
PROGRAM & ABSTRACTS



17th International Conference
on
ARABIDOPSIS RESEARCH

June 28 – July 2, 2006

University of Wisconsin
Madison, WI, USA

Throughout this **PROGRAM**, the numbers next to abstracts refer to abstract numbers, not the page number in the **ABSTRACT** part of this book.

SESSION OVERVIEW

WEDNESDAY, JUNE 28, 2006

7:00 - 8:00 pm

8:00 - 9:30 pm

KEYNOTE ADDRESS

SESSION A: Bioinformatics

THURSDAY, JUNE 29, 2006

9:00 - 10:30 am

11:00 - 12:30 pm

2:00 - 3:30 pm

4:00 - 5:30 pm

7:00 - 12:00 am

7:30 - 9:00 pm

SESSION B: Systems Biology

SESSION C: Environment 1: Abiotic

SESSION D: Environment 2: Biotic

SESSION E: Genetic and Epigenetic Mechanisms

POSTER SESSION I (Even Numbered Abstracts)

WORKSHOPS Ia & b (Concurrent)

FRIDAY, JUNE 30, 2006

9:00 - 10:30 am

11:00 - 12:30 pm

2:00 - 3:30 pm

4:00 - 5:30 pm

7:00 - 12:00 am

7:30 - 9:00 pm

SESSION F: Natural Variation and Comparative Genomics

SESSION G: Development 1 - Flower, Fertilization, Fruit, and Seed

SESSION H: Development 2 - Shoot and Root

SESSION I: Metabolism

POSTER SESSION II (Odd Numbered Abstracts)

WORKSHOPS IIa & b (Concurrent)

SATURDAY, JULY 1, 2006

9:00 - 10:30 am

11:00 - 12:30 pm

2:00 - 3:30 pm

4:00 - 5:30 pm

7:00 - 8:00 pm

8:00 - 12:00 am

8:15 - 9:30 pm

SESSION J: Signaling

SESSION K: Modeling/Other Systems

SESSION L: Cell Biology

SESSION M: Energy

SPECIAL LECTURE

POSTER SESSION III (All Abstracts)

WORKSHOPS IIIa & b (Concurrent)

SUNDAY, JULY 2, 2006

9:00 - 10:30 am

11:00 - 12:30 pm

SESSION N: Arabidopsis 2010

SESSION O: NAASC Choices

Meeting Organizers:

Members of the North American Arabidopsis Steering Committee (NAASC) are serving as the program committee for the 2006 meeting.

Brenda Winkel, Virginia Tech

Greg Copenhagen, University of North Carolina, Chapel Hill

Philip Benfey, Duke University

Rob McClung, Dartmouth College

Judith Bender, Johns Hopkins University

Xing-Wang Deng, Yale University

Xue Mei Chen, University of California, Riverside

Joe Kieber, University of North Carolina, Chapel Hill

Joanna Friesner, coordinator for NAASC/MASC

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NOTES

PROGRAM OVERVIEW

Poster schedule

All posters will remain up for the entire meeting and can be set up Thursday morning beginning at 7 AM. There will be three poster sessions, one Thursday evening, one Friday evening, and one Saturday evening. To determine when you should stand next to your poster, find your abstract in this book and note the new abstract number. The new number is your poster number, NOT the number it was assigned when you originally submitted. Posters are sequenced by topic and presenter. See the poster list on page vi to determine which group contains your topic.

All posters with EVEN numbers will be presented on Thursday evening.

All posters with ODD numbers will be presented on Friday evening.

Saturday evening's poster session will be a "free-for-all" – plenty of time to look at all posters, or stand by your own if you need more time for discussion,

Wednesday, June 28, 2006

12:00 noon – 7:00pm	Registration	Main Lounge
5:30 - 7:00 pm	Opening Reception	Tripp Commons
7:00 - 8:00 pm	KEYNOTE ADDRESS <i>Mark Estelle (Indiana University)</i> Genetic analysis of auxin signaling: a long road to a short pathway	Union Theater
8:00 - 9:30 pm	SESSION A: Bioinformatics	Union Theater
8:00 pm	Chris Town, TIGR, Session Chair Introductory remarks	
8:05 pm	Kimmen Sjolander, University of California, Berkeley, Second Improving protein functional classification through structural phylogenomics	
8:30 pm	Ann Loraine, University of Alabama, Birmingham Transcriptional coordination of the metabolic network in <i>Arabidopsis thaliana</i>	
8:45 pm	Bjorn Usadel, Max Planck Institute, Germany New MapMan dimensions	
9:00 pm	Eva Huala, Carnegie Institution, Stanford University The <i>Arabidopsis</i> Information Resource (TAIR)	
9:15 pm	Heiko Schoof, Max Planck Institute, Germany Web services for <i>Arabidopsis</i> data integration	

