

QRW Programme

Applied Genetics / Genomics in Breeding Technologies

Monday 29 August – Tuesday 30 August, 2021

Rydges Hotel, Queenstown, New Zealand

Monday 29 August

Time	Details	Location
8:30am - 10:30 am	Mihi Whakatau	Queenstown Room
Session 1: Technologies: sequencing, genotyping, GWAS etc Chaired by David Chagné (Plant & Food Research)		
10.30am-10.40am	Andrew Allan <i>sponsored by QIAGEN</i> PFR & University of Auckland <i>Welcome and Introduction</i>	QT Von Rm
10.40am-11.00am	Chad Harland (AG1) <i>sponsored by illumina</i> Livestock Improvement Corporation, Hamilton <i>Big data: Population level screening for de novo, familial and rare variants</i>	QT Von Rm
11.00am-11.20am	Thomas Lopdell (AG2) Livestock Improvement Corporation, Hamilton <i>Exploration of complex traits using QTL mapping of molecular phenotypes</i>	QT Von Rm
Session 2: Animal improvement and management Chaired by Maren Wellenreuther (Plant & Food Research)		
11.20am-11.40am	Emily Koot (AG3) Plant and Food Research, Palmerston North <i>Population genomic assessment of hoki stock structure (Macruronus novaezealandiae)</i>	QT Von Rm
11.40am-12.00pm	Priscila Salloum (AG4) University of Auckland <i>Looking for adaptation with genome scans on genetically structured populations: what can we learn from the New Zealand mollusc Onithochiton neglectus?</i>	QT Von Rm
12.00pm-12:20pm	Anna Santure (AG5) University of Auckland <i>Combining heritability estimates, gene mapping, inbreeding analysis and genetic diversity to predict adaptive potential in the threatened hihi (stitchbird)</i>	QT Von Rm
12.20pm-1.20pm	"Lunch amongst the posters": a modern fusion of food and a poster session... <i>Poster Session sponsored by Bio-Strategy</i>	Marquee
Session 3: Plant Improvement Chaired by Andrew Allan (Plant & Food Research)		
1.20pm-1.40pm	Erika Varkonyi-Gasic (AG6) Plant & Food Research, Auckland <i>Gene editing for fast breeding and improvement of kiwifruit</i>	QT Von Rm

1.40pm-2.00pm	Richard Espley (AG7) Plant & Food Research, Auckland <i>A hybrid approach to improving Vaccinium</i>	QT Von Rm
2.00pm-2.20pm	Sara Montanari (AG8) Plant & Food Research, Motueka <i>High-density linkage map construction in an autotetraploid blueberry population and detection of QTLs for anthocyanin content</i>	QT Von Rm
2.20pm-2.40pm	Charlotte Voogd (AG9) Plant & Food Research, Auckland <i>A MADS-box gene with similarity to FLC is induced by cold and regulated by epigenetic mechanisms to control budbreak in kiwifruit</i>	QT Von Rm
2.40pm-3.00pm	Ayodele Oluwaseyi Fakoya (AG10) <i>sponsored by Ngaio Diagnostics</i> University of Otago <i>Optimizing long-read amplicon sequencing to assess intra-cultivar genetic variation in flowering genes in perennial ryegrass.</i>	QT Von Rm
3.00pm – 3.30pm	Afternoon Tea	Trade Area & Level 5
Session 4: Emerging Researchers and Student talks Chaired by Nijat Amin (University of Auckland)		
3.30pm-3.50pm	Darrell Lizamore (AG11) Bragato Research Institute <i>Genome-wide epigenetic changes during and following grapevine somatic embryogenesis</i>	QT Von Rm
3.50pm-4.10pm	Monica Vallender (AG12) University of Otago & AgResearch Invermay Agricultural Centre <i>A big data, population genetics approach of low depth GBS to inform stock management of wild Chinook salmon (<i>Oncorhynchus tshawytscha</i>) in New Zealand</i>	QT Von Rm
4.10pm-4.30pm	Alex Caulton (AG13) University of Otago & AgResearch Invermay Agricultural Centre <i>Development of a farm animal epigenetic clock; a molecular predictor of age</i>	QT Von Rm
4.30pm-4.50pm	Dinum Herath (AG14) Plant and Food, University of Auckland <i>Knockout of AcBFT2 by CRISPR/Cas9 – targeted mutagenesis to reduce plant dormancy in kiwifruit</i>	QT Von Rm
5.00pm - 7.30pm	Evening Social Function <i>sponsored by Millennium Science – 10x Genomics</i> Drinks and canapes	Level 4, Trade Area

