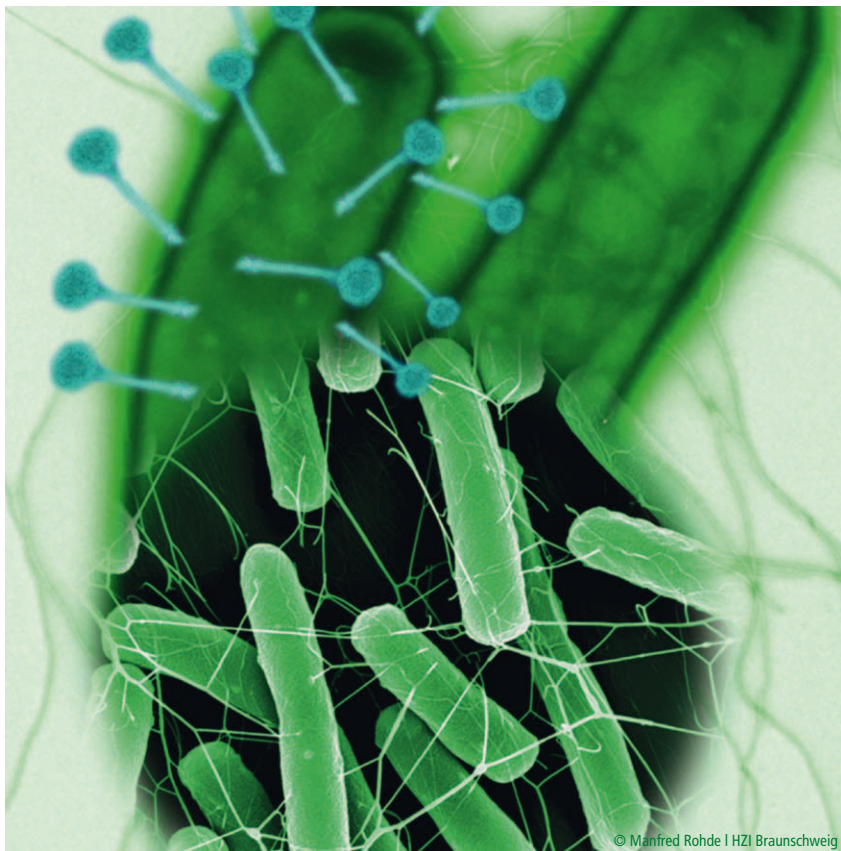


ANNUAL CONFERENCE

of the Association for General
and Applied Microbiology

2018

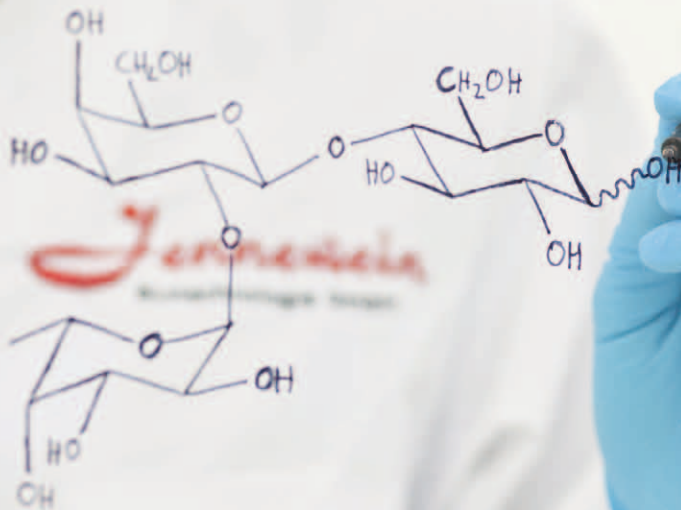


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15–18 APRIL 2018 WOLFSBURG | GERMANY

PROGRAMME





VISIT US AT
BOOTH 1

HUMAN MILK OLIGOSACCHARIDES FUNCTIONAL SUGARS FOR HEALTH

Jennewein Biotechnologie GmbH is a **science-based company** with profound expertise in the field of **industrial biotechnology** and **sugar chemistry**.

