

QRW 2023

33rd Annual Molecular Biology Meeting

Nanotechnology- Applications in Health, Agriculture and beyond

Tuesday 29 August – Wednesday 30 August, 2023
Rydges Hotel, Queenstown, New Zealand

Tuesday 29 August		
Time	Details	Location
<u>Nanomedicine</u> Chaired by Dr. Sarah Diermeier (Otago)		
8.30 am-8.35 am	Introduction : Dr. Sarah Diermeier University of Otago	Clancy's rm, live stream to QT Dart
8.35am-9.20am	Prof. Rakeesh Veedu (Q1) Murdoch/Syngenis <i>Novel thiomorpholino oligonucleotides (TMOs) as a robust next generation platform for splice switching antisense therapies.</i>	Clancy's rm, live stream to QT Dart
9.20am-9.45am	Prof. Simon Conn (Q2) Flinders University <i>Circular RNAs drive oncogenic chromosomal translocations within the MLL recombinome in leukemia</i>	Clancy's rm, live stream to QT Dart
9.45am- 10.10am	Dr. Hilary Sheppard (Q3) University of Auckland <i>Therapeutic genome editing for severe monogenic skin conditions</i> <i>Sponsored by Lonza Cell and Gene T/A Capsugel Australia Pty Ltd</i>	Clancy's rm, live stream to QT Dart
10.10am-10.30am	Morning Tea	Trade Area
10.30am-11.15am	Dame Prof. Margaret Brimble (Q4) University of Auckland <i>The medicinal chemistry behind the discovery of Trofinetide/DAYBUETM, the first drug to treat Rett Syndrome sponsored by abcam</i>	Queenstown & Wakatipu Room
11.15am-11.40am	Dr. Daniel Pletzer (Q5) University of Otago <i>Peptides and peptidomimetics as a potential treatment for hard-to-treat polymicrobial infections</i> <i>Sponsored by Bio-Rad Laboratories Pty Ltd</i>	Queenstown & Wakatipu Room
11.40am-12.00pm	Dr. Karyn Maclennan (Q6) University of Otago <i>Community conversations: The Science of Medicines – Whakatere Waka</i>	Queenstown & Wakatipu Room
12.00pm-1.00 pm	LUNCH Early Career lunch with Nobel Prize Winner	Trade Area
<u>Data Science and AI in biology</u> Chaired by Prof. Justin O'Sullivan (Auckland)		

1.00pm-1.45pm	Prof. Michael Witbrok (Q7) University of Auckland, TransAxon <i>AI as a Partner in Science</i>	Queenstown & Wakatipu Room
1.45pm-2.10pm	Dr. Megan Leask (Q8) University of Alabama, University of Otago <i>GWAS and beyond: towards 'omics based precision medicine discovery for Māori and Pacific people</i> <i>Sponsored by Australian Genome Research Facility</i>	Queenstown & Wakatipu Room
2.10pm-2.35pm	A/Prof. Alex Gavryushkin (Q9) University of Canterbury <i>Algorithms in evolutionary and systems biology</i>	Queenstown & Wakatipu Room
2.35pm-3.00pm	Dr. Arthur Morley-Bunker (Q10) University of Otago <i>Utilisation of digital pathology and AI methods for the detection of MSI status in colorectal cancer</i> <i>Sponsored by Mediscope International Limited</i>	Queenstown & Wakatipu Room
3.00pm-3.25pm	Dr. Binh Nguyen (Q11) Victoria University Wellington <i>Residual Graph Attention Networks for Molecular Property Prediction</i>	Queenstown & Wakatipu Room
3.30pm-4.00pm	Afternoon tea break	Trade Area
4.00pm-5.30pm	Poster Session <i>Sponsored by IDT</i>	Level 5 Lobby
4.30pm-6.30pm	Evening Social Function <i>Sponsored by 10x Genomics – PacBio – Millennium Science</i>	Trade Area
6.30pm-7.30pm	Research Commercialisation Function <i>Sponsored by the Otago Centre for Bioengineering and Nanomedicine</i>	Clancy's Room

Wednesday 30 August		
Time	Details	Location
Plant Biotechnology Chaired by Dr Rowan Herridge (Otago)		
8.10am-8.15am	Introduction : Dr Rowan Herridge University of Otago	Clancy's rm, live stream to QT Dart
8.15am-9.00am	Prof. Rob Martienssen (Q12) Cold Spring Harbor Laboratory / HHMI <i>Pseudouridine guides germline small RNA transport and epigenetic inheritance</i>	Clancy's rm, live stream to QT Dart
9.00am-9.25am	A/Prof. Chris Winefield (Q13) Lincoln University <i>Using natural transposon compliments in plant genomes to manipulate gene function</i>	Clancy's rm, live stream to QT Dart
9.25am-9.50am	Dr. Grant Smith (Q14) Plant & Food <i>Double-stranded RNA targeting putative pathogenicity determinants for control of the invasive basidiomycete Austropuccinia psidii</i> <i>Sponsored by dnature</i>	Clancy's rm, live stream to QT Dart

