



JSMC/ILRS Symposium 2009

October 12-13, 2009

University Main Building, Fürstengraben 1, 07743 Jena

Friedrich-Schiller-Universität Jena



October 12th, 2009

University Main Building, 1st floor, **Lecture Hall 24**

- 9:00 **Official Welcome by Prof. Axel Brakhage, Scientific Coordinator of the JSMC**
- 9:15 **Keynote Lecture, Session 1:**
Prof. Falko Langenhorst, University of Bayreuth
“High-pressure experiments on minerals and microbes – aims and current research trends”
- 9:50 **Shipeng Lu**, Institute of Ecology, University of Jena
“Taking the lake snow shuttle to enter the microbial iron cycle in acidic sediments”
- 10:05 **Xinran Liu**, Institute of Geosciences, University of Jena
“Fractional surface coverage and initial formation of goethite-EPS aggregates: A combined AFM and FTIR study”
- 10:20 Coffee Break**
- 10:40 **Carsten Paul**, Institute for Inorganic and Analytical Chemistry, University of Jena
“Phyto- and bacterioplankton exudates alter diatom growth and metabolism”
- 10:55 **Long Hoa Hoang**, Department of Molecular Ecology, MPI for Chemical Ecology
*“Analysis of ecological consequences of bacterial endophyte on growth and fitness of *Nicotiana attenuata*”*
- 11:10 **Dorothea Sonntag**, Department of Molecular Ecology, MPI for Chemical Ecology
*“The structure of the culturable root bacterial endophyte community of *Nicotiana attenuata* is organized by soil composition and host plant ethylene production and perception”*
- 11:25 **Lidan Ye**, Institute of Microbiology, University of Jena
“Studies on the microbial halogen cycle: Reactions of fungal peroxidases and bacterial reductive dehalogenases”
- 11:40 **Thomas Schulze**, Institute of General Botany and Plant Physiology, University of Jena
*“The functional characterization of the eyespot protein SOUL3 in *Chlamydomonas reinhardtii*”*
- 11:55 **Asma Asghar**, Institute of Pharmacy, University of Jena
“Intercellular communication with peptide derivatives in dictyostelid amoebae”
- 12:10 Lunch Break**

October 12th, 2009

University Main Building, 1st floor, **Lecture Hall 24**

13:40

Keynote Lecture, Session 2:

Prof. Jean-Paul Latgé, Institut Pasteur, Paris, France

"The fungal cell wall is a living organelle"

14:15

Radhika Jain, Dep. of Molecular and Applied Microbiology, Hans Knöll Institute

"Regulation of cell wall integrity signalling by mitogen-activated protein kinase MpkA in Aspergillus fumigatus"

14:30

Christoph Heddergott, Institute of Microbiology, University of Jena

"Pathogenicity mechanisms of Arthroderma benhamiae: Secretome analysis and characterisation of mutant strains"

14:45

Dennis Görlich, Jena Centre for Bioinformatics, University of Jena

"Identifying molecular organic codes in reaction networks"

15:00

Jörg Linde, Research Group Systems Biology / Bioinformatics, Hans Knöll Institute
"Predicting gene regulatory networks in Candida albicans during oral infection"

15:15

Coffee Break

15:45

Sebastian Müller, Res. Group 'Systems Biology/Bioinformatics', Hans Knöll Institute

"Robust identification of structures in molecularbiological data based on ensemble-clustering"

16:00

Sarah Werner, Department of Bioinformatics, University of Jena

"Modelling of the synthesis pathway of trisporic acid in Zygomycetes"

16:15

Angela Klein, Institute of Applied Physics, University of Jena

"New tip design for high-resolution SNOM and Raman imaging"

16:30

Nadine Vogler, Research Group 'Molecular Imaging', Inst. of Photonic Technology

"CARS meets Life Sciences"

16:45

Poster Session / Refreshments (2nd floor, University Main Building)

October 13th, 2009

University Main Building, 1st floor, **Aula**

9:00

Keynote Lecture, Session 3:

