



Plant Genetics 2005

Mechanisms of Genetic Variation

American Society of Plant Biologists

October 12 - 16, 2005 * Snowbird, Utah USA

Chair: Dorothy Shippen, *Texas A & M University*

Vice-Chair: Rich Jorgenson, *University of Arizona*



The organizers gratefully acknowledge funding from the **National Science Foundation** and the **United States Department of Agriculture** which made possible the subsidies to students, postdoctoral fellows and speakers.

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Plant Genetics 2005: Mechanisms of Genetic Variation

FINAL PROGRAM

Wednesday, October 12, 2005

4:00-10:00 pm Registration, Lobby outside of Ballrooms II & III, Level B

5:30-7:00 pm Dinner, Golden Cliff Room, Level B

7:00-8:00 pm **Keynote Lecture, Ballrooms II & III, Level B**
Evan Eichler (University of Washington, Seattle)
Organization and Evolution of the Human Genome

8:00-8:30 pm Break

8:30-10:00 pm **Session 1 - Evolutionary Genetics and Genomics I, Ballrooms II & III, Level B**

8:30-9:05 pm Michael Purugganan (North Carolina State University)
The evolutionary genomics of rice

9:05-9:40 pm Johanna Schmitt (Brown University)
Adaptive evolution of seasonal timing in Arabidopsis thaliana

9:40-10:00 pm Brandon Gaut (University of California, Irvine)
The Effects of Artificial on the Maize Genome

Thursday, October 13, 2005

8:00-9:00 am Breakfast, Golden Cliff Room, Level B

9:00-11:55 am **Session 2 – Evolutionary Genetics and Genomics II, Ballrooms II & III, Level B**

9:00-9:35 am Tom Mitchell-Olds (Duke University)
Comparative evolutionary and ecological genomics of Arabidopsis relatives

9:35-10:10 am Michael Zanis (University of California, San Diego)
From Genome to gene duplications in plants: Understanding the evolution and dynamics of gene duplications in grasses

10:10-10:40 am Break

10:40-11:15 am Elena Kramer (Harvard University)
The lower eudicot Aquilegia as a new model for the study of floral evolution

11:15-11:35 am Sarah Mathews (Harvard University)
Evidence for a link between molecular adaptation and the origin of the function of phytochrome A in angiosperms

11:35-11:55 am Christian Hardtke (University of Lausanne)
Isolation of quantitative modulators of root growth by exploiting natural genetic variation in Arabidopsis

12:00-1:30 pm Lunch, Golden Cliff Room, Level B

Aerial Tram will be open at Snowbird Center 1:30 - 3:30 pm

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Thursday, October 13, 2005, cont'd

- 4:00-6:00 pm Odd number Posters (Photographs & video prohibited)
- 6:00-7:00 pm Dinner, Golden Cliff Room, Level B
- 7:00-9:55 pm Session 3 – Epigenetics and Epigenomics, Ballrooms II & III, Level B**
- 7:00-7:35 pm Steve Henikoff (Fred Hutchinson Cancer Center, Seattle)
Genome-wide target preferences of DNA methylation pathways in Arabidopsis
- 7:35-8:10 pm Marjori Matzke (Austrian Academy of Sciences)
RNA-directed DNA methylation
- 8:10-8:40 pm Break
- 8:40-9:15 pm James Birchler (University of Missouri, Columbia)
Karyotypic Studies of the Maize Genome
- 9:15-9:35 pm Ramin Yadegari (University of Arizona)
Isolation of quantitative modulators of root growth by exploiting natural genetic variation in Arabidopsis
- 9:35-9:55 pm Ales Pecinka (IPK, Germany)
Transgenic tandem repeats may alter the chromatin organization in Arabidopsis thaliana interphase nuclei

Friday, October 14, 2005

- 8:00-9:00 am Breakfast, Golden Cliff Room, Level B
- 9:00 am-12:10 pm Session 4 - Origins and Nature of Genetic Variation, Ballrooms II & III, Level B**
- 9:00-9:35 am Robert Pruitt (Purdue University)
Non-mendelian inheritance of DNA sequence information in Arabidopsis
- 9:35-10:10 am Christine Queitsch (Harvard University)
Chaperone Hsp90 as a molecular mechanism of genetic and environmental canalization
- 10:10-10:40 am Break
- 10:40-11:15 am Luca Comai (University of Washington, Seattle)
Polyploidy, dosage variation and chromatin regulation
- 11:15-11:50 am Barbara Hohn (Friedrich Miescher Institute, Basel)
Genetic Flux in Plants – From Molecular Biology to Environmental Influences
- 11:50 am-12:10 pm Chris Cullis (Case Western Reserve)
Rapid adaptive variation in flax
- 12:10-1:30 pm Lunch, Golden Cliff Room, Level B
- Aerial Tram will be open at Snowbird Center 1:30 - 3:30 pm**
- 4:00-6:00 pm Even number Posters (Photographs & video prohibited)
- 6:00-7:00 pm Dinner, Golden Cliff Room, Level B

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Friday, October 14, 2005, cont'd

7:00-9:55 pm **Session 5 - Chromosome Dynamics, Ballrooms II & III, Level B**

- 7:00-7:35 pm Jiming Jiang (University of Wisconsin, Madison)
Rice centromeres show characteristics typical to euchromatin
- 7:35-8:10 pm Wojtek Pawlowski (Cornell University)
Genes regulating homologous chromosome pairing and initiation of meiosis in maize and Arabidopsis
- 8:10-8:40 pm Break
- 8:40-9:15 pm Karel Riha (Austrian Academy of Sciences)
Arabidopsis EVER SHORTER TELOMERE 1 homologue is required for exit from meiosis
- 9:15-9:35 pm Andreas Houben (IPK, Germany)
Uniparental chromosome elimination at mitosis and interphase in wide crosses involves micronucleus formation, progressive heterochromatinization and DNA fragmentation
- 9:35-9:55 pm Cliff Weil (Purdue University)
A plant homolog for Nbs1, the signaling component of the MRN DNA repair/recombination complex

