

SCHEDULE OF EVENTS

Talks will be held in the Grand Ballroom
Posters will be displayed in Midway West

Wednesday, March 5, 2025

8:30 AM – 6:00 PM	OPTIONAL PRE-CONFERENCE WORKSHOPS	
8:30 AM - 11:30 AM	Maize Crop Germplasm Committee	Missouri History Museum
1:00 PM – 6:00 PM	Corn Breeding Research (Day 1)	Midway 1 & 2

Thursday, March 6, 2025

9:00 AM – 6:00 PM	OPTIONAL PRE-CONFERENCE WORKSHOPS	
8:00 AM – 5:00 PM	Corn Breeding Research (Day 2)	Midway 3 & 4
9:00 AM - 4:00 PM	Development & Cell Biology Workshop	Midway 1 & 2
9:30 AM - 3:00 PM	Bayer Tour	Bus pick-up
12:00 PM - 2:00 PM	39N Lunch and Danforth Center Tour	1001 N. Warson Road St. Louis, MO 63132
2:00 PM - 5:00 PM	Computational Resources Workshop	Conductor Room
3:00 PM – 9:30 PM	REGISTRATION	Depot Registration Office
3:00 PM – 6:00 PM	POSTER HANGING	Midway West
5:00 PM – 5:45 PM	Travel awardees / mentors meet & greet	Jeffersonian / Knickerbocker
6:00 PM – 7:00 PM	DINNER	Midway West & Pegram

Thursday, March 6, 2025 (continued)

7:00 PM – 9:00 PM	SESSION 1 – WELCOME / KEYNOTE/ GENE REGULATION Chair: Sherry Flint-Garcia	
7:00 PM	WELCOME AND ANNOUNCEMENTS	Grand Ballroom
7:20 PM	Jonathan Wendel, Iowa State University <i>Genes, jeans, genomes, and the wonders of polyploidy in plants</i>	[KS1]
8:00 PM - 8:20 PM	POSTER LIGHTNING TALKS	
	Yue Liu, Iowa State University <i>Candidate Genes Underlying a Major QTL qshgd1 Causing Spontaneous Haploid Genome Doubling in Maize A427</i>	[L1, P135]
	Vladimir Torres-Rodriguez, University of Nebraska-Lincoln <i>Multi-species transcriptome-wide association studies identify additional genes controlling flowering</i>	[L2, P250]
	Andrea Sama, University of California, San Diego <i>Chemical Imaging Reveals Metabolic Responses to Salt-Stress in Maize Roots</i>	[L3, P84]
	Xiaosa Xu, University of California, Davis <i>A high-resolution, meristem stage-specific single-cell gene expression atlas resolving developmental dynamics in maize inflorescence architecture</i>	[L4, P75]
	Sebastian Mueller, Oregon State University <i>Predictive Modeling of Pollen Fitness Phenotypes from Genome Scale Data Identifies Expression Specificity As a Critically Informative Parameter</i>	[L5, P158]
	Huan Chen, Michigan State University <i>Archaeological Bolivian maize genomes suggest Inca cultural expansion augmented maize diversity in South America</i>	[L6, P133]
	Lukas Würstl, Technical University Munich <i>Natural alleles of the gene lhcb6 shape photosynthesis and key agronomic traits in maize (Zea mays L.) landraces</i>	[L7, P252]
	Hannah Pil, North Carolina State University <i>BZea: A diverse teosinte introgression population for improving modern maize sustainability</i>	[L8, P202]

Thursday, March 6, 2025 (continued)

8:20 PM	Maike Stam, University of Amsterdam <i>Vgt1 as enhancer of ZmRap2.7 impacts flowering time and gene regulatory networks involved in jasmonate signaling in maize</i>	[T1]
8:40 PM	Ankush Sangra, University of Georgia <i>Decoding a complex distal non-coding QTL at TEOSINTE BRANCHED 1</i>	[T2]
9:00 PM – 12:00 AM	INFORMAL POSTER VIEWING & HOSPITALITY	Midway West
9:00 PM – 10:30 PM	INFORMAL CORN HOLE PLAY	Regency Ballroom

Friday, March 7, 2025

7:00 AM – 8:00 AM **BREAKFAST** Midway West

7:30 AM – 12:30 PM **REGISTRATION** Depot Registration Office

8:15 AM – 10:15 AM **SESSION 2 – MODELING CORN**
Chair: Hank Bass

8:15 AM **ANNOUNCEMENTS** Grand Ballroom

8:30 AM **Jingjing Zhai, Cornell University** [T3]
Cross-species modeling of plant genomes at single nucleotide resolution using a pre-trained DNA language model

8:50 AM **Diana Ruggiero, Oregon State University** [T4]
Quantitative genetics of leaf vascular density in maize

9:10 AM **Erin Farmer, Cornell University** [T5]
Integrating proximal sensing modalities for enhanced prediction of agronomically important crop traits

9:30 AM **Lucas Batista & Joseph Gage, Kansas State University & USDA-ARS** [T6]
Crowdsourcing phenotype prediction: Results from the 2024 G2F prediction competition.

