



**20TH ANNIVERSARY
CONFERENCE**
30 October – 2 November 2022
Novotel Twin Waters
Sunshine Coast, Queensland

Sunday 30 October	
0830-1800	Conference Registration Opens
0900-1645	Pre-conference workshop (Registration required) Viral Metagenomics with Hecatomb
1700-1800	Opening Oration Panel 20 years of Australasian Genomics and where to from here? Moderator Associate Prof Ruby C Y Lin, The Westmead Institute for Medical Research Panellists Prof Susan Clark, Garvan Institute of Medical Research Prof Sean Grimmond, The University of Melbourne Prof Vanessa Hayes, University of Sydney Prof John Mattick, University of New South Wales
1800-2000	<i>Welcome Reception & Exhibition</i>

Monday 31 October	
0730-1730	Registration desk opens With thanks to our Name Badge and Lanyard sponsor 
0800-1535	Exhibition opens Barista cart available, <i>proudly sponsored by</i> 
0830-0845	Official Welcome and Conference Opening Conference Convenors Associate Prof Ruby C Y Lin Dr Nic Waddell Professor Marcel Dinger (AGTA president)
0845-0850	Welcome to Country
Session 1	
Cancer and Medical Genomics	
0850-0930	Keynote Presentation Dr Elizabeth Worthey, The University of Alabama at Birmingham
0930-0955	National Speaker Pan-cancer proteomic map of 949 human cell lines Dr Qing Zhong, The University of Sydney

0955-1010	Platinum sponsor presentation Illumina technology improvements driving genomic insights Ashley A. Van Zeeland, PhD, Vice President, Head of Illumina Open Innovation Illumina, Inc 
1010 – 1040	<i>Morning refreshments & exhibition</i> <i>proudly sponsored by</i> 
1040-1105	National Speaker Genomic basis for prostate cancer health disparities Professor Vanessa Hayes, University of Sydney
1105-1120	The Q-IMPROvE (Queensland- IMplementation of PRrecision Oncology in brEast cancer) pilot study Dr Amy McCart Reed, The University of Queensland.
1120-1135	Evolving genomic complexity unveiled in ctDNA analysis of melanoma patients Dr Sandra Fitzgerald, University of Auckland
Lightning Poster Session 1	
1135-1138	Identifying Metabolic Shift Gene Signature Pattern in The Wnt-Associated Epithelial-Mesenchymal Plasticity Of The PMC42 Breast Cancer Model System Prof Erik Thompson, Queensland University of Technology
1138-1141	Having our Cake and Eating it Too: Building Speculative Research into Clinical Genomics Studies Dr Mark Pinese, Children's Cancer Institute
1141-1144	Application of Long read sequencing (LRS) in cancer genomics Lingchen Liu, QIMR Berghofer Medical Research Institute
1144-1147	Predicting cell-type specific combinatorial binding of neuronal transcription factor network by Deep Learning Gunjan Dixit, Australian National University
1147-1150	Value of RNA-sequencing in precision medicine expands beyond fusion detection Chelsea Mayoh, Children's Cancer Institute
1150-1153	A novel reference architecture for multi-party federation: enabling joint analysis of large-scale clinical-genomic data across distributed Trusted Research Environments Kent Zaitlik, Lifebit Biotech Limited
1153-1156	Flexible and efficient handling of nanopore sequencing signal data with slow5tools Hiruna Samarakoon, Garvan Institute of Medical Research
1156-1159	Shotgun microbial profiling reveals geo-ethnic disparities in aggressive prostate cancer Dr Kaitao Lai, The University Of Sydney
1159-1202	Sequencing By Binding (SBB) Shows Superior Sensitivity and Specificity of Detection of Low Frequency Variants from ctDNA Dr James Miller, PacBio

1205-1305	<i>Lunch & Exhibition</i> <i>proudly sponsored by</i>  Australian National University Biomolecular Resource Facility
Session 2 Plant and Animal Genomics	
1305-1308	Welcome from Platinum Sponsor 
1308-1348	Keynote Presentation Animal Genomics Enables Selection and Dissemination of Improved Livestock Prof Alison van Eenennaam, University of California, Davis
1348-1403	Multi-omics analysis of <i>O. corymbosa</i> reveals the biosynthesis of anti-cancer metabolites Dr Irene Julca, Nanyang Technological University
1403-1418	The Australian Dingo is an Early Offshoot of Modern Breed Dogs A/Prof Matt Field, James Cook University
PhD runner ups	
1418-1425	Assessing the effects of date and sequence data in phylodynamics Leo Featherstone, University of Melbourne
1425-1432	A novel non-invasive method to infer fetal genotype in pregnancy Carol Wang, University of Newcastle
1435-1535	<i>Afternoon refreshments & Exhibition & Poster Session</i> <i>proudly sponsored by</i>  Australian National University Biomolecular Resource Facility
Session 3 Computational Biology, Bioinformatics, Statistical Genetics	
1535-1600	National Presentation Viral extraction, sequencing, and identification with hecatomb Professor Rob Edwards, Flinders University
1600-1640	Keynote Presentation The Origin and Evolution of COVID-19: A Genomic Perspective Professor Eddie Holmes, The University of Sydney
1640-1655	Machine learning to predict BRCA1 and BRCA2 variant pathogenicity from real-world cancer genomic profiling data Dr Olga Kondrashova, QIMR Berghofer Medical Research Institute
1655-1710	Mining the Cancer Contaminome for MAGs – Intra-tumoural Microbiome Signatures are associated with Patient Mortality in Head and Neck Squamous Cell Carcinomas George Bouras, The University Of Adelaide
1800-2000	<i>Student Night – Students Only</i>
1800-2100	<i>VIP function – Invitation only</i>

Tuesday 1 November	
0815-1800	Registration desk opens
0830-1535	Exhibition opens Barista cart available, <i>proudly sponsored by</i> 
0855-0900	Welcome to Day 2
Session 4	
Indigenous and Population Genomics	
0900-0925	National speaker Empowering Indigenous Australians in Genomic Medicine Professor Alex Brown, South Australian Health, and Medical Research Institute
0925-0950	National Speaker Indigenous Australian genomic variation reveals deep population structure Professor Stephen Leslie, The University of Melbourne
0950-1005	Influence of geographical variations on the structure of human gut microbiome Gauraw Kumar, Indian Institute of Science Education and Research Kolkata, India
1005-1020	A long-read nanopore sequencing platform for Indigenous genomics Dr Andre Reis, Garvan Institute of Medical Research
1020-1035	A Population Genomics Approach to Prostate Cancer in Diverse Geo-ethnic Samples Dr Weerachai Jaratlerdsiri, The University of Sydney
1035-1105	<i>Morning Refreshments and Exhibition</i> <i>proudly sponsored by</i> 
Session 5	
Functional and Clinical Genomics	
1105-1145	Keynote Presentation Long-read sequencing in cancer and rare disease genomics – the Genomics England experience Prof Matt Brown, Genomics England
1145-1210	National speaker Human Cardiac Organoids for Functional Genomics Professor James Hudson, QIMR Berghofer
1210-1225	Genome Wide Mapping of Physiologically Relevant i-Motifs Using an i-Motif Specific Nanobody Dr Samuel Ross, University of New South Wales
1225-1240	Tracking transcriptional evolution in cancer using circulating tumour DNA Dr Dineika Chandrananda, Peter MacCallum Cancer Centre
1240-1255	Identifying integrations of a clinical gene therapy vector with isling Dr Suzanne Scott, Children's Medical Research Institute
1255-1355	<i>Lunch & exhibition</i> <i>proudly sponsored by</i> 

Session 6 Microbial Metagenomics Session	
1355 – 1358	Welcome from Platinum Sponsor 
1358-1438	Keynote Presentation The Use of Targeted Microbial Therapeutics to Improve Health – Are We There Yet? Professor Georgina Hold, St George and Sutherland Clinical School, UNSW
1438-1443	Beer Presentation
1443-1458	Screening high-risk paediatric cancer for microbial DNA using whole-genome-sequencing data Sam El-kamand, Children's Cancer Institute
1458-1513	Drug resistance prediction with reference graphs Dr Michael Hall, University of Melbourne
1513-1528	The importance of deciphering the bacterial epitranscriptome and utilising native long-read RNA sequencing Dr Miranda Pitt, University of Melbourne
1528-1628	<i>Exhibition Viewing, Poster Session & Afternoon refreshments</i> <i>Proudly sponsored by</i> 
Session 7 Viral Genomics	
1630-1645	Platinum sponsor presentation Advancement in SpaTial Enhanced REsolution Omics-sequencing Xu Xun, PhD, Director of BGI-Research 
1645-1700	Improving gene therapy delivery by optimizing the capsid and DNA packaging of AAVs Dr Anne Klein, CSIRO
1700-1715	What can we learn from the human panvirome? Dr Michael Roach, Flinders University
1715-1745	AGTA Annual General Meeting
1830-2230	<i>Conference Dinner proudly sponsored by</i> 

Wednesday 2 November	
0830-1730	Registration desk opens
0830-1330	Exhibition opens Barista cart available, <i>proudly sponsored by</i> 
0855-0900	Welcome to Day Three
Session 8	
Single Cell and Spatial Genomics	
0900-0940	Keynote Presentation Setting up single cell experiments: lots of considerations Associate Professor Luciano Martelotto, University of Adelaide
0940-1005	National speaker Designing and analysing complex single cell experiments Professor Alicia Oshlack, Peter MacCallum Cancer Centre
1005-1020	A single-cell and spatially resolved atlas of human breast cancers Dr Daniel Roden, Garvan Institute of Medical Research
1020-1050	<i>Morning refreshments & Exhibition</i>
1050-1105	Multi-omic machine learning approach for survivability prediction in breast cancer Khoa Tran, QIMR Berghofer Medical Research Institute
1105-1120	MultiGO: A multi sample approach for gene expression pathway enrichment analysis Dr Devika Ganesamoorthy, The University of Queensland
1120-1135	Decode the Stable Cell Communications Based on Neuropeptide-Receptors Network in 36746 Tumor Cells Dr Min Zhao, University of The Sunshine Coast
Lightning Poster Session 2	
1135-1138	Assembling high-quality sea snake genomes to investigate the genetic basis of aquatic adaptation Jillian Hammond, Garvan Institute of Medical Research
1138-1141	Large field-of-view, high-resolution spatially resolved transcriptomics using DNA nanoball patterned array Stephanie Sun, BGI
1141-1144	The Spatial Biology Revolution: multi-omic whole-transcriptome GeoMx profiling combined with sub-cellular resolved Spatial Molecular Imaging Michael Rhodes, NanoString Technologies
1144-1147	Automated processing of solid tissues into single cells or nuclei for genomics and cell biology applications with the Singulator™ 100 system Dr Janette Tong, TrendBio
1147-1150	Spatially Resolved Transcriptomics Exploration in Virtual Reality Denis Bienroth, Murdoch Children's Research Institute
1150-1153	Characterization of Botrylloides diegensis whole body regeneration through single-cell RNA-sequencing Berivan Temiz, University of Otago
1153-1156	Hey Siri, how can I use Deep Learning for Variant Calling in my Familial Whole Genome Sequencing Studies? Macabe Daley, Children's Cancer Institute
1156-1159	Investigating the epitranscriptome in human tissues Ashton Curry-hyde, University of New South Wales
1205-1305	<i>Lunch & Exhibition</i>

Session 9 Emerging Technology	
1305-1310	Virtual Introduction Dr Chris Mason, Weill Cornell Medicine, and WorldQuant Initiative for Quantitative Prediction <i>Due to unforeseen circumstances Dr Chris Mason will present a short speech virtually.</i>
1310-1345	Closing Invited Speaker Presentation The Next 500 Years of Genetics, Spaceflight, and Engineering Dr. Braden Tierney, Mason Lab
1345-1410	National Speaker Spatially Resolved Transcriptomics For Deciphering Gene Regulatory Networks in Heart Development and Disease A/Prof Mirana Ramialison, Murdoch Children's Research Institute
1410-1425	Identifying candidate circulating RNA biomarkers for coronary artery disease by deep RNA-Sequencing in human plasma Dr Anna Pilbrow, University of Otago
1425-1440	Genomics through a HoloLens: Cancer Evolution in Augmented Reality Dr Tamsin Rob, University of Auckland
1440-1510	Awards Ceremony, 2023 Conference Launch and Conference Close

The AGTA Conference reserves the right to amend or alter any advertised details relating to dates, program and speakers if necessary and without notice, as a result of circumstances beyond their control. All attempts will be made to keep any changes to an absolute minimum.