPHAR congress in Sydney. He was Local Secretary of a scientific meeting at UNSW and assisted with the organizations of other meetings.

At UNSW he taught across virtually the complete range of physiological pharmacological topics to medical science students. He was an elected member of the reformed Academic Board for several terms and was for eight years an elected academic member of the governing Council of UNSW. After retirement he was for two years an honorary member of the school of History and Philosophy of Science at UNSW currently holds two honorary appointments (one in Physiology) at Sydney University.

During his years at UNSW he also engaged in a number of extra-curricular activities which included membership of the NSW Working Party of the Australian Dictionary of Biography (for which he has written numerous entries) and as a music critic and book reviewer for several Australian overseas publications and ABC broadcaster on musical and scientific topics (notably for Ockham's Razor on Radio National and Nature in London).

AuPS Honorary Members

Emeritus Professor Peter H. Barry Professor Peter O. Bishop Emeritus Professor W. Burke Professor David R. Curtis Hon Assoc Prof David F. Davey Emeritus Professor M. E. Holman Professor Paul I. Korner Professor Tony R. Luff Professor E. R. Lumbers Dr Ian McCance Professor Trefor O. Morgan Professor Ann E. Sefton

STUDENT TRAVEL AWARD

AuPS has six \$500 travel awards to support student members presenting at this meeting.



To apply, please send your abstract and evidence of registration to the AuPS National Secretary (<u>j.lynch@uq.edu.au</u>) by 16th July.

The McIntyre Prize

Is awarded annually by the AuPS and this issue of the Newsletter has the first in a series of interviews with prize winners.
The 2004 winner was Dr Matthew Watt.

What's the best thing about your lab at the moment?

We have an eclectic bunch from varied backgrounds with varied skills. We are working really hard on developing the lab and answering some important questions in the field. It is a pleasure coming into work. *How has the direction of your research*

changed over the last four years?

Considerably. I was working primarily on the regulation of triglyceride metabolism in skeletal muscle in my early post-doctoral years, with a particular focus on exercise metabolism in humans. While we still work on the regulation of lipid metabolism, our focus is more related to the relationship between defective fat metabolism, obesity and insulin resistance. We are currently investigating the acute regulation of triglyceride lipases and the impact on lipolysis, lipid metabolism and cellular homeostasis in adipose tissue, skeletal muscle and liver.

Was it the choice of Lab which determined the direction of your research?

The criticism of some of the early work was that it was not insightful enough and this was due to our inability to modify specific proteins, or parts of proteins, in humans or animal models. Hence, the need to combine the physiology with molecular / genetic perturbations in mammalian culture. I spent a few valuable years in Bruce Kemp's group getting some understanding of these processes from some experienced protein chemists/biochemists/molecular biologists. It's a different world!

What do you consider your best work?

During my time in Mark Febbraio's lab, we demonstrated that the cytokine, ciliary neurotrophic factor, was able to induce weight loss in obese animals by both central and peripheral mechanisms. This research paves the way to developing novel compounds to induce weight loss. Obviously, this is pretty

meaningful given the current obesity crisis facing most of the Western world.

What do you do to relax?

Relax? I have an 18 month old boy, so relaxing is something I do at work! Seriously, though, I love getting out for a run or a hit of squash or golf when I can. I am also a footy tragic and closely follow a few different local competitions, and the AFL of course.

Which part of research makes it most enjoyable for you?

1. New discoveries. I get a real buzz out of seeing new data, especially when it represents an advance in the field (or even our lab). 2. Seeing the development of graduate students, especially when they keep coming up with good ideas!

Is your research direction now the one you prefer or do you see it changing?

Tough question. I enjoy the disease focus and the health implications of our work and have enjoyed getting back into some physiology recently (I just moved to Dept of Physiology at Monash). Research is always evolving, new discoveries lead to different questions and new technologies lead to alternative approaches. I just hope we can evolve as a group, answer some relevant questions and have a bit of fun in the process. Thank you very much Matthew.



Assoc.Prof. Matthew Watt

New Fields for Physiology Research.

The School of Health Sciences at RMIT University, Bundoora, (Melbourne) includes the disciplines of Nursing, Osteopathy, Psychology, Chinese Medicine, Disability Studies and Chiropractic. In recent years these disciplines have begun establishing research groups. Chinese Medicine has several research groups active in pharmacology research, Nursing research continues to grow

and Chiropractic have several human physiology studies underway and PhD students about to graduate. Research coordinator, Associate Professor Barbara Polus in the following article details the history of chiropractic research in Australia, and some of the forces driving it.



I graduated as a chiropractor in the early 1980s and clearly remember the apprehension I felt nearing the end of my training. I was soon to be a Chiropractor. Yet, there was so

much that I just didn't know. There were no clinical practice guidelines, no road map to guide my practice decisions and, most of all, no understanding of biologic mechanisms that I could draw on to understand what impact my therapeutic modality might be having on the patient who sat before me. The fundamental questions were and still are, what are the neurophysiological effects of spinal manipulation and what are the consequences of spinal dysfunction, the target of the Chiropractor's manipulative thrust – the so-called spinal "manipulable lesion".

