



**Advances in Genome Biology and Technology**

**San Antonio, Texas**

**Saturday, March 25**

2:00 p.m. – 7:00 p.m. **AGBT Meeting Registration**

**Sunday, March 26**

Transfers 1 p.m. – 8 p.m. San Antonio International Airport (SAT)

7:00 a.m. – 7:00 p.m.

**AGBT Meeting Registration**  
Hill Country Foyer

**Monday, March 27**

**Scientific Program**

7:30 a.m. – 7:00 p.m.

**Meeting Registration / Hospitality Desk**  
Hill Country Foyer

7:30 a.m. – 9:00 a.m.

**Breakfast**  
Courtyard Deck

9:00 a.m. – 9:10 a.m.

**Opening Remarks**  
Independence Ballroom 1-5

**Plenary Session I:**

**Global Opportunities and Challenges for Agriculture, I** (Sarah Hearne, Principal Scientist, International Maize and Wheat Improvement Center (CIMMYT), Session Chair)

9:10 a.m. – 9:40 a.m.

Lindiwe Majele Sibanda, Chair of the CGIAR System Board, Extraordinary Professor, University of Pretoria, South Africa, Council Chair, National University of Science and Technology, Zimbabwe  
"The imperative to transform agriculture in a climate crisis: a global challenge that must be met through partnerships"

9:40 a.m. – 10:10 a.m.

Mark Cooper, University of Queensland  
"Revisiting the breeder's equation: Implications of our advancing understanding of trait genome-to-phenome relationships for predictive breeding"

10:10 a.m. – 10:30 a.m.

Rebecca Clarke (Abstract Selected) Agresearch  
"Investigation of genomic regions of interest in animal genomes using ONT adaptive sampling"

10:30 a.m. – 11:00 a.m.

**Coffee Break, Sponsors and Exhibits**  
Hill Country Ballroom & Sponsor Promenade

<b>Plenary Session II:</b>	<b>Global Opportunities and Challenges for Agriculture, II</b> (Nathan Lakey, Orion Genomics, Session Chair) Independence Ballroom 1-5
11:00 a.m. – 11:30 a.m.	Rob Martienssen, Cold Spring Harbor Laboratory "Germline RNA interference and the drive for maize domestication"
11:30 a.m. – 11:50 a.m.	Aayudh Das (Abstract Selected), Pennsylvania State University "The functional genomics of local adaptation in sorghum landraces"
11:50 a.m. – 12:10 p.m.	Nadia Kamal (Abstract Selected), Helmholtz Munich "A healthy crop like no other: the mosaic reference genome of hexaploid oat"
12:15 p.m. – 1:30 p.m.	<b>Lunch</b> Independence Lawn
<b>Plenary Session III:</b>	<b>Applying the Science, I</b> (Bruce Walsh, Professor of Ecology and Evolutionary Biology, University of Arizona, Chair) Independence Ballroom 1-5
1:30 p.m. – 2:00 p.m.	Alison Van Eenennaam, Cooperative Extension Specialist, Animal Genomics and Biotechnology, University of California, Davis "Outcomes from embryonic editing of livestock genomes"
2:00 p.m. – 2:30 p.m.	Leena Tripathi, International Institute of Tropical Agriculture (IITA), Kenya "The potential of genome editing for sustainable agriculture"
2:30 p.m. – 2:50 p.m.	Thomas Poorten (Abstract Selected), Pairwise "Elimination of pungency in allotetraploid Brassica juncea through gene editing of the multicopy myrosinase gene family"
2:50 p.m. – 3:20 p.m.	<b>Coffee Break and Exhibits</b> Hill Country Ballroom & Sponsor Promenade
3:25 p.m. – 3:45 p.m.	<b>Gold Sponsor Talk - Element Biosciences</b> Carlos Congrains "Genomics applied to species identification of fruit fly (Diptera: Tephritidae) pests" Independence Ballroom 1-5
3:45 p.m. – 4:00 p.m.	<b>Silver Sponsor Talk – Corteva</b> Gina Zastrow-Hayes & Heather Snowgren "Accelerating product development with genomics at Corteva Agriscience" Independence Ballroom 1-5
<b>Plenary Session IV:</b>	<b>Enabling Approaches and Informatics,</b> ((Len Pennacchio, DOE Joint Genome Institute, Lawrence Berkeley National Laboratory, Session Chair) Independence Ballroom 1-5
4:00 p.m. – 4:30 p.m.	Robin Buell, University of Georgia

"Use of complementary single cell omics to elucidate specialized metabolism in the medicinal plant, *Catharanthus roseus* (Madagascar periwinkle)"

4:30 p.m. – 5:00 p.m.

