

PROGRAMME

2 – 5 September 2018
DECHEMA e.V. · Frankfurt am Main · Germany

3rd European Conference on Natural Products

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IN COOPERATION WITH

VBU Association of German
Biotechnology Companies

EXHIBITORS / COMMITTEE

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University of Tuebingen/D

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LECTURE ABSTRACTS

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VENUE / ORGANISER / CONTACT

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KEYNOTE LECTURES

Monday, 3 September 2018

- 9:40 **Structures and Functions of Nonribosomal Peptide Synthetases, Macromolecular Antibiotic Factories**
Martin Schmeing, McGill University, Montreal/CND
- 16:15 **Strategies and Methods for Chemical Synthesis Inspired by Complex Natural Products**
Richmond Sarpong, University of Berkeley, CA/USA

Tuesday, 4 September 2018

- 9:00 **Uncovering the “Dark Matter” of the Chemistry of Life**
Frank C. Schroeder, Cornell University, Ithaca, NY/USA
- 16:35 **Engineered Biosynthesis of Medicinal Natural Products**
Ikuro Abe, The University of Tokyo/J

Wednesday, 5 September 2018

- 11:35 **Peptidomimetic Antibiotics: Inspired by Nature, and a Return to Nature**
John Robinson, University of Zurich/CH

Programme as of 15 August 2018.

Subject to alterations. Submission titles and authors information as provided by the authors.

Sunday, 2 September 2018

- 16:30 Check in / Registration
 17:30 Welcome Reception (until 19:00)

Monday, 3 September 2018

- 09:30 **OPENING**
 H. Bode, Goethe University Frankfurt/D

Structural Biology

Chair: H. Bode, Goethe University Frankfurt/D

- 09:40 **KEYNOTE LECTURE**
Structures and Functions of Nonribosomal Peptide Synthetases, Macromolecular Antibiotic Factories
 M. Schmeing, McGill University, Montreal/CDN
- 10:25 **Communication Breakdown: Dissecting the COM Interfaces between the Subunits of Nonribosomal Peptide Synthetases**
 C. Fage¹; S. Kosol¹; C. Öster¹; M. Jenner¹; J. Lewandowski¹; M. Marahiel²; ¹ University of Warwick, Coventry/UK; ² Philipps-Universität Marburg/D
- 10:50 **Structure-based redesign of docking domain interactions modulates the product spectrum of a rhabdopeptide-synthesizing NRPS**
 C. Hacker, Goethe University Frankfurt/D
- 11:15 **Coffee Break**
- 11:45 **Structural biology of modular polyketide biosynthesis**
 K. Weissman, Lorraine University, Vandoeuvre-Les-Nancy/F
- 12:10 **SHORT LECTURE**
The Non-Ribosomal Synthetase Ebony Encodes a Novel Type of Condensation Domain
 T. Izoré, J. Tailhades, M.J. Cryle, Monash University, Clayton/AUS
- 12:20 **SHORT LECTURE**
Promiscuity of the transferase of mouse type I fatty acid synthase (FAS) and implications for polyketide synthase (PKS) engineering
 A. Rittner, K.S. Paithankar, M. Grininger, Goethe University Frankfurt/D
- 12:30 **SHORT LECTURE**
Structural elucidation of CreD, a nitrosuccinate lyase involved in cremeomycin biosynthesis
 Y. Katsuyama¹, Y. Sato², Y. Sugai¹, Y. Higashiyama¹, M. Senda³, T. Senda³, Y. Ohnishi¹;
¹ The University of Tokyo/J; ²Tohoku University/J; ³KEK, Tsukuba/J
- 12:40 **Lunch & Posters**

PROGRAMME

Monday, 3 September 2018

Organic Syntheses

Chair: A. Kirschning, Leibniz University Hannover/D

- 14:00 **Biomimetic and Total Synthesis of Archazolid F and Novel Structural Analogs**
S. Scheeff¹; S. Rivière²; D. Menche¹; ¹ University of Bonn/D
- 14:25 **Evaluation of the Tetrapeptide GE81112A as an Antibacterial Lead**
G. Jürjens¹; S. Schuler¹; R. Wende¹; S. Petit²; F. Jeannot²; C. Couturier²; E. Bacque²; M. Kurz³; C. Pöverlein³; M. Mourez²; A. Marker³; F. Nguyen⁴; D. Wilson⁴; P. Hammann³; A. Bauer³; ¹ Sanofi-Fraunhofer Natural Products Center of Excellence / Fraunhofer IME, Gießen/D; ² Sanofi R&D, Marcy l'Etoile/F; ³ Sanofi-Aventis Deutschland GmbH, Frankfurt am Main/D; ⁴ Ludwig-Maximilians-Universität München/D
- 14:50 **Organocatalyzed hydrazination as key to hemiasterlin**
T. Lindel¹; J. Lang¹; N. Kanitz¹; ¹ TU Braunschweig/D

15:15 Coffee Break

Organic Syntheses

Chair: A. Kirschning, Leibniz University Hannover/D

- 15:45 **SHORT LECTURE**
Total Synthesis of Lagunamide A via highly stereoselective Matteson Homologation
J. Gorges, U. Kazmeier, Saarland University, Saarbrücken/D
- 15:55 **SHORT LECTURE**
Amidsyntheses as Chemobiosynthetic Tools for Challenging Macrolactamizations
C. Bartens, J. Hermans, A. Kirschning, Leibniz University Hannover/D
- 16:05 **SHORT LECTURE**
Studies Toward the Total Synthesis of the Marine Tetraterpenoid (-)-Gukulenin A
U. Bednarzick, D. Tymann, M. Hiersemann, TU Dortmund/D
- 16:15 **KEYNOTE LECTURE**
Strategies and Methods for Chemical Synthesis Inspired by Complex Natural Products
R. Sarpong, University of California, Berkeley, CA/USA
- 17:00 **POSTER DISCUSSION**
- 19:00 End of 1st Conference Day

Tuesday, 4 September 2018

Biosyntheses and Synthetic Biology

Chair: E. Dittmann, University of Potsdam/D

09:00

KEYNOTE LECTURE**Uncovering the “Dark Matter” of the Chemistry of Life**

F. Schroeder, Cornell University, Ithaca, NY/USA

09:45

Understanding the biosynthesis of the glycopeptide antibiotics

M. Cryle, Monash University, Victoria/AUS

10:10

Dissecting the biosynthetic machinery in bacterial polyunsaturated fatty acid synthasesS. Hayashi¹; M. Naka¹; Y. Satoh¹; Y. Ogasawara¹; T. Dairi¹; ¹ Hokkaido University, Sapporo, Hokkaido/J

10:35

Coffee Break

Biosyntheses and Synthetic Biology

Chair: D. Ober, University of Kiel/D

11:05

Dissection and rational engineering of the biosynthetic pathway to enacyloxin, a promising anti-Gram-negative antibioticJ. Masschelein¹; P. Sydor¹; C. Hobson¹; S. Kosol¹; A. Gallo¹; T. Valentini²; X. Jian¹; C. Jones³; E. Mahenthalingam³; S. Tsai²; J. Lewandowski¹; G. Challis¹; ¹ University of Warwick, Coventry/UK; ² University of California, Irvine, Irvine/USA; ³ Cardiff University, Cardiff/UK

11:30

Highjacking rRNA operons for antibiotic gene cluster expression - production of prodigiosin in *P. putida*A. Loeschcke¹; A. Domröse¹; R. Weihmann¹; J. Hage-Hülsmann¹; S. Thies¹; A. Grünberger²; A. Klein¹; J. Pietruszka¹; K. Jaeger¹; T. Drepper¹; ¹ Heinrich Heine University, Düsseldorf, Jülich/D; ² University of Bielefeld, Bielefeld/D

