AuPS News

September 2015

A.K. McIntyre Award Winner 2014
Dr Derik Steyn
The University of Queensland

What is your research background? How did you begin your career in Physiology?

I did a PhD in New Zealand at the Department of Anatomy and Physiology specialising in the field of Neuroendocrinology (at The Centre for Neuroendocrinology). It was during this time that I first started doing Physiology research. While my project looked at neuronal mechanisms that control hormone release, the implications of this work was directed at physiological responses that are specific to pregnancy, parturition (giving birth) and lactation. I defined interactions between steroid hormones and their role in timing parturition.

What research are you currently involved with?

I left NZ to conduct research in Australia, hoping to take a much closer look at the mechanisms that regulate our metabolic capacity, and the physiological implications of disease on these processes. I directed my attention to the body's main anabolic hormone – Growth Hormone – and developed a number of strategies to assess the release and function of Growth Hormone. I have expanded this work to generate a far more comprehensive overview of the action of the hypothalamus in regulating processes central to disease. I normally study mouse models, however recently translated this work into human studies. Motor Neurone Disease (MND) is a neurodegenerative disease that results in paralysis and death within 2 to 5 years of diagnosis. Our studies show that physiological responses to the disease process central to MND are geared to provide neurons and muscle with additional energy. By maximising this response we hope to enhance a patient's capacity to naturally resist the progression of disease - presumably by preventing or slowing the death of neurons. Considerable evidence now suggest that the hypothalamus is central in this response. It is hoped that our studies will highlight how physiological responses that originate from altered hypothalamic function in disease is critical to our capacity to survive disease, and how we can recruit normal physiological processes to improve treatment outcomes.

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

I am fortunate to work alongside a great team – I share my research space with basic and clinical researchers, and work alongside a number of clever and motivated students. I enjoy this progressive environment. Through regular contact

with patients I have fostered a greater understanding of the value of the work that we are doing and have a renewed respect for the capacity of basic research to be translated into clinical practice.

Which part of research makes it most enjoyable for you?
I love to talk about the work that we do, especially with people that attend our research clinic. Each conversation will highlight a new aspect that we may have overlooked, leading to more ideas and opportunities to expand the capacity of what we are doing. Our ideas are driven through constantly challenging our notions of what to we consider “normal physiology".

What is the research direction you would like to take in the next 3-5 years?
Hidden within normal physiology is the capacity to delay ageing, to prevent the development of diseases such as cancer, and to slow the progression of currently incurable diseases such as MND. By enhancing the body’s capacity to resist disease, we may offer individuals with incurable conditions an opportunity to lessen the impact or to delay the progression of their condition. By delaying progression we may offer renewed opportunities for treatment and ultimately a cure. Many of these processes are mediated through the neuroendocrine system. Throughout the coming 3 to 5 years I will focus on understanding hypothalamic mechanisms that regulate whole-body physiology to resist disease, with a focus of extending survival and improving quality of life.

What do you do to relax?
I am very fortunate in that I share my research environment with my wife and research partner Dr Shyuan Ngo. We get very involved with our work and get to know the people we work with, including MND patients. Unfortunately through this work we have lost many friends to MND. We struggle to maintain a healthy work-life balance as we feel pressured to discover answers that may improve the lives of those living with MND. We have developed a number of strategies to cope, including the capacity to lean on each other when the pressure is too much. We find it near impossible to relax unless we remove ourselves completely from our normal environment. As such we love to travel and make time for at least one journey a year. This year we will visit family in South Africa and take a few days off to see some wild animals.

A.K. McIntyre Award

Sponsored by SDR Scientific

The Society’s prestigious A.K. McIntyre award, named in honour of the Society's first President, is awarded annually to a member of the Society who is 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 7 years prior to the time of their application (PhD graduation after 1 November 2008). They must be proposed by two financial members of the Society, who should each provide a statement of not more than 500 words summarising their achievements. The applicant should also provide a curriculum vitae which includes any involvement with AuPS, along with a list of published works, including conference proceedings.

The Prize consists of a medal and the sum of $1000. The prize winner will be announced at the AuPS meeting in Hobart in December.

The application deadline is 31st October 2015.

