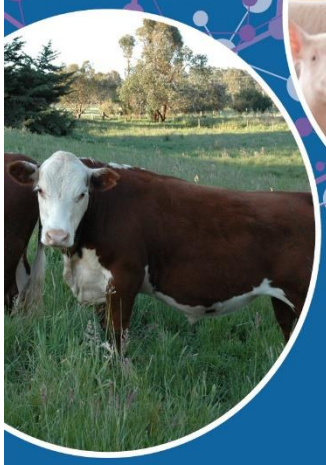


AAABG

Association for the Advancement of Animal Breeding and Genetics

24th Conference of the Association for the Advancement of Animal Breeding & Genetics

AAABG 2021

2 - 4 November, 2021

CONFERENCE PROGRAM

HUB TIMES

2021 AAABG CONFERENCE

OVERALL PROGRAM - AT - A - GLANCE

NZ (Dunedin)	QLD (Brisbane)	SA (Adelaide)	NSW (Armidale) VIC (Melbourne)	WA (Perth)		PRODUCER DAY	
TIME	TIME	TIME	TIME	TIME	Tuesday (2/11/21)	Wednesday (3/11/21)	Thursday (4/11/21)
10:30 AM	7:30 AM	8:00 AM	8:30 AM	5:30 AM	Registration	Registration	Registration
11:00 AM	8:00 AM	8:30 AM	9:00 AM	6:00 AM	Opening ceremony (15') + Plenary session: Next Next Generation Approaches to Livestock Breeding (Mark Hutchinson, John McEwan)	Welcome address (5') + Plenary session: Industry Opportunities (Suzanne Rowe) 2019 Helen Newton Turner Oration (Kevin Atkins)	Welcome address (5') + Plenary session: Addressing livestock well-being (Naomi Wray, Sonja Dominik)
12:30 PM	9:30 AM	10:00 AM	10:30 AM	7:30 AM	Morning tea (30')	Morning tea (30')	Morning tea (30')
1:00 PM	10:00 AM	10:30 AM	11:00 AM	8:00 AM	Concurrent session 1: A. DNA applications B. Livestock well-being	Special session: Breeder insights	Concurrent session 1: A. Genomics of reproduction B. Breeding objectives
2:00 PM	11:00 AM	11:30 AM	12:00 PM	9:00 AM	Break (15')	Break (15')	Break (15')
2:15 PM	11:15 AM	11:45 AM	12:15 PM	9:15 AM	Concurrent session 2: A. New phenotypes B. Heat tolerance	Concurrent session 2: A. Genomics in practice B. Causal & predictive variants	Concurrent session 2: A. Improving reproduction B. Optimising genetic gains
3:15 PM	12:15 PM	12:45 PM	1:15 PM	10:15 AM	Lunch (60')	Lunch (60')	Lunch (60')
4:15 PM	1:15 PM	1:45 PM	2:15 PM	11:15 AM	Concurrent session 3: A. Genetics x environment B. Cattle breeding	Concurrent session 3: A. Breeding directions B. Genotype imputation	Concurrent session 3: A. Sustainability B. Genetic evaluation
5:15 PM	2:15 PM	2:45 PM	3:15 PM	12:15 PM	Break (40') - Melbourne Cup	Break (15')	Break (15')
5:30 PM	2:30 PM	3:00 PM	3:30 PM	12:30 PM	Concurrent session 4: A. Recording systems B. Lifetime productivity	Concurrent session 4: A. Welfare & resilience B. Genomic evaluation	Concurrent session 4: A. Production traits B. Resource populations
6:30 PM	3:30 PM	4:00 PM	4:30 PM	1:30 PM	Afternoon tea (30')	Afternoon tea (30')	Afternoon tea (30')
7:00 PM	4:00 PM	4:30 PM	5:00 PM	2:00 PM	John Vercoe Memorial Lecture (Ben Hayes) Poster quick-fire talks & "ads"	AAABG Fellowships: Awards & addresses	General meeting (including 2021 Helen Newton Turner Oration and Conference awards)
8:00 PM	5:00 PM	5:30 PM	6:00 PM	3:00 PM	Closing remarks	Closing remarks	Closing remarks
				3:30 PM	WA ONLY - Previously recorded	WA ONLY - Previously recorded:	WA ONLY - Previously recorded:
					Opening ceremony(15') + Plenary session: Next Next Generation Approaches to Livestock Breeding	Welcome address (5') + Plenary session: Producer issues (Suzanne Rowe)	Welcome address (5')+ Plenary session: Addressing livestock well-being (Naomi Wray,
					(Mark Hutchinson, John McEwan)	Helen Newton Turner Oration (Kevin Atkins)	Sonja Dominik)
				5:00 PM	Close	Close	Close

Greetings,

On behalf of the organising committee, I extend a very warm welcome to the 24th Conference of the Association for the Advancement of Animal Breeding and Genetics. The format of this conference is necessarily different from earlier conferences, in response to the impact of the COVID-19 pandemic and associated restrictions. Delegates are participating from hubs in a number of locations, but also on-line.