Prof. Jos van Strijp, UMC Utrecht, The Netherlands

"Bacterial Innate Immune Evasion"

9:35

Anne Braunschweig, Jun.Res.Group 'Cellular Immunobiology', Hans Knöll Institute
"Crosstalk between the long pentraxin PTX3 and the complement"

9:50

Shanshan Luo, Department of Infection Biology, Hans Knöll Institute
"Immune escape of Candida albicans: The many Faces of CRASP2"

10:05

François Mayer, Dep. of Microbial Pathogenicity Mechanisms, Hans Knöll Institute
"Identification and characterisation of an infection-associated gene in Candida albicans"

10:20

Christian Otzen, Jun.Res.Group 'Microbial Biochemistry&Physiology', Hans Knöll Inst.
"Propionate metabolism in Candida albicans"

10:35

Coffee Break

10:55

Felicitas Schöbel, Jun.Res.Group 'Microbial Biochemistry&Physiology', Hans Knöll Inst.
"Enzymatic conversion of homocitrate to homoisocitrate in Aspergillus fumigatus"

11:10

Christina Große, Institute of Medical Microbiology, University Hospital Jena
"Host-pathogen interaction in Chlamydia trachomatis persistence"

11:25

Krisztina Truta-Feles, Department of Dermatology, University Hospital Jena
"A novel role for histamine as a modulator of $\gamma \delta$ T cell migration and cytotoxicity: Involvement of Gi and Gs protein-coupled signalling pathways"

11:40

Hangxing Yu, Institute of Medical Microbiology, University Hospital Jena
"Different modulation of cell death between active and persistent chlamydial infection"

11:55

Florian Henicke, Jun.Res.Group 'Fundamental Molecular Biology of Pathogenic Fungi', Hans Knöll Institute
"Molecular analysis of host adaptation mechanisms in Candida albicans"

12:10

Crisanto M. Lopez, Department of Infection Biology, Hans Knöll Institute
"Phosphoglycerate mutase of Candida albicans binds vitronectin"

12:25

Lunch Break

October 13th, 2009

University Main Building, 1st floor, **Aula**

14:00

Keynote Lecture, Session 4:

Prof. Geoffrey Turner, University of Sheffield, UK

"Secondary metabolism in Aspergillus"

14:35

Gerald Lackner, Department of Biomolecular Chemistry, Hans Knöll Institute,

"The genome of the endofungal bacterium Burkholderia rhizoxinca"

14:50

Hans-Wilhelm Nützmann, Dep. of Molec. and Appl. Microbiology, Hans Knöll Inst.

"Fungal gene regulation during Streptomyces interaction"

15:05

Yongqiang Wang, Department of Genetics, University of Jena

"Evolutionary origin of "Floral Quartets" as revealed by molecular interaction"

15:20

Melanie Wirth, Institute of Microbiology, University of Jena

"The role of the motorprotein dynein in the basidiomycete Schizophyllum commune"

15:35

Coffee Break

16:00

Alexander Funk, Bio Pilot Plant for Natural Products, Hans Knöll Institute

"Regulation of polyketidesynthase gene clusters in Aspergillus nidulans"

16:15

Anindita Sarkar, Bio Pilot Plant for Natural Products, Hans Knöll Institute

"Polyketide synthase gene expression in Aspergillus nidulans"

16:30

Michael Biermann, Bio Pilot Plant for Natural Products, Hans Knöll Institute

"E. coli under pressure - stress monitoring in large scale protein production"

16:45

Nadine Möbius, Department of Biomolecular Chemistry, Hans Knöll Institute,

"Exploration of a bacterial-fungal symbiotic alliance"

17:00

Yvonne Rudigier, Institute of Microbiology, University of Jena

"Molecular analysis of sexual communication in the zygomycetous fungus Mucor mucedo"

17:15

Final Remarks by Prof. Peter Zipfel, Scientific Coordinator of the ILRS

Presentation Awards / Poster Session / Refreshments (2nd floor, University Main Building)

