



Priority Programme

1399

# Rapid Reciprocal Adaptation and its Genetic Basis

Final Symposium

17<sup>th</sup> - 20<sup>th</sup> May 2016

Münster, Germany

host-parasite  coevolution

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*Edited by: Alexander Tönges, Jörn Peter Scharsack, Sophie Armitage, Joachim Kurtz*

<b>PROGRAMME</b>	<b>16:00</b>	Coffee & Registration
	<b>17:00</b>	Joachim Kurtz Welcome Address
	<b>17:15 - 18:00</b>	Peter Hudson Spillover, disease invasion and host-parasite coevolution
	<b>18:00 - 18:45</b>	Dieter Ebert Population genetics of host- parasite coevolution
	<b>19:00</b>	Dinner at the Franz-Hitze Haus

## WEDNESDAY 18<sup>TH</sup>

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**07:30** Breakfast

*Chair: Wolfgang Stephan*

**09:00 -**  
**09:45** Ellie Harrison

Coevolution and conflict within the genome: plasmid carriage shapes the trajectory of bacteria-phage coevolution

**09:45 -**  
**10:05** Andreas Vilcinskas

The role of epigenetics in host-parasite-coevolution

**10:05 -**  
**10:25** Jens Rolff

Evolutionary ecology of antimicrobial peptides interactions *in vivo*, *vitro* et *silico*

**10:25 -**  
**11:00** Coffee Break

*Chair: Barbara Milutinovic*

**11:00 -**  
**11:20** Hinrich Schulenburg

The microbiota as an additional player during host-parasite coevolution

**11:20 -**  
**11:40** Michaela Klösener

Intra-host parasite interactions between co-infecting *Bacillus thuringiensis* strains

**11:40 -**  
**12:00** Joachim Kurtz

Coevolution between *Tribolium castaneum* and *Bacillus thuringiensis*: On the evolutionary significance of genetic specificity and specific immunity

**12:00 -**  
**12:20** Heiko Liesegang

Genomics of evolving parasites: *Bacillus thuringiensis*, phages and plasmids specific immunity

**12:20 -**  
**13:40** Lunch

*Chair: Sophie Armitage*

**13:40 -**  
**14:25** Bregje Wertheim

Genomic basis of the evolution and variation in *Drosophila* immunity against parasitoids

## WEDNESDAY 18<sup>TH</sup>

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- 14:25 -** Megan Kutzer  
**14:45** Genotype x environment effects on host defenses: bacterial infection in *Drosophila melanogaster*
- 14:45 -** Myriam Croze  
**15:05** A genome-wide scan for genes under balancing selection in *Drosophila melanogaster*
- 15:05 -** Michael Siva-Jothy  
**15:25** Cellular immunity in bed bugs
- 15:25 -** Arndt Telschow  
**15:45** Causality networks: a new framework for host-parasite coevolution?
- 15:45 -** Coffee Break  
**16:15**
- Chair: Stephan Hutter*
- 16:15 -** Sylvia Cremer  
**17:00** Pathogen adaptation to individual and social host defences in ants
- 17:00 -** Gerrit Joop  
**17:20** Microbiota, a potential symbiont and the chemical secretion profile of different *Tribolium castaneum* lines
- 17:20 -** Christoph Kurze  
**17:40** Mechanisms of parasitic manipulation and how to escape them
- 17:40 -** Nina Schwensow  
**18:00** Co-evolution between wild rabbits and the Rabbit Haemorrhagic Disease Virus (RHDV) in Australia
- 18:30** Dinner at the Franz-Hitze Haus
- 20:00 -** Poster Session  
**22:00** (with drinks)

## THURSDAY 19<sup>TH</sup>

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**07:30** Breakfast

*Chair: Thorsten Reusch*

**09:00 - 09:20** Erich Bornberg-Bauer  
Lessons learnt from analysing many disparate and non-homogenous data with an equally diverse set of collaborators

**09:20 - 09:40** Marieke Feis  
Transcriptional and phenotypic responses from coevolving hosts and their invasive parasites

**09:40 - 10:00** Enrique González-Tortuero  
The dynamics of *Daphnia* parasite genotypes are indicative for negative frequency-dependent selection, as observed across multiples epidemics in a Central European lake

**10:00 - 10:20** Ellen Decaestecker  
The role of the host microbiome in *Daphnia*-food stress interactions

**10:25 - 11:00** Coffee Break

*Chair: Paul Schmid-Hempel*

**11:00 - 11:20** Olivia Roth  
Co-adaptation of parental investment and immune defence

**11:20 - 11:40** Anna Rahn  
Parasite distribution in relation to ecology and host genetic differentiation on North Uist

**11:40 - 12:00** Christophe Eizaguirre  
Host parasite interactions modify ecosystems and alter selection pressures on a subsequent generation

## THURSDAY 19<sup>TH</sup>

**12:00 -** Martin Kalbe  
**12:20** Population-specific adaptation of virulence in the interactions between the cestode *Schistocephalus solidus* and three-spined sticklebacks

**12:20 -** Lunch  
**13:40**

**13:40 -** Jörn Peter Scharsack  
**14:00** Rising temperature increases the virulence of the cestode *Schistocephalus solidus* in its specific host, the three-spined stickleback *Gasterosteus aculeatus*

**14:00 -** Mike Boots  
**14:45** Host-parasite coevolution and temporal and static diversity: Host, parasite characteristics, specificity, variation in specificity and fundamentally ecology

**14:45 -** Coffee Break

**15:15**

**15:15 -** SPP Final Discussion

**16:15**

**16:30** Departure for the Social Evening

## FRIDAY 20<sup>TH</sup>

**07:30** Breakfast

**09:00** Departure