9:50 AM - 10:15 AM **POSTER LIGHTNING TALKS**

Jacob Kelly, University of Missouri [L9, P268]
Speed Breeding Fast-Flowering Mini-Maize

Thanduanlung Kamei, University of Delaware [L10, P110]
SBP mutants have an expanded competence zone for brace root initiation

Katy Guthrie, University of Minnesota [L11, P190]
Teaching Scientific Writing Alongside the Scientific Method in an Introductory Plant Biology Lab

Joseph DeTemple, Iowa State University [L12, P41]
Gene expression and circadian rhythm differences between temperate and tropical maize inbreds in response to photoperiod

Friday, March 7, 2025 (continued)

	Manisha Munasinghe, University of Minnesota <i>Structural Variation has a Limited Role in Influencing Genome-Wide Differential Gene Expression Patterns in Maize</i>	[L13, P16]
	Mohamed El-Walid, Cornell University <i>Genomic Assembly and Analysis of Fast-Flowering Mini-Maize</i>	[L14, P144]
	Christopher Benson, Ohio State University <i>Resolving Maize Domestication and Subpopulation Divergence Using Long Terminal Repeat Retrotransposons</i>	[L15, P13]
	Xuelian Du, University of Bonn <i>BonnMu – A resource for functional genomics in maize (Zea mays L.)</i>	[L16, P289]
10:15 AM - 10:45 AM	BREAK	Prefunction Space Grand Ballroom
10:45 AM – 12:15 PM	SESSION 3 – EDUCATION, COMMUNITY, AND OUTREACH Chair: Brandi Sigmon	
10:45 AM	ACKNOWLEDGE TRAVEL AWARDEES	Grand Ballroom
10:55 AM - 11:10 AM	POSTER LIGHTNING TALKS	
	Jason Lynn, Cold Spring Harbor Laboratory <i>AGO2 and AGO3 regulate RNAi fidelity by suppressing RNA-directed DNA methylation</i>	[L17, P285]
	Dafang Wang, Hofstra University <i>Mechanisms of Small RNA-Induced Epigenetic Silencing of Ac Transposons in Maize</i>	[L18, P299]
	Vinay Chaudhari, Donald Danforth Plant Science Center <i>Predicting end-of-season Sorghum biomass from seedling-stage traits</i>	[L19, P265]
	Olivia Haley, USDA-ARS, ORISE <i>Comparing the performance of protein folding models AlphaFold, ESMFold, and Boltz for classical genes in maize</i>	[L20, P129]
	Zong-Yan Liu, Cornell University <i>ReelGene2: A Large Language Model for Single Base Pair Precision Gene Annotation in Diverse Plant Genomes</i>	[L21, P160]

Friday, March 7, 2025 (continued)

11:10 AM	John Fowler, Updates from RCN, Resources	[T7]
12:15 PM - 1:15 PM	LUNCH Special table at lunch w/ Helen Anne Curry	Midway & Pegram
	Travel Awardee/Mentor Networking Lunch	Midway 1 & 2
	MGC BoD and MGAC Lunch	Midway 3 & 4
1:30 PM - 4:30 PM	POSTER SESSION 1	Midway West
1:30 PM - 3:00 PM	<i>Presenters should be at odd-numbered posters</i>	
3:00 PM - 4:30 PM	<i>Presenters should be at even-numbered posters</i>	

Beverages will be available from 2:30 to 4:00 PM in Midway West

4:40 PM – 6:00 PM	SESSION 4 – MAIZE UNDER STRESS Chair: Melissa Draves	
4:40 PM	Veronica Perez, Cornell University <i>Translational and proteomic analysis of cold-stressed maize reveals ribosomal protein families involved in cold response and tolerance</i>	[T8]
5:00 PM	Fausto Rodríguez-Zapata, North Carolina State University <i>Introgression of a Mexican highland chromosomal inversion into temperate maize accelerates flowering, promotes growth, and modulates a cell proliferation gene network.</i>	[T9]
5:20 PM	Marie-Laure Martin, INRAE <i>Integration of phenomic, proteomic, and genomic data into a multi-scale network unravels missing heritability for maize response to water deficit</i>	[T10]
5:40 PM	Maggie Woodhouse, USDA-ARS (Cancelled) <i>Transcriptional regulation of stress adaptation in maize: identification and functional annotation</i>	[T11]

Friday, March 7, 2025 (continued)

