

CONFERENCE PROGRAM



PRE-CONFERENCE PROGRAM

1030 - 1200	Workshop Registration Open	
1100 - 1600	TECHNICAL SOLUTIONS TO SINGLE CELL PROBLEMS	Harbour View 1
1200 - 1540	CAN GENOME EDITING FULFIL ITS PROMISE IN THE CLINIC AND THE FIELD?	Harbour View 2
1400 - 1800	Conference Registration Open	

OPENING ORATION

CHAIR: ASSOCIATE PROFESSOR KATHRYN BURDON

1700 - 1715	Welcome to Country Kartanya Maynard	Grand Ballroom
1715 - 1800	Opening Oration TECHNOLOGY IMPACT ON OUR VIEW OF TECHNOLOGY Dr Deanna Church 10x Genomics	Grand Ballroom
1800 - 2000	Welcome Reception & Meet the Exhibitors	

SPEAKER KEY: ● Invited Abstract
● Student

● Early Career Researcher
● National Invited Speaker

● Keynote

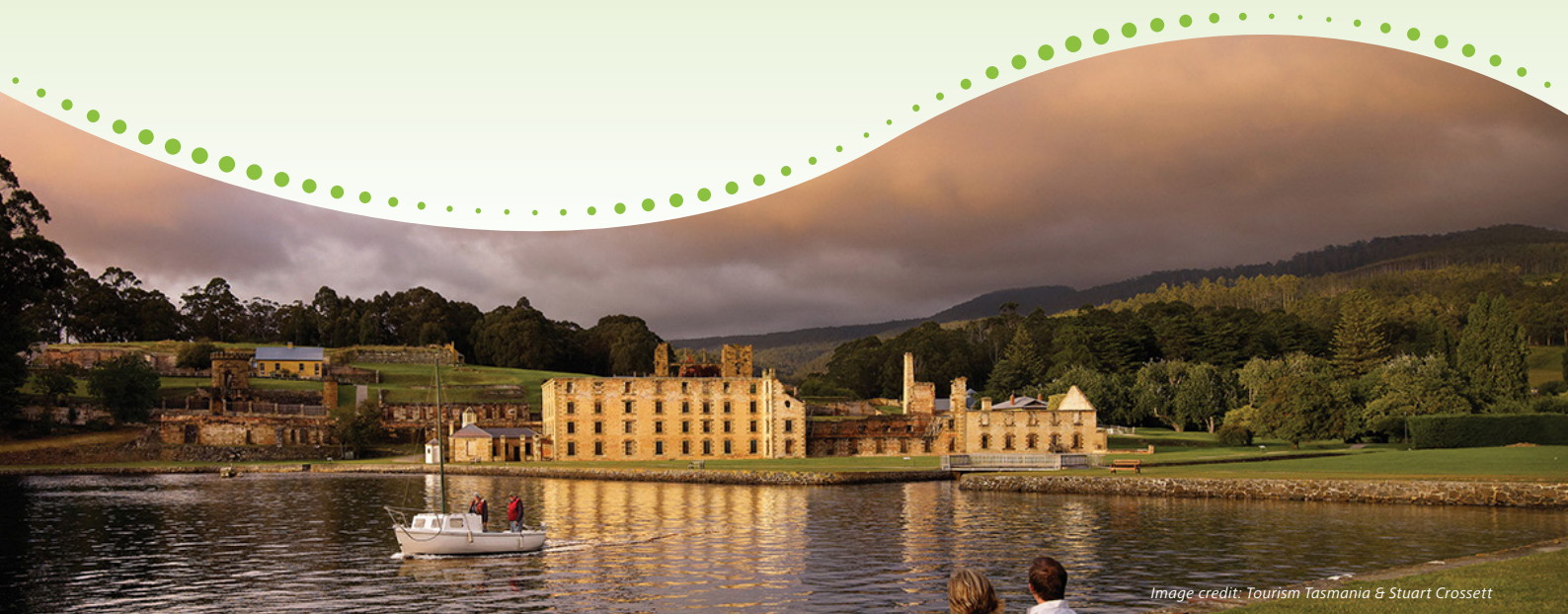



Image credit: Tourism Tasmania & Stuart Crossett


Today's Refreshment Breaks & Lunch sponsored by:



0730 - 1730	Registration Desk Open
0800 - 1730	Trade Exhibition Open Barista Coffee Served, <i>sponsored by:</i> 
0845 - 0900	Official Welcome and Conference Opening Dr Jac Charlesworth University of Tasmania

