

TUESDAY, September 29th

10.45 Welcome – Helge Bode & Martin Grininger

Session 1 – Chair: Helge Bode

11.00

Eric Helfrich (Harvard Medical School, Boston, USA) “*Eco-Nomics: Deciphering the biosynthesis, evolution and chemical ecology of trans-acyltransferase polyketide synthase-derived polyketides*”

11.40

Russell Cox (Leibniz University Hannover, Germany) “*Investigations of Programming and reprogramming in fungal HR-PKS*”

12.30 Lunch (60 minutes)

Session 2 – Chair: Russell Cox

13.30

Elizabeth Skellam (Leibniz University Hannover, Germany) “*Deconstructing Pyrichalasin H Biosynthesis to Reconstruct Non-natural Analogues*”

14.10

Hajo Kries (Hans Knöll Institute (HKI), Jena, Germany) “*NRPS design guided by adenylation promiscuity*”

14.50 Coffee break (20 minutes)

Session 3 – Chair: Eric Helfrich

15.10

Pierre Stallforth (Hans Knöll Institute (HKI), Jena, Germany) “*Nonribosomal Peptides in Microbial Predator–Prey Interactions*”

15.50

Kira Weissman (Lorraine University, Nancy, France) “*Structure/function relationship in modular PKSs and their application to genetic engineering*”

16.30 Coffee break (30 minutes)

Session 4 – Poster Session

17.00 Poster Talks

17.30 Poster Session

WEDNESDAY, September 30th

Session 5 – Chair: Kira Weissman

09.00

Nadine Ziemert (University of Tübingen, Germany) “Evolution and resurrection of ancient Megasyntases”

09.40

Marnix Medema (Wageningen University, The Netherlands) “Computational approaches to explore and engineer megasynthase functional diversity”

10.20 Coffee Break (20 minutes)

MegaSyn Projects – Chair: Eckhard Boles

10.40

Kyra Geyer (Max Planck Institute for Terrestrial Microbiology, Marburg, Germany) “Substrate selectivity of phoslactomycin polyketide synthase and function of the associated type II thioesterase”

11.00

Mirko Joppe (Goethe University Frankfurt, Germany) “Directed biosynthesis of fluorinated polyketides”

11.20

Maximilian Schmalhofer (Technical University of Munich, Germany) “Type II PKS systems: Biosynthesis of anthraquinones and aryl polyenes”

11.40

Nadya Abbood (Goethe University Frankfurt, Germany) “SYNZIPs as a tool for the rapid construction of engineered non-ribosomal peptide synthetases”

12.00

Julia Hitschler (Goethe University Frankfurt, Germany) “Polyketide synthase and decarboxylase mediated production of 3-alkylphenols in yeast engineered for increased precursor supply”

12.30 Lunch (60 minutes)

WEDNESDAY, September 30th

Session 7 – Chair: Elizabeth Skellam

13.30

Mislav Oreb (Goethe University Frankfurt, Germany) *“De novo construction of multifunctional enzyme assemblies”*

14.10

Rolf Müller (Helmholtz Centre for Infection Research, Saarbrücken, Germany) *“Myxobacterial megasynthases: a underexploited source of novel antibacterial natural products”*

14.50 Coffee break (20 minutes)

Zoom Session (Session 8) – Chair: Martin Grininger

15.10

Jason Crawford (Yale University, New Haven, USA) *“Specialized Metabolism at the Host-Gammaproteobacterial Interface”*

15.50

Adrian Keatinge-Clay (University of Texas at Austin, USA) *“Engineering modular polyketide synthases using the updated definition of the module”*

16:30

Huimin Zhao (University of Illinois at Urbana-Champaign, USA) *“New Tools for Discovery of Novel Natural Products Synthesized by Megasynthases”*

17:10

Eric Schmidt (University of Utah, Salt Lake City, USA) *“Complex polyketide biosynthesis in sacoglossan mollusks and other animals”*

18.30 Dinner “Dolce by Windham Hotel”

THURSDAY, October 1st

Session 9 – Chair: Nadine Ziemert

09.00

Elke Dittmann (University of Potsdam, Germany) “Unraveling evolutionary scenarios for the diversification of nonribosomal peptide synthetases”

09.40

Max Crüsemann (University of Bonn, Germany) “A transesterifying thioesterase extends G protein inhibitor biosynthesis”

10.20 Coffee Break (20 minutes)

Session 10 – Chair: Elke Dittmann

10.40

Frank Hahn (University of Bayreuth, Germany) “In vitro biochemistry and biocatalysis of PKS domains and modules”

11.20

Tobias Gulder (Technical University of Dresden, Germany) “Application of multimodular and tailoring enzymes in complex melcule (bio-)synthesis”

12.00 Closing Remarks

12.10 Lunch

END OF SYMPOSIUM

We wish you a safe journey home and hope that you enjoyed our conference.