



AuPS News

June 2017

Michael Roberts Education Award Winner 2016

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What is your background in physiology education and research?

I completed my Bachelor of Science degree (majoring in Human Physiology and Microbiology) at the University of Melbourne (UoM) in 1986. I enjoyed reproductive physiology and decided to undertake my Honours, and then my PhD, with the dynamic Professor Marelyn Wintour-Coghlan at the Howard Florey Institute of Experimental Physiology & Medicine. My theses investigated the regulation of steroid hydroxylase gene expression in the ovine fetal adrenal gland throughout gestation and the role of prenatal glucocorticoid treatment on vascular reactivity and blood pressure modulation. Whilst the work was intellectually stimulating, I wasn't wedded to the smell of sheep which infiltrated my clothes and hair every day! It was a productive period, Marelyn encouraging me to publish my work in high impact journals and present my research at conferences including AuPS. It was during this time, I started demonstrating to dentistry and medical students at the UoM and to nursing students at Victoria University (VU). I found the teaching experience to be very fulfilling.



Shortly after completion of my PhD in 1992, I was appointed as a lecturer at VU. My research, whilst still focussed on endocrine function, shifted from the fetus to the menopausal woman and changed orientation towards exercise, one of VU's strengths. In conjunction with A/Prof Michael Carey and Professor Lily Stojanovska, and in collaboration with the Jean Hailes Clinic, we investigated the effects of Hormone Replacement Therapy and exercise on aerobic capacity, bone parameters and cardiovascular risk factors in post-menopausal women. Between 2001 and 2007 I had two wonderful boys and took time off for carer responsibilities, impacting significantly on my research productivity.

VU attracts a very academically and socio-culturally diverse student population, which presents challenges for those of us who are passionate about communicating our research and training to the scientists of tomorrow. During my early academic career, it became apparent that commencing students were facing many of the same barriers that I had faced – being first in my family to attend university and from a non-English speaking background (NESB) - and that the barriers were not being addressed using a multi-faceted approach. I saw this as

an opportunity to make a difference and dedicated myself to significantly improving: the transition to higher education, student learning and outcomes, and the overall student experience, for commencing students undertaking courses in Biomedical and Health Sciences at VU.

Intrinsically, physiology has specialised nomenclature and complex concepts, which often requires differential approaches to teaching, based on the discipline cohort. For students from NESB and low social capital, this complexity is heightened and academics need to put in place support mechanisms to assure successful learning outcomes. In collaboration with Dr Deanne Skelly and involvement from Academic Support and Development, in 2010 we implemented Peer-Assisted Study Sessions (PASS) into the curriculum to support student learning of Human Physiology and effective study skill development. The program was highly successful and has since been implemented into other courses with ongoing funding support from the university. In collaboration with colleagues Professor Alan Hayes and Dr Emma Rybalka, peer mentoring has since also been successfully embedded into the laboratory curriculum, with 3rd year Biomedical Sciences students mentoring 1st year students in work-based scenarios, developing work-based/research skills and job-ready graduate capabilities, as well as building course and social connectedness.

Over time, in various leadership roles I have worked towards improving social integration and student learning and engagement which are all fundamental to a positive First Year Experience and have implications for long term student retention and success. This has involved: embedding customised active learning and collaborative approaches into the year 1 curriculum; mentoring and supporting academic staff to make improvements to learning and teaching (L&T); leading professional development initiatives and innovative projects; and enhancing the scholarship of L&T. In 2011, I was awarded a Vice-Chancellor's Citation for Excellence in Learning & Teaching (individual) and the Faculty of Health, Engineering & Science - Teaching Excellence Award. In 2016, I was honoured to receive two prestigious awards - an Australian Award for University Teaching: Citation for Outstanding Contribution to Student Learning; and the Michael Roberts Medal for Excellence in Physiology Education, for which I am grateful to the Australian Physiological Society.

Current challenges for physiology education

Assessment in higher education must enable students to demonstrate not only their discipline knowledge but the development of higher order skills, such as critical thinking and problem-solving – which have been identified as highly desirable by employers. However, psychometric analysis of Biomedical Sciences examination papers from three Australian universities undertaken by the Australian Council of Educational Research (ACER) determined that most questions tested memory recall and recognition skills. As co-leader of the 'Assessing Student Learning' group within the Bioscience Education Australia Network (BEAN), (formerly known as Collaborative Universities Biomedical Education Network (CUBEnet)), alongside Professor Janet Macaulay (Monash University) and in collaboration with Dr Philip MacKinnon (ACER), we have embarked on a mission to build the capability of Biomedical Sciences educators to assess higher order thinking skills through improved assessment design, with the ultimate aim of improving student learning and producing work-ready graduates. Please contact me (Kathy.Tangalakis@vu.edu.au) if you are interested in collaborating on this project.