Thursday, June 29, 2006

7:00 am – all day	Poster set-up Main Lounge (2nd floor) Posters of Orals (Except for Session Chairs) (1 - 74) Arabidopsis 2010 (75 - 94) Bioinformatics (95 - 106) Tripp Commons (2nd floor) Cell Biology (107 - 135) Development 1: Flower, Fertilization, Fruit, and Seed (136 - 178) Development 2: Shoot and Root (179 - 231) Energy (232) Environment 1: Abiotic (233 - 261) Great Hall (4th floor) Environment 2: Biotic (262 - 300) Genetic and Epigenetic Mechanisms (301 - 320) Metabolism (321 - 347) Modeling/Other Systems (348 - 349) Natural Variation and Comparative Genomics (350 - 376) Signaling (377 - 431) Systems Biology (432 - 440)	See locations below
7:00 am - 8:00 pm	Registration Continues	Annex Room
7:45 - 9:00 am	Breakfast	Inn Wisconsin/Profile
8:50 - 9:00 am	Welcome and Announcements	Union Theater
9:00 - 10:30 am	SESSION B: <i>Systems Biology</i>	Union Theater
9:00 am	Philip Benfey, Duke University, Session Chair A systems biology approach to understanding root development	
9:25 am	Wilhelm Gruissem, Swiss Federal Institute of Technology, Switzerland, Second Systems biology and reverse engineering of metabolic pathways using sparse GGM	
9:50 am	Kieron Edwards, University of Edinburgh, United Kingdom Functional analysis of regulatory flexibility in the circadian clock: transcriptomic and reporter gene assays of circadian phase	
10:03 am	Freeman Chow, University of Toronto, Canada LATCA: a library of biologically active small molecules for plant chemical genomics	
10:16 am	Sean Coughlan, Agilent Technologies Design and testing of an <i>Arabidopsis</i> small RNA microarray	
10:30 - 11:00 am	Refreshment Break	Union Theater Lobby

11:00 - 12:30 pm	SESSION C: <i>Environment 1: Abiotic</i>	Union Theater
11:00 am	Pill-Soon Song, Kumho Life & Environmental Science Laboratory, Korea, Session Chair Phenotypic functions of bathochromic mutant phytochromes A conferring shade tolerance to <i>Arabidopsis thaliana</i>	
11:25 am	Javier Paz-Ares, Centro Nacional de Biotecnologia, Spain, Second Regulation of phosphate starvation responses in <i>Arabidopsis</i> : transcriptional control and beyond	
11:50 am	Diane Bassham, Iowa State University Autophagy is required plants for plants to survive under abiotic stresses	
12:03 pm	Anthony Hall, University of Liverpool, United Kingdom The molecular basis of temperature compensation in the <i>Arabidopsis</i> circadian clock	
12:16 pm	Elsebeth Kolmos, Max Planck Institute, Germany ELF4 point mutations affect phase and period properties of the <i>Arabidopsis</i> circadian clock	
12:30 - 2:00 pm	Lunch	Inn Wisconsin/Profile
2:00 - 3:30 pm	SESSION D: <i>Environment 2: Biotic</i>	Union Theater
2:00 pm	Xinnian Dong, Duke University, Session Chair Signaling Network of Plant Immunity	
2:25 pm	Edward Farmer, University of Lausanne, Switzerland, Second Controls over oxylipin biogenesis	
2:50 pm	Kristoffer Palma, University of British Columbia, Canada The MOS4-associated complex is an important regulatory node in NPR1-independent innate immunity signaling	
3:03 pm	Hironori Kaminaka, University of North Carolina bZIP10-LSD1 antagonism modulates basal defense and cell death in <i>Arabidopsis</i> following infection	
3:16 pm	A. Corina Vlot, Boyce Thompson Institute for Plant Research Identification of <i>Arabidopsis</i> ortholog(s) of a regulator of systemic acquired resistance in tobacco	
3:30 - 4:00 pm	Refreshment Break	Union Theater Lobby
4:00 - 5:30 pm	SESSION E: <i>Genetic and Epigenetic Mechanisms</i>	Union Theater
4:00 pm	Judith Bender, Johns Hopkins University, Session Chair Histone methyltransferases that control DNA methylation in <i>Arabidopsis</i>	
4:25 pm	Pam Green, University of Delaware, Second Elucidating the small RNA component of the <i>Arabidopsis</i> transcriptome	