Saturday, October 15, 2005

- 8:00-9:00 am Breakfast, Golden Cliff Room, Level B
- 9:00-11:55 am **Session 6 - Genetic Mechanisms in Plant Biology I, Ballrooms II & III, Level B**
- 9:00-9:35 am Kathy Barton (Stanford University)
Micro-RNA mediated regulation of Arabidopsis HD-ZIP genes Micro-RNA mediated regulation of Arabidopsis HD-ZIP genes
- 9:35-10:10 am Jose Gutierrez-Marcos (Oxford University)
Genetic dissection of endosperm development- what have we learnt from interdisciplinary studies?
- 10:10-10:40 am Break
- 10:40-11:15 am Neelima Sinha (University of California, Davis)
Shoots and leaves, an evo-devo perspective
- 11:15-11:35 am Michael Scanlon (University of Georgia)
Comparative functional analyses of the stem cell organizers WOX3 and WOX4 during plant shoot development
- 11:35-11:55 am Cathie Martin (John Innes Centre)
Morphological specialisations associated with different pollination syndromes and the evolution of function in a gene family encoding transcription factors involved in cell shaping
- 12:00-1:30 pm Lunch, Golden Cliff Room, Level B
- 1:30-3:00 pm All Posters (Remove posters by 3:00 pm) (Photographs & video prohibited)

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Saturday, October 15, 2005, cont'd

3:00-6:00 pm	<u>Session 7 - Genetic Mechanisms in Plant Biology II, Ballrooms II & III, Level B</u>
3:00-3:35 pm	Maria Harrison (Cornell University) <i>Reverse genetics in <i>Medicago truncatula</i>: using RNAi to dissect the molecular basis of the arbuscular mycorrhizal symbiosis</i>
3:35-4:15 pm	Paul Schultz-Lefert (Max Planck Institute for Plant Breeding Research) <i>Pathogen portals and plant immune responses to fungal invasion</i>
4:15-4:45 pm	Break
4:45-5:20 pm	Richard Michelmore (University of California at Davis)
5:20-5:40 pm	Mary Lucero (USDA, ARS) <i>Whose Genes are We Sequencing? Evidence for the Presence of Multiple Genomes in Native and Regenerated Higher Plants</i>
5:40-6:00 pm	Bernard Carroll (University of Queensland) <i>Long-Distance RNAi Signaling in <i>Arabidopsis</i></i>
6:00-7:00 pm	Cocktails
7:00-11:30 pm	Farewell Dinner & Dance, Golden Cliff Room, Level B

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GENERAL MEETING INFORMATION

All events for Plant Genetics will be held in the Cliff Lodge. Sessions are in Ballrooms II & III, meals will be in the Golden Cliff Room, and posters will be in the Superior Lobby and Magpie rooms. An information/registration desk will be available in the lobby outside of Ballrooms II & III throughout the meeting.

Poster Information

Photographing & video taping of posters is **PROHIBITED** without specific authorization of the poster author who must be present.

Poster Set-up	Wednesday, Oct. 12	Starting at 4:00 pm
Odd Number Poster Session	Thursday, Oct. 13	4:00 - 6:00 pm
Even Number Poster Session	Friday, Oct. 14	4:00 - 6:00 pm
All Poster Session	Saturday, Oct. 15	1:30 – 3:00 pm

Please attend your poster during the assigned times above using your FINAL poster number. See the registration/information desk if you're unsure of your poster number. Posters will be judged for an award provided by the **ASPB Membership Committee**. Please remove posters by Saturday, Oct. 15, 3:00 pm. Posters not removed by 3:00 pm will be discarded.

Dining

All meals are included in your conference registration and we encourage all participants to mix and mingle at these events.

Departing Snowbird

Checkout time is 11:00 am. Be sure to arrange your transportation if you haven't done so already for your return through Canyon Transportation at 800-255-1841. You may store your bags with the bell desk if you need to check out prior to your departure.

Altitude Awareness

Snowbird's breathtaking views are attributed to its location of ~8,000 feet above sea level and altitude sickness is common. **Drink extra amounts of water during the meeting to avoid altitude illness.** Decrease salt intake and caffeine and increase carbs, limit physical activity the first day. Altitude illness can cause headaches, nausea, and tiredness. Symptoms go away in a day or two.

Night Life

After the evening sessions on Thursday and Friday the Aerie club bar has agreed to extend their normal business hours to 1:00 am, providing that a sufficient clientele is present. Club access is open to all Plant Genetics attendees.

Child Care

Snowbird's child center is not open in October, however, the concierge can help you arrange child care if needed at 1-800-232-9542. Plant Genetics is not providing child care reimbursements.

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Aerial Tram

Get an up close look at the mountains surrounding Snowbird on the aerial tram. It will be open especially for our attendees on October 13th & 14th 1:30 - 3:30 pm with the final tram departing at 3:30 pm. Tickets and entrance is available at Snowbird Center.

Exercise

Hiking is magnificent at Snowbird in October, and the Snowbird staff will be happy to point you toward the most enjoyable trails.

ENJOY THE MEETING!

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Cliff Lodge Conference Center

THE CLIFF LODGE (Level B)



CLIFF LODGE (Level C)

Conference Center Terrace w/Tent
(June - September; not to scale)