The Michael Roberts Excellence in Physiology Education Award



The Michael Roberts Excellence in Physiology Education Award, sponsored by Wiley-Blackwell, is an award bestowed by the Australian Physiological Society in memory of Professor Michael Roberts who was a lifelong passionate and dedicated advocate of physiology teaching and education. The award is intended to recognise AuPS members who have demonstrated a sustained performance of excellence in the delivery of physiology education at the tertiary level, and make a contribution to the teaching activities of AuPS.

Dr Kathy T Tangalakis was awarded the Michael Roberts Excellence in Physiology Education Award at the AuPS 2016 Scientific Meeting. Dr Tangalakis will present the Roberts Award Lecture at the 2017 AuPS meeting in Melbourne. Nominations for the 2017 Roberts Award close on **27th October 2017**. See the [AuPS website](#) for further details

Mid-year update from the AuPS National Secretary

At the end of 2016, I took over the role as National Secretary from Matt Watt (Monash University). The society would like to sincerely thank Matt for his significant contribution to AuPS. I personally would like to thank him for his support in the early stages of my appointment.

The successful Adelaide meeting in 2016, hosted by University of South Australia, with support from Flinders University and Adelaide University was well received by all. The meeting was held in conjunction with the Australian Society for Biophysics. The excellent quality of the science from our society demonstrates the strengths of our field as a whole. I was particularly impressed with our student members, who consistently demonstrate that the future of this discipline in Australia is very strong. Sincere thanks to Janna Morrison (University of South Australia) and her team for the seamless running of the meeting. I am sure you will all agree that the dinner at the Adelaide Oval was memorable.



At the end of 2016 we had some new members join the council. Jim Bell (University of Melbourne: Sponsorship Liaison) and Glenn Wadley (Associate Editor and Webmaster: Deakin University) retired from their roles on council. Renee Dwyer (Webmaster: University of Tasmania) and Chris Shaw (Associate Editor: Deakin University) joined us on council. In the next few months we will be looking for new councillors to join us. This is a very rewarding role, and we appreciate diverse representation on our council. Our current council consists of early-career, mid-career and more senior physiologists. Please consider if you feel that you would like to contribute. Nicole Vargus (Charles Sturt University) completed her role as Student representative on council. Thanks Nicole for your contributions. Following voting from the student members, Giselle Allsopp (Deakin University) was elected as the student member on council. We look forward to working with you.

In 2017, we will be conducting our annual meeting at Monash Institute of Pharmaceutical Sciences, Monash University, Parkville from Sunday 19th November to Wednesday 22nd of November. This campus is a small tram ride up from the city of Melbourne. The program includes a broad range of topics focused on a number of different areas including placental physiology, fragility in ageing, cardiovascular arrhythmia's and skeletal muscle pathophysiology. We also have a joint symposium with the Physiological Society of Japan and our strong representation of education continues with a symposium focused on large-scale authentic assessment tasks. We are pleased that Gary Housley (University of New South Wales) will be presenting the AuPS Invited Lecture, and Kathy Tangalakis (Victoria University) will be presenting the Michael Roberts Excellence in Teaching Award lecture. We will be calling for abstracts a little earlier this year due to the early timing of the meeting.

Severine Lamon and myself were fortunate to be supported by the society to attend the Science meets Parliament meeting in Canberra as the AuPS representatives. The meeting was a very valuable exercise, with a highlight the presentation by Emeritus Professor Alan Mackay-Sim, the Australian of the year. Severine has her report included in this newsletter. This was also for me a fantastic opportunity to network with others outside of academia and research. An important message from the meeting was communication to the wider audience. An important consideration for us all.

We are looking forward to the meeting in 2018 being hosted by the University of Sydney. Bill Phillips will be the local organising chair. Call for symposia will be made via the electronic format in August this year, with submissions at the end of October. Our annual prizes for Michael Roberts Teaching Award, AK McIntyre Award, the Post-Doctoral and PhD publication prizes will also be called about that time. I look forward to seeing as many of you as possible in Parkville in November.

Deanne Skelly

AuPS National Secretary

Science meets Parliament

21st-22nd March, 2017. Canberra

By Severine Lamon (Deakin University)

The Science meets Parliament (SmP) annual event attained the age of majority this year, and the organizers made a point of organising an outstanding 18th edition. Deanne Skelly and I were fortunate to represent AuPS at this event, held over two days in Canberra.