Eligibility and selection criteria can be found here: http://aups.org.au/Prizes/McIntyre.html

Please email applications to the National Secretary, Matthew Watt secretary@aups.org.au

Details of other AuPS prizes can be found at the back of this newsletter and on our website.

THE AUSTRALIAN PHYSIOLOGICAL SOCIETY WILL BE HOLDING ITS ANNUAL CONFERENCE THIS NOVEMBER IN BEAUTIFUL HOBART

PHYSIOLOGY RESEARCH

There are 12 international speakers presenting at 13 physiology research symposia across the 4 day conference and keynote lectures by:

- Professor Stefan Bröer: *Amino acid transport - translating basic discovery into improving health*
- Professor Bret Goodpaster: *The impact of exercise on insulin resistance and type 2 diabetes*

PHYSIOLOGY EDUCATION

There will be dedicated Education symposia as well as a workshop and keynote address:

- Pre-conference Physiology Education Workshop: *The core concepts of physiology: What are they and how do we know if our students understand them?*
- Keynote address from Dr Deanne Skelly, 2014 Michael Roberts Education prize winner

CONFERENCE DINNER AT MONA

The conference concludes with dinner at the world-renowned Museum of Old and New Art (MONA) including a river cruise and private museum viewing on Tuesday 1 December

REGISTRATION & ABSTRACT SUBMISSION COMMENCES ON 7TH SEPTEMBER 2015
(Early-bird registration and abstract submissions close 2 October 2015).

For registration and further information please visit http://aups.org.au

UNIVERSITY of TASMANIA

Australian Physiological Society AuPS

Student Profile – Hai Ly
The University of Melbourne

What is your research background – how did you get interested in Physiology?

During my undergraduate degree I was fortunate enough to secure an undergraduate research project for one semester in Prof Gordon Lynch's lab. I undertook this project to try get a feel for what research would be like and I ended up thoroughly enjoying it. I have always had a great passion for science and a strong curiosity regarding how the body works and I just needed to figure out what direction to take after my undergraduate degree. The time I spent in the lab solidified my choice to pursue a PhD. I then went on to complete an Honour's year with Dr. James Ryall and Prof Gordon Lynch and I am now in my second year of my PhD in which I explore one of the unresolved mysteries in skeletal muscle biology; how muscle stem cells are regulated and their role in muscle growth and adaptation. In my study I explore the potential role of metabolism as a regulator of stem cells and the potential of altered metabolism in developing new therapies.

What do you do to relax?

As a member of a muscle lab I am quite passionate about fitness and health and incorporate this into activities that will help me unwind and just step away from science for a little bit. I cycle to and from uni each day and will also go to the gym a few days each week. While not exactly physically relaxing, it is mentally rewarding to just focus on the task at hand and forget, although momentarily, the stresses of other things in life, i.e. PhD.

What is the research direction you would like to take in the next 3-5 years?

I am looking forward to the opportunity to travel overseas in the next 3-5 years to complete a postdoctoral fellowship. My mentors have instilled in me a deep passion regarding stem cells and how stem cells are regulated, so I plan on continuing in this line of research with the hope of one day being involved in the translation of stem cell therapies to treat a wide variety of pathologies.

Michael Roberts Award

Sponsored by Wiley-Blackwell

The Michael Roberts Excellence in Physiology Education Award is an award bestowed periodically 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.

The recipient of this Award in 2015 will receive a medal and a cash award, which will be presented at the Conference dinner at this year's AuPS Hobart Meeting, and will be invited to deliver a lecture during the Educational Symposium at the 2016 AuPS Adelaide Meeting.

The application deadline is 31st October 2015.

Eligibility and selection criteria can be found here: http://aups.org.au/Prizes/Roberts.html

Please email applications to the National Secretary, Matthew Watt secretary@aups.org.au

AuPS Postdoctoral publication prize

Sponsored by SDR Scientific

An annual award for the best original paper published by an AuPS member during their first 4 postdoctoral years.

The Prize consists of a $500 cheque. The prize winner will be announced at the AuPS meeting in Hobart in December. The paper must be published (on paper or online) between 30th September 2014 and 1st October this year. The award must be used to present work at a conference. Winners will be reimbursed after providing a copy of an invoice of conference expenses.

