



AuPS News



December 2017

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President's report

Prof. Graham Lamb – La Trobe University

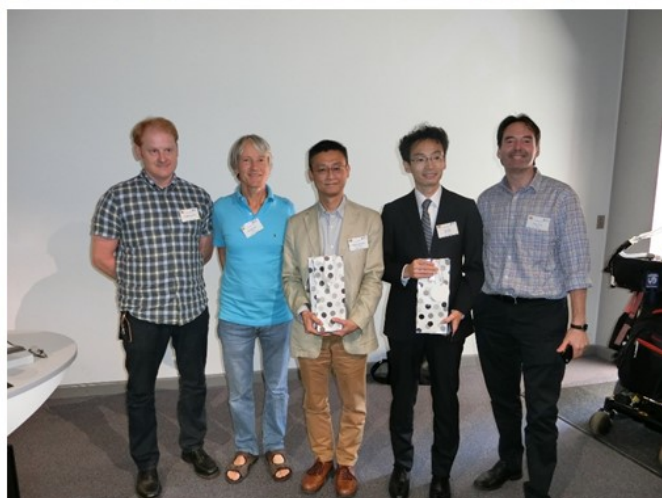
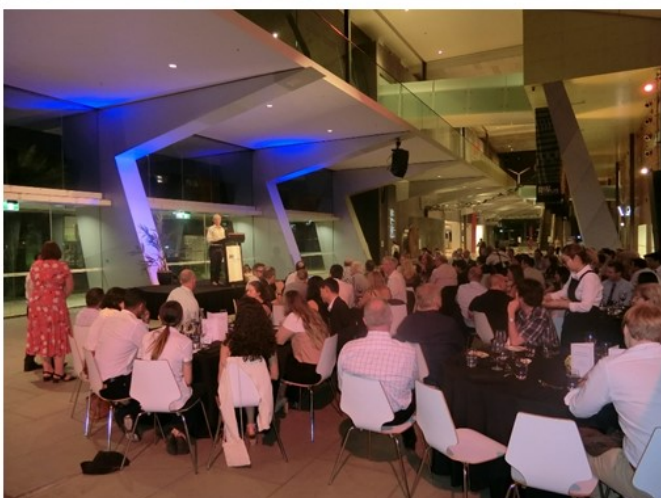


This is my final report as AuPS President, having been in this role for the last four years. I believe that the AuPS has indeed been fulfilling its role of promoting and supporting quality research and teaching in Physiology in Australia. This has involved a range of aspects, including staging high quality scientific meetings, such as the recent meeting just finished in Melbourne, which gives all Ordinary and Student AuPS members an opportunity to showcase their work and interact with leading international and national scientists with overlapping interests from outside AuPS, in both research and teaching. AuPS has also continued and expanded its links with international physiology societies and other science organisations, including supporting delegates to participate in the scientific and business sessions at the International Union of Physiology Societies meeting in Rio de Janeiro this year (thanks especially to Matt Watt and Nir Eynon), providing support and funding for the Australian Society of Medical Research report on "*Australia's health and medical research workforce*", and participating in the Science Meets Parliament event in Canberra put on by Science and Technology Australia. Council also commenced a new initiative in which six competitively selected student members participated in a 2 day research and networking event (this year hosted by Gary Housley at School of Medical Sciences, UNSW), meeting and discussing research in a range of different physiological laboratories, and as well as being mentored on other important research aspects.

Again this year there has been an increase in AuPS membership numbers, which is a good sign showing that the Society is addressing the needs of researchers and educators in Physiology, and the Society remains in a strong financial position with substantial assets. Council has to continue walking the fine line of meeting the costs of our various initiatives and links to other scientific associations, and also putting together first class meetings with leading international and national invitees, whilst at the same time keeping subscription and meeting registration costs to a minimum, especially for our Student members. I want to thank all the members of Council for their hard work again this year, particularly Deanne Hryciw, who has just finished her first year as National Secretary and done a superb job in so many ways in keeping the Society running smoothly. I and all Council also thank Lea Delbridge, who is just ending her term on Council; Lea has done a really good job particularly in supporting and expanding the opportunities for Student and ECR members.

