

# CRISPR

## DOWN UNDER

X @CRISPR\_Aus  
#CDU2026

### DAY ONE: Tuesday 24th March 2026

8:00 Registration

9:00 - 10:40 CRISPR Molecular Mechanisms (Chairs: Nathan Chai & Jovita Silva)

9:00 Welcome

9:10 **Ekaterina Semenova** Rutgers University, USA  
*What Does Cas13 Really Cleave? tRNA Cleavage as a Core Mechanism of CRISPR-Cas13 Immunity*

9:45 **Brooke Hayes**  
*In defence of Cas13*

10:10 **Kevin Chen**  
*The Landscape of On-target and Collateral Activity of Various CRISPR-Cas13 Enzymes in Human Cells and Zebrafish*

10:25 **Khoa Nguyen**  
*Harnessing Machine Learning to Design High-Efficacy Cas13b Guide RNAs*

10:40 - 11:10 Morning Tea

11:10 - 12:10 CRISPR Tools for Genome Integration

Sponsored by IDT

11:10 **Lysanne Spenkelink**  
*Single-molecule dCas9 and nCas9 studies on DNA replication*

11:35 **Ali Motazedian**  
*Characterising the functional landscape of the human PRC2 complex by base editing at single cell resolution*

11:50 **Mollie Schubert** Integrated DNA Technologies (IDT)  
*End-to-end genotoxicity assessment services for rapid development of CRISPR-based therapies: A case study on the first mRNA-based personalized CRISPR therapy*

12:10 - 13:40

Lunch

Unlocking CRISPR: Meet the Expert  
(1-on-1 with IDT)

13:40 - 15:15 Functional Genomics (Chairs: Emily Lelliott)

Sponsored by MaxCyte / TrendBio

13:40 **Lu Wang**  
*Identification of Breast Cancer-Associated lncRNAs Using 3D and In Vivo CRISPR-Cas13d Screen*

14:05 **Ebithal Mustafa**  
*CRISPR-Cas9 Functional Screens and Single-Cell Transcriptomics Define Molecular Drivers and Therapeutic Vulnerabilities in Esophageal Adenocarcinoma*

14:20 **Conor Kearney**  
*CRISPR screening and immune evasion (TBC)*

14:45 **Yexuan Deng**  
*A novel, high-density CRISPR activation platform for mapping cancer dependencies and resistance pathways ex vivo and in vivo*

15:00 **Liam Neil**  
*Using genome-wide CRISPR-Cas9 knockout screens to sensitise breast cancer to natural killer (NK) cell-mediated killing*

15:05 **Antonin Serrano**  
*Investigating chemotherapy resistance using whole genome CRISPR-cas9 screening in pancreatic cancer organoids*

15:15 **Leo He** Maxcyte  
*A variant aware framework for reducing off-target risks in therapeutic guide RNA selection*



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15:15 - 15:35

### Afternoon Tea

#### 15:35 - 16:05 Genome and Epigenome Engineering

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**15:35** **Fatimah Jalud**  
*Hidden Drivers in Non-Coding Regions: UTR Alterations Promote Immune Checkpoint Dysregulation and Oncogenic Activity*

**15:50** **Sarah Williams**  
*Investigating how CRISPR-defined chromatin regulators maintain epithelial integrity to prevent neoplastic tumours*

**15:55** **Kevin Sek**  
*Targeting the epigenome for precision CAR-T cell therapy*

**16:00** **Hanieh Noeparast**  
*Rapid and sensitive detection of Diaporthe citri causing melanose in Australian finger lime (Citrus australasica) using an RPA-CRISPR/Cas12a molecular diagnostic assay*