SESSION 1: COMPLEX TRAIT GENOMICS

CHAIRS: DR MATT FIELD & PROFESSOR MELANIE BAHLO

0900 - 0945	PET DOGS, CITIZEN SCIENCE AND THE GENOMICS OF BEHAVIOUR Dr Elinor Karlsson University of Massachusetts Medical School <i>sponsored by:</i> 
0945 - 1000	ENVIRONMENTAL SIGNAL MAXIMIZATION IN HUMAN COMPLEX DISEASES USING GENETIC CORRECTION Dr John Blangero UTRGV-South Texas Diabetes & Obesity Institute
1000 - 1015	IDENTIFICATION OF NOVEL GENES IN LARGE FAMILIES WITH AUTISM SPECTRUM DISORDER Dr Kiymet Bozaoglu Murdoch Childrens Research Institute
1015 - 1030	WHOLE EXOME SEQUENCING AND LINKAGE ANALYSIS OF EXTENDED PEDIGREES TO IDENTIFY GLAUCOMA SUSCEPTIBILITY GENES Mrs Patricia Graham University of Tasmania
1030 - 1100	Morning Refreshments & Trade Exhibition

SESSION 2: POPULATION GENETICS AND EVOLUTION


CHAIRS: DR KIYMET BOZAOGLU & DR JOHN BLANGERO

1100 - 1130	USING GENOMICS TO DECIPHER OUR MODERN HUMAN HISTORY Professor Vanessa Hayes Garvan Institute of Medical Research
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1130 - 1145	<p>THE MEDICAL GENOME REFERENCE BANK - GENOMICS OF A DISEASE-DEPLETED, ELDERLY AUSTRALIAN COHORT</p> <p>Dr Mark Pinese The Kinghorn Cancer Centre</p>	●
1145 - 1200	<p>UNTANGLING LIPIDS - A PEDIGREE BASED STUDY OF THE PLASMA LIPIDOME THROUGH WHOLE GENOME SEQUENCING TO ASSESS RARE DELETERIOUS VARIANTS IN 1,025 MEXICAN AMERICANS.</p> <p>Dr Nicholas Blackburn UTRGV-South Texas Diabetes & Obesity Institute</p>	●
1200 - 1215	<p>LIBRARY-FREE, TARGETED SEQUENCING OF NATIVE GENOMIC DNA AND RNA FROM FFPE SAMPLES USING HYB & SEQTM TECHNOLOGY - THE HYBRIDIZATION-BASED SINGLE MOLECULE SEQUENCING SYSTEM</p> <p>Dr Michael Rhodes NanoString Technologies</p>	●
1215 - 1315	Lunch & Trade Exhibition	

SESSION 3: COMPUTATIONAL BIOLOGY

CHAIRS: DR PENGYI YANG & DR JOSEPH POWELL

1315 - 1400	<p>USING GENOMIC DATA TO MAP FUNCTIONAL INTERACTIONS IN CELLULAR SYSTEMS</p> <p>Dr Kimberly Reynolds University of Texas Southwestern Medical Center</p> <p>sponsored by: </p>	●
1400 - 1415	<p>GENOTYPING REPEATS WITH NANOPORE SEQUENCING</p> <p>Dr Devika Ganesamoorthy The University of Queensland</p>	●
1415 - 1430	<p>BUILDING TRANSCRIPTIONAL LANDSCAPES USING T-SNE BASED DIMENSIONALITY REDUCTION OF PUBLIC DATA</p> <p>Dr Traude Beilharz Monash University</p>	●
1430 - 1445	<p>GENETIC RISK FACTORS IN A VULVAR CANCER CLUSTER AMONG YOUNG INDIGENOUS WOMEN IN ARNHEM LAND, AUSTRALIA</p> <p>Dr Bennet McComish University of Tasmania</p>	●