I also want to express my thanks to Chris Shaw and Renee Dwyer who have thrown themselves enthusiastically into their new respective roles as Associate Editor and Webmaster, as you will have seen both from the Newsletters produced by Chris and the stunning new AuPS website that Renee has set up. Finally, it is a great pleasure to welcome three new elected members of Council: Natalie Trevaskis (Monash University), Nicole Beard (University of Canberra) and Richard Mills (University of Queensland). Richard is an ECR, who will be able to offer a valuable perspective on Council on ECR matters.

Our scientific meeting in Melbourne two weeks ago was a great success and well attended, with sessions close to capacity even at the very end of the meeting. As usual, the meeting included a wide range of high quality symposia, many including leading international and national invitees, as well as a large number of Free Communication sessions, which allow both student and other members to present their latest research. Council sees these Free Communication sessions as a particularly valuable experience for student members to hone their skills and share in open scientific exchange. This year also included a joint symposium with the Physiological Society of Japan, with two visiting mid-career researchers presenting state of the art talks on membrane properties and ion channel function in skeletal muscle. There was also an Education Workshop, as well as a Free Communication on Physiology Education. We are extremely grateful to Natalie Trevaskis and all her team at the Monash Institute of Pharmacological Science for their meticulous work in helping plan and then running the meeting. There were excellent facilities and a relaxed atmosphere, as well as highly enjoyable social events, including a wonderful experience having canapés and drinks underneath towering dinosaur skeletons before sitting down to an excellent dinner at the Melbourne Museum. The AuPS Invited Lecturer and medal winner for 2017 was Gary Housley of UNSW, who presented a fascinating insight into the physiology of the cochlear and the advances his group is making to improve the functioning of cochlear implants.



Highlights of the AuPS Annual Meeting. Picture clockwise from top left: pre-conference council meeting; introducing Prof David Eisner for the AuPS Plenary Lecture; AuPS/Physiological Society of Japan Joint Symposium (pictured from left Brad Launikonis, Graham Lamb, Takashi Muruyama, Yuji Hara and Peter Currie; conference dinner at the Melbourne Museum.

The meeting was also fortunate to have a Plenary Lecture by Professor David Eisner of the University of Manchester, the current President of UK Physiological Society, which described the complex interplay of calcium movements in heart cells in an extremely clear and insightful way. Also, Susan Wray, the Editor-in-Chief of Physiological Reports, took the audience at the Student/ECR Workshop through the benefits and pitfalls of on-line publishing, and Andrew Moorhouse of UNSW gave a first-hand account of the ups and downs of tackling IP opportunities in research. We also had Kathy Tangalakis of Victoria University, the winner of the 2016 Michael Roberts Excellence in Physiology Education Award, present her award lecture entitled “Enhancing the commencing student learning experience with innovative learning and teaching approaches and peer support systems”. All in all it was a really first class meeting.

It was also my great pleasure at the dinner to present the primary awards of the Society. The winner of the 2017 Michael Roberts Excellence in Physiology Education Award was Glenn Wadley of Deakin University, who will present his award lecture at the meeting next year. The other prizes were sponsored by SDR Scientific, a long-time supporter of the AuPS, and we remain grateful to SDR Scientific for its continuing support of these prizes. The AuPS prize for Best Publication by a PhD student went to Greg Quaife-Ryan of the University of Queensland, and the Best Postdoc Publication prize went to Amy Hanna of Baylor College of Medicine, USA. Both received an award certificate and \$500. The AK McIntyre Prize, which is awarded periodically 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 was awarded to James Cuffe of Griffith University, who like the Michael Roberts Award winner, received an engraved medallion and a prize of \$1000.

The annual meeting next year will be held on November 25th to 28th 2018 at the School of Medicine, University of Sydney Camperdown campus, with a call for symposium proposals early in 2018, and the call for nominations for the prizes will go out in September.

In closing, I wish to say that I have felt greatly honoured and enjoyed my time as AuPS President, particularly thanks to the support and camaraderie of Council and so many other AuPS members, and I leave knowing that the Society is in very capable hands with Professor Gordon Lynch of the University of Melbourne as the new AuPS President.

