

Newsletter 2020

Message from the President

Dear AGCTS Members,

I'd like to begin by welcoming you to the AGM and thanking you for making the time to join us. In order for us to have a society that supports you, it is important that we have an opportunity to hear from each other, and discuss ideas together. This meeting should be a great place for us to achieve that. But also know that you can always reach out to me or members of the Executive Committee if you wish to discuss ideas, or have suggestions.

Secondly, I'd like to say how grateful I am for the opportunity to serve as your President for the 2019-2021 cycle. It's an honour to have your support. But if we achieve anything as a Society while I'm in this role, it should be credited to the huge amount of work that has been accomplished by our Executive Committee. Their dedication to AGCTS is seemingly tireless. So thank you!



Assoc Prof. Paul Gregorevic,
PhD

In terms of the most significant AGCTS activities since my last report, it would have to be last year's biennial conference in Brisbane, held together with The Australian Society for Stem Cell Research (ASSCR) and the ANZ chapter of The International Society for Cell & Gene Therapy (ISCT ANZ). A tri-society meeting was a first for us, and brought new challenges in terms of planning. But feedback suggested that our event was widely regarded as a great success. For their roles in bringing this meeting together, I am grateful not only to members of our Society, but also Ed Stanley of ASSCR and Ngairé Elwood of ISCT ANZ and members of their respective societies who helped take up the load. The three societies are also grateful to Mike Pickford and the Team at ASN events for their extensive work behind the scenes to prepare and execute such a great event. A meeting of this standard would not be possible without the backing of our sponsors. Their commitment to enabling our societies to interact as we did is deeply appreciated, and we hope the experience was as valuable for them as it was for us. The highlights of the meeting are included in this newsletter.

While 2020 has presented the world with challenges unlike any in recent memory, it has re-affirmed the need to bring minds together, in order to tackle pressing health problems through innovation and collaboration. As such, members of the societies are keen to explore another joint meeting in 2021, as circumstances will allow. There are many details to be worked out yet, but we remain hopeful of creating a meeting that that will foster lively interactions around outstanding research ideas in whatever form it may take. Please don't hesitate to get in touch if you would like to offer suggestions or help with planning. We will update as plans take shape.

In Australia and abroad, we continue to see evidence of exciting gene therapy strategies proceeding through clinical trials and towards patient use, and renewed interest in gene therapies by industry. To those of you forging ahead in such pursuits, I wish you the best of luck. I can't wait to hear about your successes at future AGCTS events.

With best wishes,

Paul Gregorevic, PhD

President, Australasian Gene and Cell Therapy Society

AGCTS AGM 2019-2020

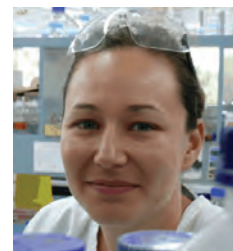
AGCTS committee has proposed and made two changes during the last annual general meeting. The number of executive committee member has now increased to six to give opportunity to AGCTS members to be involved with AGCTS activities. In addition, the financial year for AGCTS has also been changed from Jun-May to Jan-Dec. This allows the AGCTS biannual meeting to coincide with AGCST AGM and give members a chance to vote for AGCTS election. The old AGCTS logo is now officially replaced with a new logo found in this newsletter.



Jim Vadolas, PhD
Vice President



Prof. Ann M. Simpson,
PhD, Treasurer



Samantha Ginn
PhD, Secretary



Sharon Cunningham
PhD, executive
member



Leszek Lisowski
PhD, executive
member



Cindy Kok
PhD, executive
member



May Aung-Htut
PhD, executive
member



Livia Carvalho
PhD, executive
member

AGCTS official page and social media channels

Visit the updated AGCTS official page at <https://agcts.org.au>. Feedback is welcome. To promote awareness of AGCTS, two social media channels, AGCTS facebook page <https://www.facebook.com/AGCTS>, and AGCTS Twitter account [@theAGCTS](https://twitter.com/theAGCTS) were created. Follow us on these two media and provide your exciting research publications, awards, and achievement to our Secretary at sginn@cmri.org.au to be shared on our social media.