The theme of the 24th Conference is 'Widening the range of technologies used in animal breeding and genetics' with an emphasis on the many new tools that are now available to improve animal breeding programs. These tools range from novel methods for developing additional phenotypes to innovative molecular approaches to increase the accuracy of genetic selection.

The central day of this year's conference is a dedicated Producer Day. The organising committee decided to put this day in the middle of the 3-day conference to highlight the importance of addressing one of the main objectives of AAABG, which is '*to promote communication among all those interested in the application of genetics to animal production, particularly breeders and their organisations, consultants, extension workers, educators and geneticists.'*

The organising committee is grateful for the ongoing support of sponsors, especially for staying with us following a change to the conference format. Our thanks also to organisers of hubs, who have taken on responsibility for making local arrangements so delegates have the option to meet together locally to participate in the Conference.

Finally, I thank members of the Conference organising committee and Dr Sue Hatcher, our AAABG Editor, for all their hard work in making the 24th AAABG Conference possible.

Forbes Brien
President

AAABG
Association for the Advancement of Animal Breeding and Genetics

24th AAABG Conference Organising Committee

Forbes Brien, University of Adelaide (President)
Wayne Pitchford, University of Adelaide (Vice President)
Chantal Barrass, University of Adelaide (Treasurer)
Bronwyn Clarke, Murdoch University (President – elect)
Lynton Arney, Inverbrackie Stud
Cynthia Bottema, University of Adelaide
Tong Chen, University of Adelaide
Michelle Hebart, University of Adelaide
Stefan Hiendleder, University of Adelaide
Rudi Adrianna McEwin, University of Adelaide
Stephen Lee, University of Adelaide
Judith Pitchford, University of Adelaide
Penny Schulz, Schulz Livestock

Tuesday, November 2nd

JOINT SESSION: Opening Ceremony & Plenary Session (8:30 - 10:00 am, SA time; 9:00 – 10:30 am, EDST)

Welcome Address: Assoc. Prof. Forbes Brien, AAABG President

Official Opening: The Hon. David Basham, Minister of Primary Industries & Regional Development (SA)

Plenary Session #1: Next Next Generation Approaches to Livestock Breeding (Chairs: Forbes Brien, Bill Burgess; sponsored by Weatherbys Scientific)

Prof Mark Hutchinson, Director, ARC Centre of Excellence for Nanoscale BioPhotonics, University of Adelaide: *"Measurement enabled precision interventions: A future opportunity for livestock farming"*

Dr John McEwan, Principal Scientist (Animal Genomics), AgResearch: *"The future of genotyping"*

MORNING TEA BREAK (10:00 – 10:30 am, SA time; 10:30 – 11:00 am, EDST)

Concurrent session 1, stream A: DNA applications (Chairs: Ruidong Xiang, Hans Daetwyler)

Presenter	Title
Toni Reverter	Ultra-small SNP panels to uniquely identify individuals in thousands of samples
Elizabeth Ross	Assessing the potential of parentage testing using portable long read sequencing technologies
Jinghang Zhou*	HandyCNV: An R package for standardized summary, annotation, comparison, and visualization of CNV and CNVR
Kaitlyn Sarlo Davila	Integration of GWAS, network and pathway analysis reveals novel insights into thermotolerance in beef cattle
Zhi Loh*	A deterministic algorithm for optimality of threshold in a GWAS experiment

Concurrent session 1, stream B: Livestock well-being (Chairs: Sonja Dominik, Caeli Richardson)

Presenter	Title
Sara de las Heras Saldana	Genome-wide association analysis for temperament in Australian sheep
Saleh Shahinfar	Exploring machine learning approaches to predict the incidence of lameness in dairy cows
Imtiaz Randhawa	Effects of poll breeding on reproductive traits in beef cattle
Toni Reverter	ImmuneDEX: Updated genomic estimates of genetic parameters and breeding values for Australian Angus cattle
Imke Tammen	The Anstee Hub for Inherited Diseases of Animals (AHIDA) – development of a new online platform for surveillance, reporting and control of inherited diseases in animals

BREAK (11:30 – 11:45 am, SA time; 12:00 – 12:15 pm, EDST)

Concurrent session 2, stream A: New phenotypes (Chairs: Mark Hutchinson, Christian Duff)

