

## AuPS News – December 2019

### President's Report:

### Prof. Gordon Lynch, University of Melbourne

#### AuPS conference highlights

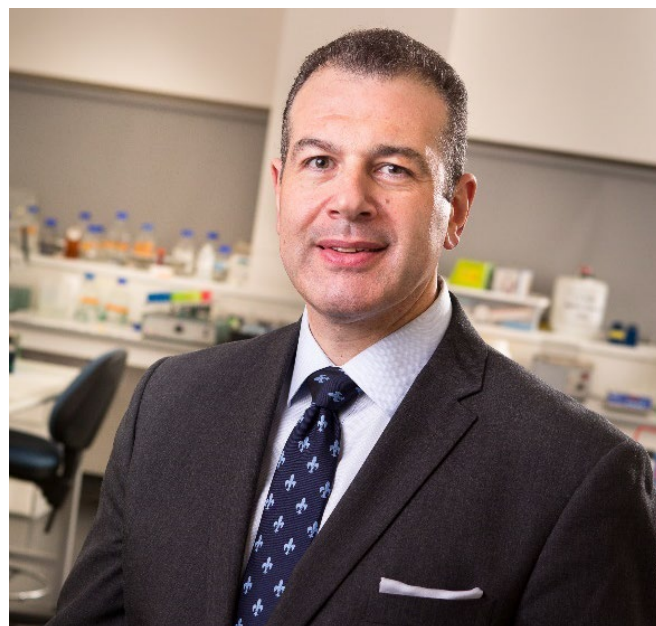
The 2019 AuPS annual conference in Canberra was a resounding success based on the quality of the scientific presentations and symposia, the interactions with our colleagues from the Australian Society of Biophysics, the quality of the Early Career Researcher and Education workshops, and the social gatherings, especially at the conference dinner held at the QT hotel.

The AuPS is grateful to Professor Stefan Broer and Associate Professor Nikki Beard and their support team for hosting the successful Canberra meeting.

One of the privileges as President of the Society is introducing key speakers and presenting awards at our annual conference. This year, our Society's prestigious Invited Lecture was delivered by Professor Robyn Murphy from La Trobe University.

Robyn has been a major contributor to the success of the AuPS, especially through her dedicated efforts as a former National Secretary and serving on Council for many years. Her informative lecture highlighted the use of sophisticated biochemistry to identify novel roles for proteins in skeletal muscle adaptation, especially with exercise.

The presentation covered her journey from her time as an undergraduate at Victoria University majoring in Chemistry; her graduate years at Deakin University studying creatine transporters in muscle and exercise; and her postdoctoral training at La Trobe University studying muscle at the single cell level but with a special emphasis on biochemical



characterisation, developing sensitive methods for protein detection in single muscle fibres.

Based on her achievements over the course of her doctoral and postdoctoral years, in 2010 Robyn was awarded the Australian Physiological Society's most prestigious award – the A.K. McIntyre Medal. Robyn began her faculty academic career in the Department of Zoology at La Trobe University, eventually moving to the Department of Biochemistry and Genetics, in the La Trobe Institute for Molecular Science in 2015.

She was appointed Head of Biochemistry and Genetics at La Trobe University in December 2016.

Robyn has published extensively in the area of skeletal muscle in health and disease, and is

recognised internationally for research excellence, especially in muscle biochemistry, studying humans and using animal models. She is also an accomplished educator and mentor of research scholars. After presentation of the Society’s Invited Lecturer Medal, the conference began in earnest with colleagues socialising at the welcome mixer.

**Honorary Membership to Professor Graham Lamb**

Receiving Honorary Member status in the AuPS is reserved for those retired members who have made sustained, excellent contributions to the Society over the course of their scientific careers. At the Canberra meeting it was an honour to present Professor Graham Lamb with Honorary Membership of the AuPS. Graham has made long-standing contributions of excellence to the Society, served on Council on several occasions and was the immediate past President of the Society.

At the conference dinner, Professor Robyn Murphy kindly provided a summary of Graham’s achievements and contributions, outlining the case for this most thoroughly deserved recognition. Congratulations Graham!