11:55

The Discovery of a Novel Signaling Molecule Containing the Unusual Diazonium Diolate Functional GroupS. Sieber¹; C. Jenul¹; C. Daepfen¹; A. Mathew¹; M. Lardi¹; G. Pessi¹; D. Hoepfner²; M. Neuburger³; A. Linden¹; K. Gademann¹; L. Eberl¹; ¹ University of Zürich/CH; ² Novartis Institutes for BioMedical Research, Basel/CH; ³ University of Basel/CH

12:20

Lunch & Posters

PROGRAMME

Tuesday, 4 September 2018

Biosyntheses and Synthetic Biology

Chair: D. Ober, University of Kiel/D

- 14:00 **Fungal biosynthesis of cyclic peptides with unique chemical properties**
T. Schafhauser¹; L. Jahn²; A. Kulik¹; N. Kirchner¹; H. Groß¹; J. Ludwig-Müller²; K. van Pée²; W. Wohlleben¹; ¹ University of Tübingen/D; ² Technical University of Dresden/D
- 14:25 **Twinning and mosaicity in ergothioneine biosynthesis**
F. Seebeck, University of Basel/CH
- 14:50 **Investigation of class iv lanthipeptide systems**
J. Hegemann¹; R. Shi²; M. Gross²; W. van der Donk¹; ¹ University of Illinois at Urbana-Champaign, Urbana, IL/USA; ² Washington University, St. Louis, MI/USA
- 15:15 **Coffee Break**

Biosyntheses and Synthetic Biology

Chair: R. Müller, Helmholtz-Institute for Pharmaceutical Research Saarland (HIPS), Saarbrücken/D

- 15:45 **In vitro reconstitution of RiPPs biosynthesis coupled by in vitro translation and post-translation modifications**
H. Onaka, Graduate School of Agricultural and Life Sciences, The University of Tokyo, Bunkyo/J
- 16:10 **Study on a dual functional cytochrome P₄₅₀ in the biosynthesis of macrolide antibiotic FD-891**
F. Kudo¹; A. Miyanaga¹; R. Takayanagi¹; T. Furuya¹; A. Motegi¹; T. Eguchi¹; ¹ Tokyo Institute of Technology, Tokyo/J
- 16:35 **KEYNOTE LECTURE**
Engineered Biosynthesis of Medicinal Natural Products
I. Abe, The University of Tokyo/J
- 17:20 **End of 2nd Conference Day**
- 19:00 **CONFERENCE DINNER**
- 23:00 **Restaurant Dauth-Schneider, Frankfurt-Sachsenhausen**

Wednesday, 5 September 2018

Biosyntheses / Targets and MoA

Chair: H. Brötz-Oesterhelt, University of Tuebingen/D

- 09:00 **Transcriptional gene cluster “refactoring” as key to secondary metabolites overproduction**
 L. Horbal¹; F. Marques²; A. Luzhetskyy¹; ¹ University of Saarland, Pharmaceutical Biotechnology, Saarbrücken/D; ² Helmholtz Institute for Pharmaceutical Research, Saarbrücken/D
- 09:25 **The Natural Product Mensacarcin induces Mitochondrial Toxicity Selectively in Melanoma Cells**
 B. Pnitzko, E.N. Kaweesa, S. Loesgen, Oregon State University, Corvallis, OR/USA
- 09:50 **SHORT LECTURE**
First discovery of fungal polyene macrolide by genome mining and heterologous expression of a cryptic HR-PKS cluster
 Y. Morishita¹; H. Zhang²; D. Hagiwara³; T. Asai¹; ¹The University of Tokyo/J; ²RIKEN Center for Life Science Technologies, Yokohama/J; ³ University of Tsukuba/J
- 10:00 **SHORT LECTURE**
Discovery and biosynthesis of the persiamycins, unusual polyglycosylated thiopeptides active against MDR tuberculosis
 Y. Dashti¹; M. Belousoff²; D. Zabala-Alvarez¹; C. Fage¹; A. Gallo¹; J. Lewandowski¹; F. Mohammadipanah³; A. Vocat⁴; J. Overmann⁵; S. Cole⁴; G. Challis⁶; ¹ University of Warwick, Coventry/UK; ² Monash University, Melbourne/AUS; ³ University of Tehran/IR; ⁴ Ecole Polytechnique Fédérale de Lausanne/CH; ⁵ Leibniz-Institute DSMZ, Braunschweig/D; ⁶ University of Warwick, Coventry/UK and Monash University, Melbourne/AUS
- 10:10 **SHORT LECTURE**
Filling the gaps in the biosynthetic pathway of the protein biosynthesis inhibitor kirromycin
 H. Lunde Robertsen¹; E. Musiol-Kroll²; S. Lee³; W. Wohlleben⁴; G. Williams⁵; S. Grond⁴; T. Weber⁶; ¹ Technical University of Denmark, Kgs. Lyngby/DK; ² Technical University of Denmark, Kgs. Lyngby/DK and University of Tübingen/D; ³ Technical University of Denmark, Kgs. Lyngb/DK and KAIST/KOR; ⁴ University of Tübingen/D; ⁵ North Carolina State University, Raleigh, NC/USA; ⁶ Technical University of Denmark, Kgs. Lyngby/D
- 10:20 **Target identification of compounds isolated from a fraction library of fungal broths**
 T. Nogawa¹; Y. Futamura¹; M. Muroi¹; N. Kato¹; H. Osada¹; ¹RIKEN, Wako-shi/J
- 10:45 **Coffee Break**

PROGRAMME

Wednesday, 5 September 2018

Biosyntheses / Targets and MoA

Chair: H. Brötz-Oesterhelt, University of Tuebingen/D

- 11:15 **SHORT LECTURE**
FR900359-the ultimate Gq inhibitor designed by nature
 M. Crüsemann¹; R. Reher²; I. Schamari²; C. Hermes²; E. Kostenis²; G. König²; ¹ Universität Bonn/D; ² University of Bonn, Institute of Pharmaceutical Biology, Bonn/D
- 11:25 **SHORT LECTURE**
Induction of nectriapyrone biosynthesis in the rice blast fungus *Pyricularia oryzae*
 T. Motoyama¹; T. Nogawa¹; H. Osada¹, ¹ RIKEN, Wako/J

