

44th Annual Maize Genetics Conference

March 14-17 2002

Thursday, March 14

6:00-7:00 PM DINNER

7:00-7:15 PM **Announcements**

Name: **Sarah Hake**

EVENING SESSION

7:15-9:15 pm

Chair: **Pat Schnable**

- 7:15-7:45 PM **Jerry Kermicle, University of Wisconsin, Madison, WI**
Oliver E. Nelson (1920-2001): Maize Geneticist Extraordinaire
- 7:45-8:30 PM **Jeff Dangl, University of North Carolina, Chapel Hill, NC**
Molecular Control of Host-Pathogen Interactions-Parasitizing the Weed
- 8:30-9:15 PM **Robert Schmidt, University of California, San Diego, CA**
Genes Controlling Floret and Inflorescence Development in Maize
- 9:15 PM Informal Poster Viewing Hang Posters Thursday Night

BEER & SNACKS AVAILABLE IN POSTER AREA UNTIL 2:00 AM

Friday, March 15

7:00-8:30 AM BREAKFAST

Session I

GENOMICS I

8:30-10:10 am

Chair: **Torbert Rocheford**

- 8:30-8:45 **Karen Cone, University of Missouri, Columbia, MO**
iMap: The Integrated Genetic and Physical Map of Maize
8:45-8:50 Discussion
- 8:50-9:05 **Susan Latshaw, University of Florida, Gainesville, FL**
Optimization of MuTAIL-PCR to Amplify Mutator-Flanking Sequences in Maize
9:05-9:10 Discussion
- 9:10-9:25 **Thomas Brutnell, Cornell University, Ithaca, NY**
Regional Mutagenesis Utilizing Activator (Ac) in Maize
9:25-9:30 Discussion
- 9:30-9:45 **Doreen Ware, Cold Spring Laboratory, Cold Spring Harbor, NY**
Gramene: A Resource for Comparative Grass Genomics
9:45-9:50 Discussion
- 9:50-10:05 **Mingsheng Chen, Clemson University, Clemson, SC**
An Integrated Physical and Genetic Map of the Rice Genome
10:05-10:10 Discussion

10:10-10:40 am - BREAK WITH BEVERAGES

Friday, March 15 Cont'd

Session 2 **GENOMICS II** **10:40-12:20 am** Chair: **Gunter Feix**

- 10:40-10:55 **Cedric Feschotte, University of Georgia, Athens, GA**
Two New Families of Transposases Are Responsible for the Origin and Amplification of MITEs
10:55-11:00 Discussion
- 11:00-11:15 **David Braun, University of California, Berkeley, CA**
Utility and Distribution of Conserved Noncoding Sequences (CNS) in the Grasses
11:15-11:20 Discussion
- 11:20-11:35 **Patrick Schnable, Iowa State University, Ames, IA**
High-Throughput Mapping Tools for Maize Genomics
11:35-11:40 Discussion
- 11:40-11:55 **Anusha Dias, Ohio State University, Columbus, OH**
Duplication and Functional Divergence of R2R3 Myb Regulatory Genes in the Grasses
11:55-12:00 Discussion
- 12:00-12:15 **Viviane Jaenicke, Max-Planck Institute, Leipzig, Germany**
Investigation of Key Genes in Maize Domestication from Archaeological Samples
12:15-12:20 Discussion

12:20-1:30 PM - LUNCH

1:30-3:00 pm - POSTER SESSION - Contributors will be at EVEN-NUMBERED Posters

2:30-3:00 pm - BEVERAGE BREAK

Session 3 **MAIZE TRANSGENICS WORKSHOP** **3:00-4:40 pm** Chair: **Sue Wessler**

- GMO 3:00-3:15 **Kan Wang, Iowa State University, Ames, IA**
Agrobacterium-Mediated Maize Transformation Using Standard Binary Vectors
3:15-3:20 Discussion
- 3:20-3:35 **David Somers, University of Minnesota, St. Paul, MN**
Transgene Locus Formation in Plants Genetically Engineered Using Microprojectile Bombardment
3:35-3:40 Discussion
- 3:40-3:55 **Curt Hannah, University of Florida, Gainesville, FL**
Super-Modified Shrunken2 Increases Wheat and Rice Yield 38% and 28%
3:55-4:00 Discussion
- 4:00-4:15 **Richard Clough, ProdiGene, College Station, TX**
Recombinant Protein Expression in Seed Is Increased in High Oil and Opaque 2 Germplasms
4:15-4:20 Discussion
- 4:20-4:35 **Stephen Moose, University of Illinois, Urbana-Champaign, IL**
Gain-of-Function Analyses of Glossy15 and its Role in Regulating Phase Change in the Leaf Epidermis
4:35-4:40 Discussion

6:00-7:30 PM - DINNER

Friday, March 15 Cont'd

Session 4 **EVENING SESSION** **7:30-9:00 pm** Chair: **David Jackson**

7:30-8:15 **Ingo Potrykus, Swiss Federal Institute of Technology, Zurich, Switzerland**
Towards Nutritional Optimization of a Major Staple, Vitamins, Iron, and Essential Amino Acids

8:15-9:00 **Virginia Walbot, Stanford University, Stanford, CA**
Mu Element Transposition: Regulation and Applications in Gene Tagging

BEER & SNACKS AVAILABLE IN POSTER AREA 9:00 pm - 2:00 am

Saturday, March 16

7:00-8:30 AM BREAKFAST

Session 5 **REPRODUCTION** **8:30-9:50 am** Chair: **Lynn Senior**

8:30-8:45 **Elene Valdivia, Penn State University, University Park, PA**
Functions of the Maize Group-1 Pollen Allergen, Zea m1