**Professor Graham Lamb receives his Honorary membership of the AuPS.**

**Michael Roberts Teaching Award**

The Michael Roberts Teaching Award recognises outstanding contributions to physiology teaching by an AuPS member. This proved to be one of the most fiercely contested awards, with five previous recipients of this award being tasked with the judging. With the competition being so tight, a major consideration by the judges was the applicant’s contributions to the Society.

The winner was Associate Professor Andrew Moorhouse from the University of New South Wales. Congratulations Andrew!

**SDR Ph.D. Publication Prize**

The Society is grateful to SDR for their ongoing sponsorship of prizes to Ph.D. students and ECR postdoctoral researchers. Jason Hotten from SDR was on hand to present the awards at the conference dinner. The Ph.D. Publication Prize judging panel was chaired by Councillor, Dr. Natalie Trevaskis.

The winner was Mr. Nirajan Shrestha from Griffith University for their publication “Elevated maternal linoleic acid reduces circulating leptin concentrations, cholesterol levels and male fetal survival in rats” in the Journal of Physiology (London). Congratulations Nirajan! Deanne Skelly accepted the award at the conference dinner in her role as Nirajan’s Ph.D. supervisor.

**SDR Postdoctoral Publication Prize**

There was strong competition for this award, but the winner was Dr. Adam Trewin from Deakin University, for his publication “Mitochondrial reactive oxygen species generated at the Complex-II matrix or intermembrane space microdomain have distinct effects on redox signalling and stress sensitivity in *C. elegans*”, in Antioxidants & Redox Signalling. Congratulations Adam!

**MAWA Poster Prizes**

The poster prizes were sponsored by Medical Advances Without Animals (MAWA) and presented by Sharyn Watson with Professor Chris dos Remedios from ASB.

The winners were Adam Dymke (‘Free energy simulations of general anaesthetic binding to a pentameric ligand-gated channel’) and Jade Vennitti (‘Modelling Amino Acid Homeostasis in Cancerous Cells’), both from ASB. Congratulations Adam and Jade!

### Savant Thakur ECR Workshop

A special highlight of the 2019 conference was the ECR Workshop that the Student and ECR representatives on Council named in honour of Savant Thakur (10/12/1991—16/06/2019), a student member of the Society who sadly died during the year as a result of complications from his condition, Duchenne muscular dystrophy.

Savant was an inspirational, multi-award-winning, high-achieving research student who truly loved his interactions with other researchers at AuPS scientific conferences. The workshop for ECRs, including students and postdoctoral researchers, explored some of the professional and personal adversities that must overcome as career scientists and discussed strategies for managing the expectations of success.

Naming the workshop in honour of Savant was a particularly moving gesture and for me, as Savant’s former mentor and someone who was very close to him, is something I will not forget. I am very proud of the contributions our Council members make to the ongoing success of the AuPS and it is particularly heartening to see the dedicated efforts of our student and ECR representatives and their commitment to the future of our Society.

### Research success

On behalf of the AuPS, I extend congratulations to those who enjoyed grant success in the highly competitive NHMRC Investigator, Synergy and Ideas grants schemes and ARC Discovery Project and other schemes. This was a particularly tough year, especially with the significant changes to the NHMRC’s traditional grant and fellowship schemes. I think I could sum up the year (in terms of grant success) by saying it’s been a lucky year for a few and a disappointing year for most! Regardless, AuPS

members were successful and this is encouraging for our discipline.

While there is much legitimate complaint about flaws in the system, fundamentally there is a serious lack of funding to support quality research across the sector. Personally, I would like to see funds strategically redirected to create something more akin to the United States’ NIH grant schemes that would support research and prepare the next generation of researchers across the spectrum, but ultimately these funds are earmarked for other purposes. How might this change?

While in Canberra on GRP duty, I asked Professor Kelso, CEO of the NHMRC, why funding couldn’t be allocated differently to empower schemes that would better support fundamental research. As part of her response, she explained, quite correctly, that politicians and governments respond to the voices and needs of people in their electorates, and so if I wanted to change the situation, my efforts should be directed to our taxpayers in order to change mindsets about the importance of fundamental research.