Presenter	Title
Amy Bell	Dentition can predict maturity in young Merino sheep
Coralia Manzanilla-Pech	Genetic parameters for feed efficiency and weight in Jersey cows using 3D cameras in commercial Danish farms
Jo Newton	Using mid-infrared spectroscopy predictions of fertility to optimise semen allocation in dairy herds
Rhiannon Handcock	Quantifying genetic variation in urination traits of grazing dairy cattle
Irene van den Berg	Genetic parameters of blood urea nitrogen and milk urea nitrogen concentration in dairy cattle managed in pasture-based productions systems in New Zealand and Australia

Tuesday, November 2nd ~ CONTINUED

Concurrent session 2, stream B: Heat tolerance (Chairs: Ben Hayes, Peter Wahinya)

Presenter	Title
Esther Donkersloot	The benefit of a 'slick' hair coat for heat tolerance in New Zealand dairy cattle
Evans Cheruiyot*	Using selected sequence variants to improve genomic prediction of heat tolerance in dairy cattle
Schalk Cloete	Responses to heat in ewes from indigenous and commercial South African sheep breeds: Preliminary results
Laura Jensen*	Evaluation of Australian breeding values for heat tolerance under US conditions
Raluca Mateescu	Revealing phenotypic and genetic relationships underlying the thermotolerance-production complex in beef cattle

LUNCH BREAK (12:45 – 1:45 pm, SA time; 1:15 – 2:15 pm, EDST)

Concurrent session 3, stream A: Genetics x environment (Chairs: Sue Hermesch, Michelle Hebart)

Presenter	Title
Lino de la Cruz*	The impact of genotype by environment interaction on breeding values for 150-day weight in Katahdin sheep in Mexico
Dominic Waters*	Genomic analysis of genotype by environment interactions in post-weaning weight of Australian sheep
Mette Madsen*	Macro- and micro-genetic environmental sensitivity for 400-day weight in Australian Angus

Concurrent session 3, stream B: Cattle breeding (Chairs: Stephen Lee, Sara de las Heras Saldana)

Presenter	Title
Shalanee Weerasinghe	Genome-wide association analysis of birth and weaning weights in Australian taurine beef cattle
Rebecca Hickson	Selection strategies for beef cow size and condition
Imtiaz Randhawa	Quick-fire talk: Genetics of horns and scurs in cattle

BREAK (with time for Melbourne Cup viewing) (2:20 – 3:00 pm, SA time; 2:50 – 3:30 pm, EDST)

Concurrent session 4, stream A: Recording systems (Chairs: Gus Rose, Rudi McEwin)

Presenter	Title
Brodie Metcalfe*	Visual classing grades are heritable and visually classed Merino sheep born and reared as twins are graded lower than singles
Sarita Guy	Maximising genetic gains with data quantity and quality in Merino flocks
Shariful Islam*	The predicted responses to genomic selection in growing pigs
Bruno Santos	Supporting data-driven sustainable livestock industries in developing countries
Chanda Nimbkar	Genetic improvement of goats owned by smallholder goat keeper women in Bihar, India with the help of a database tool

Tuesday, November 2nd ~ CONTINUED

Concurrent session 4, stream B: Lifetime productivity (Chairs: Kim Bunter, Irene van den Berg)

Presenter	Title
Bailey Engle	Genomic prediction of lifetime productivity in Brahman cows
Majid Khansefid	Improving the accuracy of predictions for cow survival by multivariate evaluation model
Franziska Weik*	Genetic parameters for structural traits in New Zealand beef cattle and their correlations with production traits
Obayed Al Rahman*	Defining longevity and estimating genetic parameters in Australian Merino ewes
Jessica Wallace	Economic analysis of Merino ewe performance from diverse industry sires using GrassGro™

AFTERNOON TEA BREAK (4:00 – 4:30 pm, SA time; 4:30 – 5:00 pm, EDST)

JOINT SESSION:

John Vercoe Memorial Lecture (Chairs: Wayne Pitchford, Cindy Bottema)

Prof Ben Hayes, Centre Director, Animal Sciences, Queensland Alliance for Agriculture and Food Innovation:
"Breeding Australian cattle for production in the year 2050"

Poster quick-fire talks & "ads" (see last page)

CLOSE (5:30 pm, SA time; 6:00 pm, EDST)

Wednesday, November 3rd: Producer Day

JOINT SESSION: Opening & Plenary Session #2 (8:30 am, SA time; 9:00 am, EDST)

Welcome: Prof Wayne Pitchford, AAABG Vice President

Plenary Session: Industry Opportunities (Chairs: Wayne Pitchford, Geoff Lindon; sponsored by AWI)

Dr Suzanne Rowe, Senior Scientist, AgResearch:
"The contribution animal breeding can make to industry carbon neutrality goals"

Dr Kevin Atkins, Recipient of Helen Turner Newton Medal, 2019
"*Genetic evaluation in Merinos: Past and future opportunities*"

