

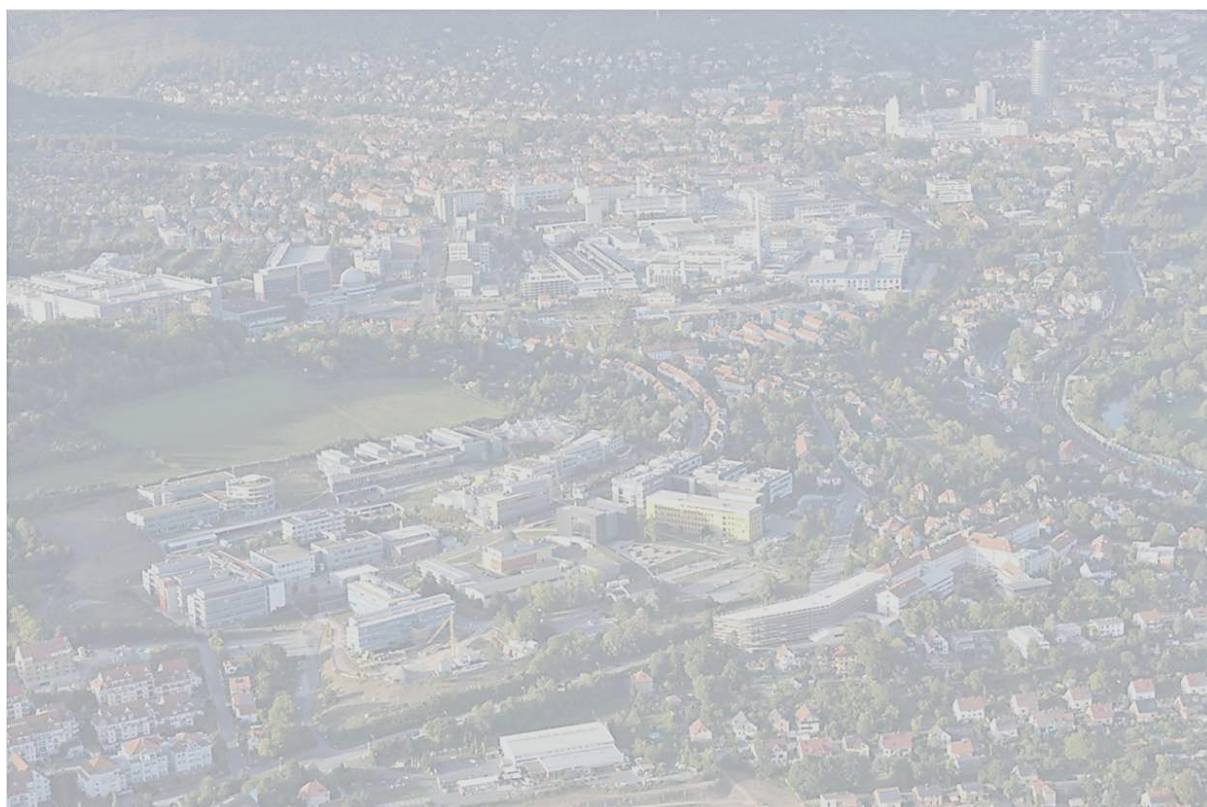


Exploration of Ecological
Interactions with Molecular
and Chemical Techniques

12th IMPRS Symposium

April 18-19, 2013
Abbe Centre, Beutenberg Campus

Program



Thursday, April 18, 2013

- 09:00 **Welcome and Announcements**
Prof. David Heckel, spokesperson of the IMPRS
- 09:10 **Plenary Lecture:**
Prof. J. Ruther, Regensburg University
Black wasps meet the Red Queen – pheromone communication in *Nasonia*
Chair: Alexander Haverkamp
- 10:10 *Coffee break (Catering Abbe Center)*
- Session I**
Chair: Youngsung Joo
- 10:40 Andrea Barthel
Hemocyte-mediated immune response: Consequences of a specialized lifestyle
- 11:00 Amol Fatangare
Application of 2-[¹⁸F]fluoro-2-Deoxy-D-glucose (¹⁸FDG) in *in vivo* plant imaging
- 11:20 **Poster Talks I – odd numbers 1-43 (1 slide and 1 min/poster)**
Chair: Purva Kulkarni
- 11:40 **Poster Session I – odd numbers 1-43**
- 13:00 *Lunch (Catering Abbe Center)*
- 14:00 **Internal Meeting of PhD students (without supervisors, postdocs etc.)**
- 14:30 **Session II**
Chair: Franziska Dolke
- 14:30 Glen D'Souza
Loose to gain: Adaptive fitness benefits drive prevalent loss of biosynthetic genes in bacteria
- 14:50 Anne-Christin Warskulat
Nudicaulins of *Papaver nudicaule* flowers: structure & biosynthesis
- 15:10 Katrin Groh
The hermit crab's nose – antennal transcriptomics
- 15:30 Hassan Salem
Symbiont-mediated vitamin supplementation in firebugs
- 15:50 *Coffee Break (Catering Abbe Center)*
- 16:20 **Poster Talks II – even numbers 2-44**
Chair: Anne-Kathrin Dietel
- 16:30 **Poster Session II – even numbers 2-44**
- 18:00 *End of poster session*

Friday, April 19, 2013

- 9:00 **Plenary Lecture:**
Prof. Ute Hentschel Humeida, Würzburg University
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Chair: Shraddha Shitut
- 10:00 *Coffee break*
- Session III**
Chair: Karen Grace Bondoc
- 10:30 Johannes Frenkel
The first diatom pheromone
- 10:50 Andrea Clavijo McCormick
Volatile mediated recruitment of natural enemies in poplar trees
- 11:10 **Poster Talks III – even numbers 46-90 (1 slide and 1 min/poster)**
Chair: Spoorthi Poreddy
- 11:30 **Poster Session III – even numbers 46-90**
- 12:50 *Lunch (Catering Abbe Center)*
- Session IV**
Chair: Fabio Miazzi
- 13:50 Anja Strauß
Beetle juice strategy: ABC transporter acts as a gatekeeper while unifying sequestration and active defense