Remember to send us papers for consideration

To encourage our early and not so early career scientists and disseminate information among members, the AGCTS Executive is offering up to two \$250 awards twice a year. These will be offered in each six month period of a calendar year to the first or corresponding author of a gene therapy or RNA therapeutic publication. Only current AGCTS members may apply and the award is open to all AGCTS members (the young as well as the wise). Please send your paper details to our Secretary at sginn@cmri.org.au.

Best paper prizes 2019-2020 Congratulations!!!

Professor Ann Simpson (Technologies School of Life Sciences University of Technology Sydney) (2019 Jan to June round)

“Ex Vivo Expansion of Murine MSC Impairs Transcription Factor-Induced Differentiation into Pancreatic β -Cells”

(Stem Cells International, Volume 2019, Article ID 1395301)

Dr May T. Aung-Htut (Centre for Molecular Medicine and Innovative Therapeutics, Murdoch University, Western Australia) (2019 July to Dec round)

“Reduction of integrin alpha 4 activity through splice modulating antisense oligonucleotides”

(Scientific Reports volume 9, Article number: 12994 (2019))

Dr Chandana Herath (Department of Medicine, University of Melbourne) (2019 July to Dec round)

“Liver-Targeted Angiotensin Converting Enzyme 2 Therapy Inhibits Chronic Biliary Fibrosis in Multiple Drug-Resistant Gene 2-Knockout Mice”

(Hepatology Communications, VOL. 3, NO. 12, 2019)

Dr Samantha Ginn (Children’s Medical Research Institute, Faculty of Medicine and Health, The University of Sydney and Sydney Children’s Hospitals Network, Sydney, Australia) (2020 Jan to June round)

“Efficient in vivo editing of OTC-deficient patient-derived primary human hepatocytes”

(JHEP Reports, Volume 2, Issue 1, February 2020)

ASSCR-AGCTS-ISCT ANZ 2019 Joint Scientific Meeting



Our biannual meeting was organised as a joint scientific meeting of three societies, the Australasian Society for Stem Cell Research (ASSCR), the Australasian Gene and Cell Therapy Society (AGCTS), International Society for Cellular and Gene Therapy (ISCT) from November 13-15 in Brisbane.

The Sponsor



Supporting Sponsor



Exhibitors



Awards



The prestigious “Panos Iannou Young Investigator Award” was awarded to Dr. Ianthe Pitout from the Centre for Molecular Medicine and Innovative Therapeutics, Murdoch University, Western Australia.

Dr. Pitout graduated with a PhD in 2018 and currently appointed as a postdoctoral scientist at Murdoch University and Perron Institute. She also holds a position at PYC Therapeutics as a senior scientist. She has 7 years of experience in the design and evaluation of therapeutic antisense oligonucleotides and committed to developing novel therapeutics for neurodegenerative diseases.



*Travel award winners;
Suzanne Scott*

*(Gene Therapy Research Unit, Children's Medical Research Institute, Westmead, NSW, Australia)
and*

Melad Farraha

(Centre for Heart Research, Westmead Institute for Medical Research, NSW, Australia)

Awards



Student poster award winner; Dr Khine Zaw from the Centre for Molecular Medicine and Innovative Therapeutics, Murdoch University, Western Australia.



Student oral award winner; Mr Craig McIntosh from the Centre for Molecular Medicine and Innovative Therapeutics, Murdoch University, Western Australia.

Awards

Esteemed Member Conference Prize was awarded to Dr Claus Hallwirth, a research Affiliate from Children's Medical Research Institute, Sydney Medical School.



AGCTS Lifetime Member Awards were awarded to Prof. Ann Simpson and Prof. Steve Wilton

Prof. Simpson is Director of the UTS Research Centre for Health Technologies. Her areas of expertise are biochemistry, molecular biology and cell biology. Her main research interest is the gene therapy of diabetes mellitus. She was the first to show a liver cell can store insulin in granules and she has engineered two liver cell lines to store and secrete insulin to a glucose stimulus. One of these cell lines has reversed diabetes in an animal model. She is the founding Treasurer of the AGCTS and continues in this role.

