



Thursday,  
20<sup>th</sup> February  
2025

# Genetics Otago Annual Symposium Programme

9:00 am - 9:10 am	Welcome and Opening	<b>Peter Williamson</b> <i>Rautaki Hononga / Kaitakawaenga (Māori Strategic Framework Facilitator)</i>
		<b>Louise Bicknell</b> <i>Co-Director Genetics Otago</i>
<b>Session One</b>		<b>Chair:</b>
9:10 am – 9:30 am	A long non-coding RNA differentially regulates neuronal health	<b>Indranil Basak</b> <i>Department of Biochemistry</i>
9:30 am – 9:45 am	CYP2D6*71 is a poor metaboliser allele common in Polynesian and Māori people and absent from Europeans	<b>Martin Kennedy</b> <i>Department of Pathology and Biomedical Science, Christchurch</i>
9:45 am – 10:00 am	What Really Drives Bioinformatic Tool Accuracy?	<b>Paul Gardner</b> <i>Department of Biochemistry</i>
10:00 am – 10:15 am	ATP13A2-inhibited astrocytes model early-onset Parkinson's pathologies in vitro	<b>Luke Geddes</b> <i>Department of Biochemistry</i>

SciCom Award Presentations		Chair:
10:15 am – 10:30 am	What fraction of the genome is functional? <i>Illustration</i>	Daniela Schiavinato, DJ Champion, Paul P. Gardner
	The pāua that clings to the sea’: a new species of abalone found only in waters off a remote NZ island chain <i>Article</i>	Kerry Walton, Hamish Spencer, Nic Rawlence
	Are kiwi and moa recent immigrants from Australia? Neither fossils nor genetic evidence support the story <i>Article</i>	Nic Rawlence, Alan Tennyson, Pascale Lubbe
	Predicting ‘male-time’ with the Androgen Clock <i>Video</i>	Victoria Sugrue
	Why study the rarest form of Parkinson’s disease? <i>Video</i>	Luke Geddes, Indranil Basak and Eden Li
10:30 am – 11:00 am Break (SciCom Award People’s Choice Voting)		

Session Two		Chair:
11:00 am – 11:20 pm	Bacterial lipopolysaccharide modulates methylation in colorectal cancer	Rachel Purcell <i>Department of Surgery, Christchurch</i>
11:20 pm – 12:00 pm	<b>Lightning Talks</b> (6 mins each including Q+A)	
	3D Perspectives on Spatiotemporal HOX Gene Expression from the Native Onychophoran, <i>Peripatoides Novaesealandiae</i>	Taylor Gallagher <i>Department of Biochemistry</i>
	A Hot New Biomarker Has Entered the Villa: Modelling the effect of DNA amount in CRC Detection Assays on Downstream Sequencing Metrics	Ruby Werry <i>Department of Biochemistry</i>
	Outcomes from a Nationwide Bioinformatics Training Programme: Reflecting and Looking Ahead	Tyler McInnes <i>Genomics Aotearoa</i>
	Unravelling the role of large genome deletions (LGD) in drug-resistant <i>Mycobacterium tuberculosis</i> isolates	Abraham Siaw <i>Department of Microbiology and Immunology</i>
	Building the Androgen Clock: An Epigenetic Predictor of Long-term Male Hormone Exposure	Victoria Sugrue <i>Department of Anatomy</i>
	A Comparison of Progeny of Selected and Unselected Sires within the Setting of a Community-Based Breeding Programme Catering to Women Smallholder Goat Rearers in Bihar, India	Shalini Abeykoon <i>AbacusBio Ltd.</i>

12:00 pm – 12:15 pm	Unravelling the Secrets of Chordate Whole-Body Regeneration using single-cell sequencing	Megan Wilson <i>Department of Anatomy</i>
12:15 pm – 12:30 pm	Understanding the genetics and epigenetics of the post-viral fatigue syndromes, Myalgic Encephalomyelitis / Chronic Fatigue Syndrome, and Long COVID	Warren Tate <i>Department of Pathology</i>
12:30 pm – 1:30 pm Lunch (poster judging)		

Session Three		Chair:
1:30 pm – 2:30 pm	TBC	Peter Dearden <i>Department of Biochemistry and Genomics Aotearoa</i>
2:30 pm – 2:45 pm	Loss of aminoarabinose lipid modification leads to cephalosporin antibiotic resistance in <i>Pseudomonas aeruginosa</i>	Maddie Hardie Boys <i>Department of Microbiology and Immunology</i>
2:45 pm – 3:00 pm	Thermal resilience in the endemic triplefins of New Zealand	Sheri Johnson <i>Department of Zoology</i>
3:00 pm – 3:30 pm Break		

Session Four		Chair:
3:30 pm – 3:50 pm	Roll-over dogma: female specific ribosomes and sex determination	Tim Hore <i>Department of Anatomy</i>
3:50 pm – 4:05 pm	Missing Heritability in Heart Failure: Don't Sweat the Small Stuff?	Gemma Moir-Meyer (via Zoom) <i>Department of Medicine, Christchurch</i>
4:05 pm – 4:20 pm	Defining therapeutic vulnerabilities in drug-resistant strains of <i>Mycobacterium tuberculosis</i>	Matt McNeil <i>Department of Microbiology and Immunology</i>
4:20 pm – 4:35 pm	Evolving vertebral counts without evolving the segmentation clock	Shannon Taylor <i>University of Oxford</i>
4:35 pm – 4:45 pm	Awards Presentation	Louise Bicknell <i>Co-Director Genetics Otago</i>
4:45 pm Close		

## Poster Presentations

Poster Number	Title	Presenting Author
1	Understanding drivers of metastasis to develop better treatments for oestrogen receptor positive breast cancer	Sophie Tunnicliffe
2	Liquid biopsy based DNA methylation biomarker panel for facilitating minimally invasive prostate cancer detection	Atreyi Dutta
3	Development of a Prognostic Tool for Identifying High-Risk Prostate Cancer Patient	Zahra Shafaei Pishabad
4	Exploring the link between Infertility and Ovarian Cancer	Bridget Fellows
5	Role of the TP53 Splice Mutations in cancer progression	Apeksha Bhandarkar
6	Predicting Functional Genomic Features	Daniela Schiavinato
7	Exploring the disease mechanism caused by variants in histone H4	Tira McLachlan
8	Exploring Mendelian-informed genetic variants for their potential to alter cancer risk using the UK Biobank	Emily Nielsen Dandoroff
9	Pathogenicity and Interactions of ORC3	Mykilah O'Sullivan
10	A Genetic Characterisation of Myalgic Encephalomyelitis/Chronic Fatigue Syndrome Predisposition	Bryn Griffiths
11	Targeting oncogenic lncRNAs in colorectal cancer-associated macrophages	Brooke Morrison
12	Molecular characterisation of novel <i>de novo</i> variants in <i>ELAVL2</i>	Meghan Mulligan
13	Developing a blood-based epigenomic signature for ME/CFS and Long COVID using Peripheral Blood Mononuclear Cells (PBMCs)	Sayan Sharma
14	Prioritisation of Māori and Pacific Gout-Associated Non-Coding Genetic Variants Using Enhancer Assays	Selina Williams