MORNING TEA BREAK (10:00 – 10:30 am, SA time; 10:30 – 11:00 am, EDST)

Special joint session 1: Breeder insights (Chairs: Wayne Pitchford, Geoff Lindon)

Presenter	Title
Peter Blackwood	Performance Corriedale Group genomics project
Lynton Arney	Ewe lamb joining for selection
Tim Leeming	Genetics for self-replacing maternals: Paradoo Prime
Sally Martin	Merinolink/UNE DNA stimulation project: Doubling the rate of genetic gain - where are we after 4 years?
Greg Popplewell	Popplewell tropical beef composite breeding program
ALL	**PANEL DISCUSSION**

Wednesday, November 3rd: Producer Day ~ CONTINUED

BREAK (11:30 – 11:45 am, SA time; 12:00 – 12:15 pm, EDST)

Concurrent session 2, stream A: Genomics in practice (Chairs: Daniel Brown, Bailey Engle)

Presenter	Title
Pamela Alexandre	Assessment of genomic predictions for feedlot and carcase traits in Australian Angus steers
Christian Duff	The value of live-animal ultrasound scanning of breeding candidates for carcase traits in the age of genomics
Mekonnen Haile-Mariam	Genomic evaluation of male fertility of Australian Holstein-Friesian and Jersey bulls
Brad Hine	Development of Angus SteerSELECT - A genomic based tool to identify performance differences of Australian Angus steers during feedlot finishing: Phase 1 validation
Stephen Lee	Investigating the potential to utilise commercial carcass traits in genetic evaluation

Concurrent session 2, stream B: Causal & predictive variants (Chairs: Imke Tammen, Stefan Hiendleder)

Presenter	Title
Phillip Gurman	Multivariate analyses using two genomic relationship matrices to weight predictive SNP markers
Li Li	Evaluating the benefits of including predictive SNP markers in single step evaluation in sheep using cross-validation
Ruidong Xiang	Bayesian genome-wide analysis of cattle traits using variants with functional and evolutionary significance
Claire Prowse-Wilkins	Narrowing the search space: Putative causal variants are enriched in annotated functional regions from 6 bovine tissues
Mehrnush Forutan	Genome wide analysis of bovine enhancers and promoters across developmental stages in liver

LUNCH BREAK (12:45 – 1:45 pm, SA time; 1:15 – 2:15 pm, EDST)

Concurrent session 3, stream A: Breeding directions (Chairs: Peter Amer, Penny Schulz)

Presenter	Title
Daniel Brown	Single step genomic evaluation of lambing ease in Australian terminal sire breed sheep
Kieran Ransom	Ewes for the future: A commercial comparison of ewe breeds for reproduction, wool and lamb growth
Gemma Jenkins	New Zealand national dairy breeding objective review stakeholder survey
Lee-ann Monks	Dairy farmer perceptions and attitudes to female genomic testing
Jen Peart	Identifying the breeding preferences and attitudes of the Australian beef cattle producer

Concurrent session 3, stream B: Genotype imputation (Chairs: Julius van der Werf, Lloyd Low)

Presenter	Title
Iona MacLeod	Current challenges for imputation of SNP chips to whole genome sequence in cattle & sheep
Hans Daetwyler	Genotyping dairy cattle with skim-whole-genome sequencing and imputation
Mohammad Ferdosi	The effects of number of reference individuals on the accuracy of imputation from low and medium densities to high density
Hassan Aliloo	The impact of reference composition and genome build on the accuracy of genotype imputation in Australian Angus cattle
Tuan Nguyen	Exploring imputation accuracy across the bovine X Chromosome

Wednesday, November 3rd: Producer Day ~ CONTINUED

BREAK (2:45 – 3:00 pm, SA time; 3:15 – 3:30 pm, EDST)

Concurrent session 4, stream A: Welfare & resilience (Chairs: Jennie Pryce, Sarita Guy)

Presenter	Title
Laura Vargovic	Economic benefit of additional recording for welfare traits in maternal breeding objectives for pigs
Sam Walkom	Improve your social license - breed sheep for disease resistance
Johan Greeff	Genetic parameters of breech strike, neck wrinkles, dags and breech cover over the lifetime of crutched Merino ewes in a Mediterranean environment
Cornelius Nel	Genetic parameters and trends for lamb survival following long term divergent selection for number of lambs weaned in the Elsenburg Merino flock
Peter Amer	Genetic progress for environmental outcomes – how do we get it?

