

## Scientific Programme

### Monday • 31 March 2014

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|----------------------|---|
| 13.00 - 15.00        | <b>Registration &amp; Poster Mounting</b>   |
| 15.00 - 15.05        | <b>Opening Remarks</b>  |
| <b>15.05 - 16.15</b> | <b>Session 1: Mating, Reproductive Barriers and Speciation</b>  |
|                      | <i>Chair: Ute Krämer</i>  |
| 15.05 - 15.40        | ▶ <b>Speciation in <i>Boechera</i></b> (p. 15)<br>Tom Mitchell-Olds   |
| 15.40 - 16.15        | ▶ <b>Birth, death and re-birth: a story with twists and turns for the evolution of self-incompatibility in the Brassicaceae</b> (p. 16)<br>Xavier Vekemans                                    |
| 16.15 - 16.45        | <b>Coffee Break</b>   |
| <b>16.45 - 18.00</b> | <b>Session 1: Mating, Reproductive Barriers and Speciation</b>  |
|                      | <i>Chair: Ute Krämer</i>  |
| 16.45 - 17.20        | ▶ <b>Meiotic Adaptation to Whole Genome Duplication in <i>Arabidopsis arenosa</i></b> (p. 17)<br>Kirsten Bomblies   |
| 17.20 - 17.40        | ▶ <b>Transcriptome and the evolution of self-compatibility of <i>Arabidopsis kamchatica</i>, the allopolyploid derived from <i>A. lyrata</i> and <i>A. halleri</i></b> (p. 18)<br>Ken Shimizu |
| 17.40 - 18.00        | ▶ <b>The footprint of mating system shift in the genus <i>Capsella</i></b> (p. 19)<br>Daniel Koenig   |
| 18.00                | <b>Dinner</b>   |
| 19.45 - 21.15        | <b>Poster Session I</b> (p. 54)   |

### Tuesday • 1 April 2014

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| <b>9.00 - 10.45</b> | <b>Session 2: Genomic and Epigenetic Variation</b>   |
|                     | <i>Chair: Renate Schmidt</i>   |
| 9.00 - 9.35         | ▶ <b>Polyploid origins and the efficacy of selection in <i>Capsella bursa-pastoris</i></b> (p. 20)<br>Stephen Wright |

- 9.35 - 10.10 ▶ **Is maize genome size flexibility an important contributor of its evolutionary history?** (p.21)  
Maud Tenailon
- 10.10 - 10.25 ▶ **Recent progress in whole-genome assemblies of Brassicaceae species** (p.22)  
Dino Jolic
- 10.25 - 10.45 ▶ **Comparative analysis of transposable element silencing in *Arabidopsis lyrata* and *Arabidopsis thaliana*** (p.23)  
Ales Pecinka

10.45 - 11.15 *Coffee Break*

11.15 - 13.00 **Session 2: Genomic and Epigenetic Variation**

*Chair: Renate Schmidt*

- 11.15 - 11.50 ▶ **The function and evolution of DNA methylation in plants** (p.24)  
Brandon Gaut
- 11.50 - 12.25 ▶ **Origin and consequences of genetic and epigenetic variation in *Arabidopsis thaliana* and its relatives** (p.25)  
Detlef Weigel
- 12.25 - 13.00 ▶ **Natural epigenetic quantitative trait loci in *Arabidopsis*** (p.26)  
Frank Johannes

13.00 - 14.30 *Lunch*

14.30 - 15.40 **Session 3: Adaptation to Abiotic Factors and Life History Traits**

*Chair: Klaus Harter*

- 14.30 - 15.05 ▶ **Phenological cuing: How it influences selection, genetic effects, and phenotypic expression across the life cycle** (p.27)  
Kathleen Donohue
- 15.05 - 15.40 ▶ **Life history evolution within the Brassicaceae** (p.28)  
Maria Albani

15.40 - 16.00 *Coffee Break*

16.00 - 17.15 **Poster Session II** (p.54)

17.15 - 18.10 **Session 3: Adaptation to Abiotic Factors and Life History Traits**

*Chair: Klaus Harter*

- 17.15 - 17.50 ▶ **Effect of mating systems on adaptation and persistence in changing environments: theoretical predictions** (p.29)  
Ophélie Ronce
- 17.50 - 18.10 ▶ **Muller's ratchet leads to genome-wide accumulation of deleterious mutations in apomictic lineages of *Boechera spatifolia*** (p.30)  
John Lovell

18.10 *Dinner*

**19.45 - 21.15** Session 3: Adaptation to Abiotic Factors and Life History Traits

*Chair: Klaus Harter*

- 19.45 - 20.20 ▶ **Can plants adapt to climate change?** (p. 31)  
Katja Tielbörger
- 20.20 - 20.55 ▶ **Comparative transcriptome atlases reveal altered gene expression modules between closely related dicotyledon C3 and C4 plant species** (p. 32)  
Andreas Weber
- 20.55 - 21.15 ▶ **The *Rorippa* genus of the Brassicaceae family provides an interesting model system for research on flooding and low-oxygen stress** (p. 33)  
Angelika Mustroph