Chemical Communication / Methods

Chair: J. Piel, ETH Zurich/CH

- 11:35 **KEYNOTE LECTURE**
Peptidomimetic Antibiotics: Inspired by Nature, and a return to Nature
 J. Robinson, University of Zurich/CH
- 12:20 **Plugging in Microfluidics/FACS technologies in industrial discovery processes to exploit invertebrate microbiomes for new Gram negative antibiotics**
 J. Glaeser¹; M. Spohn¹; M. Oberpaul¹; M. Marner¹; B. Leis¹; A. Vilcinskas¹; P. Hammann²; ¹ Fraunhofer IME-BR, Gießen/D; ² Sanofi-Aventis Deutschland GmbH, Frankfurt/D
- 12:45 **SHORT LECTURE**
New Approach for the determination of the relative configuration of natural products – the advanced floating chirality distance geometry approach
 M. Köck¹, S. Immel², M. Reggelin²; ¹ Alfred-Wegener-Institut für Polar- und Meeresforschung in der Helmholtz-Gemeinschaft, Bremerhaven/D and Helmholtz-Institut für Pharmazeutische Forschung Saarland (HIPS), Saarbrücken/D; ² Clemens-Schöpf-Institut für Organische Chemie und Biochemie, TU Darmstadt/D
- 12:55 **SHORT LECTURE**
Genome-wide chromatin mapping of *Aspergillus nidulans* reveals BasR, a novel regulator of bacteria-triggered fungal natural product biosynthesis
 J. Fischer¹; S. Müller²; A. Gacek-Matthews³; N. Jäger⁴; T. Netzker¹; K. Scherlach¹; M. Stroe¹; M. García-Altres¹; F. Pezzini¹; M. Krespach¹; E. Shelest¹; V. Schroeckh¹; V. Valiante¹; T. Heinzel⁴; C. Hertweck¹; J. Strauss³; A. Brakhage¹; ¹ Leibniz Institute for Natural Product Research and Infection Biology - Hans Knöll Institute (HKI), Jena/D; ² University of Cambridge/UK; ³ BOKU-University of Natural Resources and Life Sciences, Tulln/A; ⁴ Friedrich Schiller University Jena/D
- 13:05 **SHORT LECTURE**
Plant pathogenic anaerobic bacteria use aromatic polyketides to access aerobic territory
 G. Shabuer¹; K. Ishida¹; S. Pidot²; M. Roth¹; H. Dahse¹; C. Hertweck¹; ¹ Leibniz Institute for Natural Product Research and Infection Biology (HKI), Jena/D; ² University of Melbourne at the Peter Doherty Institute for Infection and Immunity, Melbourne/AUS

- 13:15 **Lunch & Posters**

Wednesday, 5 September 2018

Chemical Communication / Methods

Chair: J. Dickschat, University of Bonn/D

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- 14:15 **A computational framework for rapid exploration and prioritization of biosynthetic diversity from large-scale genomic data**
J. Navarro-Muñoz¹; N. Selem-Mojica²; M. Mullooney³; S. Kautsar¹; H. Tryon³; E. Parkinson⁴; E. De Los Santos⁵; M. Yeong¹; P. Cruz-Morales²; S. Abubucker⁶; A. Roeters¹; W. Lokhorst¹; A. Fernandez-Guerra⁷; L. Cappelini³; R. Thomson³; W. Metcalf⁴; N. Kelleher³; F. Barona-Gomez²; M. Medema¹; ¹ Wageningen University & Research, Wageningen/NL; ² Langebio, Guanajato/MEX; ³ Northwestern University, Evanston, IL/USA; ⁴ University of Illinois at Urbana-Champaign, Urbana-Champaign, IL/USA; ⁵ University of Warwick/UK; ⁶ Novartis Institutes of Biomedical Research, Cambridge, MA/USA; ⁷ Max Planck Institute for Marine Microbiology, Bremen/D
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- 14:40 **SHORT LECTURE**
Metabolic engineering: A powerful tool for improving glycopeptide production
E. Stegmann¹; V. Goldfinger¹; M. Spohn¹; W. Wohlleben¹; ¹ University of Tuebingen/D
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- 14:50 **Gel Free Targeted Cloning of Large Biosynthetic Gene Clusters**
D. Mead, D. Johnson, J. MacDonald, P. Brumm, R. Stankey, Varigen Biosciences, Madison, WI/USA
-
- 15:15 **Direct Pathway Cloning (DiPaC) to Unlock Natural Product Biosynthetic Potential**
P. D'Agostino¹; C. Greunke¹; E. Duell¹; A. Glöckle¹; K. Lamm¹; T. Gulder¹; ¹ Technische Universität München, Garching/D
-
- 15:40 **CLOSING**
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- 15:50 **End of conference**

POSTER PROGRAMME

Structural Biology

- P 002 **LC-MS based dereplication and isolation of compound from Arctic marine bryozoan *Dendrobeania murrayana***
P. Michael¹; ¹ University of Tromsø, Tromsø/N
- P 003 **Structural Characterisation of PPK2 Enzymes**
S. Mordhorst¹; A. Parnell²; H. Jessen¹; P. Roach²; J. Andexer¹; ¹ University of Freiburg, Freiburg/D; ² University of Southampton, Southampton/UK
- P 004 **Antibacterial 3-cyclopropyl-12-deacetoxy-11,24-diacetoxy-deoxoscalarin of the dorid nudibranch *Doriprismatica stellata* (Gastropoda, Mollusca) and its egg ribbons. A scalarane sesterterpene acquired from its dietary sponge**
C. Hertzler¹; ¹ University of Bonn, Institute of Pharmaceutical Biology, Bonn/D
- P 005 **Extracellular Complexes of Glycosylphosphatidylinositol-Anchored Proteins and (Phospho)Lipids as Phenomenological Biomarkers**
G. Müller¹; A. Herling²; K. Stemmer³; A. Lechner⁴; M. Tschöp¹; ¹ Helmholtz Zentrum München, München-Neuherberg/D; ² Sanofi GmbH Deutschland, Frankfurt am Main/D; ³ Helmholtz Zentrum München, München/D; ⁴ Ludwig-Maximilians-Universität München, München/D
- P 006 **Structure-function analysis of a new docking domain class identified in the PAX peptide producing NRPS of *Xenorhabdus bovienii***
J. Wätzel¹; C. Hacker¹; H. Bode¹; J. Wöhnert¹; ¹ Goethe University Frankfurt, Frankfurt am Main/D

Targets and MoA of Natural Products

- P 007 **Tracing trisoxazole macrolide allocation in the sponge *Penares nux* by metabolomics approach**
O.O. Olatunji¹; A. Plubrukarn¹; ¹ Faculty of Pharmaceutical Sciences, Prince of Songkla University/T
- P 008 **Cytotoxic arylnaphthalene lignan Justicidin B from in vitro cultures of *Linum leonii***
I. Ionkova¹; P. Popova¹; G. Momekov¹; ¹ Faculty of Pharmacy, Medical University of Sofia, Sofia/BG
- P 009 **Study on antiproliferative and apoptotic effects of high dose vitamin C in cholangiocarcinoma cell line**
N. Somparn¹; ¹ Faculty of Medicine, Thammasat University, Pathumthani/T
- P 010 **Phytochemical analysis of *Mentha longifolia* and their potential as neuroprotective agents against Alzheimer's disease**
S. Elshamy¹; H. Handoussa¹; D. Medhat²; M. Abdel-Halim³; A. Abd El Motaal⁴; ¹ Faculty of Pharmacy and Biotechnology, German University, Cairo/ET; ² National Research Centre, Dokki, Giza/ET; ³ Faculty of Pharmacy and Biotechnology, German University, Cairo/ET; ⁴ College of Pharmacy, King Khaled University, Abha/SAR

P 011 **Screening for novel protein synthesis inhibitors from uncharacterized streptomycetes of the 'Tübingen strain collection'**
F. Handel¹; K. Wex¹; W. Wohlleben¹; Y. Mast¹; ¹ Eberhard Karls University Tübingen, Tübingen/D

P 012 **Kalimantacin as a new FabI inhibitor in *S. aureus***
T. Lathouwers¹; C. Fage²; M. Vanmeert¹; K. Vrancken¹; R. Degroote¹; E. Lescrinier¹; P. Herdewijn¹; R. Lavigne¹; J. Anné¹; J. Masschelein¹; ¹ KU Leuven, Leuven/B; ² University of Warwick, Coventry/UK