8:45-8:50 Discussion

8:50-9:05 **Wojtek Pawlowski, University of California, Berkeley, CA**
Genetics of Homologous Chromosome Pairing in Maize Meiosis

9:05-9:10 Discussion

9:10-9:25 **Joerg Bantin, University of Hamburg, Hamburg, Germany**
Maize and Tripsacum as Model Systems to Compare Gene Expression Pattern After Fertilization and Pathenogenesis

9:25-9:30 Discussion

9:30-9:45 **Kirsten Bomblies, University of Wisconsin, Madison, WI**
The Maize FLORICAULA/LEAFY Homologs (ZFL1 and ZFL2) Control Floral Identity and Determinancy

9:45-9:50 Discussion

9:50-10:20 am - BREAK WITH BEVERAGES

Session 6 **GENE REGULATION & FUNCTION** **10:20-12:20 am** Chair: **Robert Meeley**

10:20-10:35 **Cliff Weil, Purdue University, Lafayette, IN**
Ac Transposition and the Mre11/Rad50 Complex

10:35-10:40 Discussion

10:40-10:55 **Charles Carey, University of Arizona, Tuscon, AZ**
Cloning of Pale Aleurone Color 1, a WD40 Repeat Protein Regulating the Anthocyanin Pathway

10:55-11:00 Discussion

11:00-11:15 **Harley Smith, University of California, Berkeley, CA**
Selective Interaction of Plant TALE Homeodomain Proteins Mediates High DNA-Binding Affinity

11:15-11:20 Discussion

Saturday, March 16 - Cont'd

Session 6 cont'd

- 11:20-11:35 **Rita-Ann Monde, University of Oregon, Eugene, OR**
Tha8: A New Factor Involved in the Delta-pH Thylakoid Protein Targeting Pathway
11:35-11:40 Discussion
- 11:40-11:55 **Mary Frank, University of California, San Diego, CA**
Three Brick Genes Function in a Common Actin-Dependent Pathway
11:55-12:00 Discussion
- 12:00-12:15 **Jay Hollick, University of California, Berkeley, CA**
Trans-Silencing Interactions at the Purple Plant Locus
12:15-12:20 Discussion

12:20-1:30 pm - LUNCH

1:30-3:00 pm - POSTER SESSION - Contributors will be at ODD-NUMBERED Posters

2:30-3:00 pm - BEVERAGE BREAK

Session 7 GRASS WORKSHOP 3:00-4:55 pm Chair: Sarah Hake

- 3:00-3:15 **Andrew Paterson, University of Georgia, Athens, GA**
Sorghum and Its Value to the Maize Community
3:15-3:20 Discussion
- 3:20-3:35 **Daryl Pring, USDA - University of Florida, Gainesville, FL**
Development of AFLP Markers and Mapping of Fertility Restoration Genes in Sorghum
3:35-3:40 Discussion
- 3:40-3:55 **Surinder Chopra, Penn State University, University Park, PA**
Analysis of Transposon Induced Mutations in the Regulator of 3-Deoxyflavonoid Pathway and Its Implication in Understanding the Phytoalexins Synthesis in Sorghum
3:55-4:00 Discussion
- 4:00-4:10 **Wusirka Ramakrishna, Purdue University, West Lafayette, IN**
Sequence and Physical Map Analyses of the Maize and Sorghum Rp1 Complex Uncovers Numerous Sites and Unexpected Mechanisms of Local Rearrangement
4:10-4:15 Discussion
- 4:15-4:25 **Rentao Song, Waksman Institute, Rutgers, Piscataway, NJ**
Mosaic Organization of Orthologous Sequences in Grass Genomes
4:25-4:30 Discussion
- 4:30-4:40 **Michael Freeling, University of California, Berkeley, CA**
Fractionation of Genes and Cis-Acting Elements (Maize/Rice CNSs) in Chromosomal Regions Following Ancient Duplications in Grass Lineages
4:40-4:45 Discussion
- 4:45-4:55 **Nancy Cullen, Monsanto Corporation**

5:30-7:00 pm - DINNER

7:15-11:00 pm - DISNEY EPCOT ADVENTURE (7:15 pm Departure - 11:00 pm Return)

BEER & SNACKS AVAILABLE IN POSTER AREA 11:00 pm - 2:00 am

Sunday, March 17

7:30-9:00 BREAKFAST

Session 8 KERNELS & METABOLISM 9:00-10:40 am Chair: Karen Cone

9:00-9:15 Alfons Gierl, Lehrstuhl für Genetik Tech Universität München, Garching, Germany
Inspection of Maize Metabolism by NMR

9:15-9:20 Discussion

9:20-9:35 Marina Dermastia, University of Florida, Gainesville, FL
Cytometrical Evidence that the Loss of Seed Weight in the Miniature1 Seed Mutant of Maize Is Associated with Reduced Mitotic Activity in the Developing Endosperm

9:35-9:40 Discussion

9:40-9:55 Hajime Sakai, Dupont, Newark, DE
Giant Embryo: A Genomic Approach to Dissect Genetic Circuits Controlling Embryo/Endosperm Size

9:55-10:00 Discussion

10:00-10:15 Stein Erik Lid, Agricultural University of Norway, As, Norway
The Maize Defective Kernel 1 (dek1) Gene Encodes a Membrane Protein of the Calpain Gene Super Family

10:15-10:20 Discussion

10:20-10:35 Bryan Gibbon, University of Arizona, Tucson, AZ
Proteomic Analysis of Modified Opaque 2 Maize Endosperm

10:35-10:40 Discussion

10:40 FINAL ANNOUNCEMENTS

11:00 ADJOURN