The application deadline is 31st October 2015.

Eligibility and selection criteria http://aups.org.au/Prizes/PostDocPublication.html

Please email applications to the National Secretary, Matthew Watt secretary@aups.org.au

AuPS PhD student publication prize

Sponsored by SDR Scientific

An annual award for the best original paper published by an AuPS member during the course of their PhD studies.

The Prize consists of a $500 cheque. The prize winner will be announced at the AuPS meeting in Hobart in December. The paper must be published (on paper or online) between 30th September 2014 and 1st October this year. The award must be used to present work at a conference. Winners will be reimbursed after providing a copy of an invoice of conference expenses.

The application deadline is 31st October 2015.

Eligibility and selection criteria can be found here:
http://aups.org.au/Prizes/PhDpublication.html

Please email applications to the National Secretary, Matthew Watt secretary@aups.org.au

Dear Student Members,

We are excited to connect with you through social media!! A new student and early career researchers member page has been developed on Facebook! The page is titled: **Australian Physiological Society - Students and Early Career Researchers**. The aim of this page is to provide another means to inform our student members and ECR's about upcoming events, awards/scholarships that are available and also important registration and submission dates. We will also aim to post new information about jobs and postdoc positions that are circulated to members, as well as highlight our student member of the month with some information about their area of research and accomplishments!

Privacy: It is important to note that, as Facebook is a social media page, your profile will be accessible to the page administrators, Tahnee Kennedy and Nicole Vargas (your current student representatives). The page will, in no way, be used for determining awards/scholarships, council positions and the like. Also, note that while your profile will be open to page administrators, other individuals who like the page will not have access to your page, unless your privacy settings allow it.

At this time, we would love to ask you to 'like' our Facebook page if you are a student member or early career researcher!! We are very excited to open these lines of communication and hope that they will keep everyone in the loop!

Thanks for your support and we'll see you on Facebook!!

Kind Regards,
Tahnee Kennedy and Nicole Vargas
AuPS student representatives

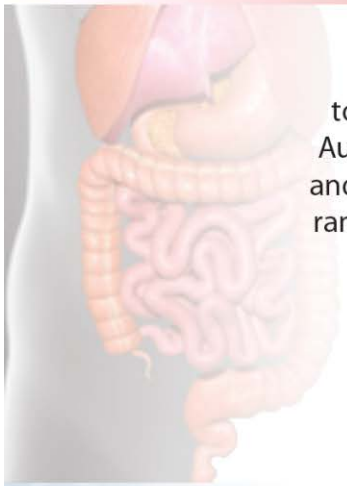
asmr Australian Society for Medical Research

54th National Scientific Conference

15-18th November 2015, Stamford Plaza, Adelaide

Bugs, Bowels & Beyond

Innovations in Digestive Health and Disease Research



Our exciting program will bring together leading international and Australian-based scientists, clinicians and health professionals with a wide-ranging focus on conditions affecting the digestive tract.

THEMES

Microbiome
Obesity and nutrition
Inflammatory bowel conditions
Gastrointestinal cancers
Pancreatic and liver diseases
Gut, brain and microbiota

FIRKIN ORATION

Professor Eran Elinav

Weizmann Institute of Science, Israel.

Professor Elinav is a clinician and scientist leading a team that investigates interactions between the innate immune system, the intestinal microbiota and their effects on health and disease.

EDWARDS ORATION

Professor Nicholas Talley

Pro Vice Chancellor, Faculty of Health, University of Newcastle

Professor Talley is an icon of Australian health and medical research with over 1,000 publications and recipient of more than $10 million in research funding. His team investigates the molecular basis and treatment of Irritable Bowel Syndrome (IBS), as well as the link between bacteria and dyspepsia, gastroesophageal reflux disease (GORD) and gastritis.

INVITED SPEAKERS

Professor Mark Morrison,

Dr Vicki Whitehall, Colon Cancer

Dr Ilse Rooman, Pancreatic Cancer

Associate Professor Phil Sutton,

4th to 5th Dec 2015

LA TROBE UNIVERSITY

EARLY BIRD RATES NOW AVAILABLE REGISTER TODAY!