Farhad Hormozdiari, Google Health  
"Deep learning for genomics applications"

5:00 p.m. – 5:20 p.m.

John Lovell (Abstract Selected), HudsonAlpha Institute for Biotechnology  
"Integrating comparative and quantitative genetics to accelerate breeding efforts"

5:20 p.m. – 5:40 p.m.

AGBT's Next Gen Leadership Awards

6:00 p.m. – 9:00 p.m.

**Welcome Dinner**  
Aunt Mary's Lawn

**Tuesday, March 28**

**(Morning)**

6:30 a.m. – 7:30 a.m.

Rise and Shine with AGBT – Optional Activity  
Meet in Lobby

7:30 a.m. – 7:00 p.m.

**Hospitality/Information Desk**  
Hill Country Foyer

7:30 a.m. – 9:00 a.m.

**Breakfast**  
Courtyard Deck

**Plenary Session V:**

**Applying the Science, II** (Jack Dekkers, Distinguished Professor, section leader of animal breeding and genetics, Iowa State University, Session Chair)  
Independence Ballroom 1-5

9:00 a.m. – 9:30 a.m.

Anna Sonesson, Norwegian Food Research Institute (Nofima)  
"Genetics in aquaculture"

9:30 a.m. – 9:50 a.m.

Harry Lamb (Abstract Selected), Queensland Alliance for Agriculture and Food Innovation  
"On-farm genomics for rapid genotyping and pathogen monitoring in livestock"

9:50 a.m. – 10:10 a.m.

R. Kelly Dawe (Abstract Selected), University of Georgia  
"Synthetic maize centromeres transmit chromosomes across generations"

10:10 a.m. – 10:30 a.m.

Sergey Koren, (Abstract Selected) National Human Genome Research Institute (NHGRI)  
"Automated telomere-to-telomere crop genome assembly using only Oxford Nanopore sequencing"

10:30 a.m. – 11:00 a.m.

**Coffee Break and Exhibits**  
Hill Country Ballroom & Sponsor Promenade

<b>Plenary Session VI:</b>	<b>Informatics and Analytics Session VI:</b> (Daniella Lourenco, University of Georgia, Session Chair) Independence Ballroom 1-5
11:00 a.m. – 11:30 a.m.	Gregor Gorjanc, University of Edinburgh "Managing and improving populations in the era of mega-scale genomics"
11:30 a.m. – 12:00 p.m.	Gustavo de los Campos, Michigan State University "Sparse selection indices for high dimensional phenotypes, sparse genomic prediction, and both"
12:00 p.m. – 2:00 p.m.	<b>AGBT Lunch</b> Independence Lawn
12:45 p.m. – 2:30 p.m.	<b>Ag T2T Workshop Lunch</b> Sergey Koren, Wes Warren, Tim Smith, Ben Rosen, Zhigui Bao Independence Ballroom 1-5
<b>Plenary Session VII:</b>	<b>From FASTQ to Fork</b> (Alison Van Eenennaam, Cooperative Extension Specialist, Animal Genomics and Biotechnology, University of California, Davis, Session Chair) Independence Ballroom 1-5
3:00 p.m.– 3:20 p.m.	Hao Cheng (Abstract Selected), University of California, Davis "Homomorphic encryption to enable sharing of confidential data in agricultural genome to phenome"
3:20 p.m.– 3:32 p.m.	<b>Bronze I Talk - PacBio</b> Jake Brandenburg, PacBio "Ultra-High throughput multi-omics workflows for HiFi sequencing" Independence Ballroom 1-5
3:32 p.m. 3:44 p.m.	<b>Bronze II Talk – PerkinElmer</b> Eva M. Farre, Ph.D., Associate Professor of Plant Biology, Michigan State University "Variation of diurnal transcriptomes across potato genotypes" Independence Ballroom 1-5
3:45 p.m. 4:00 p.m.	<b>Poster Flash talks</b>
4:00 p.m. – 6:00 p.m.	<b>Poster Session &amp; Exhibit Hall, Wine Reception</b> Hill Country Ballroom
6:00 p.m. –7:30 p.m.	<b>Dinner</b> Independence Lawn
Beginning at 7:35 p.m.	<b>Click2Win Party</b> (Engage with sponsors and exhibitors to win great prizes, including free registration to next year's AGBT Ag)
<b>Wednesday, March 29</b>	<b>(Morning)</b>
6:30 a.m. – 7:30 a.m.	<b>Rise and Shine with AGBT – Optional Activity</b> Meet in Lobby