KEY COMPETENCES:

- **Sugar chemistry** and **purification**
- **Biochemistry** in general and biotransformation and biocatalysis processes
- **Metabolic Engineering** and **Fermentation**
- Profound know-how in **process development** and **production**
- Established **contacts to leading infant formula, clinical nutrition manufacturers** for the commercialization of human milk oligosaccharides



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Opening, Awards, Assemblies

Plenary Session

Social Programme

Short Lectures

Events for Young Scientists

Industrial Symposium

ePoster and Poster Session

Mini Symposium

Special Group Meeting

Further

ORGANISATION AND IMPRINT

Venue and Date

CongressPark Wolfsburg
Heinrich-Heine-Straße | 38440 Wolfsburg/DE
15–18 April 2018



Hosting Society

Association for General and Applied Microbiology (VAAM)
www.vaam.de

Conference President

Prof. Dr. Dieter Jahn
Braunschweig University of Technology | Institute for Microbiology | General Microbiology

Organising Committee Braunschweig

Dirk Heinz | Helmholtz Centre for Infection Research (HZI)

Martina Jahn | Braunschweig University of Technology (TU)

Dieter Jahn | Braunschweig University of Technology (TU)

Jörg Overmann | Leibniz Institute German Collection of Microorganisms and Cell Cultures (DSMZ)

Kornelia Smalla | Julius Kühn Institute, Federal Research Centre for Cultivated Plants (JKI)

Christoph Tebbe | Thünen Institute (TI)

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WELCOME NOTE OF THE CONFERENCE PRESIDENT



Dear colleagues and friends,
Dear microbiologists,

Wolfsburg is waiting for you! Various institutions from Braunschweig are organizing the Annual Conference of the VAAM 2018 in Wolfsburg. Involved are the Braunschweig University of Technology (TU), the Helmholtz Centre for Infection Research (HZI), the Leibniz Institute German Collection of Microorganisms and Cell Cultures (DSMZ), the Johann Heinrich von Thünen Institute, Federal Research Institute for Rural Areas, Forestry and Fisheries (TI) and the Julius Kühn Institute, Federal Research Centre for Cultivated Plants (JKI).

During the last years, we focused our joint microbiological research in Braunschweig on infection, biodiversity, ecology and biotechnology. Typical for Braunschweig is the trustful, close scientific cooperation across disciplinary and institutional borders. Here microbiologists are used to work with local and international engineers, physicians, bioinformaticians and chemists in joint projects. Moreover, this interdisciplinary and international approach is the basis of our common educational programmes. Consequently, you find here an innovative and friendly study and research environment.

Wolfsburg is an exciting town with many professional and recreational possibilities – you simply have to explore it!

We all like to welcome you to the Annual Conference of the VAAM 2018 and wish you an inspiring meeting with many fruitful discussions and contacts.

Best wishes,

A handwritten signature in black ink, which appears to read 'Dieter Jahn'. The signature is fluid and cursive, with a long horizontal stroke extending to the right.

Dieter Jahn | Conference President

WELCOME NOTE OF THE VAAM PRESIDENT



Dear colleagues and friends,

on behalf of the board of the Association for General and Applied Microbiology (VAAM) I warmly welcome you to the annual meeting, the face-to-face encounter and the highlight of each year for our society. Given the fact that we were on the verge of cancelling the meeting entirely since the Technical University of Braunschweig had to withdraw the commitment of hosting the Conference. We are particularly happy that the organizers from Braunschweig made it possible to find another place here in Wolfsburg. Unfortunately, it was not feasible to get a slot in the semester break, even though the executive committee decided that everything is better than to skip the conference in 2018 entirely!

Now we expect more than 1000 participants in Wolfsburg and the programme promises a highly attractive and successful annual VAAM meeting. For the plenary sessions the organizers have invited a variety of well-distinguished speakers presenting exciting as well as emerging topics in several areas of microbiology. The Special Groups (Fachgruppen) of the VAAM will contribute in organizing inspiring mini-symposia.

It has always been a mission of the VAAM to foster young academics. Thus, I am particularly happy that the meeting attracts so many young people who will be offered the possibility to present their work in short lectures and poster sessions. Besides we will have the VAAM-Karrieresymposium for the young scientists, where professionals from different areas will discuss their career pathways. This year we will have some electronic ePoster sessions, a new format to present scientific results. We will carefully evaluate this format afterwards as a new element for future meetings and all participants are invited to send us their comments.

Another highlight will be the 2nd Microbe Slam as well as the award ceremonies for the 'VAAM Forschungspreis' and the 'VAAM Promotionspreise'. All members of the VAAM are invited to join the General Meeting and I am very pleased to announce that Prof. Georg Fuchs will become an honorary member of the VAAM during this meeting.

The VAAM annual meeting is always an excellent opportunity to meet old friends, make new friends and to get inspired by many scientific presentations and discussions.