6:00 PM - 7:00 PM	DINNER Bayer Student/Postdoc Dinner	Midway & Pegram Midway 1 & 2
7:00 PM - 9:00 PM	SESSION 5 - AWARDS Chair: Andrea Eveland	
7:00 PM	Andrea Eveland <i>Introduction to Awards</i>	Grand Ballroom
7:10 PM	Natalia de Leon (Matt Hufford substituting) <i>Presenting: Cooperator and Leadership Awards</i>	
7:30 PM	Andrea Eveland <i>Presenting: M. Rhoades Early-Career, L. Stadler Mid-Career</i>	
7:50 PM	Andrea Eveland and Wojtek Pawlowski <i>Presenting: R. Emerson Lifetime Awards</i>	
8:10 PM	Marna Yandeau-Nelson <i>McClintock Prize Presentation Introduction</i>	
	Edward Buckler IV, USDA Agricultural Research Service (Cancelled) <i>Why do we do maize genetics?</i>	[M1]
8:20 PM	Helen Anne Curry, Georgia Tech <i>Input, Insurance, Objective: Reflections on diversity from the history of crop science</i>	[KS2]
9:00 PM - 12:00 AM	INFORMAL POSTER VIEWING & HOSPITALITY	Midway West
9:30 PM - 10:00 PM	OPERA BELL BAND	Pegram
9:00 PM - 10:30 PM	EARLY BRACKETS OF THE CORN HOLE TOURNAMENT	Regency Ballroom

Saturday, March 8, 2025

7:00 AM – 8:00 AM **BREAKFAST** Midway West & Pegram

8:00 AM – 12:00 PM **REGISTRATION** Depot Registration Office

8:15 AM – 10:00 AM **SESSION 6 – ROOTS & NUTRIENT UPTAKE / KEYNOTE**
Chair: Rubén Rellán Álvarez

8:15 AM **ANNOUNCEMENTS** Grand Ballroom

8:20 AM **Alexander Liu, Washington University in Saint Louis, Donald Danforth Plant Science Center** [T12]
A Rootless1 knockdown allele affects maize nodal root development, increasing rooting depth, nitrogen uptake efficiency, and grain production in the field

8:40 AM **Sylvia Morais de Sousa Tinoco, Embrapa** [T13]
Overexpression of PSTOL1-like genes increases maize root surface area and biomass under low and high phosphorus conditions

9:00 AM **Ivan Baxter, Donald Danforth Plant Science Center** [KS3]
You need a real maize geneticist

9:40 AM – 10:00 AM **POSTER LIGHTNING TALKS**

Forrest Li, University of California, Davis [L23, P267]
Sequencing a seed bank: Assessing the utility of environmental data from CIMMYT traditional varieties for climate-adaptive maize breeding

Aimee Schulz, University of Minnesota [L24, P20]
The molecular evolution of perenniality across the grasses

Matthew Wendt, Iowa State University [L25, P220]
Environmental and Genetic Factors Underlying Maize Cuticular Wax Accumulation Under Drought Stress

Wen-Yu Liu, North Carolina State University [L26, P72]
ZmCER9-Mediated Regulation of Autoactive NLR Proteins and Effector-Triggered Immunity via ERAD Pathway

Saturday, March 8, 2025 (continued)

	Huda Ansaf, University of Missouri-Columbia <i>Understanding the Role of TOR Signaling and Translational Machinery in Regulating Protein-bound Amino Acid Homeostasis in Maize Kernels</i>	[L27, P70]
	Gwonjin Lee, West Virginia State University <i>Sex-specific patterns of meiotic recombination are determined by maize lines from different climate zones.</i>	[L28, P15]
	Michelle Stitzer, Cornell University <i>Comparative grass genomics reveals explosive genome evolution in maize and its wild relatives</i>	[L29, P4]
	Mohammad Mahmood Hasan, University of Florida <i>mop1 reshapes recombination landscapes by altering DNA methylation and chromatin states at MITEs</i>	[L30, P303]
10:00 AM – 10:30 AM	BREAK	Prefunction Space Grand Ballroom

10:30 AM – 12:30 PM **SESSION 7 – KEYNOTE / CELL DIVISION & MERISTEMS** Chair: Sarah Jensen

10:30 AM	Sióbhán Brady, Howard Hughes Medical Institute, University of California Davis <i>Environmental integration with root cell type development</i>	[KS4]
11:10 AM	Stephanie Martinez, University of California, Riverside <i>Delayed divisions and cell elongation defects influence plant growth in katanin mutants</i>	[T14]
11:30 AM	Fang Xu, Shandong University <i>The EPF-ERECTA ligand-receptor pairs regulate maize shoot and inflorescence architecture in coordination with CLAVATA pathway in maize.</i>	[T15]
11:50 AM	Thu Tran, Cold Spring Harbor Laboratory <i>Catalytic and non-catalytic TREHALOSE-6-PHOSPHATE SYNTHASES (TPSs) interact with RAMOSA3 to control maize development</i>	[T16]

