

# Program – Day 1 (24<sup>th</sup> October)

## Day 1: Wednesday 24<sup>th</sup> October

8:50-9:00 Conference Welcome (including Acknowledgement of Country)

### **SESSION 1: Introduction to High Content Screening and Imaging Analysis**

9:00-9:45 Introduction to High Content Screening: from Imaging to Analysis  
**Kaylene Simpson (Peter Mac, VIC)**

9:45-10:20 High-Content Phenotypic Screens: From Live Cells to Machine Learning  
**Keynote: Myles Fennell (Memorial Sloan Kettering Cancer Centre, USA)**  
*Sponsored by FHTTA*

#### **10:20-10:50 Morning Tea (JCSMR Foyer)**

10:50-11:35 Machine Learning in Phenotypic Pre-Screening, Recognition, and Classification of Bacteria  
**Keynote: Bartek Rajwa (Purdue University, USA)**  
*Sponsored by FHTTA*

11:35-11:55 A High Throughput Approach to Identifying Compound Inhibitors of mRNA Processing and Export  
**Kirsty Carey (Peter Mac, VIC)**

11:55-12:15 Identification of Novel FDA-Approved Inhibitors of Zika Virus Infection  
**Amanda Aloia (Flinders University, SA)**

12:15-12:35 Identification of Therapeutic Targets for the Treatment of Diamond Blackfan Anaemia Using a High-Throughput Screening-Based Approach  
**Amea George (Australian National University, ACT)**

#### **12:35-13:35 Lunch (JCSMR Foyer)**



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## **SESSION 2: 3D Screening**

13:35-14:10 Dynamic 3D Imaging of Patient-Derived Tumour Organoids for Drug Screening Applications

**Keynote: Shannon Mumenthaler (University of Southern California, USA)**

*Sponsored by Perkin Elmer*

14:10-14:45 High-Content Screening in Human Cardiac Organoids Identifies Key Proliferative Pathways Without Functional Side-Effects

**Enzo Porrello (Murdoch Children's Research Institute, VIC)**

### **14:45-15:15 Afternoon Tea (JCSMR Foyer)**

15:15-15:35 3D Bioprinting of HTP Tumour Spheroids for Precision Medicine  
**Lakmali Atapattu (Children's Cancer Institute Australia, NSW)**

15:35-15:55 Drug Discovery Phenomics  
**Tayner Rodriguez (Griffith Institute, QLD)**

15:55-16:40 **Open discussion on the Future of HCS in Australia**  
*Sponsored by the Australian Phenomics Network*  
*Moderated by Michael Dobbie – CEO*

17:00-18:30 **Networking Cocktail Function (JCSMR Foyer)**  
*Sponsored by Tecan*



# Program – Day 2 (25<sup>th</sup> October)

## Day 2: Thursday 25<sup>th</sup> October

8:55-9:00 Conference Messages

### **SESSION 3: CRISPR Screening**

9:00-9:35 Synthetic CRISPRs: Novel Approaches to Study Gene Function  
**Iva Nikolic (Peter Mac, VIC)**

9:35-10:10 Unravelling Biology and Identifying Targets with Functional Genomics  
Approaches Supported by LentiArray CRISPR Library Screens  
**Keynote: Jonathan Chesnut (ThermoFisher Scientific, USA)**  
*Sponsored by ThermoFisher Scientific*

### **10:10-10:40 Morning Tea (JCSMR Foyer)**

10:40-11:15 Powering the Synthetic Biology Revolution  
**Keynote: Reed Hickey**  
*Sponsored by Twist Bioscience*

11:15-11:35 Defining Novel Modifiers of the Cellular Response to Unedited Endogenous dsRNA  
**Jacki Heraud-Farlow (SVI, VIC)**

11:35-11:55 A whole genome CRISPR screen to identify mechanisms that determine resistance and sensitivity to the mutant p53 reactivator, APR-246  
**Nick Clemons (Peter Mac, VIC)**

11:55-12:15 Unlocking HDR-mediated Nucleotide Editing by identifying high-efficiency target sites using machine learning and high throughput screening  
**Gaetan Burgio (Australian National University, ACT)**

### **12:15-13:15 Lunch (JCSMR Foyer)**



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## SESSION 4: Image Analysis Workshop

- 13:15-13:45 Microscopium: Interactive Exploration of Large Imaging Datasets for Unbiased Phenotype Discovery  
**Genevieve Buckley (Monash Micro Imaging, VIC)** *Sponsored by FHTTA*
- 13:45-14:15 Mapping Phenotypic Plasticity in the Actin Cytoskeletal System via Unbiased Chemical Screening  
**John Lock (UNSW, NSW)** *Sponsored by FHTTA*
- 14:15-14:35 Multilabelling – Highly Multiplexed, High-Content Confocal Imaging  
**Volker Hilsenstein (Monash Micro Imaging, VIC)**
- 14:35-14:55 Using High-Content Time-Lapse Imaging to Investigate Effects of Oncogenic Mutations in Melanocyte-Keratinocytes-Fibroblast Interaction  
**Duka Skalamera (MMRI, University of Queensland, QLD)**

14:55-15:25 **Afternoon Tea (JCSMR Foyer)**

## SESSION 5: Emerging Technologies

- 15:25-16:00 The Promise of siRNA Therapeutics  
**Keynote: David Evans (Sirnaomics, USA)**  
*Sponsored by Millennium Science*
- 16:00-16:20 Intelligent Image-Activated Cell Sorting  
**Nao Nitta (Japan Science and Technology Agency, Japan)**
- 16:20-16:55 Utilisation of High Throughput Cytometers to Expand Screening Capabilities  
**Keynote: Jennifer Smith (Harvard University, USA)**  
*Sponsored by FHTTA*
- 16:55-17:00 **Conference Wrap Up and Close**