7:30 a.m. – 7:00 p.m.	<b>Hospitality/Information Desk</b> Hill Country Foyer
7:30 a.m. – 9:00 a.m.	<b>Breakfast</b> Courtyard Deck
<b>Plenary Session VIII:</b>	<b>Building From Basic Science</b> , (Appolinaire Djikeng, Director, Centre for Tropical Livestock Genetics and Health, The University of Edinburgh, Session Chair) Independence Ballroom 1-5
9:00 a.m. – 9:30 a.m.	Antonio Augusto Franco Garcia, University of Sao Paulo "Genetic mapping in autopolyploids"
9:30 a.m. – 10:00 a.m.	Jo Newton, Agriculture Victoria Research "Genomics: an era of innovation in dairy cattle breeding"
10:00 a.m. – 10:20 a.m.	Temitayo Olagunju, (Abstract Selected), University of Idaho "The first complete ungapped T2T Y-chromosome assemblies of cattle and sheep"
10:20 a.m. – 11:00 a.m.	<b>Coffee Break and Exhibits</b> Hill Country Ballroom & Sponsor Promenade
<b>Plenary Session IX:</b>	<b>Quantitative and Population Genetics: Tools and Applications</b> , (Charlie Johnson, Executive Director Genomics & Bioinformatics, Texas A&M AgriLife, Session Chair)
11:05 a.m. – 11:25 a.m.	Matias Bermann (Abstract Selected), University of Georgia "Single-step genome-wide association analysis with p-values for large genotyped populations"
11:25 a.m. – 11:45 a.m.	Klara Verbyla (Abstract Selected), Center for Aquaculture Technologies "Commercial implementation of genomic selection in Tasmanian Atlantic salmon: Scheme evolution, validation, and further developments"
11:45 a.m. – 12:05 p.m.	Keith Gardner (Abstract Selected), International Maize and Wheat Improvement Center (CIMMYT) "Estimating genetic gain in CGIAR breeding programs: challenges and opportunities"
12:10 p.m. – 1:30 p.m.	<b>Lunch</b> Independence Lawn
<b>Plenary Session X:</b>	<b>Harnessing Talent</b> (Daniela Lourenco, University of Georgia and Sarah Hearne Principal Scientist, International Maize and Wheat Improvement Center (CIMMYT), <b>Chairs</b> )
1:30 p.m. – 2:25 p.m.	Independence Ballroom 1-5
<b>Panel Discussion</b>	

<b>Interactive Session</b>	<b>Mentoring in Science</b> (Jo Newton, Agriculture Victoria Research, Facilitator)
	<b>Next Generation Scientists</b> (Daniela Lourenco, University of Georgia, Session Chair)
2:30 p.m. – 2:50 p.m.	Valentine Ntui (Abstract Selected), International Institute of Tropical Agriculture “Engineering banana for resistance to diseases through CRISPR activation”
2:50 p.m. – 3:20 p.m.	<b>Coffee Break</b> Windmill Plaza
<b>Plenary Session X continued:</b>	
3:20 p.m. – 3:40 p.m.	Chensong Chen (Abstract Selected), The University of Queensland “Machine learning for performance prediction in species with polyploid and hybrid genomes”
3:40 p.m. – 4:00 p.m.	Katharine Jenike (Abstract Selected), Johns Hopkins University “Alignment-free and interactive pan-genome visualization reveals lineage specific sequence conservation in Solanum”
4:00 p.m. – 4:20 p.m.	Daniel Tolhurst (Abstract Selected), The Roslin Institute, University of Edinburgh “Genomic selection for broad and specific adaptation using regressions on known and latent environmental covariates”
<b>Plenary Session XI:</b>	<b>From the Cutting Edge-New Ideas and Opportunities</b> , (Renee Lafitte, Deputy Director for rops R&D, Bill and Melinda Gates Foundation, Session Chair) Independence Ballroom 1-5
4:25 p.m. – 4:45 p.m.	Rupashree Dass (Abstract Selected), Computomics “Machine learning-based phenotype prediction help in detecting significantly associated genetic markers”
4:45 p.m. – 5:05 p.m.	John Bergeron (Abstract Selected), University of Nevada “Where’s Waldo? Describing resilience linked land use behaviors of sheep via GPS collars”
5:05 p.m. – 5:15 p.m.	Closing Comments, and Click2Win Announcements, (Sarah Hearne, Principal Scientist, International Maize, and Wheat Improvement Center (CIMMYT) and AGBT Ag Conference Chair)
7:00 p.m. – 10:00 p.m.	<b>Farewell Dinner Party</b> Henry’s Hollow
<b>Thursday, March 30</b>	Transfers 4 a.m. – 2 p.m. to San Antonio International Airport (SAT)