

# Scientific Programme

Monday • 13 March 2017

12.00 - 14.00	Registration
14.00 - 14.05	Opening remarks
14.05 - 15.35	<b>Session 1: Genome Sequence Diversity</b>
	<i>Chair: Magnus Nordborg</i>
14.05 - 14.40	▶ <b>Understanding the causes of variation in nucleotide diversity across the genome</b> (p. 15) Peter Keightley
14.40 - 15.15	▶ <b>Population genomics of heavy metal adaptation of <i>Noccaea caerulescens</i></b> (p. 16) Mark Aarts
15.15 - 15.35	▶ <b>Understanding global patterns of structural variation on species and genus level</b> (p. 17) Felix Bemm
15.35 - 16.05	<i>Coffee Break (Planck Lobby)</i>
16.05 - 17.35	<b>Session 1: Genome Sequence Diversity</b>
	<i>Chair: Magnus Nordborg</i>
16.05 - 16.40	▶ <b>Recurrent evolution of responsiveness to heat stress among <i>COPIA</i> retrotransposons</b> (p. 18) Ales Pecinka
16.40 - 17.15	▶ <b>A cold relict in a warming world - adaptive introgression in <i>Cochlearia</i></b> (p. 19) Marcus Koch
17.15 - 17.35	▶ <b>Adaptive functional changes associated with increased dehydration tolerance in the <i>Arabidopsis</i> genus</b> (p. 20) Juliette de Meaux
18.00 - 19.30	<i>Dinner (Restaurant)</i>
19.30 - 21.00	<b>Wine and Beer Poster Session I (Planck Lobby)</b>

## Tuesday • 14 March 2017

### 9.00 - 10.45 Session 2: Evolution of Pathways and Functional Networks

*Chair: Andreas Weber*

- 9.00 - 9.35 ▶ **Exploiting *Cardamine hirsuta* to understand the genetic basis for evolution of plant form** (p. 21)  
Miltos Tsiantis
- 9.35 - 10.10 ▶ **Natural variation and mechanisms of metal hyperaccumulation and metal hypertolerance in the extremophile *Arabidopsis halleri*** (p. 22)  
Stephan Clemens
- 10.10 - 10.45 ▶ **Fascinating Facets of Selenium Hyperaccumulation: From Molecular Mechanisms to Ecology and Evolution** (p. 23)  
Elizabeth Pilon-Smits
- 10.45 - 11.15 *Coffee Break (Planck Lobby)*

### 11.15 - 12.25 Session 2: Evolution of Pathways and Functional Networks

*Chair: Andreas Weber*

- 11.15 - 11.50 ▶ **Genome biogeography, lateral gene transfer, and photosynthetic innovation in the grass *Alloteropsis*** (p. 24)  
Pascal-Antoine Christin
- 11.50 - 12.05 ▶ **Identification of Factors Governing CO<sub>2</sub> Concentration Mechanisms in *Moricandia*** (p. 25)  
Meng-Ying Lin
- 12.05 - 12.25 ▶ **Phenotypic and biochemical comparisons of different *Arabidopsis* accessions lead to the identification of a central enzyme in D-amino acid metabolism** (p. 26)  
Uener Kolukisaoglu
- 12.30 - 12.45 **Conference Photo**
- 13.00 - 14.30 *Lunch (Restaurant)*

### 14.30 - 15.40 Session 3: Local Adaptation

*Chair: Katja Tielbörger*

- 14.30 - 15.05 ▶ **The genetic basis of contemporary, local adaptation in *Arabidopsis thaliana*** (p. 27)  
Joy Bergelson
- 15.05 - 15.40 ▶ **Ecological genetics of local adaptation in *Arabidopsis thaliana***  
Jon Ågren (p. 28)
- 15.40 - 17.00 **Coffee Break and Poster session II (Planck Lobby)**

**17.00 - 18.15      Session 3: Local Adaptation**

*Chair: Katja Tielbörger*

- 17.00 - 17.20      ▶ **Epigenetic variation in *Arabidopsis thaliana*** (p. 29)  
Magnus Nordborg
- 17.20 - 17.55      ▶ **What can we learn from experimental evolution about evolutionary processes in natural populations?** (p. 30)  
Christian Schlötterer
- 17.55 - 18.15      ▶ **Evolution of herbivore resistance along an invasion chronosequence** (p. 31)  
Michal Gruntman
- 18.15 - 19.45      *Dinner (Restaurant)*

**20.00 - 21.15      Session 3: Local Adaptation**

*Chair: Juliette de Meaux*

- 20.00 - 20.35      ▶ **Genetics of adaptation to changing climate in *Arabidopsis thaliana*** (p. 32)  
Johanna Schmitt
- 20.35 - 20.55      ▶ **Diversity and Local Adaptation in the Metal Hyperaccumulator *Arabidopsis halleri*** (p. 33)  
Justin Anderson