P 013 **The first pigment study on a Chilean *Myxaciium* species – *Cortinarius pyromyxa* reveals new nor-guanacastepenes**
T. Lam¹; G. Palfner²; A. Porzel¹; W. Brandt¹; A. Frolov¹; C. Wagner³; K. Merzweiler³; L. Wessjohann¹; N. Arnold¹; ¹ Leibniz Institute of Plant Biochemistry, Halle/D; ² Universidad de Concepción, Concepción/RCH; ³ Martin-Luther University Halle-Wittenberg, Halle/D

P 015 **The putative PAINS nostotrebin 6 and derivatives from *Nostoc* sp. inhibit the trypanosomal cysteine protease rhodesain**
R. Kossack¹; S. Breinlinger¹; T. Nguyen²; T. Schirmeister³; H. Enke⁴; T.H.J. Niedermeyer¹; ¹ Martin-Luther-Universität Halle-Wittenberg, Halle/D; ² Eberhard Karls Universität Tübingen, Tübingen/D; ³ Johannes Gutenberg-Universität Mainz/D; ⁴ Cyano Biotech GmbH, Berlin/D

P 016 **Discovery of MDN-0207: A novel lanthipeptide with unprecedented structural features and unusual mode of action**
O. Genilloud¹; F. Ortiz-López¹; D. Carretero-Molina¹; J. Martin¹; M. de la Cruz¹; M. Sanchez¹; C. Diaz¹; I. Gonzalez¹; M. Morosini²; F. Vicente¹; F. Reyes¹; J. Deisinger³; A. Müller³; T. Schneider³; ¹ Fundacion MEDINA, Granada/E; ² Hospital Universitario Ramón y Cajal, Madrid/E; ³ University of Bonn, Institute of Pharmaceutical Biology, Bonn/D

P 017 **Evolution of griselimycin-based fragments as sliding clamp DnaN binders via dynamic combinatorial chemistry**
W. Elgaher¹; A. Schulte¹; P. Lukat²; J. Herrmann¹; N. Reiling³; W. Blankenfeldt²; R. Müller¹; A. Hirsch¹; ¹ Helmholtz Institute for Pharmaceutical Research Saarland (HIPS), Saarbrücken/D; ² Helmholtz Centre for Infection Research (HZI), Braunschweig/D; ³ Research Center Borstel, Leibniz Center for Medicine and Biosciences, Borstel/D

Organic Synthesis

P 018 **Stereoselective Arene-Forming Aldol Condensation: Synthesis of Axially Chiral Aromatic Amides**
V. Fäseke¹; C. Sparr¹; ¹ University of Basel, Basel/CH

P 019 **Novel Microwave-assisted Approach towards Dibenzo[b,d]pyran-6-ones**
S. Behne¹; B. Schmidt¹; ¹ University of Potsdam, Potsdam/D

P 020 **Towards the Total Synthesis of the Salarins, Marine Macrolides from the Sponge *Fascaplysinopsis* sp.**
J. Schäckermann¹; T. Lindel¹; ¹ TU Braunschweig, Braunschweig/D

POSTER PROGRAMME

- P 021 **Studies on the structure elucidation of a linear azole containing peptide from *Clostridium botulinum***
B. Schmid¹; R. Süßmuth¹; ¹ TU Berlin, Department of Chemistry, Berlin/D
- P 022 **Studies towards the total synthesis of Xenovulene A**
P. Li¹; R. Cox¹, A. Kirschning¹; ¹ Leibniz Universität Hannover, Hannover/D
- P 023 **Syntheses of Carolacton Derivatives as highly potent Biofilm Inhibitors**
J. Meyer¹; J. Ammermann¹, A. Kirschning¹; ¹ Leibniz Universität Hannover, Hannover/D
- P 024 **Towards the total synthesis of Cochimicin I and its role as potent Cyclopeptide Endothelin Antagonist**
R. Schnegotzki¹; R. Süßmuth¹; ¹ TU Berlin, Berlin/D
- P 025 **Photochemically triggered Benzannulative Two-Carbon Ring Expansion as a Key Step for the Synthesis of Cyclohepta[b]indoles**
D. Tymann¹; D. Hafki¹; M. Hiersemann¹; ¹ TU Dortmund, Fakultät für Chemie und Chemische Biologie, Dortmund/D
- P 026 **Towards the Total Synthesis of the Cystobactamids**
T. Planke¹; A. Kirschning, ; ¹ Leibniz Universität Hannover, Hannover/D
- P 027 **Xylochemistry – Making Natural Products from Wood-based Starting Materials**
J. Kühlborn¹; A. Lipp¹; T. Opatz¹; ¹ Johannes Gutenberg-University Mainz, Mainz/D
- LMP OS 1 **Design and Synthesis of novel Macrolide-based Antibiotics**
D. Möller¹, S. Heinrich¹, N. Pryk¹, J. Bandow², F. Schulz¹; ¹ Ruhr-Universität Bochum, Faculty of Chemistry, Bochum/D; ² Ruhr-Universität Bochum, Faculty of Biology, Bochum/D

Biosyntheses and Synthetic Biology

- P 028 **Mining and Expressing Biosynthetic Gene Clusters from Soil Metagenomes**
D. Mead¹; ¹ Varigen Biosciences, Madison, WI/USA
- P 029 **Antisense RNAs are able to affect antibiotic production in *Streptomyces***
P. Pohl¹, D. Šetinová², J. Bobek^{1,2}; ¹ Jan Evangelista Purkyně University, Ústí nad Labem/CZ; ² Charles University, Prague/CZ
- P 030 **Identification of a New Family of Discrete Offloading Enzyme in Non-ribosomal Peptide Biosynthesis**
K. Matsuda¹; M. Kobayashi¹; A. Sano¹; T. Kuranaga¹; T. Wakimoto¹; ¹ Hokkaido University, Sapporo/J
- P 031 **Genome-wide metabolic engineering for activation of the silent secondary metabolites gene clusters in *Streptomyces* species**
K. Arakawa¹; ¹ Hiroshima University, Hiroshima Prefecture/J
- P 032 **Cellular morphology of filamentous organisms in natural product biosynthesis**
M. Papenfuß¹; A. Spieß¹; ¹ TU Braunschweig – Institut für Bioverfahrenstechnik, Braunschweig/D