On behalf of the VAAM, I want to thank the conference chair Dieter Jahn and his wife Martina, the Scientific Committee, our congress-management partner Conventus and Katrin Muth from the VAAM for their great efforts in organizing this annual conference in Wolfsburg. In particular I want to thank all scientists for their contributions and the opportunity for scientific exchange and interactions.

Yours

Ruth A. Schmitz-Streit | President of the VAAM



Braunschweig Integrated Centre of Systems Biology – BRICS

BRICS is a joint centre of the TU Braunschweig, the Helmholtz Centre of Infection Research (HZI) and the Leibniz Institute DSMZ – German Collection of Microorganisms and Cell Cultures. It integrates all necessary Omics, bioengineering, spectroscopy and bioinformatics expertise to allow for the modelling and prediction of biological processes. The new BRICS building hosts 8 research groups. Overall more than 25 groups are members of BRICS.



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Braunschweig University of Technology, founded in 1745, is one of the oldest technical institutes in Germany. Recent research and education focuses on Mobility (car, airplanes), Metrology, Infection and Therapeutics and the City of the Future.

Institute of Microbiology

Prof. Dr. Susanne Engelmann: The main focus of the research of the Engelmann group is to provide a comprehensive understanding of host-pathogen interactions during *Staphylococcus aureus* colonization and infection. We are using mass spectrometry-based proteomics to gain new information on the dynamics of the protein inventory and protein modification events, protein-protein interactions, the role of crucial regulons in metabolism and proteins displaying essential functions under these conditions. The identification and functional characterization of small proteins and peptides involved in virulence and fitness of *S. aureus* are of particular importance. By this way we are able to define novel vaccine candidates to monitor and prevent spreading of *S. aureus* but also drug targets leading to novel treatment options for infections with multi-resistant isolates.

Prof. Dr. Dieter Jahn: Since many years the group focuses on the structure and function of enzymes of heme and chlorophyll biosynthesis. Bacterial lipid biosynthesis and the function of bacterial volatiles are also investigated (**Dr. Martina Jahn, Dr. Jürgen Moser**). Moreover, the biochemistry and gene regulation involved in the anaerobic energy metabolism of *Bacillus subtilis* and *Dinoroseobacter shibae* are studied (**Dr. Elisabeth Härtig**). *Bacillus megaterium* is systematically optimized for high yield intra- and extracellular protein production. Artificial microbial communities for electrical power generation are designed and optimized (**Dr. Rebekka Biedendieck**). High molecular weight protein complexes from *Pseudomonas aeruginosa* and *Clostridium difficile* involved in energy generation during infection are isolated and studied (**Dr. José M. Borrero de Acuña**). Finally, gene regulatory networks from bacteria are predicted using bioinformatics databases like PRODORIC and corresponding bioinformatics tools (**Dr. Denitsa Eckweiler**).

Prof. Dr. Michael Steinert: The Steinert group analyses the pathogen-host interactions of the causative agent of Legionnaires' disease. In addition to protozoa, nematodes and human host cells we study the infection of human lung tissue explants. A special emphasis is laid on bacterial peptidyl-prolyl-*cis/trans*-isomerases (*PPIases*) and outer membrane vesicles. The virulence mechanisms of *C. difficile* including tissue colonization and spore-mediated persistence are investigated. Moreover, we aim to identify new bacterial drug targets and to develop alternative treatment strategies. *Paenibacillus larvae* is the causative agent of American foulbrood (AFB), the most serious bacterial infection of honey bees. Biochemistry, molecular biology and modern Omics technologies are used to elucidate AFB outbreaks and the virulence mechanisms *P. larvae*. Moreover, *P. larvae*-specific bacteriophages are investigated and criteria for a safe phage therapy are developed. Finally, infection strategies of *Streptococcus pneumoniae* are investigated (**PD Dr. Simone Bergmann**).

Prof. Dr. Irene Wagner-Döbler: Unraveling the interactions between the marine unicellular algae *Prorocentrum minimum*, a dinoflagellate, and the Roseobacter bacterium *Dinoroseobacter shibae* is the current focus of the Wagner-Döbler group. Other topics are membrane vesicles of *D. shibae*, and bacterioplankton diversity in the ocean. The microbiota of the oral cavity, vagina, and stool, and their roles for chronic diseases are studied using omics tools and laboratory culture.