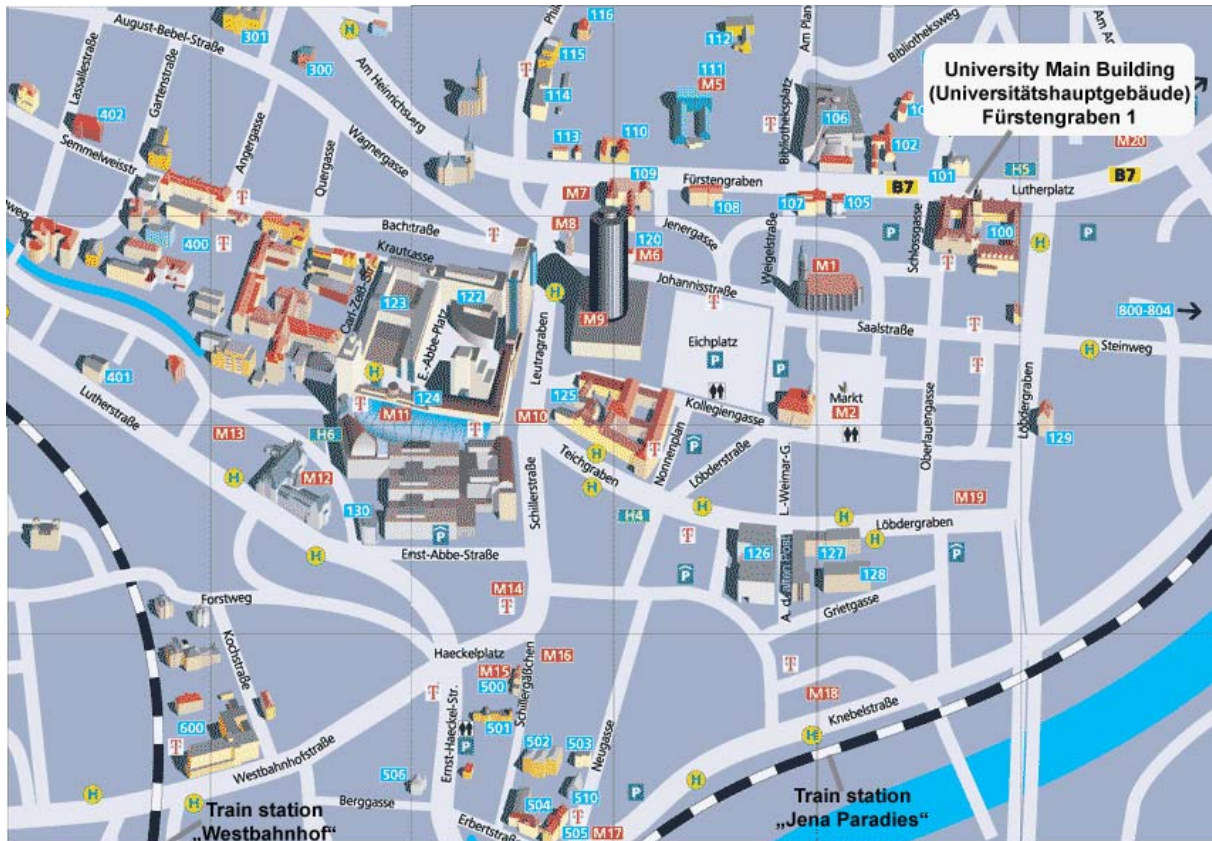
List of posters – 1/2

- 1. Rabab Gamal El-Mergawy Abd El-Aleem**, Center for Molecular Biomedicine, University of Jena
"Methionine sulfoxide reductases (MsrA, MsrB) in Aspergillus nidulans: biochemistry, subcellular localization and role in stress tolerance"
- 2. Daniela Albrecht**, Research Group: Systems Biology / Bioinformatics, Hans Knöll Institute
"Struggling with transcriptome and proteome data - How to get them together?"
- 3. Asma Asghar**, Institute of Pharmacy, University of Jena
"Glorin-mediated gene expression in P. pallidum development"
- 4. Swantje Behnken**, Department of Biomolecular Chemistry, Hans Knöll Institute,
"Genome mining of clostridium sp. for secondary metabolites"
- 5. Markus Bohnert**, Institute of Pharmacy, University of Jena
"The mode of action of melleolide antibiotics from armillaria mellea"
- 6. Tsilla Boisselet**, Institute of Geosciences, University of Jena
"Study of chemical and biological factors influencing heavy metal mobilisation through analysis of REE fractionation patterns"
- 7. Hannes Eberhardt**, Department of Infection Biology, Hans Knöll Institute,
"Factor H-related human plasma proteins are complement regulators with anti inflammatory functions"
- 8. Jan Grüneberg**, Institute for Inorganic and Analytical Chemistry, University of Jena
"Symbiotic interaction of green macroalgae and bacteria. Step 1: axenic cultivation of Ulva mutabilis"
- 9. Huijuan Guo**, Department of Bioorganic Chemistry, MPI for Chemical Ecology
"Chemical investigation on ion channel forming compound(s) from oral secretion of herbivorous Lepidopteran larvae"
- 10. Janine Hofmann**, Junior Research Group 'Microbial Interactions', MPI for Chemical Ecology
"The aggregation pheromone of the striped cucumber beetle - Who is the producer?"
- 11. Fabian Horn**, Research Group 'Systems Biology / Bioinformatics', Hans Knöll Institute
"Prediction of gene regulatory networks involved in the differentiation, secondary metabolism, and cross talk of Aspergillus nidulans"
- 12. Gerald Lackner**, Department of Biomolecular Chemistry, Hans Knöll Institute