Saturday, March 8, 2025 (continued)

12:10 PM	Alejandro Aragon Raygoza, Iowa State University <i>Exploring the effects of ethylene-related transcription factors during maize shoot development</i>	[T17]
12:30 PM - 1:30 PM	LUNCH <i>Travel awardee lunch with keynote speakers</i> <i>Maize genetics mentoring & networking lunch</i> <i>MGMSC lunch</i>	Midway & Pegram Midway 1 & 2 Midway 3 Midway 4
1:30 PM - 4:30 PM	POSTER SESSION 2	Midway West
1:30 PM - 3:00 PM	<i>Presenters should be at even-numbered posters</i>	
3:00 PM - 4:30 PM	<i>Presenters should be at odd-numbered posters</i>	
Beverages will be available from 2:30 to 4:00 PM in Midway West		
4:30 PM - 6:00 PM	COMMUNITY SESSION Maize Genetics Cooperative <i>Wojtek Pawlowski, MGC BoD Chair</i>	Grand Ballroom
6:00 PM - 7:00 PM	DINNER <i>Corteva Student/Postdoc Dinner</i>	Midway West & Pegram Midway 1 & 2
7:00 PM – 8:20 PM	SESSION 8 – REPRODUCTION / KEYNOTE Chair: Cinta Romay	
7:00 PM	ANNOUNCEMENTS	Grand Ballroom
7:05 PM	Xixi Zheng, University of Regensburg <i>Understanding the Molecular Mechanism of Parthenogenesis in Cereals</i>	[T18]
7:25 PM	Rachel Egger, Syngenta <i>Heat treatment and UBA2 fusions enhance LbCas12a genome editing activity during haploid induction</i>	[T19]
7:45 PM	Elli Cryan, University of California Davis <i>Molecular evolution of the Ga reproductive barriers in maize and related species</i>	[T20]

Saturday, March 8, 2025 (continued)

8:05 PM	Doreen Ware, USDA Agricultural Research Service (Cancelled) <i>Plant genomes: Understanding their past and managing their future</i>	[KS5]
8:15 PM - 12:00 AM	INFORMAL POSTER VIEWING & HOSPITALITY	Midway West
10:00 PM - 12:00 AM	GAME NIGHT / CORN HOLE TOURNAMENT FINALS	Midway West

Sunday, March 9, 2025

7:00 AM - 8:20 AM **BREAKFAST** Midway & Pegram

8:25 AM – 10:20 AM **SESSION 9 – EPIGENETICS**
Chair: Katie Murphy

8:25 AM **ANNOUNCEMENTS**

8:30 AM **Qi Li, University of Tuebingen, Germany** [T21]
Long-distance retrotransposons direct variable gene imprinting in maize

8:50 AM **Xi Cheng, University of Florida** [T22]
Deciphering epigenetic and genetic alterations in a DNA methylation mutant through successive generations of self-fertilization in maize

9:10 AM **Hafiza Sara Akram, Florida State University** [T23]
Replication timing uncovers a novel two-compartment arrangement of maize interphase euchromatin

9:30 AM **Akwasi Yeboah, University of Florida** [T24]
Determination of Genetic and Epigenetic Regulations of Meiotic Recombination during Domestication in Maize

9:50 AM - 10:20 AM **BREAK**

Sunday, March 9, 2025 (continued)

10:20 AM – 12:00 PM **SESSION 10 – BUILDING A STRONGER MAIZE PLANT**
Chair: Frank Hochholdinger

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| 10:20 AM | Bharath Kunduru, Clemson University
<i>Deciphering genetic architecture of stalk lodging resistance using high-density phenotype map in maize</i> | [T25] |
| 10:40 AM | Laura Tibbs-Cortes, USDA-ARS (Talk Recorded)
<i>Plasticity and fitness trade-offs in switchgrass revealed by open science and citizen science data</i> | [T26] |
| 11:00 AM | Qin Yang, Northwest A&F University
<i>Inactivation of a lysine-histidine transporter-1 gene confers southern leaf blight resistance in maize</i> | [T27] |
| 11:20 AM | Marion Pitz, University of Bonn
<i>Regulation of heterosis-associated gene expression complementation in maize hybrids</i> | [T28] |
| 11:40 AM | CLOSING REMARKS | |
| 12:00 PM | ADJOURNMENT | |

1:00 PM – 3:00 PM **OPTIONAL POST-CONFERENCE WORKSHOP**

1:00 PM - 3:00 PM **Missouri Botanical Garden**
Missouri Botanical Garden
4344 Shaw Blvd
St. Louis, MO 63110