HUMAN ANATOMY & PHYSIOLOGY SOCIETY (HAPS)

AUSTRALIAN REGIONAL CONFERENCE

ADVANCING SOCIETY THROUGH INNOVATIVE CURRICULUM IN PHYSIOLOGY AND ANATOMY

La Trobe University, Melbourne Campus

GET INVOLVED!

Submit your abstracts for poster & workshop presentations by Nov 20 2015

At the first HAPS regional conference to be held in Australia we will provide an opportunity for human physiology and anatomy educators to discuss inventive ways to deliver curricula that will produce graduates able to meet the needs of society today and in an uncertain future.

Conference to be opened by Senior Deputy Vice-Chancellor and Vice-President (Academic) Professor Jane Long.

KEYNOTE SPEAKERS

NATHAN TAYLOR

Chief Economist, CEDA – the Committee for Economic Development of Australia

Nathan Taylor is the Chief Economist at CEDA where he is responsible for CEDA's Research and Policy agenda. This includes CEDA's major reports Australia's future workforce? and Australia Adjusting: how to optimise national prosperity.

DARRELL EVANS

Vice-Provost (Learning and Teaching), Monash University

As Vice-Provost (Learning and Teaching) at Monash University, Professor Darrell Evans is responsible for the provision of transformational senior level leadership of the University's learning and teaching strategic activities including forward planning, implementation and strategic management.

SANDRA LEWIS

Professor Emeritus, Pierce College District, President Emeritus, Human Anatomy and Physiology Society

Sandy is a Professor Emeritus, Pierce College District, Washington State and President Emeritus of the Human Anatomy and Physiology Society (HAPS). She taught for 31 years full-time at Pierce College, teaching primarily Human Anatomy and Physiology, but also taught other Biology, Health Sciences, Medical Technology, Veterinary Technology and related courses.

TONY MACKNIGHT

Director of Education for ADInstruments

Professor A. D. C. (Tony) Macknight graduated MBChB from the University of Otago in 1963 and obtained a PhD in Physiology in 1968 and an MD in 1969. In 1984 he was appointed as the Wolf Harris Professor of Physiology at the University of Otago, a position he held until his retirement at the beginning of 2002.

For further information contact
Dr Brianna Julien on bjulien@hapsconnect.org

Register and submit your abstracts here:
http://www.hapsweb.org/events/event_details.asp?id=647722

http://www.hapsweb.org/

Skeletal Muscle: *An African Perspective*

The inaugural Indian Ocean Rim Muscle Colloquium was held at the University of Western Australia in 2009. Institutions in countries bordering the Indian Ocean are rich in outstanding scientists working in muscle biology. The objective of this IORMC is to expand the network of participants and the scope of the 'muscle research' presented.

The exciting scientific programme will focus on the latest and most significant developments in current muscle bioscience research and provide educational, training and collaborative opportunities at all research levels.

Focus of the meeting:

- Skeletal muscle myogenesis
- Stem cells and methodology
- Regeneration and tissue engineering
- Exercise myology
- Muscle model systems

Confirmed International Faculty:

- Prof Miranda Grounds
- Prof Jyotsna Dhawan
- Dr Yu Suk Choi
- Prof Gianni Parise
- Prof Philip Ingham

New Features:

Young investigator keynote:
Cardiotoxicity: Mitochondrial stress signaling - Dr Balindiwe Sishi
Workshop: Research methodology and application

Website:
www.iormc.co.za

We invite all muscle scientists, from countries bordering the Indian Ocean to present their work in South Africa at the fourth iteration of the IORMC.

IMPORTANT DATES

Abstract submission closing date: ***15 September 2015***
Early Bird Registration closes: ***30 September 2015***

Enquiries:
• Email: Iormc2016@allevents.co.za • Tel: +27 (0)21 948 9549
For specific queries related to the academic content of the program, please email: carolaniesler@gmail.com

AuPS Supporters

This issue of AuPS News was compiled by Glenn Wadley and with many thanks to the generous contributors.

The next issue of AuPS News will be distributed to members in December 2015.
All contributions for AuPS News should be sent to: newsletter@aups.org.au before the end of November.