Concurrent session 4, stream B: Genomic evaluation (Chairs: Dorian Garrick, Evans Cheriuyot)

Presenter	Title
Karin Meyer	Impact of missing pedigrees in single-step genomic evaluation
Harry Lamb*	Accuracy of genomic prediction in Brahman cattle using simulated genotypes from low-coverage Nanopore sequencing
Amali Samaraweera	Estimation of optimum polygenic and genomic weights in single step genetic evaluation of carcass traits in Australian Angus beef cattle
Andre Tan*	Comparing genomic with pedigree relationship matrices and preliminary genome wide association in Santa Gertrudis bulls
Gilbert Jeyaruban	Determination of optimum weighting factors for single step genetic evaluation via genetic variance partitioning

AFTERNOON TEA BREAK (4:00 – 4:30 pm, SA time; 4:30 – 5:00 pm, EDST)

JOINT SESSION: AAABG Fellowships: Awards & Addresses (Chair: Wayne Pitchford)

CLOSE (5:30 pm, SA time; 6:00 pm, EDST)

Thursday, November 4th

JOINT SESSION: Opening & Plenary Session (8:30 am, SA time; 9:00 am, EDST)

Welcome: Dr Bronwyn Clarke, Incoming AAABG President

Plenary Session #3: Addressing livestock well-being (Chairs: Bronwyn Clarke, Evgeny Glazov; sponsored by Illumina)

Prof Naomi Wray, NHMRC Leadership Fellow, University of Queensland:
"What can research on the genetics of human well-being tell us about improving livestock well-being?"

Dr Sonja Dominik, Group leader, Sustainability and Welfare of the Livestock & Aquaculture Program, CSIRO Agriculture and Food
"Advancing livestock well-being: The role of genetic improvement"

MORNING TEA BREAK (10:00 – 10:30 am, SA time; 10:30 – 11:00 am, EDST)

Thursday, November 4th ~ CONTINUED

Concurrent session 1, stream A: Genomics of reproduction (Chairs: Bec Hickson, Maddy Facy)

Presenter	Title
Laurie Piper	An evaluation of the effect of the Booroola gene, *Fec B*, on productivity in a Border Leicester x Merino prime lamb production system
Babatunde Olasege*	Genetic parameter estimates for female and male fertility traits using genomic data to improve fertility in Australia beef cattle
Marina Fortes	Phenobank: A platform to facilitate collaboration and genomic selection for female fertility in beef cattle
Laercio Porto-Neto	Multi-breed genomic prediction for male fertility in tropical beef cattle
Yutao Li	Ranking Brahman bulls for female reproductive performance in northern Australian commercial environments using DNA pooling

Concurrent session 1, stream B: Breeding objectives (Chairs: Sam Walkom, Timothy Bilton)

Presenter	Title
Michelle Axford	Impact of a multiple-test strategy on breeding index development for the Australian dairy industry
Luna Zhang	The application of a sub-index weighted percent emphasis method to Australian dairy selection indexes
Stephen Miller	A new tool to select Angus bulls to breed to dairy cows
Ireti Balogun*	Trait prioritization methods used in animals also work in plants
Gertje Petersen	Industry consultation as the basis of a breeding objective for the New Zealand beekeeping industry

BREAK (11:30 – 11:45 am, SA time; 12:00 – 12:15 pm, EDST)

Concurrent session 2, stream A: Improving reproduction (Chairs: Juca Porto Neto, Rhiannon Handcock)

Presenter	Title
Susanne Hermesch	Economic values for farrowing rate to improve seasonal fertility
Andrew Swan	Deriving breeding values for net reproduction rate from component traits in sheep
Katarzyna Stachowicz	New model for genetic evaluation of fertility in New Zealand dairy cattle
Matt Wolcott	Genetics of heifer age at puberty in Australian Angus cattle
Kirsty Moore	Genetic analysis of body condition and growth traits in beef females within and across ages and physiological states

Concurrent session 2, stream B: Optimising genetic gains (Chairs: Gertje Petersen, Laura Vargovic)

Presenter	Title
Brian Kinghorn	Management of inbreeding and co-ancestry to target short-term and long-term genetic gains
Torsten Pook	The Modular Breeding Program Simulator (MoBPS) allows efficient simulation of complex breeding programs
Beth Scott*	Does selecting for the A2 β-casein allele increase inbreeding?
Yuandan Zhang	Genetic diversity and trends of Australian Japanese Black cattle
Mark Henryon	Group records with genomic prediction convert accuracy into genetic gain more efficiently than pedigree prediction

LUNCH BREAK (12:45 – 1:45 pm, SA time; 1:15 – 2:15 pm, EDST)

Thursday, November 4th ~ CONTINUED

Concurrent session 3, stream A: Sustainability (Chairs: Suzanne Rowe, Mette Madsen)