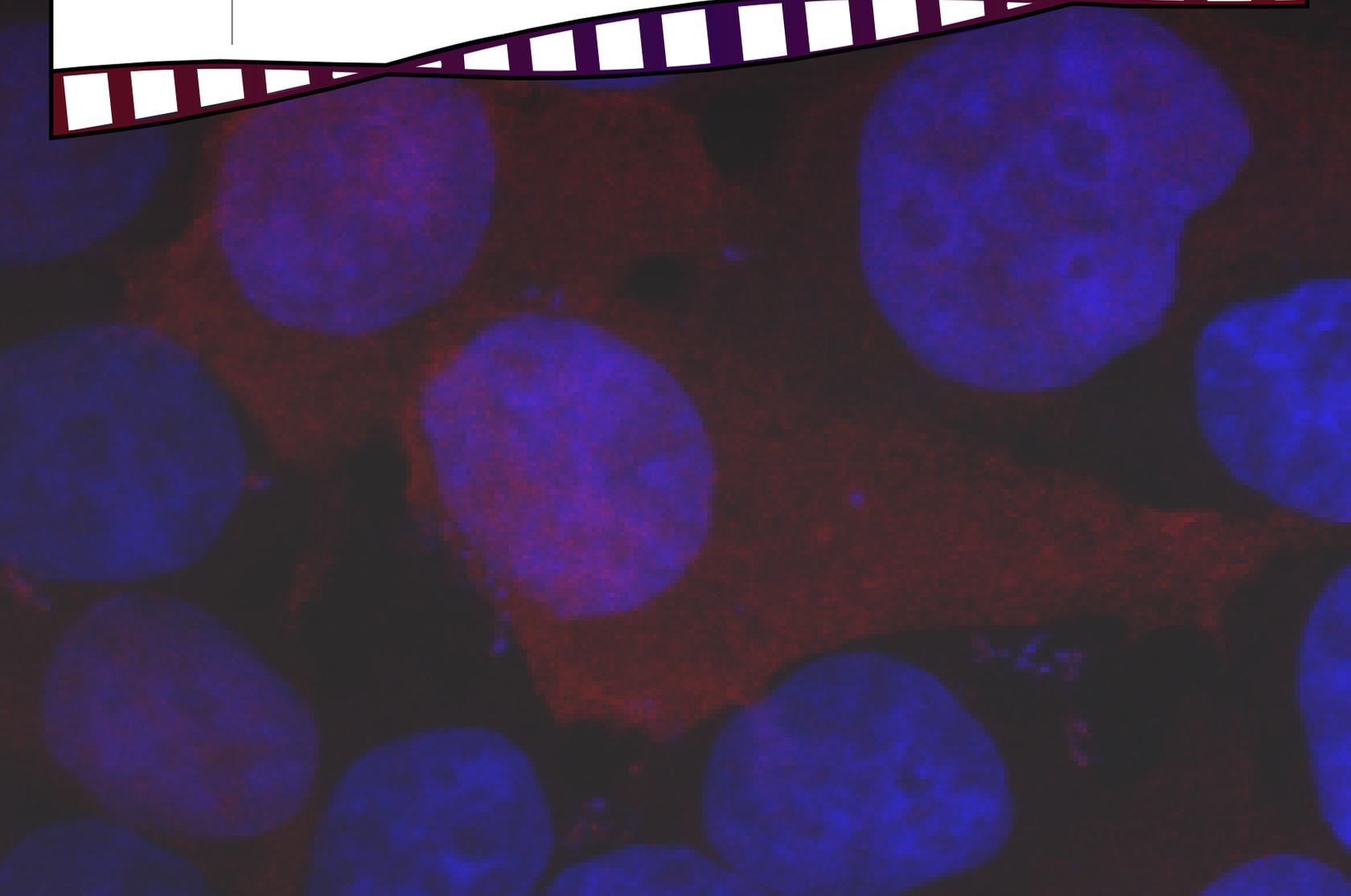
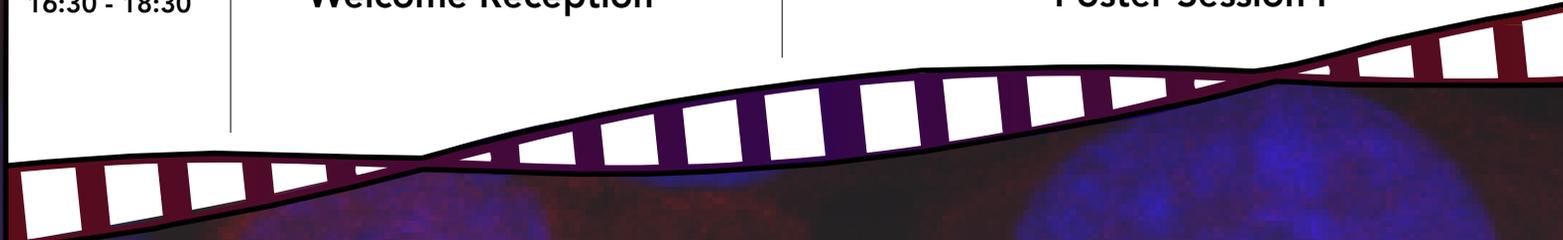
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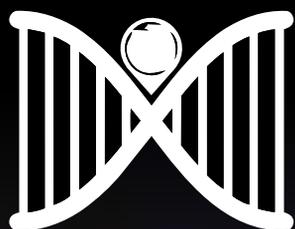
### Housekeeping