- 14:10 Michael Stitz
The key to flower opening: Jasmonate signaling and floral development in *Nicotiana attenuata*
- 14:30 Jan Jirschitzka
Identification of the penultimate enzymes in the biosynthesis of cocaine and other tropane alkaloids in *Erythroxylum coca* and other *Erythroxylum* species
- 14:50 Katrin Friedemann
Evolution of attachment structures in *Acercaria*
- 15:10 *Coffee Break (Catering Abbe Center)*
- 15:40 **Poster Talks IV – odd numbers 45-91**
Chair: Ayufu Yilamujiang
- 16:00 **Poster Session IV – odd numbers 45-91**
- 17:30 Final remarks Prof. Heckel and Prof. Oelmüller, Cafeteria MPI-CE
Get-together with beer, juice and salty snacks

Poster Presentations

- 1 *Effect of the genetic variation on the insect diversity in the natural population of Nicotiana attenuata*
Alhammoud, Nour
- 2 *Bacterial community associated with hindgut -wall and novel structures, of the forest cockchafer (Melolontha hippocastani).*
Arias Cordero, Erika
- 3 *Pheromone-plant interaction in Heliothis virescens*
Badeke, Elisa
- 4 *Chlorophyll degradation in the insect gut*
Badgaa, Amarsanaa
- 5 *Mapping the olfactory output in Drosophila*
Baschwitz, Amelie
- 7 *Bon appetit! How does Hylobius abietis cope with terpenes in their diet?*
Berasategui, Aileen
- 8 *An extracellular superoxide dismutase supports antifungal resistance of Phaedon cochleariae (Insecta: Coleoptera)*
Bodemann, René
- 9 *Who has the benefit? Galling aphid infestation alters foliar phenolic levels in poplar*
Boeckler, Andreas
- 10 *Complex interactions during biofilm formation by benthic diatoms*
Bondoc, Karen Grace
- 11 *Cytokinins regulate optimal defense patterns in plants*
Brütting, Christoph
- 12 *Screening the desert for food: Olfactory-driven foraging in Cataglyphis*
Bühlmann, Cornelia
- 13 *Detoxification of maize chemical defenses by lepidopteran herbivores*
Christoff Wouters, Felipe
- 14 *Plasmids as minimal endosymbionts – Unravelling the causes for genome erosion*
Dietel, Anne-Kathrin
- 15 *The role of Nicotiana attenuata WRKY9 transcription factor in plant defense against herbivory*
Dinh, Truong Son
- 16 *Small molecule signaling in plant-parasitic nematodes*
Dolke, Franziska
- 18 *Divergence in olfactory host plant preference in D. mojavensis in response to cactus host use*
Dweck, Hany
- 19 *Olfactory modulations in starved and fed fly Drosophila*
Farhan, Abu