1445 - 1455	Lightning Poster Session 1
AUTHORS: ● Early Career Researcher ● Student	
REPRESENTING THE CANCER GENOME WITH MIRROR-DNA SPIKE-IN CONTROLS Mr Ira Deveson ● Garvan Institute of Medical Research	
IMPROVING PREDICTABILITY OF CRISPR-CPF1 ACTIVITY Dr Kaitao Lai ● CSIRO	
A STRATEGY TO DESCRIBE THE ADAPTIVE IMMUNE LANDSCAPE OF METASTATIC BREAST CANCER LESIONS ON A SINGLE-CELL LEVEL Mr Ghamdan Al-Eryani ● Garvan Institute of Medical Research	
THE THERANOSTIC POTENTIAL OF MICRO RNAS IN AGGRESSIVE PROSTATE CANCER Ms Farhana Matin ● Queensland University of Technology	
NON-SYNONYMOUS VARIATION IN ADAMTS12 CORRELATES WITH CAROTID ARTERY INTIMA-MEDIA THICKNESS Mr Juan Peralta ● UTRGV-South Texas Diabetes & Obesity Institute	
1455 - 1545	Poster Session 1 & Afternoon Refreshments <i>Poster Session sponsored by:</i> 
SESSION 4: FUNCTIONAL GENOMICS CHAIRS: DR SEYHAN YAZAR & DR EVA CHAN	
1545 - 1615	A GENOME-WIDE CRISPR-CAS9 KNOCKOUT SCREEN IDENTIFIES NOVEL ANTI-CANCER DRUG RESISTANT GENES Associate Professor Greg Neely ● The University of Sydney
1615 - 1630	HIGH RESOLUTION TEMPORAL TRANSCRIPTOMICS OF MOUSE EMBRYOID BODY DEVELOPMENT REVEALS COMPLEX EXPRESSION DYNAMICS OF CODING AND NONCODING LOCI Dr Brian Gloss ● Garvan Institute of Medical Research

1630 - 1645	<p>SURVIVAL OF THE FITTEST: THE FIGHT FOR DOMINANCE IN WINE FERMENTATION AND THE GENOMIC ADAPTATIONS THAT UNDERPIN YEAST STRAIN PERFORMANCE</p> <p>Dr Anthony Borneman The Australian Wine Research Institute</p>	●
1645 - 1700	<p>GENETIC AND MOLECULAR ANALYSIS OF TWO NEW LOCI CONTROLLING FLOWERING IN GARDEN PEA, PISUM SATIVUM</p> <p>Mr Mainul Hasan University of Tasmania</p>	●
1800 - 2300	<p>Conference Dinner</p> <p><i>The Conference Dinner is an optional function and is not included in any registration type. Bookings are essential.</i></p> <p><i>Delegates attending must arrive at the Brooke Street Pier Ferry Terminal by 5:50pm for a 6:00pm departure.</i></p>	Museum of Old and New Art (Mona)

TUESDAY 31 OCTOBER 2017

Today's Refreshment Breaks & Lunch sponsored by:



0730 - 1730	Registration Desk Open	
0800 - 1730	<p>Trade Exhibition Open</p> <p>Barista Coffee Served, <i>sponsored by:</i></p>	
0845 - 0900	<p>Welcome to Day Two</p> <p>Associate Professor Ruby Lin University of New South Wales</p>	

SESSION 5: SINGLE CELL 'OMICS AND GENOME ASSEMBLY







DR NICHOLAS BLACKBURN & PROFESSOR VANESSA HAYES

0900 - 0945	<p>HIGH RESOLUTION BIOLOGY USING 10X</p> <p>Dr Deanna Church 10x Genomics</p> <p><i>sponsored by:</i></p>	●

0945 - 1000	<p>DE NOVO GENOME AND TRANSCRIPTOME ASSEMBLIES OF THE BARE-NOSED WOMBAT</p> <p>Dr Seyhan Yazar University of Edinburgh</p>	●
1000 - 1015	<p>MODELLING BREAST CANCER PROGRESSION USING MASSIVELY PARALLEL SINGLE-CELL RNA-SEQ TECHNOLOGY</p> <p>Dr David Gallego-Ortega Garvan Institute of Medical Research</p>	●
1015 - 1030	<p>SINGLE CELL RNA-SEQ OF CARDIAC INTERSTITIAL CELLS REVEALS NOVEL POPULATIONS IN HEALTHY & DISEASED HEART</p> <p>Mrs Nona Farbehi University of New South Wales</p>	●
1030 - 1100	Morning Refreshments & Trade Exhibition	
<p>SESSION 6: SYNTHETIC BIOLOGY AND NOVEL TECHNOLOGIES</p> <p>CHAIRS: DR BRIAN GLOSS & DR RICHARD TOTHILL</p>		
1100 - 1130	<p>YEAST 2.0 AND BEYOND: BUILDING THE WORLD'S FIRST SYNTHETIC EUKARYOTE</p> <p>Professor Ian Paulsen Macquarie University</p>	●
1130 - 1145	<p>BIG DATA FROM A SMALL DEVICE: REAL TIME GENOMICS WITH NANOPORE SEQUENCING</p> <p>Dr Martin Smith Garvan Institute of Medical Research</p>	●
1145 - 1200	<p>PARALLEL ASSAY OF SINGLE-CELL CHROMATIN ACCESSIBILITY AND TRANSCRIPTOME</p> <p>Dr Longqi Liu BGI</p>	●
1200 - 1215	<p>ONGOING HUMAN CHROMOSOME END EXTENSION DRIVEN BY A PRIMATE ANCESTRAL GENOMIC REGION REVEALED BY ANALYSIS OF BIONANO AND NANOPORE GENOMICS DATA</p> <p>Mr Haojing Shao The University of Queensland</p>	●
1215 - 1315	Lunch & Trade Exhibition	

