



Australasian Grain Science Association Inc.

The 72nd Australasian Grain Science Conference

24-26 August 2022

Rydges Capital Hill, Canberra, ACT



Grains: Many Opportunities

Draft Program

Conference Program

DAY 1: Wednesday 24th August

Session 1: Conference Opening and Award Presentations

8:30	Conference Opening	
8:35	Guthrie Medal Presentations	
8:45	Bond Medal Presentation and Address	
9:15	Opening Address GRDC	

Session 2: Wheat Quality

9:35	Some of the events that shaped the quality of Australian wheat	Lindsay O'Brien
10:00	Development of high-throughput technologies to screen wheat for the effects of elevated alpha-amylase activity	Joe Panozzo
10:20	Effect of heat stress on wheat grain quality	Yifeng Lyu
10:40	MORNING TEA	

Session 3: Rice and Flash Talks

11:10	Identification of structure-controlling rice biosynthesis enzymes	Jihui Zhu
11:30	Rice with multilayer aleurone: a larger sink for multiple micronutrients	Ronald Yu
11:50	Nutrient dense rice 3: iron and zinc biofortification in TA rice	Xiaoba Wu
12:10	Starch molecular structural differences between chalky and translucent parts of chalky rice grains	Keyu Tao
12:20	An empirical structural parameterization of branched starch oligomers	Miaomiao Zhu
12:30	LUNCH	

Session 4: Grain Bioactives

1:30	Comparing the effect of different oat bran concentrations for the treatment of induced type I diabetes in rat model	Tabussam Tufail
2:00	Characterisation, bioaccessibility and antioxidant activity of polyphenols from pigmented wheat and barley	Borkwei Ed Nignpense
2:20	Application of synergistic enzyme cocktail for selective degradation of sorghum grain pericarp	Sruthi Nedumpillil Unnikrishnan
2:40	Impact of processing techniques on the phenolic content and antioxidant activity of sorghum (<i>Sorghum bicolor</i> L.Moench)	Aduba Jok
3:00	AFTERNOON TEA	

Session 5: Grains and Human Health

3:40	Factors affecting in vitro gut fermentation of grain products and ingredients	Mike Gidley
4:10	Intact plant cells: Macronutrients composition and cell wall integrity control for microbiota and metabolites	Weiyan Xiong
4:30	Cell wall composition modulates gut microbiota and short chain fatty acid production during in-vitro fermentation	Lavaraj Devkota
4:50	Understanding the binding of starch fragments to granule-bound starch synthase	Shaobo Zhang
5:10	Day 1 Close	
6:00	WELCOME RECEPTION	

Day 2: Thursday 25th August**Session 6: Grains and Plant Based Proteins**

8:30	Grains for a world hungry for food and knowledge	Colin Wrigley
8:50	New approaches to improving techno-functionality of plant protein food ingredients	Rewati Bhattarai
9:10	Characterising chickpea diversity for plant based protein	Sally Buck
9:30	Thermorheological properties of mungbean protein isolates compared to commercial soy and pea protein isolates	Smriti Shrestha
9:50	Structure-function of plant proteins	Sushil Dhital
10:20	MORNING TEA	

Session 7: Focus Session - Developing a Plant Based Protein Industry in Australia

10:50	Plant protein - how do we turn a global opportunity into economic and social benefits for Australia	Michelle Colgrave
11:20	Making the switch to Australian plant proteins	Brent Kaiser
11:50	Creating a plant protein powerhouse	Nick Hazell
12:20	LUNCH	

Session 8: Cereals & Grains Association ILSI SEA Region Australasia Focus Session - Gene Edited Crops for Australia

1:15	Moderator Emeritus Professor Les Copeland, Sydney Institute of Agriculture	
	Panelists:	
	Geoffrey Annison AFGC	
	Steve Jobling CSIRO	
	Felicity Keiper BASF	

Session 9: Workshop organised by the AGSA Advisory Committee

2:15	'Towards a Decadal Plan'	
3:00	AFTERNOON TEA	

Session 10: AGSA AGM

3:30	AGSA AGM	
5:00	Day 2 Close	
6:30	CONFERENCE DINNER	

Friday 26th August**Session 12: Sensors and Stress**

8:30	Development of a chemometric prediction model for a rapid detection of different phytochemicals present in a training population of different coloured rice grains	Achini Herath
8:50	Combining climate, soil and satellite-derived variables with interpretive machine learning to predict head rice yield	Allister Clarke
9:10	The application of portable sensor technologies across the grain value-chain	Cassandra Walker
9:30	Rapid measurement of paddy rice quality	Mark Talbot
9:50	Phenotyping root response to abiotic stress	Yinglong Chen
10:10	MORNING TEA	

Session 12: Functionality and Novel Foods

10:40	Phenolic profiles and potential anti-Alzheimer activity of Australian adzuki bean	Joel Johnson
11:00	Differential hydration behaviour of albus and angustifolius lupins	Dilini Perera
11:20	Functional properties of gluten during mixed culture fermentation	Sara Sayanjali
11:40	The Wattleseed Effect: Exploring Australia's native legumes for novel food applications	Sera Jacob
12:00	Conference Close	
12:10	LUNCH	