My response to this disquiet was to commence post-graduate study. In the early days there was very little research activity done by and for Chiropractors, particularly in Australia. My own growth and understanding of physiology as it related to chiropractic occurred largely in isolation. At the time I undertook post graduate training the number of chiropractors actively engaged in research in Australia in the areas of anatomy and physiology numbered three.

The number of chiropractors pursuing post graduate training in the area of neuroscience is slowly growing. However, even today, the number of neuroscientist – chiropractors throughout the world is alarmingly small – so much so that most of us either know each other or at least are familiar with each others work.

Why is this so? The answer is complex. The lack of research activity and training is not

restricted to chiropractic but is a common phenomenon among the majority of CAM (complementary and alternative medicine) modalities. Funding for research and training is limited. There also continues to be some controversy within the chiropractic profession about the role of science and evidence in chiropractic practice - although I am pleased to observe that this controversy is diminishing. The RMIT University Division of Chiropractic has embraced an evidence based approach to its teaching and learning activities and actively incorporates evidencebased practice (EBP) in its curriculum. As coordinator of research my job is to incorporate both EBP and research methods and practice into the curriculum. Graduate capabilities for students of our program include that they are critical consumers of research as well as limited producers of clinical research.

My other main priority within the division is the establishment of the clinical neuroscience research group. The focus of this group is the impact of an alteration of sensory afferent inputs from axial structures – particularly the spine, on sensorimotor integration and selected end-organ functions. Our group is small but dedicated. Our steps forward are still tentative. I would like to think that my contribution to the chiropractic profession might be to contribute to the training of chiropractic neuroscientists and encourage them to continue their training with nationally and internationally recognised neuroscientists. The chiropractic profession needs a critical mass of neuroscientists who are able to engage with the international scientific community and do science that leads to a greater understanding of the neurophysiological effects of spinal manipulation as well as the consequences of the target of the manipulative thrust – the socalled "manipulable lesion". We need to know not just that our intervention is effective. We also need to ask the question – is it plausible to suggest that our intervention might have a positive influence on musculoskeletal health and perhaps more

generally on the health and well being of the patients who attend our practices. A significant proportion of adults in Australia visit chiropractors, approximately 16% of the adult Australian population and of these, most consider their treatment to be helpful [1]. The chiropractic profession has an obligation to understand the mechanisms underpinning its therapeutic approach. As it does so it helps to

define its scope of practice and provide Assoc. Prof. Barbara Polus

[1] Xue, Zhang, Lin *et al.* (2008) Acupuncture, chiropractic and osteopathy use in Australia: a national population survey. *BMC public health* <u>8</u>; 105

CALENDAR OF EVENTS 2008



Beijing Joint Conference of Physiological Sciences 2008

Physiology in Medicine: Bridging Bench and Bedside

October 19-22, 2008

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Beijing Joint Conference of Physiological Societies

October 19-22, 2008: Registration deadline July 15. http://www.beijingphys2008.org/

The Australian Health and Medical Research Congress

Brisbane, 16th - 21st November 2008. Abstract submissions will be called for early 2008 http://www.ahmrcongress.org.au/

Molecular Mechanisms of Renal Disease

Sunday, 31st August to Tuesday, 2nd September Rydges Hotel, Queenstown, NZ http://www.kidneys.co.nz/conferences/ Satellite of the Queenstown Molecular Biology conference



Christopher Bell (1941 -2008), BSc MSc PhD (Melb) MA, Fellow (Trinity College, Dublin)

Professor Christopher Bell, obituary for *The Age*, by John Carmody

As a post-graduate student, Christopher Bell was President of the Tin Alley Players (the University of Melbourne Graduate Dramatic Society) and was active as an actor and director: his production of The indecent exposure of Anthony East, in 1968, was the first ever of a play by David Williamson and the playwright remains grateful to for Bell for his perspicacity in seeing his potential and having the courage to direct his script in a public season. But Bell was a medical scientist who, after being an academic in the Department of Physiology at the University of Melbourne from 1973-1995, spent the next 11 as Professor of Physiology at Trinity College Dublin and was Dean (as well as a member of the College Council) during 2006, his last year there. He also published in military history, notably on the first Duke of Wellington. Few academics could boast such protean skills, to which should be added his instinctual prowess as a cook.

He was born on 30 September 1941, the son of Arthur, a commercial artist, and Betty who was a gifted painter. In 1942 they began, with limited success, to practice what would now be called "organic farming" on an old property on the Plenty River at Greensborough; their artistic activities also made them fringe members of the Heide Group. After a primary education at home through correspondence classes, Bell attended Eltham High School where he was active in diverse sports (including captaining the swimming team in 1958, his final year), as editor of the school magazine (1957-58) and was Dux of the school in 1958.