Prof. Wilton is Director of Centre for Molecular Medicine and Innovative Therapeutics, Murdoch University and Director of Perron Institute. Although Steve's research has encompassed numerous areas of research, his major achievement has been to develop a new therapy for Duchenne muscular dystrophy. He has made a major contribution to the AGCTS over many years as AGTS President (2009-2013) and in other capacities

Invited speaker A/Prof Charles A Gersbach



“Genome Editing for Duchenne Muscular Dystrophy”

Dr. Charles A. Gersbach is the Rooney Family Associate Professor at Duke University in the Departments of Biomedical Engineering and Orthopaedic Surgery, an Investigator in the Duke Center for Genomic and Computational Biology, and Director of the Duke Center for Biomolecular and Tissue Engineering. His research interests are in genome and epigenome editing, gene therapy, regenerative medicine, biomolecular and cellular engineering, synthetic biology, and genomics. Dr. Gersbach’s work has been recognized through awards including the NIH Director’s New Innovator Award, the NSF CAREER Award, the Outstanding New Investigator Award from the American Society of Gene and Cell Therapy, the Allen Distinguished Investigator award, and induction as a Fellow of the American Institute for Medical and Biological Engineering.

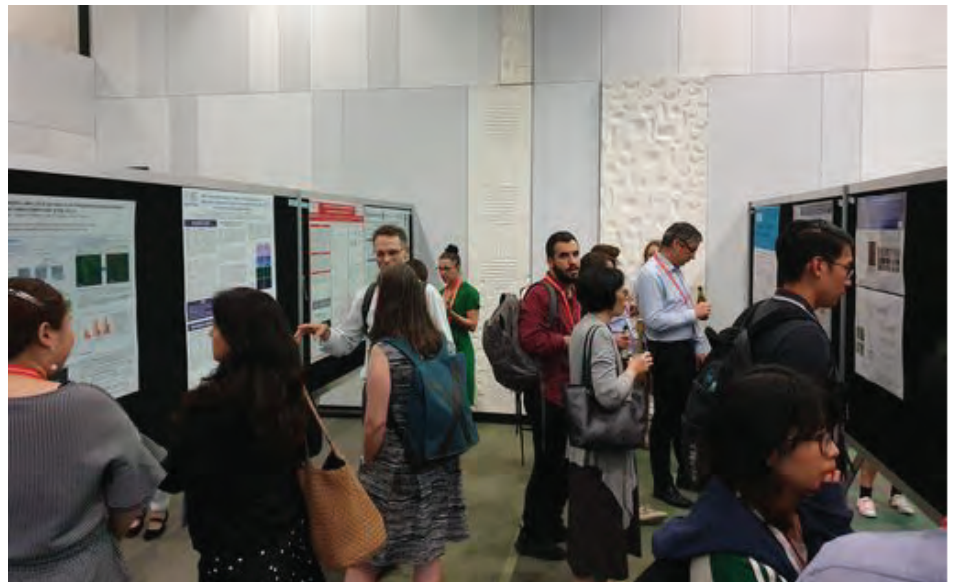
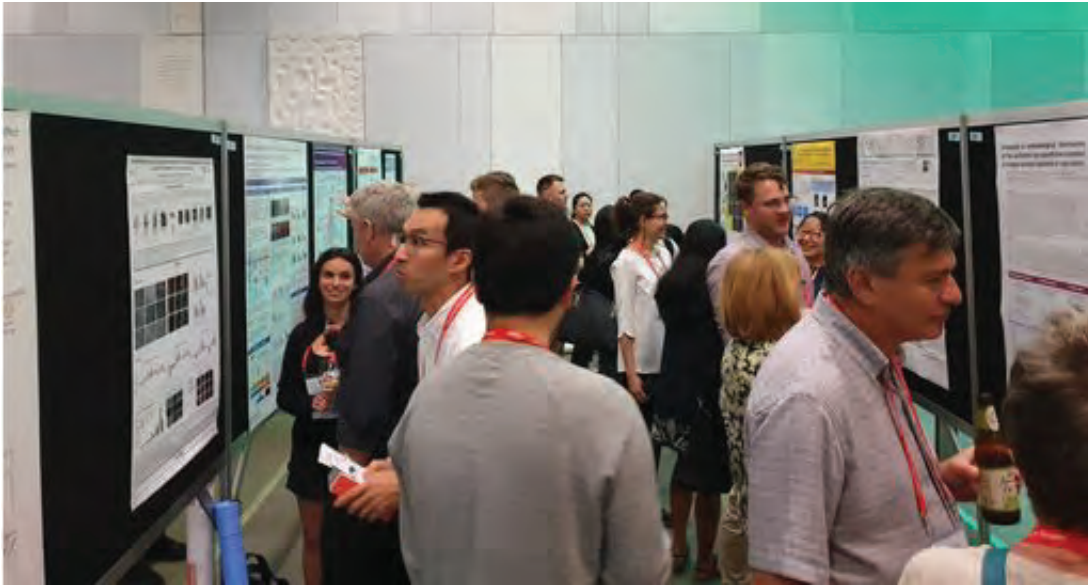
Greg Johnson Memorial Oration by Professor Peter Leadman