SESSION 7: BIOINFORMATICS AND DATA ANALYTICS

CHAIRS: DR KAITAO LAI & DR MATTHEW WAKEFIELD

1315 - 1400	<p>MUTATIONS THAT MATTER</p> <p>Dr Pauline Ng Explorer and Consultant</p> <p>sponsored by: ThermoFisher SCIENTIFIC</p>	
1400 - 1415	<p>A COMPOSITIONALLY VALID PIPELINE FOR ANY-OMICS DATA</p> <p>Dr Thom Quinn Deakin University</p>	
1415 - 1430	<p>USING MACHINE LEARNING TO UNDERSTAND CRISPR-CAS9 ACTIVITY</p> <p>Dr Laurence Wilson CSIRO</p>	
1430 - 1445	<p>FUNCTIONAL INSIGHTS FROM RNA-SEQ ARE AFFECTED BY DECISIONS MADE EARLY IN THE EXPERIMENTAL DESIGN, LIBRARY PREPARATION AND SEQUENCING PROTOCOL</p> <p>Dr Susan Corley University of New South Wales</p>	
1445 - 1455	Lightning Poster Session 2	
<p>AUTHORS:  Early Career Researcher  Student</p>		
<p>RELIABLY DETECTING CLINICALLY IMPORTANT VARIANTS REQUIRES BOTH COMBINED VARIANT CALLS AND OPTIMIZED FILTERING STRATEGIES</p> <p>Dr Matt Field James Cook University</p>		
<p>INTRAGENIC ENHANCERS ATTENUATE HOST GENE EXPRESSION</p> <p>Dr Pengyi Yang The University of Sydney</p>		
<p>DIVERSIFICATION OF INNATE IMMUNE RESPONSES BY TRANSCRIPTIONAL MECHANISMS</p> <p>Miss Suzanne Butcher The University of Melbourne</p>		
<p>IDENTIFICATION OF SODIUM VALPROATE AND LITHIUM CO-REGULATED GENES IN A SEROTONERGIC CELL LINE</p> <p>Ms Priyanka Sinha University of Otago</p>		

SLAMSEQ: HIGH-THROUGHPUT METABOLIC SEQUENCING OF RNA

Dr Stephanie Bannister

Lexogen

1455 - 1545

Poster Session 2 & Afternoon Refreshments

Poster Session sponsored by:



SESSION 8: EPIGENETICS AND TRANSCRIPTOMICS

CHAIRS: DR HALOOM RAFEHY & ASSOCIATE PROFESSOR ALICIA OSHLACK

Exhibitor Prize Draw 1

1545 - 1615

SEX SPECIFIC LANDSCAPES OF DNA METHYLATION ON THE MARSUPIAL X CHROMOSOME: THE SHAPE OF SILENCING

Dr Paul Waters

University of New South Wales



1615 - 1630

RNA-CHROMATIN INTERACTOME REVEALS NCRNA FUNCTIONS FOR TRANSCRIPTION REGULATION AND GENOME ORGANIZATION

Dr Oscar Luo

CSIRO



1630 - 1645

SPLICED SYNTHETIC GENES AS INTERNAL CONTROLS IN RNA-SEQ EXPERIMENTS

Mr Simon Hardwick

Garvan Institute of Medical Research



1645 - 1700

DYNAMICS OF CHROMATIN ACCESSIBILITY AND TRANSCRIPTION FACTOR BINDING IN HUMAN AND CHIMPANZEE PLURIPOTENT STEM CELLS

Dr Irene Gallego Romero

The University of Melbourne



1715 - 1745

AGTA Annual General Meeting

Grand Ballroom

1830 - 2030

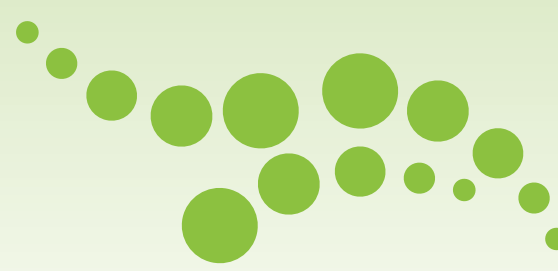
Student Function

Shambles Brewery

1830 - 2030


VIP Function (Invitation Only)