- P 033 **New bioactive prodigiosin derivatives – Synthetic Biology meets Organic Chemistry**
A. Klein¹; H. Brass¹; A. Domröse²; A. Loeschcke¹; T. Drepper¹; T. Classen³; S. Sievers⁴;
 K. Jaeger¹; J. Pietruszka¹; ¹ Heinrich-Heine-Universität Düsseldorf im Forschungszentrum
 Jülich, Jülich/D; ² Heinrich-Heine-Universität Düsseldorf, Düsseldorf/D; ³ Forschungs-
 zentrum Jülich GmbH, Jülich/D; ⁴ Max Planck Institute of Molecular Physiology,
 Dortmund/D
-
- P 034 **Regulatory mechanism of mycotoxin tenuazonic acid biosynthesis in *Pyricularia oryzae***
Y. Choong-Soo¹; M. Takayuki¹; O. Hiroyuki¹; ¹ RIKEN center for Sustainable Resource
 Science, Wako/J
-
- P 035 **Elucidating and Mimicking Evolutionary Processes in Modular Type I Polyketide Synthases**
 H. Peng¹; Y. Sugimoto¹; K. Ishida¹; C. Hertweck¹; ¹ Leibniz Institute for Natural Product
 Research and Infection Biology – Hans Knöll Institute (HKI), Jena/D
-
- P 036 **Construction of recombinant bacterial cell factories for biosurfactant production**
 S. Thies¹; S. Kubicki¹; I. Bator²; A. Loeschcke¹; A. Domröse¹; R. Wehmann¹; T. Drepper¹;
 T. Tiso²; L. Blank²; K. Jaeger¹; ¹ Heinrich-Heine University Düsseldorf, Jülich/D; ² RWTH
 Aachen University, Aachen/D
-
- P 037 **Modification of the produced spectrum of pamamycins by precursor supply modulation**
N. Gummerlich¹; N. Manderscheid²; Y. Rebets¹; L. Petzke³; A. Luzhetskyy¹; ¹ Universität
 des Saarlandes, Saarbrücken/D; ² Boehringer Ingelheim, Biberach/D; ³ BASF SE,
 Ludwigshafen/D
-
- P 038 ***Trichoderma reesei*: a versatile expression host for bioactive metabolites production**
E. Bassiony¹; E. Skellam²; R. Cox²; ¹ Zagazig University faculty of Science, Cairo/ET;
² Leibniz Universität Hannover, Hannover/D
-
- P 039 **Metabolic engineering of *Corynebacterium glutamicum* for the fermentative production of halogenated tryptophan**
K. Veldmann¹; J. Lee²; V. Wendisch¹; ¹ Bielefeld University, Genetics of Prokaryotes,
 Faculty of Biology & CeBiTec, Bielefeld/D; ² Kyungshung University, Major in Food
 Science & Biotechnology, School of Food Biotechnology & Nutrition, Busan/ROK
-
- P 040 **An unprecedented glutamate epimerase for bacterial peptidoglycan biosynthesis**
R. Feng¹; Y. Satoh¹; Y. Ogasawara¹; T. Dairi¹; ¹ Hokkaido University, Sapporo/J
-
- P 041 **Exploration of Futasoline Pathway Specific Inhibitors**
Y. Ogasawara¹; K. Kondo¹; Y. Sato¹; Y. Shimizu¹; R. Harada¹; A. Ikeda¹; T. Dairi¹;
¹ Hokkaido University, Sapporo/J
-
- P 042 **Phosphonate production in *Kitasatospora sp. TŪ4103***
J. Krause¹; W. Wohlleben¹; Y. Mast¹; ¹ Universität Tübingen, Tübingen/D

POSTER PROGRAMME

- P 043 **Biosynthesis of Vincristine and Vinblastine Precursors**
L. Caputi¹; J. Franke²; S. Farrow¹; K. Chung¹; R. Payne¹; T. Nguyen¹; T. Dang¹; I. Soares Teto Carqueijeiro³; K. Koudounas³; T. Dugé de Bernonville³; B. Ameyaw¹; D. Jones¹; I. Curcino Vieira⁴; V. Courdavault³; S. O'Connor¹; ¹ John Innes Centre, Norwich/UK; ² Leibniz Universität Hannover, Hannover/D; ³ Université François-Rabelais de Tours, Tours/F; ⁴ Universidade Estadual do Norte Fluminense Darcy Ribeiro, Campos dos Goytacazes/BR
-
- P 044 **Reconstitution of a Type II Polyketide Synthase Catalyzing Polyene Formation**
D. Du¹; Y. Katsuyama¹; K. Shin-ya²; Y. Ohnishi¹; ¹ The University of Tokyo, Tokyo/J; ² National Institute of Advanced Industrial Science and Technology (AIST), Tokyo/J
-
- P 045 **Biosynthesis of fungus-derived furanosteroidal antibiotic demethoxyviridin, a potent inhibitor of PI3K**
D. Hu¹; H. Gao¹; I. Abe²; X. Yao¹; ¹ Jinan University, Guangzhou/CN; ² The University of Tokyo, Tokyo/J
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- P 046 **Novel Ring-Forming Enzymes in Tetrionate Biosynthesis**
R. Little¹; ¹ University of Cambridge, Cambridge/UK
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- P 047 **The Role of the two P450 Oxygenases in Kistamicin Biosynthesis**
A. Greule¹; T. Izoré¹; J. Tailhades¹; M. Cryle¹; ¹ Monash University, Clayton, Melbourne, Victoria/AUS
-
- P 048 **Biosynthesis of Polythioamide Antibiotics in Anaerobic Bacteria**
M. Dell¹; ¹ Hans-Knöll-Institut Jena, Jena/D
-
- P 049 **Fascinating Stachybotrys – novel cytotoxic meroterpenoids, chemically inspired isolation approaches and application of an LC-MS/MS multi-method**
A. Jagels¹; ¹ Westfälische Wilhelmsuniversität, Münster/D
-
- P 050 **Biosynthesis of the depsipeptide FR900359 – Investigation of the first NRPS module FrsA**
C. Hermes¹; M. Crüsemann¹; G. König¹; ¹ University of Bonn, Institute of Pharmaceutical Biology, Bonn/D
-
- P 051 **Studies on the Role of AmbF in the Biosynthesis of the Divinylcyclopropanediyl Fragment of the Ambruticins**
J. Wunderlich¹; F. Hemmerling¹; F. Hahn¹; ¹ Universität Bayreuth, Bayreuth/D
-
- P 053 **Production of diverse diterpenoid pyrones by re-construction and re-designing of fungal biosynthetic pathways in *Aspergillus oryzae***
K. Tsukada¹; S. Shinki¹; A. Kaneko¹; T. Asai¹; ¹ The University of Tokyo, Tokyo/J
-
- P 054 **C-Methylation mechanism in fosfomicin biosynthesis**
S. Sato¹; F. Kudo¹; T. Kuzuyama²; T. Eguchi¹; ¹ Tokyo Institute of Technology, Tokyo/J; ² The University of Tokyo, Tokyo/J
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- P 055 **Biosynthetic study of abscisic acid in fungi**
J. Takino¹; T. Kozaki¹; C. Liu¹; T. Ozaki¹; A. Minami¹; H. Oikawa¹; ¹ Hokkaido University, Sapporo/J