Presenter	Title
Timothy Bilton	Impact of breeding for divergent methane yield on milk composition in breeding ewes
Melanie Hess	Across-country prediction of methane emissions using rumen microbial profiles
Caeli Richardson*	A method for implementing methane breeding values in Australian dairy cattle
Boris Sepulveda*	Genomic breeding values for residual feed intake in Australian maternal composite ewes
Sunduimijid Bolormaa	Next generation feed saved Australian breeding values evaluated in Holstein dairy cattle

Concurrent session 3, stream B: Genetic evaluation (Chairs: Andrew Swan, Franziska Weik)

Presenter	Title
Matt Reynolds	EBVs predict progeny performance differences
Christie Warburton*	Breed-adjusted genomic relationship matrices as a method to account for population stratification in multi-breed populations of tropically adapted beef heifers
Madeliene Facy*	Evaluation of dominance in tropically adapted composite beef cattle
Tom Granleese	Is sex determination in Merinos heritable?
Uddhav Paneru*	Investigation of methods for inclusion of fixed effects for ultrasound scan traits in large scale sheep genetic evaluation

BREAK (2:45 – 3:00 pm, SA time; 3:15 – 3:30 pm, EDST)

Concurrent session 4, stream A: Production traits (Chairs: Johan Greeff, Pamela Alexandre)

Presenter	Title
Panoraia Alexandri	Genetic association between ultrasound and carcass muscle dimension measures in sheep
Sue Mortimer	Variation between Merino sires in lamb carcass value
Nipa Sarker*	Improving carcase value by incorporating primal weights into pig breeding objectives
Ee Cheng Ooi*	Identification of genetic variants linking dairy fertility and milk production traits
Cheryl Quinton	Indexes supporting genomic tools for selecting commercial Angus heifer replacements and identifying steers for long-fed programmes in Australia

Concurrent session 4, stream B: Resource populations (Chairs: John McEwan, Beth Scott)

Presenter	Title
Ken Dodds	A genomic comparison of Australian, New Zealand and Norwegian dairy goat populations
Wayne Pitchford	Genomic analysis of purebred and crossbred Angus cattle demonstrates opportunity for multi-breed evaluation
Brad Walmsley	Initiating the Southern Multi-Breed resource population
Sam Walkom	Using MATESEL to aid sire allocation in genomic reference populations - Southern Multi-Breed an example
Kath Donoghue	Southern Multi-Breed resource population: Generation of cohorts one and two

AFTERNOON TEA BREAK (4:00 – 4:30 pm, SA time; 4:30 – 5:00 pm, EDST)

JOINT SESSION: General meeting (inc 2021 Helen Newton Turner Oration, Conference awards) **(Chair: Forbes Brien)**

CLOSE (5:30 pm, SA time; 6:00 pm, EDST)

Poster quick-fire talks & "ads" (Tuesday, Nov 2 @ 5 pm, SA time; 5:30 pm, EDST) (Chair: Cindy Bottema)

Presenter	Title
Denis Larkin	Genetic history and adaptation of Russian cattle breeds***
Panoraia Alexandri	Merits of developing a genetic evaluation for the Australian dairy sheep and goat industries
Kim Bunter	Phenotypic trade-offs between lambs and wool reflect weak antagonistic correlations between reproductive and wool traits
Jackie Chapman	Growth, body composition and body wrinkle are favourably correlated with reproductive performance in 2-8 year old Merino sheep
Bronwyn Clarke	Split paternity is high in twins born from syndicate-mated Merino ewes
Schalk Cloete	Genetic parameters for reproduction in intensively and extensively managed Dohne Merino flocks in South Africa
Natalie Connors	Addressing scur phenotyping challenges with the Southern Multi-Breed project
Christian Duff	Redefining residual feed intake to account for marbling fat in beef breeding programs
Kathryn Egerton-Warburton	The importance of early environmental effects on Merino fleece traits across two shearings***
Mohammad Ferdosi	Evaluation of haplotype diversity of Australian beef populations using medium-density SNP genotypes
Johan Greeff	Microbiome analysis of the skin of sheep that are resistant or susceptible to breech flystrike***
Sarita Guy	Characterising the quantity and quality of data used in Merino sheep genetic evaluation systems
Marnie Hodge	Characterisation of spermatozoal transcriptomes in sheep, and the influence of breed and semen quality***
Hyoun Ju Kim	A genome-wide association study (GWAS) for carcass traits in Hanwoo cattle using imputed whole genome sequence data
Leah Manning	Investigation of the pathogenesis of suspected inherited neurological diseases in Australian sheep***
Emily Mantilla Valdivieso	Effect of bovine reference genome choice in RNA-seq alignment and differential gene expression analysis in Brangus cattle
Rudi McEwin	Within breed selection is sufficient to improve terminal crossbred beef marbling: A review of reciprocal recurrent genomic selection
Nasir Moghaddar	The effect of *GDF9* on litter size in Australian sheep
Sue Mortimer	Ewe reproduction status and its impact on greasy fleece weight breeding values
Jo Newton	Reducing lameness and urinary nitrogen excretion through selection on next generation national dairy selection indices***
Beth Paganoni	Proximity sensors provide an accurate alternative for measuring maternal pedigree of lambs in Australian sheep flocks under commercial conditions
Gertje Petersen	Management tools for genetic diversity in an isolated population of the honeybee (*Apis mellifera*) in New Zealand
Judith Pitchford	The use of Hereford sires over mature Angus dams can add value to Angus cattle herds
Imtiaz Randhawa	Circular genomic permutations can limit the confounding effects of the reference population in the analyses of selection signatures
Imke Tammen	Curation of pig traits in the online Mendelian inheritance in animals (OMIA) database
Laura Vargovic	Genetic parameters for urinalysis traits recorded on gestating sows
Peter Wahinya	Proposed genetic improvement strategies for dairy cattle in Kenya
Cherokee Walters	How are you feeling, girls? – Behavioural traits as emergent properties of the community***
Luna Zhang	Methane emissions variation among New Zealand dairy farms and herds