Syra







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0730 - 1730	Registration Desk Open
0800 - 1300	Trade Exhibition Open Barista Coffee Served, <i>sponsored by:</i> 
0845 - 0900	Welcome to Day Three + Exhibitor Prize 2 Ms Vikki Marshall The University of Melbourne


SESSION 9: COMPARATIVE GENOMICS

CHAIRS: DR QUENTIN GOUIL & DR IRENE GALLEGRO ROMERO

0900 - 0930	REPETITIVE DNA: EVOLVING SAFELY IN NUMBERS Dr Austen Ganley University of Auckland 
0930 - 0945	THE OZ MAMMALS GENOMICS INITIATIVE: MAMMAL GENOMICS, EVOLUTION AND CONSERVATION AT A CONTINENTAL SCALE Dr Anna MacDonald Australian National University 
0945 - 1000	POPULATION STRUCTURE OF THE BRACHYPODIUM SPECIES COMPLEX AND GENOME WIDE DISSECTION OF AGRONOMIC TRAITS IN RESPONSE TO CLIMATE Professor Justin Borevitz Australian National University 
1000 - 1015	IDENTIFYING RACIAL DIFFERENCES IN THE MUTATIONAL LANDSCAPE OF AGGRESSIVE PROSTATE CANCER Dr Weerachai Jaratlerdsiri Garvan Institute of Medical Research 
1015 - 1045	Morning Refreshments & Trade Exhibition

SESSION 10: GENE EDITING AND GENE REGULATION

CHAIRS: DR BENNET MCCOMISH & ASSOCIATE PROFESSOR NICOLE CLOONAN

1045 - 1115	AUTOMATED CULTURE SYSTEM FOR LARGE SCALE DISEASE MODELLING Associate Professor Alice Pebay The University of Melbourne 
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1115 - 1130	<p>EXTENSIVE TRANSCRIPTOMIC AND EPIGENOMIC REMODELING DURING ARABIDOPSIS THALIANA GERMINATION</p> <p>Dr Quentin Gouil Walter and Eliza Hall Institute of Medical Research</p>	●
1130 - 1145	<p>PREDICTING THE HDR EFFICIENCY OF CRISPR-CAS</p> <p>Mr Aidan O'Brien Australian National University</p>	●
1145 - 1200	<p>SINGLE CELL SEQUENCING REVEALS CHANGES IN THE GENETIC CONTROL OF GENE EXPRESSION THROUGH REPROGRAMMING OF INDUCED PLURIPOTENT STEM CELLS FROM FIBROBLASTS</p> <p>Dr Joseph Powell The University of Queensland</p>	●
1200 - 1300	Lunch & Trade Exhibition	
<p>SESSION 11: MEDICAL AND CANCER GENOMICS CHAIRS: DR DEVIKA GANESAMOORTHY & ASSOCIATE PROFESSOR RUBY LIN</p>		
1300 - 1330	<p>SINGLE-CELL RNA-SEQ: ANALYSIS, SIMULATION AND KIDNEYS IN A DISH</p> <p>Associate Professor Alicia Oshlack Murdoch Childrens Research Institute</p>	●
1330 - 1345	<p>WHOLE GENOME SEQUENCING IS IMPROVING THE IDENTIFICATION OF GENETIC CAUSES OF PAEDIATRIC CATARACTS</p> <p>Ms Johanna Jones University of Tasmania</p>	●
1345 - 1400	<p>SINGLE-CELL TRANSCRIPTOMICS REVEALS FUNCTIONAL HETEROGENEITY IN BREAST CANCER CELLS</p> <p>Dr Daniel Roden Garvan Institute of Medical Research</p>	●
1400 - 1415	<p>GENOME MAPPING ILLUMINATES ARCHITECTURE OF CHAINED FUSIONS IN CANCER</p> <p>Dr Eva Chan Garvan Institute of Medical Research</p>	●
1415 - 1445	<p>THE GENOMIC PATHOLOGY OF PANCREATIC CANCERS</p> <p>Professor Sean Grimmond The University of Melbourne</p>	●
1445 - 1500	Awarding of Prizes, Exhibitor Prize Draw 3, 2018 Conference Launch and Conference Close	

The 2017 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.