

MELBOURNE EMERGING LEADERS IN
BIOMEDICAL
 research
 society presents

2023 Symposium: Advancing Discovery



FRIDAY 1 SEPTEMBER 2023

PROGRAM

8:00-9:00 Registration

9:00 **Acknowledgement of Country & Symposium Opening** - Dr. Madeline Dans, Walter and Eliza Hall Institute of Medical Research

9:10 **Plenary Speaker**
 Associate Professor Sam Forster, Hudson Institute
 Chair: Dr. Jess Neil

9:45 **Session 1: Lightning talks** Chairs: Dr. Connie Ow & Dr. Jeff Luo

- 09:45 Structure-based discovery of new positive allosteric modulators of the A 1 adenosine receptor
 Dr. Anh Nguyen, Monash Institute of Pharmaceutical Sciences
- 09:52 Targeting adenosine receptors for the treatment of myocardial infarction associated with advanced age
 Dr. Bui San Thai, Monash University
- 09:59 Pericyte-endothelial cell crosstalk in blood-brain barrier development and function
 Dr. Oguzhan Baltaci, Peter MacCallum Cancer Centre
- 10:06 $\gamma\delta$ T cells as potential modulators of SCLC tumour-specific responses
 Dr. Jin Ng, Walter and Eliza Hall Institute of Medical Research
- 10:13 The SARS-CoV-2 Omicron (BA.1) variant remains dependent on TMPRSS2 for entry throughout the respiratory tract
 Dr. Matthew Gartner, University of Melbourne
- 10:20 Efficient non-viral CAR-T cell generation via silicon-nanotube-mediated transfection
 Dr. Yaping Chen, Monash University
- 10:27 Nasal invaders revealed: deciphering distinct nasopharyngeal microbiome signatures in COVID-19 through longitudinal profiling of recovered and naïve individuals
 Dr. Marilou Barrios, Walter and Eliza Hall Institute of Medical Research
- 10:34 Single-cell transcriptomic profiling of the cardiac cellulome in obese female mice
 Dr. Malathi Dona, Baker Heart and Diabetes Institute

10:45-11:10 Morning tea

11:10 **Session 2: Cutting Edge Technology sponsored by Bruker** Chairs: Dr. Rukmali Wijayarathna & Dr. Ruofei Liu

- 11:10 Sponsor presentation: Bruker
- 11:15 A novel method for the accurate assessment of human carbohydrate digestion: advancing discoveries for the management of type 2 diabetes
 Dr. Michael Houghton, Monash University
- 11:30 Development of a hepatic cryoinjury model to study liver regeneration
 Dr. Marcos Sande-Melon, Peter MacCallum Cancer Centre
- 11:45 Normative tract models to turn advanced diffusion MRI into a clinical tool in epilepsy
 Dr. Remika Mito, The Florey Institute
- 12:00 Non-invasive metabolic imaging using a lab-on-a-chip device: a novel strategy to revolutionise IVF treatments.
 Dr. Fabbriozio Horta, Monash University
- 12:15 Employing CRISPR-based technology for the rapid and accurate detection of monkeypox virus
 Dr. Soo Jen Low, University of Melbourne

12:40-1:40 Lunch and Poster Session

1:40 **Session 3: Mechanistic advances in health and disease** Chairs: Dr. Jordyn Thomas & Dr. Lachlan Dalli

- 1:40 Automatic prediction of infants with cerebral palsy using smart phone videos
 Dr. Elyse Passmore, Murdoch Childrens Research Institute
- 1:55 Cyclin-dependent-kinase 11 is required for Pol II-dependent mRNA synthesis and is essential for acute-myeloid-leukaemia cell viability
 Dr. Jennifer Devlin, Peter MacCallum Cancer Centre
- 2:10 Spinocerebellar ataxia associated mutations differentially affect metabotropic glutamate receptor 1 function
 Dr. Shane Hellyer, Monash Institute of Pharmaceutical Sciences
- 2:25 BRCA1 secondary mutations at splice-sites drive exon-skipping and PARP inhibitor resistance in ovarian cancer
 Dr. Ksenija Nestic, Walter and Eliza Hall Institute of Medical Research
- 2:40 Characterising HIV-1 transmission in Victoria, Australia: A genomic epidemiological study
 Dr George Taiaroa, University of Melbourne

3:10-3:40 Afternoon tea

3:40 **Plenary Speaker**
 Professor Natalie Hannan, University of Melbourne
 Chair: Dr. Alexandra George

4:10 **Career Panel Discussion with** Chairs: Dr. Alexandra George and Dr. Kirsty Carey
 Prof. Natalie Hannan (University of Melbourne) Dr. Emma Burrows (AAMRI)
 A/Prof Sam Forster (Hudson Institute) Dr. Sri Harsha Ramarathinam (CSL)
 Dr. Niall Geoghegan (WEHI) Dr. Gavin Knott (Monash University)

5:00 **Awards and Symposium Close** – Dr. Chris Horne, Walter and Eliza Hall Institute of Medical Research

5:15-7:00 Networking Mixer sponsored by Melbourne Protein Group