4:50 pm	Todd Sangster, Whitehead Institute Chaperone Hsp90 as a molecular mechanism of genetic and environmental canalization	
5:10 pm	Hidetoshi Saze, National Institute of Genetics, Mishima, Japan BONSAI: loss-of-function epigenetic mutation induced in the DDM1 (decrease in DNA methylation) background	
5:30 - 7:00 pm	Dinner	Inn Wisconsin/Profile
7:30 - 9:00 pm	Workshops I (Concurrent)	
	(a) Submitting data to long-term repositories: information for 2010 grant recipients and all researchers <i>Eva Huala</i>	Union Theater
	(b) TAIR introductory workshop: including a general overview of the website and available resources and tools <i>Peifan Chang and Katica Ilic</i>	Reception Room
7:00 - 12:00 am	POSTER SESSION I Please present (stand by) your poster if your abstract number in this book is EVEN Main Lounge (2nd floor) Posters of Orals (Except for Session Chairs) (1 - 74) Arabidopsis 2010 (75 - 94) Bioinformatics (95 - 106) Tripp Commons (2nd floor) Cell Biology (107 - 135) Development 1: Flower, Fertilization, Fruit, and Seed (136 - 178) Development 2: Shoot and Root (179 - 231) Energy (232) Environment 1: Abiotic (233 - 261) Great Hall (4th floor) Environment 2: Biotic (262 - 300) Genetic and Epigenetic Mechanisms (301 - 320) Metabolism (321 - 347) Modeling/Other Systems (348 - 349) Natural Variation and Comparative Genomics (350 - 376) Signaling (377 - 431) Systems Biology (432 - 440)	See locations below

Friday, June 30, 2006

7:45 - 9:00 am	Breakfast	Inn Wisconsin/Profile
9:00 - 10:30 am	SESSION F: <i>Natural Variation and Comparative Genomics</i>	Union Theater
9:00 am	Johanna Schmitt, Brown University, Session Chair Measuring selection on natural variation	
9:25 am	Justin Borevitz, University of Chicago, Second Evolutionary mechanisms of light response adaptation	

9:50 am	Sureshkumar Balasubramanian, Max Planck Institute, Germany Common alleles of PHYTOCHROME C mediate natural variation in flowering and growth responses of <i>Arabidopsis thaliana</i>	
10:03 am	Christopher Toomajian, University of Southern California Recent selection in the <i>Arabidopsis</i> genome: FRIGIDA and beyond	
10:16 am	M. Eric Schranz, Duke University Independent ancient polyploidy events in the sister families <i>Brassicaceae</i> and <i>Cleomaceae</i>	
10:30 - 11:00 am	Refreshment Break	Union Theater Lobby
11:00 - 12:30 pm	SESSION G: <i>Development 1: Flower, Fertilization, Fruit, and Seed</i>	Union Theater
11:00 am	Caroline Dean, John Innes Centre, United Kingdom, Session Chair Flowering and vernalization	
11:25 am	Jean-Philippe Vielle-Calzada, Langebio- Cinvestav, Mexico, Second Seven cells in the ovule: functional analysis of the female gametophyte transcriptome	
11:50 am	Wim Soppe, Max Planck Institute, Germany The molecular identification of <i>RDO2</i> and <i>RDO4</i> reveals new aspects of the seed dormancy mechanism	
12:03 pm	Yunde Zhao, University of California, San Diego Temporally and spatially regulated auxin biosynthesis controls the formation of floral organs and vascular tissues	
12:16 pm	Cristina Castellejo, CSIC-IRTA, Spain A <i>RAV</i> gene negatively regulates <i>FT</i> expression and extremely delays flowering	
12:30 - 2:00 pm	Lunch	Inn Wisconsin/Profile
2:00 - 3:30 pm	SESSION H: <i>Development 2: Shoot and Root</i>	Union Theater
2:00 pm	Dominique Bergmann, Stanford University, Session Chair Promoting stomatal development	
2:25 pm	Ben Scheres, Utrecht University, The Netherlands, Second Root patterning and cell polarity in <i>Arabidopsis</i> roots	
2:50 pm	Steffen Vanneste, Ghent University, Belgium FOUR LIPS/MYB124 and MYB88 enhance PIN transcription	
3:03 pm	Kimberly Gallagher, Duke University Examination of the mechanisms of SHORT-ROOT cell-to-cell signaling	
3:16 pm	John Chandler, University of Cologne, Germany DORNROESCHEN (DRN) and DRN-LIKE redundantly control cotyledon initiation and meristem development in <i>Arabidopsis thaliana</i>	
3:30 - 4:00 pm	Refreshment Break	Union Theater Lobby