Prof Phil Poronnik awarded a Payne-Scott Professional Distinction

On behalf of AuPS, congratulations to Professor Philip Poronnik who has been awarded an inaugural Payne-Scott Professional Distinction. The award recognises outstanding leaders in research and education whose work is renowned nationally and internationally. It recognises those who help the career development of others, contributing to educational reform and innovation, and play a major role in community engagement.

The distinction has been named for Ruby Payne-Scott, only the third woman to graduate in physics from the University of Sydney and who is remembered as one of Australia’s most outstanding physicists for her contribution to the development of radio astronomy. Prof Philip Poronnik is an AuPS member and previous winner of the Michael Roberts Excellence in Physiology Education Award in 2010.

Source: <http://sydney.edu.au/medicine/physiology/>

AuPS 2017 – Early Career Researcher Workshop

Barnaby Frankish – La Trobe University

The ECR Workshop has become an important part of the annual AuPS Scientific Meeting, giving individuals an opportunity to discuss areas of scientific research that are often forgotten or over-looked. This year the AuPS were fortunate enough to have both Prof Susan Wray and Assoc. Prof Andrew Moorhouse to lead the ECR workshop, focusing on two areas of interest: “*Open access publishing: friend or foe to physiologists?*” and “*The ups and downs of IP and its interplay with publishing.*” This promised to be a stirring educational session and was evident by the turn out of not only early-career researchers, but also a range of mid-career researchers in attendance.

Professor Susan Wray is the current Editor-in-Chief of *Physiological Reports* and a past editor of the *Journal of Physiology*, viewing open access publishing as an opportunity to raise the profile of physiology for the benefit of readers and authors. Susan’s excitement was evident from the beginning, bringing energy to a topic that many in the room knew very little about at the time. Susan provided a pro’s and con’s viewpoint of open access publishing, covering a range a topics from “journal impact factors” and the important of “peer-reviewed journals”, to the presence “predatory publishers” in the open access world. Susan began very positively, outlining the benefits of open access publishing by provided both a practical and competitive solution to upper tier journal options. “*Physiological Reports is an online only, open access journal that will publish peer reviewed research across all areas of basic, translational, and clinical physiology and allied disciplines. Providing quick time publication while upholding a quality standard of sound research that constitutes a useful contribution to the field.*” However like many things in research, open access publishing has its negative aspects and Susan introduced us to the idea of predatory open access publishing, a term unknown to many in the room. The goal of a predatory open access publisher is to exploit the fee charging model of publication without providing the expected publishing standards and expectations which can deceive both authors and readers. Susan provided great insight into how to identify a predatory publisher, and how the changing landscape of open access publication has unfortunately and unintentionally created these thorns on the rose so to speak. I think I speak for everyone when I say we all left enlightened, and far more interested in the concept of open-access publishing as a viable option for research in the future.



Lively debate at the ECR workshop with AuPS members and Prof. Susan Wray (left) and A/Prof. Andrew Moorhouse (right).

Assoc. Professor Andrew Moorhouse leads the Neurobiology Research laboratory at the University of NSW. Andrew’s research focuses on the molecular and cellular basis of neuron excitability, and Andrew currently holds a patent entitled “*Methods for inhibiting neuron apoptosis and necrosis*”. A common

phrase heard in research is “publish or perish”, describing the pressure in academia to publish articles to sustain and further one’s career. However it could be said that in today’s research climate with the low success rate for both NHMRC and ARC project grants, “patent and perish” is becoming a direction many academics are now exploring. Intellectual property (IP) Australia reports a steady increase in the number of patents granted, increasing over 30% (6,019 grants) from 2007 to 2016. Andrew generously provided insight into not only the discovery process when working with a patent, but also the timeline in terms of applications and the afflictions it can have towards an academics publishing abilities. Andrews’s excitement when talking about his patent was palpable sitting in the audience. His description of the process resonated with our own laboratory experiences, and left us hoping that perhaps one day, we could be that lucky. Listening to the process of development was great, giving the audience a very in depth view. However as stated earlier in relation to open-access publishing, IP and patents also have pitfalls that make the process harder to pursue, the main one being the inability to publish any work related to that patent. This was possibly the most interesting aspect of Andrew’s discussion, as it provided a very realistic perspective into Andrew’s team and his own decision making process when pursuing the work he discussed and deciding if a patent is indeed the best path forward.