That may well be one approach, but advocating for health and medical research or for research more generally, is no small task and requires a concerted, sustained effort from everyone in the sector if it is to



Enjoying the Council dinner during the 2019 AuPS conference in Canberra

have influence. In the short-term, our traditional avenues for funding will be more difficult to acquire and so we need to be flexible in our thinking and approaches to identify alternative opportunities where physiology can play a lead or supporting role.

### **Thank you Deanne Skelly**

On behalf of the Society, I would like to convey sincere thanks to Associate Professor Deanne Skelly for her outstanding contributions to the AuPS during her tenure as National Secretary.

I have been incredibly impressed by Deanne's dedication to this most important role in serving the Society's membership. She has successfully guided Council through a period of considerable change and helped steer new initiatives that have brought in more ECRs and students to leadership roles and overseen the creation of student research grants and other support schemes. The AuPS is in a strong position and growing in membership. Thank you Deanne.

Deanne's contributions to the AuPS will continue, as she is the Local Secretary for next year's very special 60th anniversary scientific conference to be held on the Gold Coast.

The reins of National Secretary were handed over to Associate Professor Glenn Wadley at the conclusion of the Canberra meeting. We wish Glenn every success in this very important role.

Several outgoing members of Council are deserving of special mention and I will endeavour to properly convey my thanks to them in the next newsletter.

Finally, my thanks to all members and sponsors for your ongoing support of the Australian Physiological Society.

Next year promises to be an exciting one for the AuPS as we celebrate our 60th anniversary. It is something Australia's science and medical research community should be proud and I'm looking forward to celebrating this milestone with you.

May I take this opportunity to wish each of you the compliments of the festive season and a safe and enjoyable New Year.

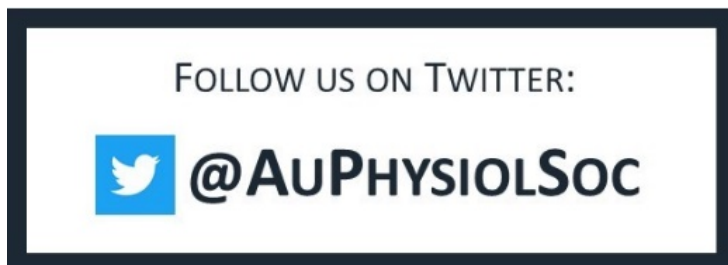
**Professor Gordon S. Lynch**

**President, Australian Physiological Society**

**(on Twitter @GordonSLynch);**

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Help us to communicate the achievements of our members to the wider world with our AuPS Twitter account.

Follow us and use our twitter handle to communicate the achievements of our members [@AuPhysiolSoc](https://twitter.com/AuPhysiolSoc)

# Highlights from the 2019 AuPS and ASB Scientific Meeting



Australian National University  
© VisitCanberra



John Gollings  
©National Museum of Australia



Parliament House  
© VisitCanberra

**1<sup>st</sup> - 4<sup>th</sup> DECEMBER 2019**  
**AUSTRALIAN NATIONAL UNIVERSITY, CANBERRA**



**The meeting was officially opened with the AuPS invited lecture.**

Prof Robyn Murphy, La Trobe University, gave the invited lecture entitled;