**Wednesday • 2 April 2014**
**9.00 - 10.45** Session 3: Adaptation to Abiotic Factors and Life History Traits

*Chair: Andrew Hudson*

- 9.00 - 9.35 ▶ **Genetic Analysis of Parallel Local Adaptation to Serpentine and Mine Soils in *Mimulus*** (p. 34)  
John Willis
- 9.35 - 9.55 ▶ **Metal hyperaccumulation and hypertolerance in *Arabidopsis halleri*** (p. 35)  
Ricardo Stein

**Session 4: Functions of Alleles Underlying Plant Adaptations**

*Chair: Andrew Hudson*

- 9.55 - 10.30 ▶ **The evolution of petal cellular differentiation and pollinator attraction** (p. 36)  
Beverly Glover
- 10.30 - 10.45 ▶ **Molecular-genetic analysis of trade offs between vegetative growth and flowering in natural populations of perennial *Arabis alpina*** (p. 37)  
Stefan Wötzel
- 10.45 - 11.15 **Coffee Break**

**11.15 - 12.45** Session 4: Functions of Alleles Underlying Plant Adaptations

*Chair: Andrew Hudson*

- 11.15 - 11.50 ▶ **Analysis of cis-regulatory divergence in the *Arabidopsis* genus** (p. 38)  
Juliette de Meaux

- 11.50 - 12.05 ▶ **Comparative expression analysis of  $B_{\text{sister}}$  genes in Brassicaceae *sensu lato* reveals that the evolution of  $B_{\text{sister}}$  gene regulation moves along the fast lane** (p. 39)  
Amey Bhide
- 12.05 - 12.25 ▶ ***GORDITA*-like developmental control genes evolve in Brassicaceae under relaxed purifying selection in a twilight zone of non-, sub- and neo-functionalization** (p. 40)  
Andrea Hoffmeier
- 12.25 - 12.45 ▶ **Evolution of the selfing syndrome in the genus *Capsella*** (p. 41)  
Adrien Sicard
- 12.45 - 13.00 **Conference Photo**
- 13.00 - 14.15 **Lunch**

**14.15 - 16.05 Session 5: Population Genetics and Evolutionary Ecology**

*Chair: Juliette de Meaux*

- 14.15 - 14.50 ▶ **DNA methylation variation in *Arabidopsis* has a genetic basis and appears to be involved in local adaptation** (p. 42)  
Magnus Nordborg
- 14.50 - 15.25 ▶ **Evolutionary genomics of wild tomatoes** (p. 43)  
Laura Rose
- 15.25 - 15.45 ▶ **Invasive success and the evolution of enhanced weaponry** (p. 44)  
Michal Gruntman
- 15.45 - 16.05 ▶ **Differentiation and adaptation in the range expanding invasive plant *Rorippa austriaca*** (p. 45)  
Mirka Macel
- 16.05 - 16.30 **Coffee Break**

**16.30 - 18.20 Session 5: Population Genetics and Evolutionary Ecology**

*Chair: Juliette de Meaux*

- 16.30 - 17.05 ▶ **Natural selection on photoperiodic reactions in *Arabidopsis lyrata*** (p. 46)  
Outi Savolainen
- 17.05 - 17.40 ▶ **Edaphic adaptation in *Arabidopsis*: A genomic perspective on the calcicole-calcifuge problem** (p. 47)  
Alex Widmer
- 17.40 - 18.00 ▶ **Population and Adaptive History of *Arabidopsis* in the Cape Verde Islands** (p. 48)  
Angela Hancock

- 18.00 - 18.20 ▶ **Arabidopsis phylogenomics – the first deep insight** (p.49)  
Polina Novikova
- 19.30 **Conference Dinner**

## Thursday • 3 April 2014

### 9.30 - 10.40 Session 6: Between-Organism Interactions

*Chair: Eric Schranz*

- 9.30 - 10.05 ▶ **Ecology of insect-plant interactions: from genes to community**  
(p.50)  
Marcel Dicke
- 10.05 - 10.40 ▶ **Specificity of metabolic plant responses to environmental challenges and consequences on herbivores** (p.51)  
Caroline Müller

10.40 - 11.10 **Coffee Break**

### 11.10 - 12.20 Session 6: Between-Organism Interactions

*Chair: Eric Schranz*

- 11.10 - 11.45 ▶ **A tale of MADS, RADs and hungry insects** (p.52)  
Saskia Hogenhout
- 11.45 - 12.20 ▶ **Ecological genomics of biotic interactions in *Arabidopsis thaliana*: cases of plant-pathogen and plant-plant interactions**  
(p.53)  
Fabrice Roux

12.20 **Closing Remarks**

12.30 **Lunch (or packed lunch to take)**

**END OF MEETING**