4:00 - 5:30 pm	SESSION I: <i>Metabolism</i>	Union Theater
4:00 pm	Harvey Millar, University of Western Australia, Australia, Session Chair Where are all the proteins? Subcellular compartmentation of the <i>Arabidopsis</i> proteome as a key foundation for post-genomic analysis of metabolism	
4:25 pm	Wolf Frommer, Carnegie Institution, Stanford University, Second The visible plant cell- biosensors and bioreporters: <i>in vivo</i> physiological imaging using fluorescent indicator proteins	
4:50 pm	Nicole Linka, Michigan State University Peroxisomal ATP import is involved in fatty acid oxidation	
5:03 pm	Keiko Yonekura-Sakakibara, RIKEN, Japan Functional identification of <i>Arabidopsis</i> flavonoid 7-O-rhamnosyltransferase gene by co-expression analysis	
5:16 pm	Yan Lu, Michigan State University Functional and informatic analyses of the <i>Arabidopsis</i> plastid	
5:30 - 7:00 pm	Dinner	Inn Wisconsin/Profile
7:30 – 9:00 pm	Workshops II (Concurrent)	
	(a) Web services and demonstrations <i>Chris Town and Heiko Schoof</i>	Union Theater
	(b) Public engagement: broadening the impact of your research <i>Erin Dolan</i>	Reception Room
7:00 - 12:00 am	POSTER SESSION II Please present (stand by) your poster if your abstract number in this book is ODD Main Lounge (2nd floor) Posters of Orals (Except for Session Chairs) (1 - 74) Arabidopsis 2010 (75 - 94) Bioinformatics (95 - 106) Tripp Commons (2nd floor) Cell Biology (107 - 135) Development 1: Flower, Fertilization, Fruit, and Seed (136 - 178) Development 2: Shoot and Root (179 - 231) Energy (232) Environment 1: Abiotic (233 - 261) Great Hall (4th floor) Environment 2: Biotic (262 - 300) Genetic and Epigenetic Mechanisms (301 - 320) Metabolism (321 - 347) Modeling/Other Systems (348 - 349) Natural Variation and Comparative Genomics (350 - 376) Signaling (377 - 431) Systems Biology (432 - 440)	See locations below

Saturday, July 1, 2006

7:45 - 9:00 am	Breakfast	Inn Wisconsin/Profile
9:00 - 10:30 am	SESSION J: <i>Signaling</i>	Union Theater
9:00 am	Ute Hoecker, University of Duesseldorf, Germany, Session Chair Suppression of light signaling in darkness	
9:25 am	Masatoshi Nakajima, University of Tokyo, Japan, Second Cytosolic gibberellin-receptor GID1	
9:50 am	Geraint Parry, Indiana University, Bloomington Investigating the expression of the TIR1/AFB family of auxin receptors: could miRNAs hold the key?	
10:03 am	Aaron Rashotte, University of North Carolina, Chapel Hill Cytokinin-regulated AP2/ERF transcription factors are novel components of the cytokinin signaling pathway that function in concert with type-B ARR	
10:16 am	Hicham Zegzouti, University of California, Los Angeles Structural and functional insights into the regulation of the <i>Arabidopsis</i> AGC VIIa kinase family	
10:30 - 11:00 am	Refreshment Break	Union Theater Lobby
11:00 - 12:30 pm	SESSION K: <i>Modeling/Other Systems</i>	Union Theater
11:00 am	Sue Wessler, University of Georgia, Session Chair Dramatic amplification of a rice transposable element since domestication	
11:25 am	Michael Beer, Johns Hopkins University, Second Systematic identification of cis-regulatory logic from microarray data and whole-genome sequence	
11:50 am	Li Li, USDA/Cornell University <i>Or</i> encodes a cystein-rich zinc finger domain containing protein that regulates high-levels of β -carotene accumulation in cauliflower	
12:10 pm	Rodrigo Gutierrez, New York University VirtualPlant: a software platform to support systems biology research in the post-genomic era	
12:30 - 2:00 pm	Lunch	Inn Wisconsin/Profile
2:00 - 3:30 pm	SESSION L: <i>Cell Biology</i>	Union Theater
2:00 pm	Jiri Friml, University of Tuebingen, Germany, Session Chair Establishment and maintenance of cell polarity	
2:25 pm	Chris Staiger, Purdue University, Second Actin-binding proteins as sensors of cellular stress	