Institute of Biochemistry, Biotechnology and Bioinformatics

Prof. Dr. Karsten Hiller: The Department of Biochemistry and Bioinformatics studies cellular metabolism in human immune cells and microorganisms. The team puts a special focus on stable-isotope based metabolic flux analyses and non-targeted methods in metabolomics. Due to the strong bioinformatics background in the team, most of the needed computational tools are developed directly by the group and are specifically tailored to the scientific problems to be addressed. The Department will focus on metabolism of host and pathogen during infections with *Clostridium difficile* in the future. In addition, the team is interested in the metabolic interaction of dinoflagellates with Roseobacter bacteria. For that, metabolic labeling (^{13}C , ^{15}N) experiments in the algae and in the bacteria are performed. In combination with a genome based metabolic model, detailed insights into the synthesis and exchange of biomolecules of each partner will become feasible.

Prof. Dr. Anett Schallmeyer: The main research focus of the group is the identification, biochemical characterization and application of enzymes in biocatalysis. Using enzyme-specific sequence motifs and bioinformatics tools, we are mining the wealth of sequence information available in public databases for the discovery of interesting novel biocatalysts with valuable properties. Moreover, different protein engineering techniques are applied to manipulate the activity, selectivity and stability of our biocatalysts. Especially regio- and stereoselective transformations using oxygenases and halohydrin dehalogenases, as well as their combination in chemo-enzymatic cascades, are studied for the selective synthesis of fine chemicals and pharmaceuticals using either isolated enzymes or whole-cell catalysts. Additionally, also enzymes for biomass valorization are studied with a special focus on β -etherases for selective lignin depolymerisation.

Institute of Genetics

Prof. Dr. Andre Fleißner: The group is studying eukaryotic cell-cell communication, cell fusion, and plasma membrane repair using various fungi as model organisms, including the red bread mold *Neurospora crassa*. We are focussing on the analysis of plasma membrane-associated signaling processes, by using classical, molecular and chemical genetics, biochemistry, state-of-the-art live cell imaging, and fluorescence microscopy. Since many of the molecular factors identified in our studies are also of high relevance for fungal pathogenic development, we recently also turned to the analysis of host-pathogen interactions using *Candida albicans* and *Botrytis cinerea* as model systems.

Institute of Organic Chemistry

Prof. Dr. Stefan Schulz: The group is interested in the chemistry of bacterial signaling and analyses bacterial volatiles, quorum-sensing signals and other compounds produced by bacteria. Various bacterial groups are investigated including actinomycetes, myxobacteria or *Roseobacter* group bacteria. Organic trace-analytical methods, synthesis, and feeding of isotope-labeled precursors are used to decipher compound composition, production and biosynthetic pathways, as well as function of the compounds.

Institute of Biochemical Engineering

Prof. Dr.-Ing. Antje Spieß/Prof. Dr. Rainer Krull: The Institute of Biochemical Engineering (ibvt) mostly targets at pharmaceutical synthons or anti-infectives, which are produced in heterogeneous bioprocess systems, ranging between isolated and immobilized enzyme or whole-cell biotransformations, mostly using carboligases and alcohol dehydrogenases, over planar pure or mixed culture biofilms, also applied in bioelectrochemical systems, and shear sensitive, filamentous microorganisms, e.g. *Aspergillus niger*, *Lechevalieria aerocolonigenes*, or *Actinomadura namibienis*. To rationally develop tailored biocatalysts and sustainable integrated bioprocesses, ibvt develops and applies classical and systems biotechnological analytics, and mathematical modelling workflows, with a particular focus on mechanistic models of enzymatic reactions and on reaction and mass transfer models for biofilm systems. To characterise and model bioprocesses, including downstream processing and integrated production processes, ibvt develops and applies automated and multiphase microbioreactors with appropriate sensors. The ibvt has longstanding expertise in cultivating and characterizing the morphology, stability and vitality of planar biofilms and fluidized bioagglomerates, which is connected with the new field of bioelectrochemical systems.

★ SAVE THE DATE ★

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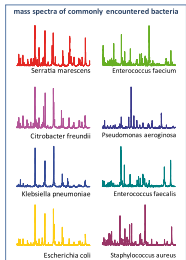
Jahrestagung der Deutschen
Gesellschaft für Hygiene und
Mikrobiologie (DGHM) e. V.

