



Plants for a Brighter Future

2-4 July 2019, Massey University, Palmerston North, New Zealand

Tuesday 2nd July

AH2

10:00 – 10:40	Registration/morning tea in foyer	
10:45 – 11:15	Mihi whakatau and Opening address	Takuta Ferris
Session 1	Opening session	Chair: Richard MacKnight
11:15 – 11:45	Opening Address	Juliet Gerrard, Chief Science Advisor to PM
11:45 – 12:15	New breeding technologies for fruit trees	Andy Allan
12:15 – 12:30	Molecular characterisation of a supergene in hybrid kiwifruit	John McCallum

12:30 – 13:30 Lunch

Session 2	Plant growth substances	Chair:
13:30 – 14:15	Keynote Cytokinin: a hormone with many roles	Paula Jameson
14:15 – 14:30	Overexpression of transporter genes in pea leads to increased protein content, yield and changed cytokinin regulation	Jan Grant
14:30 – 14:45	Plant hormones and branching in <i>Zantedeschia</i> and <i>Acer</i>	Sarina Manandhar
14:45 – 15:00	How hormonal interplay controls plant organ longevity	Donald Hunter

15:00 – 15:30 Afternoon Tea

Session 3	Workshop and Oral Posters	
15:15 – 15:30	Early Career Researchers: what do you want from a scientific society?	Jill Stanley
15:30 – 17:00	3 min Poster Presentations	Huub Kerckhoffs
17:00 – 18:00	Poster session with drinks and nibbles	
18:00 –	Free time (NZSPB: dinner in town)	

Wednesday 3rd July
NB Parallel Sessions in AH2 and AH3

Session 4	AH2 Cell Walls	Chair:
09:00 – 09:45	Annals of Botany Speaker Cellulose synthesis in land plants	Staffan Persson
09:45 – 10:00	Differential processing of pectic galactans and arabinans in cell types at the apple fruit surface during development	David Brummell
10:00 – 10:15	Developmental changes to xyloglucan in the skin of growing apples	Erin O'Donoghue
10:15 – 10:30	Micropore distribution in cell walls of softwood and hardwood xylem	Lloyd Donaldson

10:30 – 11:00 Morning tea

Session 5	AH3 New Technologies (parallel)	Chair:
09:45 – 10:00	Detecting feeding injury of brown marmorated stink bugs (<i>Halyomorpha halys</i>) for Sungold™ kiwifruit using optical coherence tomography	Mo Li
10:00 – 10:15	Real-time, non-destructive, fruit-softening measurement using piezo trays	Robert Schaffer
10:15 – 10:30	Genetic transformation of <i>Solanum muricatum</i> as a model crop for testing anthocyanin regulatory constructs in fruit	Murray Boase

10:30 – 11:00 Morning tea

Session 6	AH2 Plant Development	Chair:
11:00 – 11:30	Translating classical physiological knowledge to discover molecular control of bulbing in onion (<i>Allium cepa</i> L.)	Richard MacKnight
11:30 – 11:45	NZSPB Michael McManus Award for Best Student Paper Differential regulation of anthocyanin profile in purple kiwifruit (<i>Actinidia</i> species)	Yongyang Peng
11:45 – 12:00	The fine regulation of anthocyanin pigment production alters floral colour patterning in <i>Antirrhinum majus</i> (snapdragon)	Sarah Moss
12:00 – 12:15	Phytochrome light signalling controls the circadian clock and photoperiodic flowering in <i>Medicago truncatula</i>	Soledad Perez-Santangelo
12:15 – 12:30	Systemic and local signals converge to regulate nitrogen demand signalling and nodule formation in <i>Medicago truncatula</i>	Nijat Imin

12:30 – 13:30 Lunch

Session 7	AH3 Cell Walls II and Metabolism (Parallel session)	Chair:
11:00 – 11:15	<i>Marchantia</i> : a simple model system to study cell wall biosynthesis	Ed Lampugnani
11:15 – 11:30	Impact of overexpression of a gene for polygalacturonase on apple fruit phenotypes and cell wall composition	Ian Hallett
11:30 – 11:45	Novel polysaccharide structures in the mucilage of Arabidopsis seeds visualised by AFM	Bill Williams
11:45 – 12:00	Non-structural carbohydrates in the physiology of <i>Avicennia marina</i> subsp. <i>australasica</i>	Sridevi Ravi
12:00 – 12:15	A study of amino acid metabolism in grapevine (<i>Vitis vinifera</i>)	Scott Gregan
12:15 – 12:30	Delivering high-quality apples: a multi-omics profiling for identification of potential perfect storage life predictors	Laurie Favre

12:30 – 13:30 Lunch

Session 8	AH2 Postharvest	Chair: Andrew East
13:30 – 14:15	Keynote speaker Breaking the mould with cold plasma	Kirsty Bayliss
14:15 – 14:30	A review of current approaches in modelling ethylene effects on postharvest firmness progression of fruit	Jeritah Tongonya
14:30 – 14:45	Evaluation of efficacy of washing treatment for extending the post-harvest shelf-life of banana (<i>Musa acuminata</i>)	Champathi Gunathilake
14:45 – 15:00	Effect of fruit calcium content and harvest maturity on instrumental texture parameters of 'Rahi' blueberries	Sebastian Rivera Smith