**Wednesday • 15 March 2017**

**9.00 - 10.40      Session 4: Adaptation to Challenging Environments**

*Chair: Caroline Müller*

- 9.00 - 9.35      ▶ **The genetics of adaptation to extreme geothermal soils in *Mimulus guttatus*** (p. 34)  
Lila Fishman
- 9.35 - 10.10      ▶ **Intra-species trait variation in *Arabidopsis halleri* in relation to local ecological factors imposing oppositely directed selection** (p. 35)  
Ute Krämer
- 10.10 - 10.25      ▶ **A genomics approach to glyphosate resistance in *Amaranthus Tuberculatus* (Waterhemp) in the US midwest** (p. 36)  
Julian Regalado
- 10.25 - 10.40      ▶ **Stay small or grow tall? Understanding flooding tolerance mechanisms in selected Brassicaceae wild-species** (p. 37)  
Jana Müller
- 10.40 - 11.10      *Coffee Break (Planck Lobby)*

<b>11.10 - 12.55</b>	<b>Session 4: Adaptation to Challenging Environments</b>
	<i>Chair: Caroline Müller</i>
11.10 - 11.45	▶ <b>Plants use insect eggs as telltale signals for an upcoming herbivory</b> (p. 38) Anke Steppuhn
11.45 - 12.05	▶ <b>Major multi-trait quantitative trait locus controls glucosinolate content across developmental stages of <i>Aethionema arabicum</i> (Brassicaceae)</b> (p. 39) Eric Schranz
12.05 - 12.20	▶ <b>Responses of heavy metal-hyperaccumulating <i>Arabidopsis halleri</i> to herbivore infestation are organ specific</b> (p. 40) Clemens Stolpe
12.20 - 12.55	▶ <b>Genomic and phenotypic footprints of local adaptation of the two endemic species <i>Arabidopsis pedemontana</i> and <i>A. cebennensis</i></b> (p. 41) Karl Schmid
13.00 - 14.15	<i>Lunch (Restaurant)</i>
<b>14.30 - 16.00</b>	<b>Session 5: The Selfing Syndrome</b>
	<i>Chair: Detlef Weigel</i>
14.30 - 15.05	▶ <b>African genomes illuminate the early history and transition to selfing in <i>Arabidopsis thaliana</i></b> (p. 42) Angela Hancock
15.05 - 15.40	▶ <b>Genetic load, competition and population history: insights from the <i>Capsella</i> genus</b> (p. 46) Martin Lascoux
15.40 - 16.00	▶ <b>Comparative genome analysis in <i>Capsella bursa-pastoris</i>: Evolutionary adaptation of the Shepherd's Purse</b> (p. 47) Christiana Wesse
16.00 - 16.25	<i>Coffee Break (Planck Lobby)</i>
<b>16.25 - 17.50</b>	<b>Session 5: The Selfing Syndrome</b>
	<i>Chair: Detlef Weigel</i>
16.25 - 17.00	▶ <b>Genomic analysis of cis-regulatory variation and divergence in <i>Capsella</i></b> (p. 45) Tanja Slotte
17.00 - 17.35	▶ <b>Molecular basis of flower-size evolution associated with the transition from outbreeding to selfing</b> (p. 43) Michael Lenhard
17.35 - 17.50	▶ <b>Adaptation to selfing in the genus <i>Capsella</i></b> (p. 44) Natalia Wozniak

17.50 - 18.30	Steering Committee Meeting
18.30 - 19.30	Champagne Reception (Planck-Lobby)
19.30 - 22.00	Conference Dinner (Restaurant)
22.00 - 00.00	Get together (Einstein Lounge)

## Thursday • 16 March 2017

### 9.30 - 11.00 Session 6: Evolution of Life History Traits and Speciation

*Chair: Barbara Neuffer*

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| 9.30 - 10.05  | ▶ <b>A cross-kingdom comparison of the developmental hourglass model</b> (p. 48)<br>Marcel Quint   |
| 10.05 - 10.40 | ▶ <b>Mutation accumulation in an asexual relative of Arabidopsis</b> (p. 49)<br>Tim Sharbel  |
| 10.40 - 11.00 | ▶ <b>Pleiotropy between flowering behaviour and seed traits in the perennial <i>Arabis alpina</i> (Brassicaceae)</b> (p. 50)<br>William Hughes |
| 11.00 - 11.25 | <i>Coffee Break (Planck Lobby)</i>   |

### 11.25 - 12.55 Session 6: Evolution of Life History Traits and Speciation

*Chair: Ute Krämer*

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| 11.25 - 11.45 | ▶ <b>Clinal population divergence in an adaptive parental environmental effect adjusts seed dormancy to local environmental predictability</b> (p. 51)<br>Katja Tielbörger |
| 11.45 - 12.20 | ▶ <b>The role of ecological divergence for speciation in <i>Silene</i></b><br>Sophie Karrenberg (p. 52)  |
| 12.20 - 12.55 | ▶ <b>Divergence of annual and perennial life-history among Brassicaceae species</b> (p. 53)<br>George Coupland   |
| 12.55 - 13.00 | <b>Closing Remarks</b>   |
| 13.00         | <i>Lunch (Restaurant)</i>  |