Tuesday 30 August

Time	Details	Location
Session 5: CRISPR and novel molecular techniques for use in the primary sector		
Chaired by Jo Putterill (University of Auckland) sponsored by QIAGEN		
8.30am-8.50am	Nick Albert (AG15) Plant & Food Research, Palmerston North <i>CRISPR in diverse land plant lineages</i>	QT Von Rm
8.50am-9.10am	Elena Lopez-Girona (AG16) Plant & Food Research, Palmerston North <i>CRISPR-enrichment for fine mapping</i>	QT Von Rm
9.10am-9.30am	Alex Trevarton (AG17) sponsored by New England BioLabs University of Auckland <i>Massively parallel reporter assay to identify expression-modulating non-coding variants involved in milk production</i>	QT Von Rm
9.30am-9.50am	Lynette Brownfield (AG18) sponsored by University of Otago University of Otago <i>Changing the ins and outs of plant breeding</i>	QT Von Rm
10.00am-10.30am	Morning Tea	Trade Area & Level 5
Session 6: Genomic predictions and breeding		
Chaired by Matt Littlejohn (Livestock Improvement Corporation, Hamilton)		
10.30am-10.50am	Dorian Garrick (AG19) Massey University <i>A novel genetic mechanism generates a tri-modal distribution of offspring for a complex trait</i>	QT Von Rm
10.50am-11.10am	Shannon Clarke (AG20) AgResearch <i>Genomics Solutions: from underpinning tools to industry application</i>	QT Von Rm
11.10am-11.30pm	Bevin Harris (AG21) LIC, Hamilton <i>Genomic prediction in New Zealand dairy cattle</i>	QT Von Rm
11.30pm-11.50pm	Swati Jivanji (AG22) Massey University LIC, Hamilton <i>Epistatic interactions between KIT and MITF cause breakthrough pigmentation in regions of white on the coat in cattle</i>	QT Von Rm
12.00pm – 1.00pm	Lunch	Trade Area & Level 5
Session 7: Developing higher value plants		
Chaired by Richard Espley (Plant & Food Research)		
1.00pm-1.20pm	Robert Schaffer (AG23) Plant & Food Research, Motueka & University of Auckland <i>Improving fruit quality via gene edits</i>	QT Von Rm

1.20pm-1.40pm	Chris Winefield (AG24) <i>sponsored by Millennium Science – 10x Genomics</i> Lincoln University <i>Utilisation of transposons to alter genomic and epigenomic diversity in crop plants</i>	QT Von Rm
1.40pm-2.00pm	Rongmei Wu (AG25) Plant & Food Research, Auckland <i>An ever-green apple tree for a future climate?</i>	QT Von Rm
2.00pm-2.20pm	Glenn Thorlby (AG26) Scion <i>Gene editing to improve the productivity, sustainability and resilience of New Zealand's planted forests</i>	QT Von Rm
3.00pm – 3.30pm	Afternoon Tea	Trade Area & Level 5
Session 8: Implementation, socialisation and application of technologies Chaired by Susan Thomson (Plant & Food Research)		
3.30pm-3.50pm	Bjorn Oback (AG27) <i>sponsored by illumina</i> AgResearch, Ruakura <i>Male germline complementation in chimaeric sheep</i>	QT Von Rm
3.50pm-4.10pm	Charles Dwamena (AG28) Plant & Food Research <i>Fast breeding a yellow fleshed apple</i>	QT Von Rm
4.10pm-4.30pm	Susan Thomson (AG29) Plant & Food Research, Lincoln <i>High throughput genotyping for molecular breeding in Actinidia sp.</i>	QT Von Rm
4.30pm-4.50pm	Phil Wilcox (AG30) <i>sponsored by Thermo Fisher Scientific</i> University of Otago <i>Māori perceptions of gene editing</i>	QT Von Rm
5.00pm	Closing comments	QT Von Rm
Queenstown Research Week Plenary Session <i>sponsored by University of Otago</i>		
6:00pm-6:30pm	Pre QRW Plenary Session Drinks & Canapes	Reds Bar
6:30pm – 6.45pm	Welcome: Peter Shepherd, Chair University of Auckland	Queenstown & Wakatipu Rm
6.45pm - 8.00pm	“The Future of the New Zealand Research System” Prof. Juliet Gerrard Prime Minister's Chief Science Advisor Prof. Gary Evans MBIE's Chief Science advisor Prof Sunny Collins Chief Executive, Health Research Council of New Zealand Chris Higgins CEO, New Zealanders For Health Research	Queenstown & Wakatipu Rm
8.00pm – 10.00pm	Fashionomics <i>sponsored by Thermo Fisher Scientific</i>	Level 4, Trade Area