- P 056 **Enzymatic Halogenation of Pyrrole-based Natural Products**
 J. Gebauer¹; A. Fejzagic¹; T. Classen²; ¹ Heinrich-Heine-Universität Düsseldorf, Jülich/D; ² Forschungszentrum Jülich GmbH, Jülich/D
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- P 057 **Genome mining of *Streptomyces sp. Go-475* isolated from a unique environmental niche in Ethiopia**
 J. Guerrero Garzón¹; S. Zotchev¹; M. Kibret²; E. Urban³; M. Zehl⁴; V. Wronski¹; C. Rückert⁵; T. Busche⁵; J. Kalinowski⁵; J. Rollinger¹; D. Abate²; ¹ Department of Pharmacognosy, University of Vienna, Vienna/A; ² Microbial, Cellular and Molecular Biology Department, College of Natural Science, Addis Ababa University, Addis Ababa/ETH; ³ Department of Pharmaceutical Chemistry, University of Vienna, Vienna/A; ⁴ Department of Analytical Chemistry, Faculty of Chemistry, University of Vienna, Vienna/A; ⁵ Center for Biotechnology, Bielefeld University, Bielefeld/D
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- P 058 **Biosynthesis of aminophenylpyrrole-derived alkaloids by marine Cytophagales bacteria reveals enzymatic basis for structural diversity**
 L. Linares Otoy¹; Y. Liu¹; T.F. Schäberle¹; ¹ Justus Liebig University of Giessen/D
-
- P 059 **Unusual cyclization occurs via nitrene transfer-like reaction catalyzed by cytochrome P450 in benzastatin biosynthesis**
 H. Tsutsumi¹; Y. Katsuyama¹; M. Izumikawa²; M. Takagi²; M. Fujie³; N. Satoh³; K. Shin-ya⁴; Y. Ohnishi¹; ¹ The University of Tokyo, Tokyo/J; ² JBC, Tokyo/J; ³ OIST, Okinawa/J; ⁴ AIST, Tokyo/J
-
- P 060 **The bicyclomycin biosynthetic gene cluster and its dissemination among environmental and pathogenic bacteria**
 N. Miguel-Vior¹; ¹ John Innes Centre, Norwich/UK
-
- P 061 **Engineering of lanthipeptide class II lichenicidin: Mutagenesis of B ring Bli α lichenicidin**
 L. Sukmarini¹; ¹ Technische Universität Berlin, Berlin/D
-
- P 062 **Modulation of carrier protein-catalytic domain interactions in fatty acid synthases**
 E. Rossini¹; J. Gajewski²; M. Klaus²; M. Grininger²; G. Hummer³; ¹ Max Planck Institute of Biophysics, Frankfurt am Main/D; ² Goethe University Frankfurt, Frankfurt am Main/D; ³ Max Planck Institute of Biophysics, Frankfurt/D and Institute of Biophysics, Goethe University Frankfurt, Frankfurt am Main/D
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- P 063 **Identification and in silico analysis of a BGC encoding the biosynthesis of three new 36-membered bioactive macrolactones**
 D. Oves-Costales¹; M. Sanchez-Hidalgo²; I. Pérez-Victoria²; R. Lacret²; F. Reyes²; O. Genilloud²; ¹ Fundación MEDINA, Armilla, Granada/E; ² Fundación MEDINA, Granada/E
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- P 064 **Biosynthesis of quinolidomycin: Identification and heterologous expression of the biosynthetic gene cluster over 200 kb**
 T. Hashimoto¹; K. Amagai²; T. Kawahara³; J. Hashimoto³; I. Kozone³; S. Takahashi²; H. Ikeda⁴; K. Shin-ya¹; ¹ National Institute of Advanced Industrial Science and Technology (AIST), Tokyo/J; ² RIKEN center for Sustainable Resource Science, Saitama/J; ³ Japan Biological Informatics Consortium, Tokyo/J; ⁴ Kitasato Institute for Life Sciences/Kitasato University, Kanagawa/J

POSTER PROGRAMME

- P 065 **Exploiting the unexploited - Antifungals against *Candida albicans* and *Fusarium oxysporum* from uncultivable microorganisms**
M. Obermeier¹; S. Hollauf²; F. Stocker¹; I. Wrolli³; C. Müller³; G. Berg³; ¹ ACIB GmbH/ TU Graz Institut für Umweltbiotechnologie, Graz/A; ² ACIB GmbH, Graz/A; ³ Institute of Environmental Biotechnology, TU Graz, Austria, Graz/A
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- P 066 **Exploring the plant microbiome for nonribosomal peptide synthetase diversity**
C. Müller¹; S. Hollauf¹; M. Obermeier²; G. Berg¹; ¹ Graz University of Technology, Graz/A; ² ACIB GmbH/ Graz University of Technology, Graz/A
-
- P 067 **High Quality Screening at NAICONS: unusual and novel antibiotics from rare Actinomycetes**
S. Maffioli¹; M. Iorio¹; S. Pessina¹; A. Bernasconi¹; B. D'Orio¹; J. Cruz¹; C. Brunati¹; P. Monciardini¹; M. Sosio¹; S. Donadio¹; ¹ NAICONS srl, Milan/I
-
- P 068 **Artificial splitting of a non-ribosomal peptide synthetase by inserting natural docking domains**
C. Kegler¹; H. Bode¹; ¹ Goethe-Universität Frankfurt, Frankfurt am Main/D
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- P 069 **Dividing condensation domains by half – A new strategy for the engineered biosynthesis of non-ribosomal peptides**
A. Tietze¹; K. Bozhüyük¹; A. Linck¹; H. Bode¹; ¹ Goethe-Universität Frankfurt, Frankfurt am Main/D
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- P 070 **Fabclavine Biosynthesis: Multiple mechanisms for natural product diversification in a peptide, polyketide, polyamine hybrid**
S. Wenski¹; H. Bode¹; ¹ Goethe-Universität Frankfurt am Main, Frankfurt am Main/D
-
- P 071 **An unprecedented post-translational modification creates α -keto- β -amino acids in Nif11 peptide natural products**
A. Vagstad¹; ¹ ETH Zurich, Zurich/CH
-
- P 072 **FrsC, a novel type of dehydrogenase involved in FR900359 biosynthesis**
R. Richarz¹; N. Vasenda¹; M. Crüsemann¹; G. König¹; ¹ Rheinische Friedrich-Wilhelms-Universität Bonn, Bonn/D
-
- P 073 **Synthesis of atypical polyketide extender units and substrate specificity of AT domains**
K. Geyer¹; T. Erb¹; ¹ Max Planck Institute for Terrestrial Microbiology, Marburg/D
-
- P 074 **Identifying metabolic functions of uncultivated microbiota by Raman microscopy, single-bacterial genomics and biochemical studies**
F. Hemmerling¹; H. Maciejewska-Rodrigues¹; T. Mori²; M. Hosokawa²; H. Takeyama²; J. Piel¹; ¹ ETH Zürich, Zürich/CH; ² Waseda University, Tokyo/J
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- P 075 **Deciphering the biosynthesis of acetylenic phenol metabolites produced by *Eutypa lata***
F. Schmidt¹; J. Fischer¹; Y. Shi²; H. Kassemeyer³; H. Bode²; A. Schöffler¹; ¹ IBWF - Institut für Biotechnologie und Wirkstoff-Forschung gGmbH, Kaiserslautern/D; ² Molekulare Biotechnologie, Fachbereich Biowissenschaften, Goethe Universität Frankfurt, Frankfurt am Main/D; ³ Staatliches Weinbauinstitut, Albert-Ludwigs-Universität Freiburg/D