“RNA therapeutics for cancer: are we there yet? ”



Peter Leadman is the Director of the Harry Perkins Institute of Medical Research in Perth, Head of the Perkins Laboratory for Cancer Medicine and Professor of Medicine at the University of Western Australia. He has a long-term interest in RNA biology, ncRNAs and how this information can be harnessed for therapeutics in poor prognostic tumors (head and neck, prostate, melanoma and liver cancer). He co-founded miReven, a company established to commercialise microRNA-7 as a replacement therapy for cancer, and is driving this initiative towards an early phase clinical trial in patients with liver cancer. He is also Chairman of Linear Clinical Research Ltd, an award-winning company specializing in early phase clinical trials, with a focus on cancer, and which is a wholly owned subsidiary of the Harry Perkins Institute.

Poster sessions



Dinner at Olé Restaurant



Discussion, discussion!



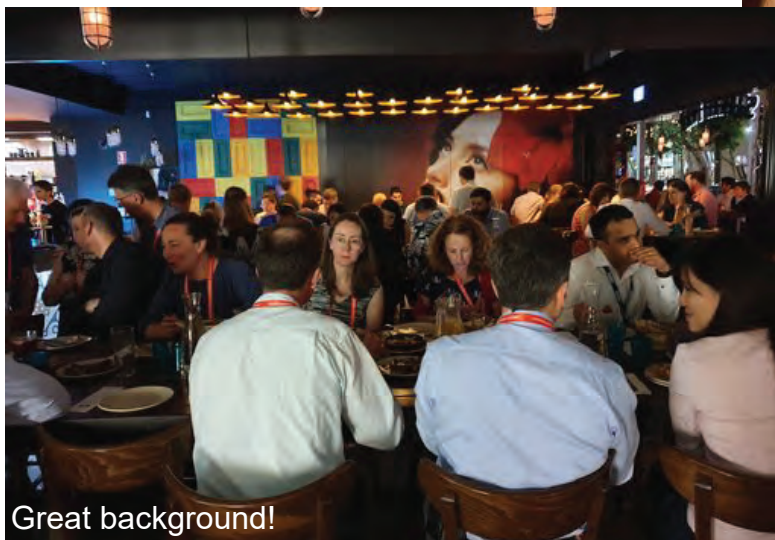
Good food!



Beautiful lights



Good company



Great background!

Research highlights of our members

FDA approval for exon skipping drug

The team led by Prof. Steve Wilton and Prof. Sue Fletcher from Murdoch University, Western Australia has been working on potential therapeutics for Duchenne muscular dystrophy and their second exon skipping drug Vyondys 53 was approved by U.S. Food and Drug Administration (FDA) in December 2019. Congratulations team!!!

MRFF award for potential COVID-19 treatment

As a collaborative effort with Professor Merlin Thomas at Monash University, Professor Steve Wilton and Dr May Aung-Htut, both based at Murdoch University are investigating inhaled treatments for COVID-19. The novel idea is to make the Angiotensin-Converting Enzyme 2 (ACE2) surface protein used by COVID-19 to enter and infect lung cells into the soluble isoform so that the virus can't attach to the cell and slow down the infection.

MRFF award for COVID-19 vaccine

Monash University Professor of Pharmaceutical Biology, Professor Colin Pouton and collaborators has been awarded with almost \$3 million by the Commonwealth Government's Medical Research Future Fund (MRFF) to explore on new COVID-19 vaccine candidates. Professor Pouton said the approach includes messenger RNA that codes for the tip of the viral spike protein known as the receptor binding domain (RBD). The technology should provide a very safe and focussed vaccine and the composition can be rapidly adjusted when the virus mutates.