2:50 pm	Catherine Konopka, University of Wisconsin, Madison <i>In vivo</i> dynamics implicate a role for dynamin-related protein 1C in polar cell growth	
3:03 pm	Simon Alfred, University of Toronto, Canada Polarazine: a new plant cytokinesis inhibitor	
3:16 pm	Nico Dissmeyer, Max Planck Institute, Germany Functional analysis of the <i>Arabidopsis</i> cdc2 homolog CDKA:1	
3:30 - 4:00 pm	Refreshment Break	Union Theater Lobby
4:00 - 5:30 pm	SESSION M: <i>Energy</i>	Union Theater
4:00 pm	Steven Rothstein, University of Guelph, Canada, Session Chair Energy and Agriculture: The potential to use genetics to improve the energy efficiency of crop production	
4:25 pm	Keiko Torii, University of Washington, Second Linking biomass and stomatal development	
4:50 pm	Liming Xiong, Danforth Plant Science Center Genetic analysis of drought tolerance in <i>Arabidopsis</i>	
5:10 pm	Akiko Maruyama-Nakashita, RIKEN SLIM1/EIL3 transcription factor required for plant growth on low sulfur environment	
5:30 - 7:00 pm	Dinner	Inn Wisconsin/Profile
7:00 - 8:00 pm	Special Lecture <i>Richard Young (M.I.T)</i> Regular circuitry in embryonic stem cells	Union Theater
8:15 – 9:30 pm	Workshops III (Concurrent)	
	(a) Systems biology approaches to analysis of metabolic and regulatory networks of <i>Arabidopsis</i> <i>Eve Wurtele</i>	Union Theater
	(b) Mechanotransduction in <i>Arabidopsis</i> <i>Elizabeth Haswell</i>	Reception Room
8:00 - 12:00 am	POSTER SESSION III Free-for-All: A time for further discussions	See schedule for locations
9:35 – 10:20 pm	Fireworks Celebration	Union Terrace

Sunday, July 2, 2005

7:45 - 9:00 am	Breakfast	Inn Wisconsin/Profile
9:00 - 10:30 am	SESSION N: <i>Arabidopsis 2010</i>	Union Theater
9:00 am	Machi Dilworth, NSF, Session Chair Introductory Remarks	
9:05 am	Jeff Harper, University of Nevada, Reno <i>Arabidopsis 2010</i> : Integrating the Unknown-come with abiotic stress response networks in <i>Arabidopsis</i>	
9:25 am	Heven Sze, University of Maryland <i>Arabidopsis 2010</i> : Functional genomics of cation transporters	
9:45 am	Mary Wildermuth, University of California, Berkeley Temporal and spatial expression profiling of the <i>Arabidopsis</i> response to powdery mildew	
10:05 am	Kristin Kasschau, Oregon State University Genome-wide analysis of <i>Arabidopsis</i> small RNAs	
10:30 - 11:00 am	Refreshment Break	Union Theater Lobby
11:00 - 12:30 pm	SESSION O: <i>NAASC Choices</i>	Union Theater
	Rob McClung, Dartmouth College, Session Chair	
11:00 am	Matt Geisler, University of Western Ontario, Canada The predicted <i>Arabidopsis</i> interactome	
11:22 am	Bert van der Zaal, Leiden University, The Netherlands Polydactyl zinc finger transcription factors can be used as efficient tools to discover <i>Arabidopsis</i> mutants with enhanced homologous recombination	
11:44 am	Rebecca Schwab, Cold Spring Harbor Laboratory Engineering specific and efficient gene silencing with artificial microRNAs	
12:06 pm	Martin Bayer, Cold Spring Harbor Laboratory The receptor-like cytoplasmic kinase gene SHORT SUSPENSOR regulates extra-embryonic development in <i>Arabidopsis</i>	
12:30 - 2:00 pm	Lunch	Inn Wisconsin/Profile

NOTES