- 21 *Burkholderia* bacteria as insect endosymbionts:
The fully equipped bacterial partners of *Lagria hirta* tenebrionid beetles.
Flórez Patino, Laura Victoria
- 22 Systemic root jasmonic acid synthesis and perception regulate nicotine production and transport and account for plant performance against folivores.
Fragoso, Variluska
- 26 Identification of cellular cost-benefit trade-offs in biofilm formation on various surfaces
Großmann, Peter
- 27 Leaf herbivory elicits distinct asynchronous shifts in the root transcriptome of *Nicotiana attenuata*
Gulati, Jyotasana
- 28 Induced defense compounds in corn: Methylation of DIMBOA-Glc
Handrick, Vinzenz
- 29 The behavioral correlates of flower perception in the hawkmoth *Manduca sexta*
Haverkamp, Alexander
- 30 MS-based dereplication and classification of 17-hydroxygeranylinalool diterpene glycoside profiles of 24 Solanaceous plant species
Heiling, Sven
- 31 Aldehyde dehydrogenases are key elements in the ectomycorrhizal cross talk
Henke, Catarina
- 32 Phenylphenalenone-type compounds and its role as phytoalexins in the pathosystem *Musa - M. fijiensis*
Hidalgo, William
- 33 Searching for apomixis candidate genes in *Poa pratensis*
Hilpert, Stephanie
- 34 The role of latex secondary metabolites in root herbivore defense
Huber, Meret
- 35 Computational methods for analyzing small molecule mass spectrometry data
Hufsky, Franziska
- 37 The biosynthesis of nitrogen-containing volatiles in poplar
Irmisch, Sandra
- 38 Defenses in *Gracilaria vermiculophylla*
Jacquemoud, Dominique
- 39 Detoxification and the metabolic effects of isothiocyanates in insect herbivores
Jeschke, Verena
- 40 How do plants shut down jasmonate signalling?
Jiminez-Aleman, Guillermo Hugo
- 42 Timing for defense: Different responses in *Nicotiana attenuata* induced by herbivory at different times.
Joo, Youngsung

- 43 *Do cerato-platanin-like proteins facilitate fungal attachment to insect vectors? A case study with Ceratocystis polonica and Ips typographus*
Kandasamy, Dineshkumar
- 44 *Detoxification processes in Bt resistant insects by ABC-transporters*
Karpinski, Anne
- 45 *Nucleases which impair experimental RNAi in Lepidoptera.*
Khan, Sher Afzal
- 46 *Detoxification of gossypol, a cotton secondary metabolite, by Heliothine moths*
Krempl, Corinna
- 47 *Computational methods for analyzing imaging mass spectrometry data*
Kulkarni, Purva
- 48 *Manduca sexta larvae co-opt host Nicotiana attenuata's defense metabolite nicotine to deter its predator*
Kumar, Pavan
- 49 *Adaptive regulation of digestive serine proteases in Helicoverpa armigera*
Kumar, Suyog
- 50 *Nurture vs. nature: Maternal and environmental effects on symbiont-mediated antimicrobial defense in a solitary digger wasp*
Köhler, Sabrina
- 51 *Genes and the environment: Epigenetics in Manduca sexta*
König, Christopher
- 52 *An indiscriminant MS/MS approach unravels natural diversity patterns in defense responses of Nicotiana attenuata populations*
Li, Dapeng
- 53 *Transcriptome survey on the alternative splicing landscape in Nicotiana attenuata*
Ling, Zhihao
- 54 *Host plant-driven sensory specialization in the Pandanus specialist Drosophila erecta*
Linz, Jeanine
- 55 *Evidence of aggregation pheromone in euedaphic soil animal Folsomia candida (Collembola)*
Liu, Jing
- 56 *The role of cytokinins in systemic responses after herbivory*
Meza Canales, Ivan David
- 57 *Investigating the role of Calmodulin in the odor response termination in Drosophila melanogaster*
Miazzi, Fabio
- 58 *Growth and defense - Ca²⁺ signaling in unstable continuum: Piriformopsora indica-derived trisaccharide induces intracellular calcium elevation, promotes growth and confers resistance in Arabidopsis*
Michal Johnson, Joy
- 59 *Evolution of insect olfactory receptors*
Mißbach, Christine