"The genome of Burkholderia rhizoxinica reveals secrets of an endofungal toxin factory"

List of posters – 2/2

- 13. Jana Lemm**, Clinic for Anesthesiology and Intensive Care Medicine, University Hospital Jena
"Role of hydrogen sulfide and its generating enzyme cystathionine- γ -lyase in septic cardiomyopathy"
- 14. Anja Lüttich**, Dep. of Microbial Pathogenicity Mechanisms, Hans Knöll Institute
"Candida albicans microevolution during coinubation with macrophages"
- 15. Holger Merker**, Dep. of Bioorganic Chemistry, MPI for Chemical Ecology
"Experimental evolution of cooperation"
- 16. Mohan Karthik Mohan**, Institute of General Botany and Plant Physiology, University of Jena
"An insertional mutagenesis approach to understand temperature entrainment of the circadian clock in Chlamydomonas reinhardtii"
- 17. Ute Münchberg**, Institute of Physical Chemistry, University of Jena
"Raman spectroscopy for early detection of pathogenic microorganisms"
- 18. Pyniarlang L. Nongbri**, Institute of General Botany and Plant Physiology, University of Jena
"The role of Piriformospora indica in sulfur metabolism in Arabidopsis thaliana"
- 19. Sarbani Sarkar**, Institute of Microbiology, University of Jena
"Identification of factors involved in the regulation of sexual development in Mucor mucedo"
- 20. Yongqi Shao**, Dep. of Bioorganic Chemistry, MPI for Chemical Ecology
"A novel accumulation of carotene in the gut of Spodoptera littoralis"
- 21. Andreas Thywissen**, Dep. of Molecular and Applied Microbiology, Hans Knöll Institute
"The first contact: Recognition and processing of Aspergillus fumigatus conidia by alveolar macrophages"
- 22. Anja Voigt**, Department of Cell- and Molecular Biology, Hans Knöll Institute
"Comparative genome analysis of different Chlamydia psittaci isolates"
- 23. Namita Wadke**, Department of Biochemistry, MPI for Chemical Ecology
"Functional genomics of the bark beetle associated fungus Ceratocytis polonica"
- 24. Arne Weinhold**, Department of Molecular Ecology, MPI for Chemical Ecology
"Microbial interaction relevant for the fitness of Nicotiana attenuata in the native environment"

Jena City Map



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