2019

25.–27. Februar 2019

UNIVERSITÄTSMEDIZIN GÖTTINGEN **UMG** Universitätsmedizin Göttingen

www.dghm-kongress.de



Helmholtz Centre for Infection Research

At the Helmholtz Centre for Infection Research (HZI), scientists investigate the molecular mechanisms of infectious diseases, elucidating fundamental processes of bacterial and viral pathogens, as well as the mechanisms of the host defense against infection. The interdisciplinary bio-medical research conducted at the institute aims to address clinical challenges, developing patient-oriented and population-based approaches as well as novel anti-infective strategies. The main mission of the HZI is the translation of basic research to application within the clinic. The HZI has branches and joint institutes in several German cities including the TWINCORE in Hanover, the Helmholtz Institute for Pharmaceutical Research Saarland (HIPS) in Saarbrücken, the Helmholtz Institute for RNA-based Infection Research (HIRI) in Würzburg, the Braunschweig Integrated Centre of Systems Biology (BRICS), the Centre for Structural Systems Biology (CSSB) in Hamburg, as well as the Clinical Research Center (CRC) in Hanover and maintains strong ties with the local universities. Moreover, the HZI, with several of its research groups, comprises a partner site of the German Center for Infection Research, the head office of which is located on campus.

Department Molecular Infection Biology

Prof. Dr. Petra Dersch: Bacterial pathogens such as enteropathogenic *Yersinia*, *Salmonella*, and *Escherichia coli* species cause severe gastrointestinal infections. The Department of “Molecular Infection Biology” employs enteropathogenic *Yersinia* species to study the mechanisms by which these bacteria adhere to and penetrate the intestinal epithelium and spread within the host. The group characterises the structure and function of virulence factors and investigates the bacterial colonization and persistence strategies, as well as the modulation of host immune responses during infection. The main research focus of the group is the elucidation of virulence regulation and regulatory networks with an emphasis on the role of non-coding regulatory and sensory RNAs and ribo-regulators implicated in virulence control.

Department Molecular Bacteriology

Prof. Dr. Susanne Häußler: *Pseudomonas aeruginosa* is an environmental bacterium and an opportunistic pathogen that causes severe acute as well as chronic persistent, often biofilm-associated infections. The department of “Molecular Bacteriology” studies the molecular mechanisms responsible for *Pseudomonas aeruginosa* adaptation to the habitat of the human host during an infection process. A main research focus are phenotype-genotype correlation studies for the identification of genetic markers that drive infection-relevant bacterial phenotypes and the use of this information for the development of innovative diagnostics for resistance profiling as well as new therapeutic strategies to combat chronic biofilm-associated infections.

Research Group Microbial Interactions and Processes

Prof. Dr. Dietmar Pieper: Microorganisms in the environment are living in complex and interacting communities. Also the human body is such an environment where hundreds of species interact and influence human health. By a detailed analysis of the composition of microbial communities in the human body we want to understand how the microbiota changes in certain diseases, and whether these changes determine the course of the disease. Central research subjects of the research group “Microbial Interactions and Processes” are the analysis and quantification of functions of special importance for human health and the characterization of the activity of microbial or “pathogenic” communities *in vivo*.

Research Group Infection Immunology

Prof. Dr. Eva Medina: In order to establish an infection, pathogens have developed elaborate strategies to hide, evade or even destroy the host immune system. Detailed understanding of the complex interactions between host and pathogen is essential for designing new strategies to counteract the pathogen’s mechanisms to circumvent the host defenses. The main focus of the research group “Infection Immunology” is to use novel experimental approaches to investigate the dynamic interactions between *Streptococcus aureus* and the host. The information deriving from these studies can then be used to develop new therapeutic approaches to treat staphylococcal infections.

Junior Research Group Microbial Immune Regulation

Prof. Dr. Till Strowig: The microbiota encompasses a diverse population of microorganisms that colonize many body sites such as skin and intestine of multicellular hosts and fulfills essential tasks for the host metabolism. The homeostasis between host and microbiota may however be disrupted temporarily by the invasion of pathogenic microbes or an antibiotics. The junior research group “Microbial Immune Regulation” uses well-defined model systems (i.e. mice with specific microbiota) and a wide variety of techniques to dissect the relationship of the host specifically the immune system, commensals as well as bacterial and viral pathogens. The elucidation of the underlying regulatory networks promise the development of novel therapeutics to prevent and treat infectious diseases.



Leibniz Institute DSMZ – German Collection of Microorganisms and Cell Cultures GmbH

The Leibniz Institute DSMZ in Braunschweig is the national competence centre for research, provision and utilization of microbial diversity. It is one of the largest biological resource centers worldwide. The unique diversity of resources, its extensive scientific services and the professional quality management makes the DSMZ an international supplier for science, diagnostic laboratories, national reference centers, as well as industrial partners of high renown. Research at the DSMZ focuses on microbial diversity, molecular mechanisms of biological interactions and tumor genesis.