Following these great presentations and discussions, the Student and ECR mixer took place at The Captain Melville in the CBD. This always provides a great opportunity to catch-up with fellow academics and hear how their work is progressing, but more importantly just socialise over a few cold ones with one another. I would like to thank our student representative of the AuPS council, Giselle Allsop, for all her hard work in organising the both the ECR workshop and mixer.



Barnaby Frankish (right) with fellow ECR, Rob Barker (left), at the Conference Dinner.

Barnaby Frankish is a senior PhD candidate under the supervision of Assoc. Prof Robyn Murphy and Prof Graham Lamb at La Trobe University. His work throughout his PhD has been focused on skeletal muscle health and function, with particular emphasis on proteins important for calcium homeostasis and glucose metabolism in human skeletal muscle at the single fibre level. Barnaby presented his work on the Characterisation of SERCA, phospholamban and sarcolipin proteins in human skeletal muscle at this year’s AuPS Scientific Meeting for which he received a runner up oral presentation prize.

Highlights from the 2017 AuPS Annual Meeting

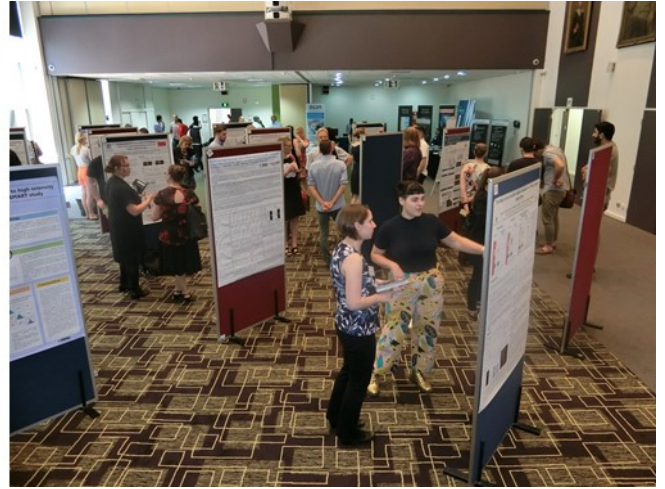


The 2017 AuPS scientific meeting officially began on Sunday night with the AuPS invited lecture by Prof Gary Housley.



Prof Gary Housley (UNSW) giving the AuPS Invited Lecture, entitled 'An earful of Physiology'.

Discussions at the poster session



Well attended symposia



Takashi Murayama (Juntendo University) presenting at the AuPS/Physiological Society of Japan Joint Symposium (left). David Bishop, Michael Lazarou, Michael Ryan and Robyn Murphy at the symposium on Mitochondrial Dynamics and Function (right).

And well attended Council dinner

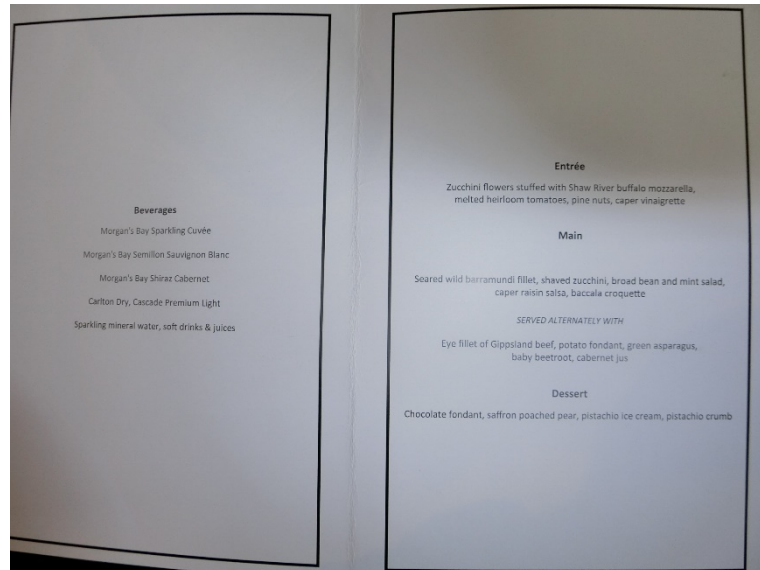


Michael Roberts Lecture and Award Winners



Kathy Tangalakis, the 2016 award winner, presents the Michael Roberts Lecture for 2017 (left). Previous Michael Roberts Award Winners (right) from left to right: Yvonne Hodgson (2011), David Saint (2012), Kathy Tangalakis (2016), Glenn Wadley (2017), Deanne Skelly (2014), Julia Choate (2015), and Kay Colthorpe (2013).