- 60 *Chitin Receptors in Arabidopsis thaliana / Piriformospora indica interaction*
Mrozinska, Anna
- 61 *Calmodulin affects odor response in insect olfaction*
Mukunda, Latha
- 62 *Exploring the biosynthetic pathway of ladybird alkaloids*
Nagel, Nadja
- 63 *Diversion products of terpenoid-based oleoresin biosynthesis function in plant defense*
Nagel, Raimund
- 64 *Exploration of low molecular weight metabolites by MALDI-MS: Development of novel MALDI matrices*
Napagoda, Mayuri
- 65 *RNA interference and insect-virus interaction in Lepidoptera species*
Neunemann, David
- 66 *Impact of plant toxins on the gut microbiome of Spodoptera littoralis*
Novoselov, Alexey
- 67 *Analysis of phenolic glucosides in leaf beetles and host plants*
Pauls, Gerhard
- 68 *Revealing Manduca sexta's diterpene glycoside tolerance using plant mediated RNAi*
Poreddy, Spoorthi
- 69 *Investigating proteins involved in the metabolic pathway of iridoids in defensive glands of Phaedon cochleariae*
Rahfeld, Peter
- 70 *Insights in underground talking: Tricholoma vaccinum and the mycorrhizosphere*
Reiher, Katharina
- 71 *Auxins and jasmonates coordinate regrowth responses from rootstocks in Nicotiana attenuata*
Ruiz Machado, Ricardo Alberto
- 75 *Endophytic bacterial communities at species and class level are complex and differ between field grown Nicotiana attenuata plants, independent of their developmental stages and JA*
Santhanam, Rakesh
- 76 *Calcium sensor CML37 – a player in defense*
Scholz, Sandra
- 77 *Cytokinins: new signals in defense against herbivores*
Schäfer, Martin
- 78 *You produce what your neighbor needs? Unraveling the dynamics of amino acid production within microbial communities*
Shitut, Shraddha
- 79 *Semiochemicals in the host choice of Manduca sexta – presenting the essence of 4 years PhD work*
Späthe, Anna

- 80 *A tale of two tobaccos: direct and indirect traits mediating host choice by *Corimelaena extensa* seed feeders*
Stanton, Mariana
- 81 *Exploring the transcriptome of *Phaedon cochleariae*; putative sugar transporters involved in larval defense*
Stock, Magdalena
- 82 *Symbiotic microbiome of *Pyrrhocoridae* bugs (*Pyrrhocoridae*; Hemiptera)*
Sudakaran, Sailendharan
- 83 *The beneficial fungus *Piriformospora indica* protects *Arabidopsis* from *Verticillium dahliae* infection*
Sun, Chao
- 84 *Vinegar fly behavior towards odor mixtures – an additive approach*
Thoma, Michael
- 85 *Secrets in the dark: Sexual communication variation in the two *Spodoptera frugiperda* strains*
Unbehend, Melanie
- 86 *Multiproduct sesquiterpene synthase *MtTPS5*: structural studies and the journey so far*
Vattekkatte, Abith
- 87 *Potential role of hoverfly – plant species interaction in sympatric speciation of the pea aphid complex*
Vosteen, Ilka
- 89 *Regulatory functions of *MYC2* and *MYC2*-like transcription factors in plant defense against herbivores in *N. attenuata**
Woldemariam, Melkamu
- 90 *A role for phytohormones in carnivorous plants?*
Yilamujiang, Ayufu
- 91 *Timing for outcrossing: Circadian clock regulates floral rhythms with large fitness consequences*
Yon, Felipe