- P 076 **Beyond the Isoprene Rule - Investigation of non-canonical bacterial terpenes**
 M. Kschowak¹; H. Wortmann¹; L. Drummond¹; J. Dickschat²; J. Schrader¹; M. Buchhaupt¹;
¹ DEHEMA-Forschungsinstitut, Frankfurt am Main/D; ² Rheinische Friedrich Wilhelms University, Bonn/D
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- P 077 **Influence of Nutrient Limitation on the Production Profile of Bacterial Strains with High Biosynthetic Potential**
J. Schwarz¹; S. Lütz¹; ¹ TU Dortmund, Lehrstuhl für Bioprozesstechnik, Dortmund/D
-
- P 078 **Process design for recombinant expression of non-ribosomal peptide synthases as factories of potential biomolecules**
A. Oestreich¹; ¹ Institute of Bioprocess Engineering and Pharmaceutical Technology, University of Applied Sciences Mittelhessen, Gießen/D
-
- P 079 **Uncommon Mechanism of a type II PKS derived Aryl Polyene Pigment produced by *Xenorhabdus doucetiae***
G. Grammbitter¹; ¹ Goethe-Universität Frankfurt, Frankfurt am Main/D
-
- P 080 **Lipolanthines - Ribosomally Synthesized Lipopeptides with Anti-Staphylococcal Activity**
V. Wiebach¹; A. Mainz¹; M. Siegert¹; N. Jungmann¹; G. Lesquame²; S. Tirat³; A. Dreux-Zigha²; J. Aszodi²; D. Le Beller²; R. Süßmuth¹; ¹ Technische Universität Berlin, Institut für Chemie, Berlin/D; ² Deinobiotics, Grabels/F; ³ Université Lille 1, Lille/F
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- P 081 **β-lactone ring formation in ebelactone**
K. Dornblut¹; ¹ University of Cambridge, Cambridge/UK
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- P 082 **Self-resistance guided genome mining uncovers new topoisomerase inhibitors from myxobacteria**
F. Panter¹; D. Krug¹; S. Baumann¹; R. Müller¹; ¹ Helmholtz-Institut für Pharmazeutische Forschung Saarland (HIPS), Saarbrücken/D;
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- P 083 **Structural Characterization of Cytochrome Sas16, mediates the formation of the dehydrotyrosine residue in WS9326A**
 S. Zhang¹, L. Zhang², A. Greule³, J. Zhu¹, M. Cryle³, O. Einsle², A. Bechthold¹;
¹ Department of Pharmaceutical Biology and Biotechnology, University of Freiburg/D; ² Institute for Biochemistry, University of Freiburg/D; ³ EMBL Australia, Monash University, Clayton/AUS
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- P 084 **Assembly of a biofactory – Insights from fungal fatty acid synthase for engineering a megasynthase compartment**
 M. Fischer¹; M. Joppe¹; A. Rill¹; M. Grininger^{1,4} ¹ Institute of Organic Chemistry and Chemical Biology, Buchmann Institute for Molecular Life Sciences, Goethe University Frankfurt, Frankfurt am Main/D
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- P 085 **New antibacterial compounds from MEDINA's actinomycetes collection**
 F. Ortiz-López¹; D. Carretero-Molina¹; C. Diaz¹; M. de la Cruz²; I. Gonzalez¹; F. Reyes¹; F. Vicente¹; O. Genilloud¹; ¹ Fundacion MEDINA, Granada/E
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- P 086 **Novel gram- superhost for heterologous expression**
K. Buntin¹; ¹ Novartis Pharma AG, Basel/CH

POSTER PROGRAMME

P 087 **PRISEs (progesterone 5 β -reductase and/or iridoid synthase-like 1,4-enone reductases): Catalytic and substrate promiscuity allows for realization of multiple pathways in plant metabolism**
K. Schmidt¹; J. Petersen¹; J. Munkert¹; C. Egerer-Sieber¹; M. Hornig¹; Y. Muller¹; W. Kreis¹;
¹ FAU Erlangen-Nürnberg, Erlangen/D

P 088 **Early Steps in the Biosynthetic Pathway of Rishirilide B**
P. Schwarzer¹; ¹ Albert-Ludwigs-Universität Freiburg, Freiburg/D

P 089 **Purification and Functional Investigations of Two Exceptional trans-Adenylation Domains from a Non-ribosomal Peptide Cluster of *Streptomyces calvus***
M. Bernhardt¹; ¹ Albert-Ludwigs-Universität Freiburg, Freiburg/D

Chemical Communication

P 090 **Biosynthetic Potential and Chemical Diversity of Microbial Associated with Fungus-growing Termites**
H. Guo¹; R. Benndorf¹; D. Lechnitz¹; P. Stefan¹; A. Schmidt¹; C. Beemelmanns¹; ¹ Leibniz Institute for Natural Product Research and Infection Biology e.V. Hans-Knöll-Institute, Jena/D

P 091 **A Novel Chemical Mediator in Bacteria-Host Interactions**
R. Hermenau¹; K. Ishida¹; B. Hoffmann¹; J. Mohr²; S. Gama²; W. Plass²; T. Wichard²;
H. Saluz¹; C. Hertweck¹; ¹ Leibniz Institute for Natural Product Research and Infection Biology – Hans Knöll Institute (HKI), Jena/D; ² Friedrich Schiller University Jena, Jena/D

P 092 **Towards a deeper understanding of *Streptomyces iranensis*-triggered natural product formation in *Aspergillus nidulans***
M. Krespach¹; T. Netzker¹; V. Schroeckh¹; K. Scherlach²; C. Hertweck²; A. Brakhage¹;
¹ Department of Molecular and Applied Microbiology, Leibniz Institute for Natural Product Research and Infection Biology (HKI), Jena/D; ² Department of Biomolecular Chemistry, Leibniz Institute for Natural Product Research and Infection Biology (HKI), Jena/D

P 095 **Mighty Midgets – Chemical Ecology of *Laccaria* species (Fungi)**
H. Schrey¹; ¹ University of Bremen, Bremen/D

P 096 **New antibacterial compounds from MEDINA's actinomycetes collection**
F. Javier Ortiz-López¹; D. Carretero-Molina¹; C. Díaz¹; M. de la Cruz¹; I. González¹; F. Reyes¹;
F. Vicente¹; O. Genilloud¹; ¹ Fundación MEDINA, Granada/E

Methods (from bioinformatics to screening)

P 097 **Using one natural product to convert fibroblasts to neurons on a chip and its application for neurotoxicity evaluation**
J. Theobald¹; S. Wölfel¹; X. Cheng¹; ¹ Heidelberg University - Institute of Pharmacy and Molecular Biotechnology (IPMB), Heidelberg/D

P 099 **LC-UV-MS-CD-assisted Discovery of Novel-Type Naphthylisoquinoline Dimers in a Congolese Ancistrocladus Plant**
B. Lombe¹; T. Bruhn¹; D. Feineis¹; V. Mudogo²; G. Bringmann¹; ¹ Julius-Maximilians Universität Würzburg/D; ² Université de Kinshasa/ZRE

- P 100 **Genetic features of the human associated *Streptomyces sp. TR42***
 E. Corretto¹; A. Chroňáková¹; M. Petříšek²; M. Čihák²; A. Herbrík²; J. Scharfen³; K. Petříčková²; ¹ Institute of Soil Biology, Biology Centre, Czech Academy of Sciences, České Budejovice/CZ; ² Charles University, 1st Faculty of Medicine, Prague/CZ; ³ National Reference Laboratory for Pathogenic Actinomycetes, Trutnov Hospital, Trutnov/CZ
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- P 101 **Antibiotic compounds from fungal endophytes of rare medicinal plants**
 M. Oberhofer¹; J. Wackerlig²; H. Isikoglu²; C. Haager¹; D. Dobusch²; E. Urban²; S. Zotchev¹; ¹ Department of Pharmacognosy, University of Vienna/A; ² Department of Pharmaceutical Chemistry, University of Vienna/A
-
- P 102 **clusterTools: proximity searches for functional elements to identify putative biosynthetic gene clusters**
 E. de los Santos¹; G. Challis²; ¹ University of Warwick, Coventry/UK; ² University of Warwick and Monash University, Coventry/UK
-
- P 103 **Metabolomic Analysis Guided Investigation of African Hypericum species for Bioactive Compound Discovery**
 S. Fobofou¹; ¹ Martin-Luther-Universität Halle-Wittenberg, Halle/D
-
- P 104 **Labeling Natural Products in Complex Extracts**
 C. Hughes¹; G. Castro-Falcon¹; G. Seiler¹; ¹ Scripps Institution of Oceanography, UCSD, La Jolla, CA/USA
-
- P 105 **Identification of fungal fossils and novel bisazaphilone pigments in ancient specimens dating back to the Bronze Age**
 K. Becker¹; ¹ Helmholtz-Zentrum für Infektionsforschung (HZI), Braunschweig/D
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- P 106 **BiG-FAM: a comprehensive and interactive database of Biosynthetic Gene Cluster families**
 S. Kautsar¹; M. Medema¹; ¹ Wageningen University & Research, Wageningen/NL
-
- P 107 **Metabolite profiling and the intraspecific variance of *Hypericum perforatum* and *Hypericum maculatum***
 P. Stark¹; S. Scharfenberg¹; A. Porzel¹; P. Rizzo²; T. Sharbel²; K. Franke¹; L. Wessjohann¹; ¹ Leibniz Institute of Plant Biochemistry, Halle/D; ² Leibniz Institute of Plant Genetics and Crop Plant Research, Gatersleben/D
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- P 108 **Exploration of the YcaO-TfuA protein pair landscape with RiPPER highlights the unknown diversity of thioamidated RiPPs**
 J. Santos Aberturas¹; ¹ John Innes Centre, Norwich/UK
-
- P 109 **Advancing microbe assisted crop protection through plant immune-biosensors and omics-guided compound discovery**
 K. Belt¹; ¹ Commonwealth Scientific and Industrial Research Organisation (CSIRO), Perth/AUS
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- P 110 **Exploiting the secondary metabolome of tropical Basidiomycota**
 B. Sandargo¹; ¹ Helmholtz-Zentrum für Infektionsforschung (HZI), Braunschweig/D