16:30 - 18:30

Welcome Reception

Poster Session I





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### DAY TWO: Tuesday 25th March 2026

8:00 Registration

9:00 - 10:35 CRISPR Evolution and Diversity (Chairs: Mohamed Fareh & Gurjeet Kaur Gill)

9:00 Welcome

9:10 **Peter Fineran** University of Otago, New Zealand  
CRISPR-Cas systems in phage-bacterial interactions: biology and exploitation

9:45 **Gaetan Burgio**  
Voyage into the mechanisms of CRISPR-Cas12a cleavage activities

10:10 **Marjan Hadian-Jazi**  
Discovery and design of novel CRISPR-Cas13 effectors

10:35 - 11:05 Morning Tea

11:05 - 12:25 Immunoengineering and Cancer Therapeutics

Sponsored by Revvity

11:05 **Michelle Fraser** Revvity  
Advancing Genome Editing Precision: Comparative Insights into CRISPR-Cas9, Base Editing, and AI-Engineered Enzymes

11:20 **Daniel Layton**  
From Screens to Solutions: CRISPR Knockouts for Next-Gen Infectious Disease Countermeasures

11:45 **Yu-Kuan Huang**  
Antigen-heterogeneous solid tumour targeting with tumour-localised T cell engager-expressing T cells

12:00 **Felix O'Hagan**  
CRISPR-based Modulation of Lymph Node Homing Improves CAR T-Cell Function in Solid Tumours

12:05 **Yi Tian Ting**  
Why Equal TCR Engineering Is Not Equal: CRISPR-Engineered TCR-Tregs Outperform Lentiviral Approaches

12:10 **XiaoJing Ong**  
Overcoming CAR-T manufacturing barriers for T-cell lymphoma using CRISPR-HDR

12:15 **Jacinta Macdonald**  
CRISPR-mediated gene editing to validate targets of malaria parasite drug leads

12:20 **Chee Ho H'ng** VectorBuilder  
VectorBuilder: Your Trusted Lab Partner for All Things Gene Delivery

12:30 - 14:00 Poster Session II

12:30 - 14:00

Lunch

Unlocking CRISPR: Meet the Expert  
(1-on-1 with IDT)

14:00 - 15:05 Responsible Innovation and Ethics (Chair: Gavin Knott)

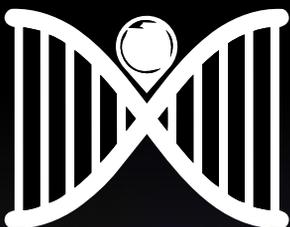
14:00 **Christopher Gyngell**  
The Ethics of Polygenic Genome Editing

#### PANEL DISCUSSION

To Edit or Not to Edit - Translating Gene Editing Technologies to Real World Applications

#### Panelists

14:25 **Christopher Gyngell** - Bioethicist  
**Peter Fineran** - CRISPR Biology  
**Ekaterina Semenova** - CRISPR Mechanisms  
**Con Panousis** - Drug Development  
**Nathalie Cook** - Consumer Advocate



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15:05 - 15:35

Afternoon Tea

15:35 - 16:50 **Translational CRISPR: Delivery and Diagnostics** (Chair: Josh Casan)

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- 15:35 **Fei Deng**  
*Advancements in CRISPR-based Diagnostics*
- 15:50 **Wei Deng**  
*Lipid nanoparticle-delivered CRISPR-mediated VEGFA gene editing for in vitro retinal disease treatment*
- 16:15 **Alexandra Farcas**  
*Computational enhancement of non-viral CRISPR/Cas9-gold nanoparticle delivery platform design*
- 16:30 **Michael Keating**  
*Packaged CRISPR lipid nanoparticles as a research tool and treatment modality for cardiovascular disease*

16:50 - 1700

Short break

17:00 **Closing ceremony and prizes**

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