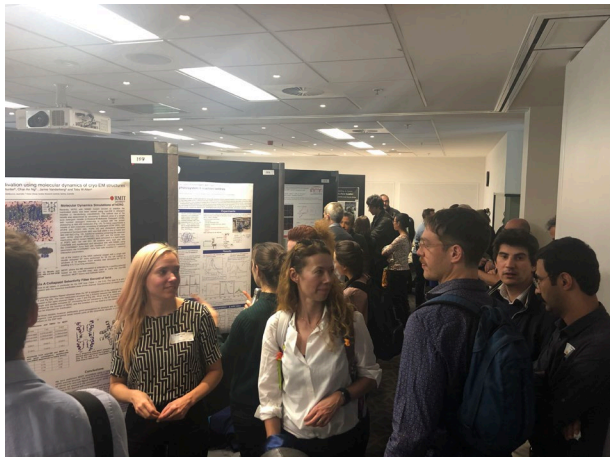
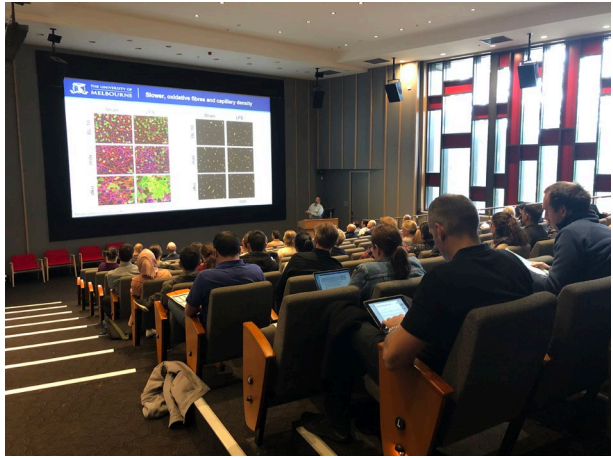
'Physiological insights into skeletal muscle plasticity'.



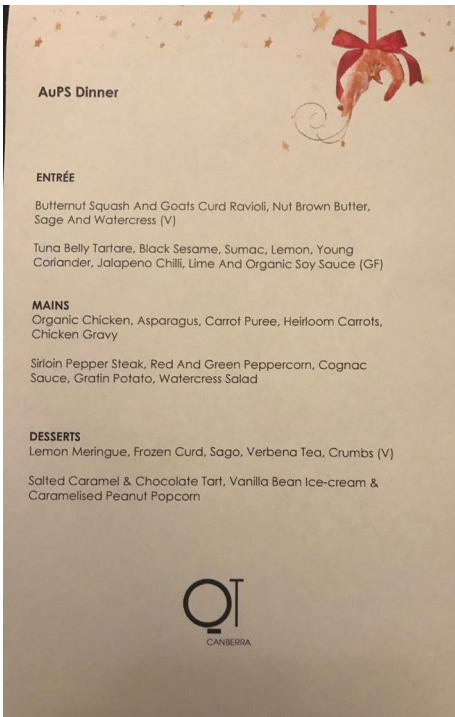
## Drinks and Nibbles at the Welcome Reception



## Conference Highlights



# Conference Dinner at QT Hotel, Canberra





## Congratulations to all 2019 Prize Winners!!

### The Michael Roberts Excellence in Physiology Education Award

Associate Professor Andrew Moorhouse,  
University of New South Wales



**Associate Professor Andrew Moorhouse** was awarded a medal and a cash award at the conference dinner and will deliver a keynote lecture at the Educational Symposium at next year's AuPS conference in the Gold Coast.

## Post-doctoral publication prize

Dr Adam Trewin, Deakin University

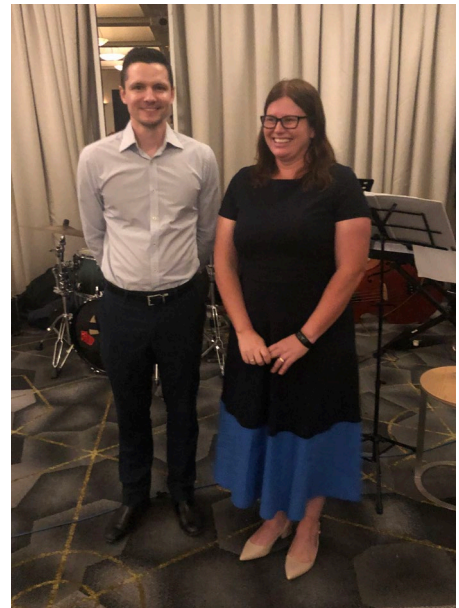
Trewin AJ, Bahr LL, Almast A, Berry BJ, Wei AY, Foster TH, Wojtovich. Mitochondrial Reactive Oxygen Species Generated at the Complex-II Matrix or Intermembrane Space Microdomain Have Distinct Effects on Redox Signaling and Stress Sensitivity in *Caenorhabditis elegans*. *Antiox Redox Signal*, 2019, 31(9):594-607.