After taking the BSc and MSc degrees, he enrolled as a PhD student, researching the structure and function of the autonomic nervous system with the renowned Geoffrey Burnstock (then Professor of Zoology at Parkville) where the other "Terrible Triplets" were Graeme Campbell (later Professor of Zoology at the University of Melbourne) and Max Bennett (later Professor of Physiology at Sydney University). In 1969, he went to Britain as an Overseas Research Fellow of the National Heart Foundation, first with the formidable Professor Marthe Vogt (at the Institute of Animal Physiology in Cambridge) and then at the Royal College of Surgeons England in the London laboratory of Professor (Sir) John Vane, the later Nobel Laureate. As a colleague at the RCSE said, "Neither laboratory was for the merely competent 'post-doc.' and Chris was fully able to meet the high standards demanded and to retain the scientific respect and friendship of both his supervisors"; during this period Dr Bell won the first Sandoz Prize of the British Pharmacological Society in 1972. He returned to Australia to complete his NHF Fellowship and was appointed Lecturer in Physiology in 1973, with promotion to Senior Lecturer in 1976 and then Reader in 1980, the year when his DSc was awarded. During those 20-odd years in Melbourne he taught an unusually diverse range of topics (notably respiration, cardiovascular function, digestive physiology and neuroscience), he threw himself into the wider work of the university (the ethics, curriculum and library committees, for instance), he played a full role in the scientific life of the Australian Physiological and Pharmacological Society (as well as serving several terms as a councilor and four years as its National Secretary and CEO) and accepted many engagements as external examiner and as consultant to numerous government, nongovernment and commercial organisations and firms.

Shortsightedly, a number of Australian universities passed over him for their chairs of Physiology - some found his direct manner discomforting -- but, after ten years without a professor, Trinity College wisely offered him its chair in 1995. He inherited a Dickensian department - tawdry facilities and dispirited staff but all this was changed by the time of his retirement: the staff were younger and energized, the heritage building refurbished and a multistorey Neuroscience Research Institute constructed. He had comprehensively earned the admiration of his colleagues. After being in office for seven years, he joined the medical schools' accreditation panel of the Irish Medical Council and stood for the position of Dean of the Faculty of Health Sciences (including Medicine) on a platform of fiscal reform. In his own words, "I was defeated resoundingly"; so he relished the irony of his later appointment to that office after the Provost (Vice-Chancellor) had already implemented his proposed reforms. Bell's professional record included 130 published scientific papers, the authorship and editorship of ten books, about 40 invited review articles and over 60 letters and conference abstracts. He had numerous terms on the editorial boards of several scientific journals, including the British Journal of Pharmacology and the Journal of the Autonomic Nervous System. In the late 1980s he published a

He was a passionate lover of opera and the visual arts and was extremely well read in literature and military history. At home, he was an excellent gardener and almost pathological in his love for his numerous dogs, often strays that he had befriended. His hospitality was legendary and lavish -- often far too lavish -- and the quality of both food and wine at his table was never less than excellent. Shortly before his retirement an aggressive prostate cancer was diagnosed and he died in his new Melbourne home on 3 February. A public Memorial Service was held at St Peter's Eastern Hill on 4 May. He is survived by his wife, Christine Downer (former Picture Librarian of the State Library of Victoria), and by his former wives, Ms Elizabeth Wakefield and Professor Elspeth McLachlan.

series of articles, *Inside Ourselves*, in *The Age*;

book.

they were later issues as a beautiful and engaging

All who knew him would agree that Tennyson's description of Ulysses applied equally truly to the life and philosophy of Christopher Bell: "strong in will, to strive, to seek, to find and not to yield".

John Carmody, 8 May 2008.

Chris Bell: A student's perspective

I joined the Department of Physiology as a Junior Sophister student, the year after Chris was appointed to the Chair at Trinity. Chris was an intimidating figure and not all students took to his 'interrogative' form of teaching. His was the only class where everyone studied before entering, and we were all the better for it! I enjoyed Chris's course on cardiovascular physiology so much that I went on to complete my Senior Sophister research project with him, during which time he persuaded me to carry on to a PhD (in fact, he may have filled in the forms for me!). That was typical of Chris, always thinking ahead for his students. I was only in the first year of my PhD when he asked where I was thinking of going for my post-doc! Even after I left the Department and moved across the water, Chris continued to mentor me and advise me on my career

progression, and it is without doubt that I would not be where I am today without Chris's constant support and guidance. Chris's technique was a perfect balance of guidance and letting you find your own way. Indeed, I feel privileged to have been guided by such a supervisor and now as I am just about to embark on the supervision of my first PhD student, I hope that I can follow in his footsteps. Other than nurturing my academic progression, I also have Chris to thank for the following, for which I am eternally grateful: an unusually expensive taste in white wine, a serious appreciation for olives, having dined in some excellent restaurants and an aspiration to live in a beautiful big old house. He is greatly missed.

Saoirse O'Sullivan Lecturer in Medicine School of Graduate Entry Medicine and Health University of Nottingham

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Conference website: www.beijingphys2008.org

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All contributions for AuPS News should be sent to: newsletter@aups.org.au