A historic venue for the conference dinner



Fantastic conference dinner at the Melbourne Museum

Congratulations to all 2017 Prize Winners!!

The A.K. McIntyre Award

Dr James Cuffe, Griffith University



Dr James Cuffe (Griffith University, pictured centre) being congratulated by **Chaitanya Dev Veeranki** (SDR Scientific, left) and **Prof. Graham Lamb** (right) on being awarded the **AK McIntyre Prize** (donated by SDR Scientific). The prize consists of a medal, certificate and the sum of \$1000.



James is pictured with previous AK McIntyre Prize Winners (from left to right); Gordon Lynch (1995), Brad Launikonis (2005), Paul Gregorevic (2006), James Ryall (2008), Robyn Murphy (2010), Kate Murphy (2011), James Bell (2012), Natalie Trevaskis (2015), Kim Mellor (2016) and James Cuffe (2017).

The Michael Roberts Excellence in Physiology Education Award

A/Prof Glenn Wadley, Deakin University



A/Prof Glenn Wadley (Deakin University, pictured right), being presented the award by Prof Graham Lamb (left) as winner of the Michael Roberts Excellence in Physiology Education Award 2017. This award includes a medal and an invitation to give the Roberts lecture at next year's meeting.

Postdoctoral Publication Prize

Dr Amy Hanna, Baylor College of Medicine.

[Lee CS, Hanna AD, et al. A chemical chaperone improves muscle function in mice with a RyR1 mutation. Nat Commun. 2017, 8:14659.](#)

This annual, \$500 award is for the best original paper published by an AuPS member during their first 4 postdoctoral years and is sponsored by SDR Scientific.

PhD Student Publication Prize

Mr Greg Quaife-Ryan, University of Queensland.

[Quaife-Ryan GA, et al. Multicellular Transcriptional Analysis of Mammalian Heart Regeneration. Circulation. 2017, 136:1123-1139.](#)

This annual, \$500 award is for the best original paper published by an AuPS member during the course of their PhD studies and is sponsored by SDR Scientific.



Student presentation prizes

Best oral presentation prizes:

Winner:

Pierre Hofstee, Griffith University.

Maternal selenium deficiency in mice alters placental function, reduces fetal glucose concentrations and impairs fetal growth.

The prize was sponsored by SDR Scientific and consists of a certificate and the sum of \$250.



Runners up:

Paris Papagianis, Hudson Institute of Medical Research.

Human amnion epithelial cells alter lung development and inflammation in 7-day-old preterm lambs exposed to inflammation before birth.



Barnaby Frankish, La Trobe University.

Characterisation of SERCA, phospholamban and sarcolipin proteins in human skeletal muscle.

The prizes were sponsored by SDR Scientific and consists of a certificate and the sum of \$100. .



Best poster presentation prizes:

Winner:

Savant Thakur, University of Melbourne.

Heat shock protein 70 (Hsp70) overexpression drives myoblast fusion during C2C12 cell differentiation.

Savant is pictured (centre) with Prof Graham Lamb (left) and Chaitanya Dev Veeranki (right, SDR Scientific). The prize is sponsored by SDR and consists of a certificate and the sum of \$250.



Runners up:

Helen Waddell, University of Melbourne.

Establishing reference conditions for electrophysiological recordings of spontaneously beating neonatal rat cardiomyocytes on a multi-electrode array.

Helen is pictured (right) with Prof Graham Lamb (left) and Chaitanya Dev Veeranki (right, SDR Scientific). The prize consists of a certificate and the sum of \$100 and is also sponsored by SDR Scientific.



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See you next year.....



Hosted by The University of Sydney,

Local Contact: Bill Phillips william.phillips@sydney.edu.au

Conference Website: <http://aups.org.au/Meetings/201811/>

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All contributions for AuPS News should be sent to: newsletter@ups.org.au before the end of February.