## PhD publication prize

Nirajan Shrestha, Griffith University

Shrestha N, Cuffe JSM, Holland OJ, Bulmer AC, Hill M, Perkins AV, Muhlhauser BS, McAinch AJ, Hryciw DH. Elevated maternal linoleic acid reduces circulating leptin concentrations, cholesterol levels and male fetal survival in a rat model. *J Physiol* 2019, 597(13):3349-3361.



These annual prizes are awarded for the best original paper published by an AuPS member during the course of their post-doctoral or PhD studies and are sponsored by SDR Scientific. Winners are awarded \$500 to be used to present work at a conference. Adam and Deanne Skelly (on behalf of Nirajan) are pictured receiving the awards from Jason Hotten, SDR Scientific.

## Student Presentation Prizes

### Best oral presentation prizes:

#### Winner:

**Mr Adam Hagg**, University of Melbourne

*Muscle fibre denervation and inhibited bone morphogenic protein signaling promote cancer associated muscle wasting.*



#### Runner-up:

**Mr John Nguyen**, University of Melbourne

*The cellular microenvironment supports muscle stem cell proliferation and regeneration.*



These annual prizes are awarded for the best oral presentations at the AuPS annual meeting and are sponsored by SDR Scientific. Winners are awarded \$250 and runners up \$100. Adam and John are pictured collecting their awards from Deanne Skelly (AuPS National Secretary).

**Best poster presentation prizes:**

**Winner:**

**Mr Luke Pearce, University of Queensland**

*Chronic Ca<sup>2+</sup> leak in ryanodine receptor variants change plasma membrane Ca<sup>2+</sup> handling properties*



**Runner-up:**

**Miss Crystal Seng, University of Queensland**

*Methods for examining mitochondrial Ca<sup>2+</sup> and inorganic phosphate buffering in skeletal muscle*



These annual prizes are awarded for the best poster presentations at the AuPS annual meeting and are sponsored by SDR Scientific. Winners are awarded \$250 and runners up \$100. Luke and Crystal are pictured collecting their awards from Deanne Skelly (AuPS National Secretary).

A dark blue banner for the 60th Diamond Jubilee Conference. On the left, there are two images: a lifeguard stand on a beach at sunset and a city skyline at night. The AuPS logo is in the top right. The text reads: 'THE AUSTRALIAN PHYSIOLOGICAL SOCIETY 60<sup>TH</sup> DIAMOND JUBILEE CONFERENCE Hosted by Griffith University Gold Coast, Qld 22<sup>nd</sup> – 25<sup>th</sup> November 2020'. There are several yellow stars scattered around the text. A small caption 'Images: Destination Gold Coast' is at the bottom left of the images.

Images: Destination Gold Coast

# The Gage Conference on Muscle

Canberra Boys Grammar School, ACT, April 21<sup>st</sup> to 23<sup>rd</sup> 2020

This is a biennial meeting continuing the original series of Curtin Conferences organized by Peter Gage. It encompasses all aspect of the biology of striated muscle, including excitation-contraction coupling; ryanodine receptor physiology and biophysics; Ca<sup>2+</sup> regulation; performance and fatigue; metabolism and aging; cardiac muscle growth and dysfunction; myopathies.

**REGISTRATIONS AND ABSTRACT SUBMISSION**  
**Open early/mid February (TBA)**

Further information: <http://gageconf.org.au/muscle2020/>  
email: [angela.dulhunty@canberra.edu.au](mailto:angela.dulhunty@canberra.edu.au) or [nicole.beard@canberra.edu.au](mailto:nicole.beard@canberra.edu.au)

### Organising Committee

Angela Dulhunty, Gordon Lynch, Bradley Launikonis, James Bell, Miranda Grounds, Nicole Beard, Graham Lamb, Miranda Grounds, Lea Delbridge, Frances Everson, Marco Casarotto

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This issue of AuPS News was compiled by Chris Shaw with many thanks to the generous contributors.

The next issue of AuPS News will be distributed to members in March 2020.

All contributions for AuPS News should be sent to: [newsletter@auaps.org.au](mailto:newsletter@auaps.org.au) before the end of February.

## Thank you to the supporters of AuPS:

