











20TH ANNIVERSARY CONFERENCE

30 October – 2 November 2022
Novotel Twin Waters
Sunshine Coast, Queensland

Sunday 30 October		Minyama 1
0830-1800	Conference Registration Opens	Arrivals Lounge
0900-1600	Pre-conference workshop (Registration required) Viral Metagenomics with Hecatomb	Minyama 1
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 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> <i>Welcome to Country</i> Kerry Neill, Director, Tribalink	Wandiny Room
Monday 31 October		Minyama 1
0730-1730	Registration desk opens <i>With thanks to our Name Badge and Lanyard sponsor</i>	Arrivals Lounge
		
0800-1535	Exhibition opens <i>Enjoy barista made coffee with thanks to</i>	Wandiny Room
		
0830-0845	Official Welcome, Conference Opening and Acknowledgment to Country Conference Convenors Associate Prof Ruby C Y Lin Dr Nic Waddell Professor Marcel Dinger (AGTA President)	
Session 1		
Cancer and Medical Genomics		
Chair & Co-chair A/Prof Mark Cowley & Ashton Curry-hyde		
0845-0925	Keynote Presenter Ending diagnostic, prognostic, and treatment odysseys: Transforming data into clinically actionable knowledge Dr Elizabeth Worthey, The University of Alabama at Birmingham	
0925-0950	National Speaker Pan-cancer proteomic map of 949 human cell lines Dr Qing Zhong, The University of Sydney	

0950-1010	Platinum Sponsor Presentation Illumina technology improvements driving genomic insights Dr. Anthony Beckhouse, Illumina	
1010 – 1040	<i>Morning refreshments & exhibition</i> <i>With thanks to our Morning Refreshments sponsor</i>	 Wandiny Room
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 Presentations Session 1 Chair & Co-chair Dr Tamsin Robb & Huiwen Zheng		<i>Minyama 1</i>
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>With thanks to our Lunch sponsor</i>	 Wandiny Room
Session 2 Plant and Animal Genomics Chair & Co-chair A/Prof Mirana Ramialison & Jillian Hammond		<i>Minyama 1</i>

1305-1308	Welcome from Platinum Sponsor Dr. Anthony Beckhouse, Illumina	
1308-1348	Keynote Presenter 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>With thanks to our Afternoon Refreshments sponsor</i> 	<i>Wandiny Room</i>
Session 3 Computational Biology, Bioinformatics, Statistical Genetics Chair & Co-chair Dr Mark Pinese & Lochlan Fennell		<i>Minyama 1</i>
1535-1600	National Speaker Viral extraction, sequencing, and identification with hecatomb Professor Rob Edwards, Flinders University	
1600-1640	Keynote Presenter 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 – Registered Students Only</i>	<i>Sola Restaurant Deck</i>
1800-2100	<i>VIP Function – By Invitation only</i>	<i>Lily's on the Lagoon</i>

Tuesday 1 November		
0815-1800	Registration desk opens	<i>Arrivals Lounge</i>
0830-1535	Exhibition opens <i>Enjoy barista made coffee with thanks to</i> 	<i>Wandiny Room</i>
Session 4		
Indigenous and Population Genomics		
Chair & Co-chair Prof Vanessa Hayes & Dr Andrew Lonsdale		
0855-0900	Welcome to Day 2	<i>Minyama 1</i>
0900-0925	National Speaker Empowering Indigenous Australians in Genomic Medicine Professor Alex Brown, Australian National University	
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>With thanks to our Morning Refreshments sponsor</i> 	<i>Wandiny Room</i>
Session 5		<i>Minyama 1</i>
Functional and Clinical Genomics		
Chair & Co-chair Prof Robert Edwards & Dr Berenice Talamantes Becerra		
1105-1145	Keynote Presenter 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>With thanks to our Lunch sponsor</i> 	<i>Wandiny Room</i>

Session 6 Microbial Metagenomics Chair & Co-chair Dr Nouri Ben Zakour & George Bouras		<i>Minyama 1</i>
1355 – 1358	Welcome from Platinum Sponsor Dr Bicheng Yang, BGI Australia	
1358-1438	Keynote Presenter The Use of Targeted Microbial Therapeutics to Improve Health – Are We There Yet? Professor Georgina Hold, University of New South Wales	
1438-1443	Beer Presentation Jack Black, Your Mates Brewing Co.	
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	
1528-1623	<i>Exhibition Viewing, Poster Session & Afternoon refreshments</i> <i>With thanks to our Afternoon Refreshments sponsor</i> 	<i>Wandiny Room</i>
Session 7 Viral Genomics Chair & Co-chair Dr Nic Waddell & Dr Jessica Mar		<i>Minyama 1</i>
1625-1645	Platinum Sponsor Presentation WGS for newborn screening of an unselected 10k children cohort Dr. Mingyan Fang, BGI Research Asia-Pacific	
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	
1830-2200	<i>Conference Dinner</i> <i>Dress Code: Casual</i> <i>Proudly sponsored by</i> 	<i>Arrivals Lounge</i>

Wednesday 2 November		
0830-1500	Registration desk opens	Arrivals Lounge
0830-1330	Exhibition opens <i>Enjoy barista made coffee with thanks to</i> 	Wandiny Room
Session 8		
Single Cell and Spatial Genomics		
Chair & Co-chair Lachlan Coin & Berivan Temiz		
0855-0900	Welcome to Day Three	Minyama 1
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>	Wandiny Room
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	Genomics through a HoloLens: Cancer Evolution in Augmented Reality Dr Tamsin Robb, University of Auckland	
Lightning Presentations Session 2		Minyama 1
Chair & Co-chair Dr Sandra Fitzgerald & Dr Venkateswar Addala		
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	Stereopy as an advanced tool in interpreting spatial transcriptomics data Dr Kira Xiaohuan 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	
1200-1305	<i>Lunch & Exhibition</i>	Wandiny Room

Session 9 Emerging Technology Chair & Co-chair Professor James Hudson & Dr Michael Roach		<i>Minyama 1</i>
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 Microbial Waypoints on our Path to Mars Dr. Braden Tierney, Cornell University	
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	Decode the Stable Cell Communications Based on Neuropeptide-Receptors Network in 36746 Tumor Cells Dr Min Zhao, University of The Sunshine Coast	
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.