***See also extended poster talks on website

Quick-fire talk: Genetics of horns and scurs in cattle (Tuesday, Concurrent session 3B)

Presenter	Paper titles for "Genetics of horns and scurs in cattle" presentation
Imtiaz Randhawa	Efficiency of optimized poll testing assay in Australian beef cattle
	Genome-wide analyses of scur genetics in cattle

WEB PRESENTATIONS

Illumina sponsored talks

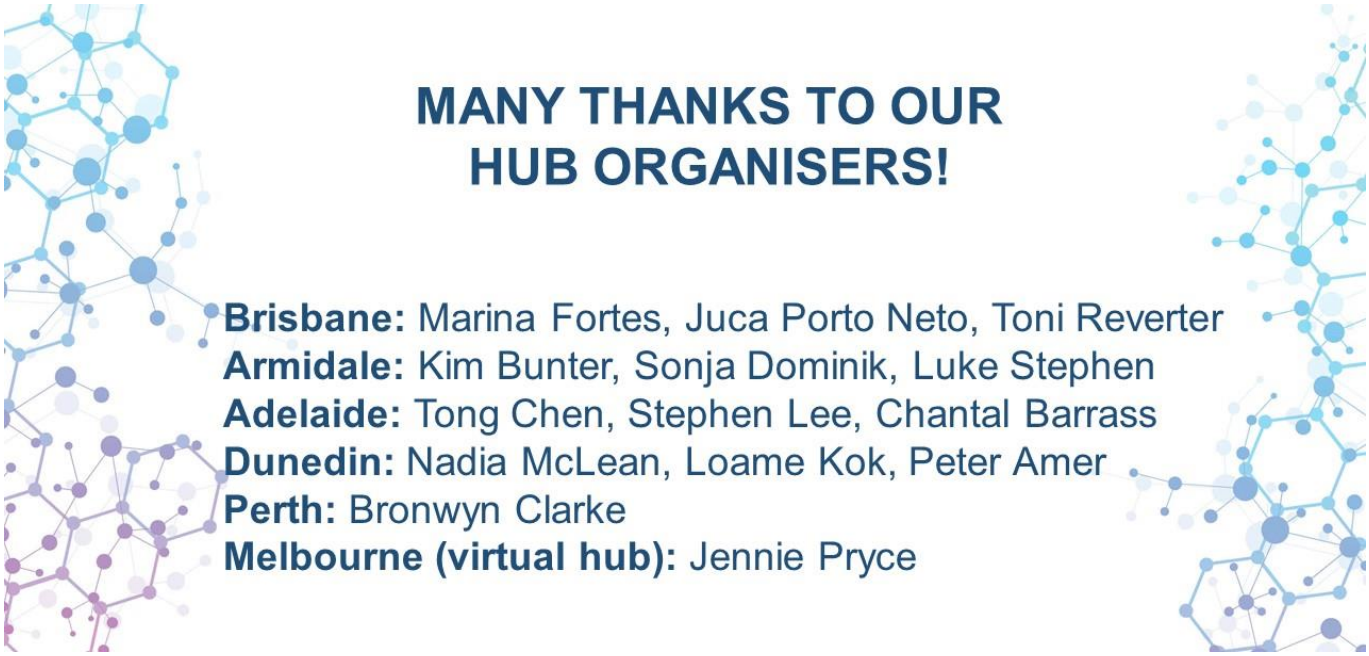
Presenter	Title
Denis Larkin	Interview
Denis Larkin	Genetic history and adaptation of Russian cattle breeds

FOR MORE PRESENTATIONS FROM ILLUMINA, SEE:

AAABG 2021 - Illumina.html

Extended poster talks

Presenter	Title
Kathryn Egerton-Warburton	The importance of early environmental effects on Merino fleece traits across two shearings
Johan Greeff	Microbiome analysis of the skin of sheep that are resistant or susceptible to breech flystrike
Marnie Hodge	Characterisation of spermatozoal transcriptomes in sheep, and the influence of breed and semen quality
Leah Manning	Investigation of the pathogenesis of suspected inherited neurological diseases in Australian sheep
Jo Newton	Reducing lameness and urinary nitrogen excretion through selection on next generation national dairy selection indices
Cherokee Walters	How are you feeling, girls? – Behavioural traits as emergent properties of the community



GOLD SPONSOR

Weatherbys Scientific commenced parentage testing thoroughbred horses using blood typing technology in 1985, and established operations at a facility on the same site as the Irish Equine Centre in Johnstown, County Kildare, Ireland. In 2000, the technology for parentage verification changed to microsatellite DNA markers. They started offering parentage testing services for other species – bovine, ovine, canine, companion and exotics. As the level of scientific expertise developed in the business, so too did the suite of DNA based services offered. In 2010, the laboratory commenced genotyping cattle using SNP technology. The team quickly developed a reputation for service and versatility and genotyped cattle using the Illumina 7k low density SNP chip in 2012.

Weatherbys Scientific's reputation for service has been strengthening over time. Close relationships were established with the Irish Cattle Breeders Federation (ICBF) in 2012 and 2013, and the Weatherbys Scientific team collaborated, through a research project, in the development of a customised SNP chip (IDB) for dairy and beef breeds, genotyping 25,000 cattle/week (the largest program of its type in the world).

Since its establishment in 1985, Weatherbys Scientific has achieved several significant technical milestones. It is an institutional member of the scientific body of the International Society of Animal Genetics (ISAG) and it is also accredited by the International Committee for Animal Recording (ICAR). Weatherbys Scientific is also approved with Propel certification by Illumina and has been selected as an Illumina Beta testing laboratory for new technologies.

Weatherbys Scientific began providing its leading DNA testing, genomics and bioinformatics services to livestock industries in Australia and the Asia-Pacific region in 2018, thanks to a partnership with the University of Adelaide and facilitated by the State Government.

WEATHERBYS
SCIENTIFIC AUSTRALIA

• 1770 2020 •
CELEBRATING 250 YEARS

SILVER SPONSOR

awi Australian Wool Innovation Limited

AWI is the Rural Research & Development Corporation entrusted with making strategically targeted investments into research, development, extension and marketing along the global supply chain for Australian wool to enhance the profitability, international competitiveness and sustainability of the Australian wool industry, increasing the long-term profitability of Australian woolgrowers.

AWI is proud to support the 24th AAABG 2021 Conference.

SILVER SPONSOR

illumina®

Next-generation sequencing (NGS) is enabling the discovery and understanding of the structure, function, and diversity of plant and animal genomes. Through innovation and collaboration with researchers around the globe, we are driving genomic breakthroughs that promote food security and conservation efforts, this inspires Illumina to push the boundaries of our imagination and drive innovation in agriculture.

NextSeq™ 1000 and NextSeq 2000 Sequencing Systems -

the scalable NGS platforms that will support your Agrigenomics needs of today and tomorrow

The NextSeq 1000/2000 system offers innovative design features, advanced chemistry, simplified bioinformatics, and an intuitive workflow that enable the widest range of Agrigenomics applications and flexibility of scale on a benchtop sequencing system.

- Innovative system design and advanced reagent chemistry that provides fast and accurate data with flexibility of scale
- Widest range of applications for Agrigenomics on a benchtop sequencing system which include whole genome sequencing, exome sequencing to single-cell RNA sequencing
- Enables Next-Generation sequencing-based Genotyping (NGG) specifically for genotype screening, genetic mapping, purity testing and genomic selection

Illumina • 1.800.809.4566 toll-free (US) • +1.858.202.4566 tel • techsupport@illumina.com • www.illumina.com

illumina

SPONSORS OF THE 24TH AAABG CONFERENCE, NOV 2021

Financial assistance from the following organisations is gratefully acknowledged:

GOLD SPONSOR

WEATHERBYS SCIENTIFIC AUSTRALIA

SILVER SPONSORS

awi Australian Wool Innovation Limited

illumina®

BRONZE SPONSORS

zoetis

intertek Total Quality. Assured.

NEOGEN®

SA CATTLE INDUSTRY FUND

SA SHEEP INDUSTRY FUND

Angus AUSTRALIA

mla MEAT & LIVESTOCK AUSTRALIA

SUPPORTING PARTNERS

THE UNIVERSITY of ADELAIDE

DAVIES LIVESTOCK RESEARCH CENTRE