9.50am-10.10pm	Dr. Colm Carraher (Q15) Scientian Bio <i>Insect Odorant Receptor Biosensors for non-invasive disease detection</i>	Queenstown & Wakatipu Room
10.10am-10.30am	Morning Tea	Trade Area
10.30am-10.55am	Ilya Vensky (Q16) HelicoBio <i>Production of high value biologics using plants</i>	Queenstown & Wakatipu Room
10.55am-11.20am	Dr. Sam Baldwin (Q17) Plant & Food <i>Breeding technologies for delivering crops for the future</i>	Queenstown & Wakatipu Room
11.20am-11.45am	Prof. Jo Putterill (Q18) University of Auckland <i>Flowering time control for forage and food: Gene editing of SOC1 genes in the reference legume Medicago abolishes flowering</i>	Queenstown & Wakatipu Room
11.45am-12.30pm	Early Career Researcher talks Chaired by A/Prof Aniruddha Chatterje (University of Otago) Dr. Natalie Netzler University of Auckland <i>Broad-spectrum antiviral potential of PI3K inhibitors</i> Michele Zuppi University of Auckland <i>Faecal Microbiota Transplant-mediated alteration of the phageome composition in a clinical trial for obesity</i> Laura Veenendaal University of Otago, Christchurch <i>Bioprinting Spheroid-Based 3D In Vitro Disease Models: Screening Patient-Specific Tissue in Healthy and Osteoarthritic Microenvironments</i> Dr. Zohaib Rana Amaroq Therapeutics <i>Identification of lncRNAs as potential novel therapeutic targets in triple-negative breast cancer</i> Dr. Chris Göebl University of Otago, Christchurch <i>A novel amyloid formation mechanism: oxidation-induced transition of the tumour suppressor protein p16 into amyloid fibrils</i>	Queenstown & Wakatipu Room
12.30pm-1.30 pm	LUNCH	Trade Area
12.30pm-1.30 pm	QMB Society AGM	Queenstown Room
Bioengineering Chaired by A/Prof. Jaydee Cabral (Otago)		

1.30pm-1.35pm	Introduction: A/P Jaydee Cabral University of Otago	Queenstown & Wakatipu Room
1.35pm-2.00pm	Shannon McLoughlin (Q19) University of Maryland <i>Biofabrication Strategies for the Generation of Bone Tissue Interfaces</i>	Queenstown & Wakatipu Room
2.00pm-2.20pm	Prof. Geoff Chase (Q20) University of Canterbury <i>Digital Twins in Critical Care: Current State-of-the-Art and Future Potential</i>	Queenstown & Wakatipu Room
2.20pm-2.40pm	Prof. Poul Nielsen (Q21) University of Auckland <i>Efforts to improve reproducibility and reusability in physiological models and measurements</i>	Queenstown & Wakatipu Room
2.40pm-3.00pm	A/Prof. Azam Ali (Q22) University of Otago <i>Concept to Clinic: Translating Biomaterials into Medical Devices</i>	Queenstown & Wakatipu Room
3.00pm-3.30pm	Afternoon tea break	Trade Area
3.30pm-3.45pm	Dr. Nasim Amiralian (Q23) University of Queensland <i>Application of nanocellulose in health and agriculture industries</i>	Queenstown & Wakatipu Room
3.45pm-4.00pm	Dr. Natasha Evans (Q24) Callaghan Innovation <i>3D structures of electrospun nanofibres</i> <i>Sponsored by Lonza Cell and Gene T/A Capsugel Australia Pty Ltd</i>	Queenstown & Wakatipu Room
4.00pm-5.00pm	Awards PeerJ Awards Dr. Abigail Sharrock (Q25) Victoria University of Wellington Illumina Emerging Researcher Award 2023 <i>From Fish to Fight: Nitroreductases as versatile tools in cell ablation & cancer therapy</i> Prof. Jemma Geoghegan (Q26) University of Otago Thermo Fisher Scientific Award for Excellence in Molecular Biology 2023 <i>The role of host ecology in shaping the virome</i>	Queenstown & Wakatipu Room
5.45pm-10.00pm	QMB Dinner, Walter Peak Station Board the TSS Earnslaw boat at the Steamer Wharf at 5.45pm (departs at 6.00pm) <i>Sponsored by Thermo Fisher Scientific and Maurice Wilkins Centre</i>	