



## Institute Symposium 2014

Location: Lecture hall, Abbe Center Beutenberg Campus, Hans-Knöll-Str. 1, 07745 Jena

Wednesday, September 10, 2014

09:00 – 09:30 **Opening remarks + review of the year 2013/14** (*David G. Heckel*)

09:30 – 10:15 **Das Leben der Einzeller im Ozean - eine komplexe Gemeinschaft wird durch chemische Signale organisiert**  
(*Prof. Dr. Georg Pohnert, FSU Jena*)

10:15 – 10:45 *Coffee break*

### **Session 1** (*Chair: Andre Busch, Dept. of Entomology*)

10:45 – 10:55 Synthesis and analysis of leaf beetle defensive compounds  
(*Tobias Becker, Dept. of Bioorganic Chemistry*)

10:55 – 11:05 A native root herbivore drives the evolution of defensive latex secondary metabolites in dandelion  
(*Meret Huber, Dept. of Biochemistry*)

11:05 – 11:15 Investigating the physiological basis of olfactory sensitization in *Drosophila melanogaster*  
(*Fabio Miazzi, Dept. of Evolutionary Neuroethology*)

11:15 – 11:25 Termite defensive weaponry  
(*Heiko Vogel, Dept. of Entomology*)

11:25 – 11:35 Understanding the functions of root-expressed photoreceptors in plant growth and development  
(*Youngjoo Oh, Dept. of Molecular Ecology*)

11:35 – 12:05 *Sportive warm up to cool your brain down*  
(in front of the building or inside, next to the coffee/tea buffet)

### **Session 2** (*Chair: Sandra Irmisch, Dept. of Biochemistry*)

12:05 – 12:15 NO in a partnership - radical defense in the beewolf-*Streptomyces* symbiosis  
(*Tobias Engl, Max Planck Research Group Insect Symbiosis*)

12:15 – 12:25 JAZZ played by jasmonates: Is one instrument enough to form the orchestra?  
(*Guillermo Hugo Jiménez-Alemán, Dept. of Bioorganic Chemistry*)

- 12:25 – 12:35 Geographical stability of endosymbiotic gut bacteria of the large pine weevil and their role in the detoxification of terpenes  
(*Aileen Berasategui, Dept. of Biochemistry*)
- 12:35 – 12:45 Detection of antioxidant aroma in *Drosophila*  
(*Hany Dweck, Dept. of Evolutionary Neuroethology*)
- 12:45 – 12:55 The 'mustard-oil bomb' of *Phyllotreta* flea beetles  
(*Franziska Beran, Research Group Detoxification in Insects*)

13:00 – 14:00 *Lunch break*

**Session 3** (*Chair: Alexander Haverkamp, Dept. of Evol. Neuroethology*)

- 14:00 – 14:10 Can the manipulation of single plant genes result in functionally diverse monocultures that support diverse ecological communities?  
(*Meredith Schuman, Dept. of Molecular Ecology*)
- 14:10 – 14:20 Metabolic hijack: intercellular regulation of amino acid biosynthesis in bacteria  
(*Shraddha Shitut, VW Research Group Experimental Ecol. & Evolution*)
- 14:20 – 14:30 The dominant gut bacterium, *Enterococcus mundtii*, as a positive modulator of insect herbivore health through its antimicrobial property  
(*Yongqi Shao, Dept. of Bioorganic Chemistry*)
- 14:30 – 14:40 The role of Cerato-platanin-like proteins in the bark beetle-vectored blue stain fungus *Ceratocystis polonica*  
(*Dinesh Kandasamy, Dept. of Biochemistry*)
- 14:40 – 14:50 Calmodulin affects insect odorant receptor function  
(*Latha Mukunda, Dept. of Evolutionary Neuroethology*)

14:50 – 15:20 *Coffee break*

15:30 – 17:30 **Poster session 1 (odd numbers)** (in foyer + first floor of the MPI)

Thursday, September 11, 2014

- 09:00 – 09:45 **Heiße Quellen in der Tiefsee: Oasen des Lebens**  
(*Prof. Dr. Nicole Dubilier, MPI für Marine Mikrobiologie, Bremen*)  
(*Chair: David G. Heckel*)

**Session 4** (*Chair: Axel Mithöfer, Dept. of Bioorganic Chemistry*)

- 09:50 – 10:00 Small berry, big bonus: Immune modulation enables a specialist insect to benefit from host plant antibacterial properties  
(*Hanna Heidel-Fischer, Dept. of Entomology*)
- 10:00 – 10:10 Smoke - more than a germination stimulant?  
(*Karin Groten, Dept. of Molecular Ecology*)
- 10:10 – 10:20 Effects of jasmonates and its mimics on secondary metabolites of *Wachendorfia thyrsiflora*  
(*Jima Chandran, Biosynthesis/NMR Research Group*)

- 10:20 – 10:30 Chemical defense in leaf beetle larvae (subtribe Chrysomelina)  
(*Peter Rahfeld, Dept. of Bioorganic Chemistry*)
- 10:30 – 11:00 *Coffee break*
- 11:00 – 13:00 **Poster session 2 (even numbers)** (in foyer + first floor of the MPI)
- 13:00 – 14:00 *Lunch break*

**Session 5** (*Chair: Shuqing Xu, Dept. of Molecular Ecology*)

- 14:00 – 14:10 Metabolism of phenolic compounds in gypsy moth and other caterpillars  
(*Andreas Boeckler, Dept. of Biochemistry*)
- 14:10 – 14:20 Olfactory specialization in *Drosophila suzukii* supports ecological shift in host preference from rotten to fresh fruit  
(*Ian Keeseey, Dept. of Evolutionary Neuroethology*)
- 14:20 – 14:30 A worldwide resistance mechanism of *Helicoverpa armigera* - Crucial amino acids and the evidence for multiple origin in the chimeric CYP337B3  
(*Nicole Joußen, Dept. of Entomology*)
- 14:30 – 14:40 Diversifying Jasmonate signaling: COI2 in *N. attenuata* is a second JA-Ile receptor  
(*Michael Stitz, Dept. of Molecular Ecology*)
- 14:40 – 14:50 Metabolomic tools to identify metabolites from wood-degrading fungi elicited by growth in fungal co-cultures  
(*Riya Christina Menezes, Mass Spec./Proteomics Research Group*)
- 14:50 – 15:00 Systemic calcium signals upon insect herbivory in *Arabidopsis*  
(*Jyothilakshmi Vadassery, Dept. of Bioorganic Chemistry*)
- 15:00 – 15:30 *Coffee break*

**Session 6** (*Chair: Laura Flórez, Max Planck Res. Group Insect Symbiosis*)

- 15:30 – 15:40 Role of predator – plant species interaction in maintenance of pea aphid host races  
(*Ilka Vosteen, Dept. of Biochemistry*)
- 15:40 – 15:50 Evolution of insect olfactory genes  
(*Christine Mißbach, Dept. of Evolutionary Neuroethology*)
- 15:50 – 16:00 Evolutionary history of plant cell wall degrading enzymes in phytophagous beetles  
(*Yannick Pauchet, Dept. of Entomology*)
- 16:00 – 16:10 Quantification of homeolog expression bias upon herbivory of synthetic and natural allopolyploids from *N. attenuata* x *N. obtusifolia*  
(*Aura Navarro-Quezada, Dept. of Molecular Ecology*)
- 16:10 – 16:20 Coding of food cues and sex pheromones in *Drosophila*  
(*Federica Trona, BMBF Research Group Olfactory Coding*)
- 16:20 – 16:30 **Conclusions** (*David Heckel*)