SmP has the vocation to connect those working in science, technology, engineering and mathematics (STEM) to the political process; and those in politics to science and technology. The challenge has probably never been so important and Deanne and I, along with about 200 other delegates from all science backgrounds, were motivated to make the most out of this opportunity. The first day was devoted to several forums and workshops aimed at preparing us for the highlight of the second day: one or two 30-minute face-to-face meetings with a parliamentarian. As a very recent Australian citizen, this event would be my first experience with Australian politics. This was an exciting perspective and I have the advantage of having a fresh and relatively unbiased eye.



The three forums during the first morning were around “Meet the media”, “Getting into policy” and “How to convince parliamentarians” and conveyed a common message of simplicity. To reach the media, the policy makers and the politicians, the best and unique strategy is to provide them with content they are interested in, rather than content we are interested in. As it is unlikely an external stakeholder will find interest in the single gene or pathway a researcher has studied during their career, it is our responsibility to explain how our work is linked to real world situations they can relate to. As scientists, we are always the best people to talk about our science; however, we may find it challenging to make a good narrative when the appropriate background knowledge is missing. We soon found out that it was even more complex than we thought. I gave the lunchtime ECR/MCR speed dating session a miss to enjoy a quick lunch and meet the delegates I was sharing a table with, as we would be pairing for the afternoon activities. The interactive rehearsal sessions for our parliamentary meetings was my personal highlight of the day. At first, we were given two minutes to summarize our research program to three of our peers, which I found was somewhere between “a good exercise” and “a challenge already”. Following their feedback, we were then asked to repeat the exercise in one minute, 30 seconds and 15 seconds. Try this with your colleagues or students, it is very difficult and probably one of the best exercises I have had to do in years! The one-minute version was unanimously voted the best and we were now expected to test it on our parliamentarian(s).



The gala dinner took place at beautiful Parliament House and each delegate sat with six or seven fellow delegates and one politician. We all had very different experiences. While some really connected with their politicians and organised impromptu, unofficial meetings for the following day, I found it difficult to engage with “my” politician. Aware of the necessity to be at our best the following morning, we were officially sent to bed at 10PM.

Things became more formal in the morning and each delegate had a different and sometimes very tight schedule. I was lucky to have meetings with two politicians on that day. As for most of the other delegates, I had done a little bit of homework and knew that Nick Champion (South Australia) was a Labour Party member of the House of Representatives and that Greg Hunt (Victoria) used to be the Minister for Industry, Innovation and Science and had been appointed Minister for Health and Sport in January 2017. I would soon find out that getting someone “famous” comes with disadvantages as well. Both experiences were very different and Nick Champion had little interest in the specifics of my research and those of the two other delegates. Rather, he really wanted to get our views about science in general. I did not expect to have a conversation about scientific integrity and impact factors with a member of parliament, but this is where we ended up and I found it very rewarding that he took time to listen to us. My next meeting started disappointingly, as we were informed at the last minute that Greg Hunt would not attend it – a situation that many of us experienced on that day. We were however received by his advisor, Alex Caroly, who was keen to find out all about our specific research fields. Thanks to the first day’s training we all did a good job and the ensuing conversation spanning mental health, cardio-vascular disease and ageing was fascinating. Depending of their schedule, some of us had the opportunity to attend the National Press Club, but I did not. The last event of the day was a parliamentary forum around Science and Politics and how to mix both. The four politicians up to the challenge did an excellent job and managed to keep a tired audience captivated by an interactive and engaging discussion around various topics including genetically modified organisms, gender equity in STEM and reproduction science. As a last but not least take-home message, we understood that as scientists, we can certainly be politically active without politicizing our science.



Meeting Greg Hunt’s advisor Alex Caroly. Photo courtesy of Dr Francine Marques.

I would like to thank AuPS for the fantastic opportunity to attend SmP 2017. If any of you have a chance to attend in the future, via AuPS or another way, I certainly think it is an excellent investment of 2 days in my career and I am sure you will think the same.

AuPS Melbourne 2017



AuPS 2017 Melbourne

19th-22nd November

Monash Institute of Pharmaceutical
Sciences, Parkville.

The Australian Physiological Society's annual scientific meeting will be held at the Monash Institute of Pharmaceutical Sciences in Melbourne this year. After a very successful and well attended conference in Adelaide last year, we are looking forward to an equally good event in Melbourne.

The keynote lecture will be presented by Prof Gary Housley from the University of New South Wales. The Michael Roberts Excellence in Physiology education Award Lecture will be presented by Dr Kathy Tangelakis from Victoria University. There will be several international and national speakers from a wide variety of physiology research areas.