15:00 – 15:30 Afternoon tea

Session 9	AH3 Nectaries and Pollination (parallel session)	Chair:
14:15 – 14:30	Nectary photosynthesis contributes to the production of m nuka (<i>Leptospermum scoparium</i>) floral nectar	Stevie Noe
14:30 – 14:45	Optimising best practices for stonefruit pollination	Max Buxton
14:45 – 15:00	Watermelon pollination in Queensland, Australia	Theo van Noort

15:00 – 15:30 Afternoon tea

Session 10	AH2 Pre- to Postharvest Physiology	Chair:
15:30 – 15:45	Yield and morpho-physiological response of potato cultivars to abiotic stress associated with climate change in New Zealand	Allan Siano
15:45 – 16:00	Skin topography of kiwifruit from different growing conditions	Leo Lai
16:00 – 16:15	Which foliar potassium fertiliser improves fruit growth and quality of Gold3 kiwifruit at harvest?	Maria Hashmatt
16:15 – 16:30	Characteristics of apple (<i>Malus domestica</i>) fruit at harvest are affected by altering early season light environment	Daya Dayatilake
16:30 – 16:45	Understanding the physiological effects of aminoethoxyvinylglycine (AVG) on 'Prem009' pears	Jess Byrne
16:45 – 17:00	Seasonal variations in the source and use of water by three dominant vegetation species in desert steppe, Ningxia, China	Haiyung Hu

Session 11	AH3 Germplasm (parallel session)	Chair:
15:30 – 15:45	Cryopreservation of <i>Syzygium maire</i> (Swamp maire, waiwaka), a critically endangered tree species from New Zealand	Karin van der Walt
15:45 – 16:00	Description on biological characteristics of ten varieties of kiwi berry (<i>Actinidia arguta</i>) germplasm resources from northeast of China	Ying Wang
16:00 – 16:15	Development of a protocol for cryopreservation of kiwifruit (<i>Actinidia</i> spp.) germplasm through droplet vitrification	Liya Mathew
16:15 – 16:30	Towards developing a core collection of New Zealand hop (<i>Humulus lupulus</i>) genetic resources for cryobanking	Claudia Wiedow
16:30 – 16:45	Effect of preconditioning donor plantlets and manipulating recovery media on potato (<i>Solanum</i> spp.) regeneration after cryopreservation by	Ranjith Pathirana
16:45 – 17:00	Pollen development and 2n pollen induction using nitrous oxide in <i>Limonium sinuatum</i>	Rian Siregar

Wednesday 3rd July**AH2, AH3 and AH5**

17:00 – 18:00	AH2 AGM for NZSPB	
17:00 – 18:00	AH3 AGM for NZIAHS	
17:00 – 18:00	AH5 AGM for IAPB(NZ)	
19:00 –	Conference Dinner, Russell Room, Wharerata	

Thursday 4th July AH2

Session 12	Plant Phenotyping	Chair:
09:00 – 09:45	Keynote Speaker Fast Phenotyping – linking growth patterns, stress responses and plant	Bettina Berger
09:45 – 10:00	Fruit feature detection using LIDAR mapping of kiwiberry orchards	Peter McAtee
10:00 – 10:15	GBS for detection of SNP loci under selection in white clover (<i>Trifolium repens</i> L.)	Sofie Pearson
10:15 – 10:30	Utilising high throughput brewing to phenotype hops with novel flavour and aroma characteristics	Kerry Templeton

10.30 – 11.00 Morning tea

Session 13	Plant Physiology	Chair:
11:00 – 11:15	Light interception of sweet cherry trees grown as a planar cordon orchard system design and the relationship to fruit quality	Claire Scofield
11:15 – 11:30	Establishment of planar sweet cherry canopies using physiological principles	Jill Stanley
11:30 – 11:45	Understanding the relationship between crop load, yield and fruit quality in apple planar cordon orchard systems	Jack Wilson
11:45 – 12:00	Modelling grape growth in relation to whole-plant carbon and water fluxes	Junqi Zhu
12:00 – 12:15	Bridging stress physiology experiment and modelling: an example of representing the differential drought sensitivities of leaf gas exchange	Shuangxi Zhou
12:15 – 12:30	Investigation of seed dormancy in 13 <i>Actinidia</i> species	Azadeh Esfandiari

12:30 – 13:30 Lunch

Session 14	Plant diseases and Conference close	Chair:
13:30 – 14:00	Improving tomato diseases management using micro-ecosystem	
14:00 – 14:15	Resistance and susceptibility of Camellia plants to petal blight disease are defined by the timing of defence responses	Nikolai Kondratev
14:15 – 14:30	Living off the bioeconomy: what does the future hold for New Zealand?	Julian Heyes
14:30 – 14:45	Student awards for best oral presentation and best poster Closing Remarks	