POSTER PROGRAMME

- P 111 **Optimization of the production and downstream processing of labyrinthopeptins from the actinobacterium *Actinomadura namibiensis***
Z. Rupčić¹; S. Hüttel¹; S. Kanaki²; S. Bernecker¹; M. Stadler¹; ¹ Department Microbial Drugs, Helmholtz Centre for Infection Research GmbH, Braunschweig/D; ² Toyama Prefectural University, Toyama/J
-
- P 112 **Exploiting the secondary metabolome of Kenya's tropical Basidiomycota**
C. Chepkirui¹; ¹ Helmholtz Centre for Infection Research, Braunschweig/D
-
- P 113 **Identification of fungal fossils and novel azaphilone pigments in ancient carbonised specimens of *Hypoxylon fragiforme* from forest soils of Châtillon-sur-Seine (Burgundy)**
F. Surup¹; A. Narmani²; K. Becker¹; L. Wendt¹; S. Pfütze¹; R. Kretz¹; C. Menbrivès³; M. Rohde¹; M. Stadler¹; ¹ Helmholtz-Zentrum für Infektionsforschung (HZI), Braunschweig/D; ² University of Tabriz, Tabriz/IR; ³ University of Paris 1, Archéologies Environnementales, Paris/F
-
- P 114 **Uniting metabolomics data processing and highly confident annotation across four MS instrumental set ups: MetaboScape 4.0**
N. Kessler¹; F. Zubeil¹; W. Timm¹; S. Winter¹; U. Schweiger-Hufnagel¹; S. Meyer¹; A. Barsch¹; H. Neuweger¹; ¹ Bruker Daltonik GmbH, Bremen/D
-
- P 115 **A semi-automated metabolomics platform for rapid prioritization of huge datasets – examples for variable dereplication**
M. Marner¹; F. Zubeil¹; P. Hammann²; A. Vilcinskas³; A. Bauer²; J. Glaeser¹; ¹ Sanofi-Fraunhofer Natural Product Center, Branch for Bioresources of the Fraunhofer IME, Giessen/D; ² Sanofi-Fraunhofer Natural Product Center, R&D TSU Infectious Diseases, Sanofi-Aventis Deutschland GmbH, Frankfurt a. M./D; ³ Fraunhofer Institute for Molecular Biology and Applied Ecology IME, Giessen/D
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- P 116 **Bacterial vs. chemical diversity: The taxonomy paradigm in microbial natural products discovery**
D. Krug¹; T. Hoffmann¹; R. Garcia¹; N. Bozkurt¹; S. Duddela¹; R. Jansen²; K. Gerth²; H. Steinmetz²; R. Müller¹; ¹ Helmholtz-Institute for Pharmaceutical Research Saarland, Saarbrücken/D; ² Helmholtz Centre for Infection Research (HZI), Braunschweig/D
-
- P 117 **A high throughput platform using a combined Microfluidics / FACS setup for antibiotic drug discovery of termite nest-associated microorganisms**
M. Oberpaul¹; S. Brinkmann¹; P. Hammann²; A. Vilcinskas¹; J. Glaeser¹; ¹ Sanofi-Fraunhofer Natural Product Center, Branch for Bioresources of the Fraunhofer Institute for Molecular Biology and Applied Ecology IME, Giessen/D; ² Sanofi-Fraunhofer Natural Product Center, Giessen/DE, R&D TSU Infectious Disease, Sanofi-Aventis Deutschland GmbH, Frankfurt/D

- P 118 **An integrated drug discovery platform for the high-throughput cultivation of chemical and phylogenetic diversity**
B. Leis¹; M. Marner¹; M. Oberpaul¹; M. Spohn¹; S. Mihajlovic¹; H. Grossart²; D. MacMahon³; R. Plarre⁴; P. Hammann⁵; A. Vilcinskas¹; J. Glaeser¹; ¹ Sanofi-Fraunhofer Natural Product Center, Branch for Bioresources of the Fraunhofer Institute IME, Giessen/D; ² Leibniz Institute of Freshwater Ecology and Inland Fisheries, Stechlin/D; ³ Institute of Biology, Free University Berlin, Berlin/D; ⁴ BAM - Federal Institute for Materials Research and Testing, Berlin/D; ⁵ Sanofi-Fraunhofer Natural Product Center, Giessen/DE, R&D TSU Infectious Disease, Sanofi-Aventis Deutschland GmbH, Frankfurt/D
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- P 119 **Comparison of DI-FTICR and UPLC-qTOF for the comprehensive profiling of myxobacterial secondary metabolomes**
C. Bader¹; D. Krug¹; P. Haack¹; F. Panter¹; R. Müller¹; ¹ HIPS Helmholtz Institute for Pharmaceutical Research Saarland, Saarbrücken/D
-
- P 120 **Identification of Secondary Metabolites from Tropical Basidiomycota and Genome-wide Identification, Functional Characterization and Evolution of Secondary Metabolites Genes**
T. Cheng¹; ¹ Helmholtz-Zentrum für Infektionsforschung (HZI), Braunschweig/D
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- P 121 **Enhancement of production of illudin M from the Ghost Fungus *Omphalotus nidiformis* (Basidiomycota)**
L. Chaverra-Munoz¹; T. Cheng¹; C. Chepkirui¹; S. Hüttel¹; M. Stadler¹; ¹ Helmholtz Centre for Infection Research (HZI), Braunschweig/D
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- P 122 **Gene Activation Strategies in Fungi - Sex, Drugs, and Genetics?**
D. Adressa¹; P. Mandelare¹; L. Connolly¹; K. Smith¹; M. Freitag¹; S. Loesgen¹; ¹ Oregon State University, Corvallis, OR/USA
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- P 123 **Activation of silent secondary metabolite clusters by various regulatory proteins in Actinomycetes**
E. Mingyar¹; ¹ Eberhard Karls Universität Tübingen/D
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- LMP
M 1 **Investigation of Planomonospora as Secondary Metabolite Producer by Metabolomic Tools**
M. Zdouc^{1,2*}; M. Sosio¹; S. Maffioli¹; M. Simone¹; T. den Blaauwen²; S. Donadio¹; ¹ Naicons Srl., Milano/I; ² Swammerdam Institute for Life Sciences, University of Amsterdam/NL

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