Provisional Research Symposia

- Assessing and counteracting frailty during ageing.
- Cellular mechanisms of failure and arrhythmia in the diseased.
- Emerging leaders in placental physiology.
- How do calcium oscillations regulate biological rhythm?
- Mitochondrial dynamics and function.
- Molecular mechanisms regulating skeletal muscle attributes in health and disease.
- New directions in ischemia cardio protection.
- Problems in labour: Mother Nature versus Father Time.
- Skeletal muscle physiology and function.
- Strategies for large-scale and authentic assessment of undergraduates.
- The preterm baby.

Physiology education symposium will take place on Sunday 19th November and highlight recent education advances.

Conference dinner will take place in Melbourne museum which is celebrated for its striking architecture and is an incredible venue for a wonderful dinner and social evening.



Abstract submission will commence in August 2017. For more information, please visit <http://aups.org.au/Meetings/201711/>

Local contact: Dr Natalie Trevaskis (Natalie.Trevaskis@monash.edu)



REGISTRATION IS OPEN!

sgpweb.org/2017symposium

Society of General Physiologists
71st Annual Symposium

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Richard Kramer and Edwin Levitan

September 6-10, 2017
Marine Biological Laboratory, Woods Hole, MA

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To learn about sponsorship opportunities, email us at admin@sgpweb.org

<http://www.sgpweb.org/>

Europhysiology 2018
14 - 16 September 2018
QEII Centre, London, UK



Key Dates

1 November 2016	Call for Plenary & Keynote Lectures nominations opens
31 January 2017	Call for Plenary & Keynote Lectures nominations closes
1 March 2017	Call for symposia suggestions opens
30 April 2017	Call for symposia suggestions closes
1 January 2018	Online registration opens
1 May 2018	Abstract submission opens
31 May 2018	Abstract submission closes
14 - 16 September 2018	Meeting dates

[Europhysiology 2018](#)



Organization



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Abstract submission closed 30 April 2017 <http://iups2017.com>

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San Diego, California • August 27-30, 2017
Deadlines: Abstracts: May 5, 2017 • Advance Registration: July 24, 2017 • Housing: August 4, 2017



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Westminster, Colorado • August 11-14, 2017
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Submissions are now open for 2017 entries.

For the fifth year in a row, the *Science* and SciLifeLab Prize for Young Scientists offers four recent PhDs a career-making opportunity. Could you (or your grad student) be one of them?

Recent doctoral graduates in the life sciences may submit a 1000-word essay based on their thesis work. Four winners, in different categories, will be selected for this international award.

Application deadline: July 15, 2017

The winners will:

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- Receive up to 30,000 USD in prize money
- Be honored in Stockholm, Sweden during Nobel week

Categories:

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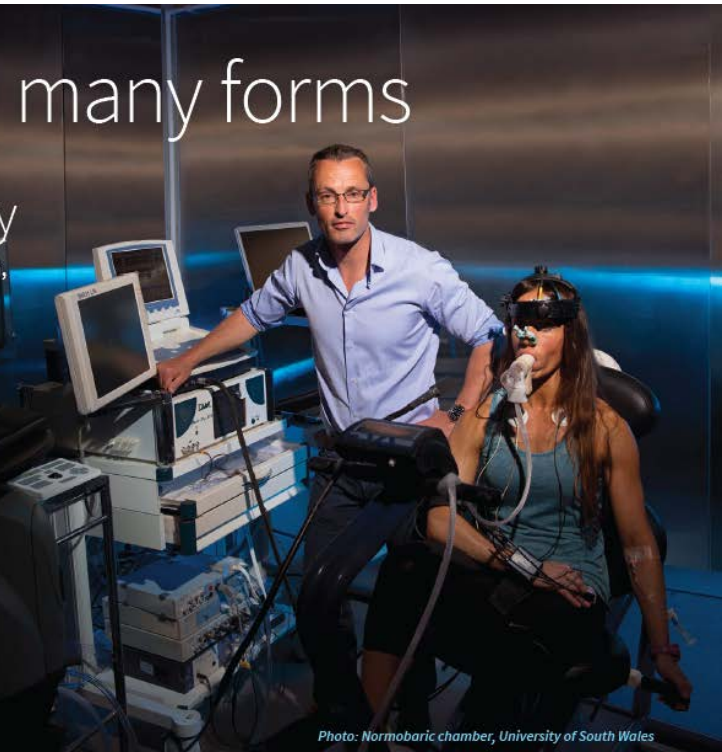


Photo: Normobaric chamber, University of South Wales



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The next issue of AuPS News will be distributed to members in September 2017. All contributions for AuPS News should be sent to: newsletter@ups.org.au before the end of August.