Department Microbial Ecology and Diversity Research

Prof. Dr. Jörg Overmann: The evolutionary basis of bacterial diversity is studied including mechanisms of genome evolution, speciation and niche separation. Bacterial adaptation strategies to nutrient and energy limitation and implications for biogeochemical cycles are investigated. We are also interested in the evolution, ecophysiology and molecular basis of bacterial multicellularity. Finally, the provision and mobilization of prokaryotic metadata for next-generation biodiversity analyses is a major topic of our research.

DZIF Group Microbial Genome Research

Prof. Dr. Ulrich Nübel: The population genomics and phylogeography with the evolution and spatial dispersal of bacterial populations are of interest. We use genome-based molecular epidemiology to determine the emergence and transmission of bacterial pathogens. Finally, we use functional genomics of novel microbial producers to accelerate the discovery of natural products by using high-throughput genome sequencing.

Department Microorganisms

Prof. Dr. Michael Pester: In our geomicrobiology section the biology and interactions of biogeochemically important microorganisms are analyzed from an ecophysiological and ecosystem service perspective. In the freshwater microbiology section we investigate the impact of microorganisms driving the sulfur and nitrogen cycle in freshwater environments such as peatlands, rice paddy fields, and lakes.

Julius Kühn-Institute (JKI), Federal Research Centre for Cultivated Plants

The JKI is linked closely with the secure cultivation of sufficient cultivated plants. Cultivated plants are not only an essential means of nutrition for humans; they and their ecosystems also contribute significantly to our quality of life. The effects of climate change, the globalisation of the movement of goods and the urbanisation of society, as well as declining of natural resources and biological diversity, are increasingly endangering our resources. At the Julius Kühn Institute, we promote the sustainable production and use of our crops as basic nutrients, as renewable resources and as essential elements in our living environment. At the same time we aim to maintain plant diversity in our cultural landscapes.

Institute for Epidemiology and Pathogen Diagnostics

Prof. Dr. Kornelia Smalla: Below-ground microbial diversity and its importance for plant health and growth is a long-term research focus of the group. Cultivation-independent and -dependent methods are being used to unravel how agricultural management practices shape soil microbial communities, the abundance and diversity of pathogenic and beneficial bacteria. Adaptation of soil bacteria to changing environmental conditions and pollutants such as antibiotics is often driven by vertical and horizontal transfer plasmid-mediated adaptive traits. The Smalla group is interested in the environmental dimension of antibiotic resistance and the studies focus on the ecology of bacterial antibiotic resistance genes and plasmids in the agro-ecosystem. Fresh produce was found to be an important link between the environment, humans and animal.

PD Dr. Adam Schikora: Collaborative action between a host plant and associated bacteria is crucial for the establishment of an efficient interaction. The Schikora group investigates the stimulation of plant immune system by bacterial quorum sensing molecules on the one hand, and on the other, how bacteria (e.g. the human pathogen *Salmonella*) manipulate plant defense mechanisms.

Thünen Institute – Federal Research Institute for Rural Areas, Forestry and Fisheries



The Thünen Institute with its headquarter in Braunschweig is a German research institute under the auspices of the German Ministry of Food and Agriculture (BMEL). It develops scientific basics as decision-making helps for the policies of the German government and is, in this context, scientifically independent. It comprises 14 specialist institutes, and microbiology takes places in mainly two of them.

The **Institute of Biodiversity (Prof. Dr. Jens Dauber)** analyzes the diversity and function of organisms in agricultural ecosystems. The **Microbial Ecology group**, headed by **Prof. Dr. Christoph Tebbe**, analyses the link between microbial community structure and function in soils, plant- and animal-associated habitats and in organic waste management, including the production of bioenergy or composts. The group is specialized in applying cultivation-independent, nucleic acid based techniques to characterize metagenomes and their dynamics and regulation, also taking advantage of isotope-analyses. There is strong interdisciplinary collaboration with the **Institute of Climate Smart Agriculture (Prof. Dr. Heinrich Flessa)** where the group cooperates with the team of **PD Dr. Axel Don** for revealing the interaction between soil organic matter and soil microorganisms. Current projects concern the analyses of microbiomes in rhizospheres and soil aggregates. The implications of different cropping systems for soil microbial diversity and activity are analyzed. Off-target effects on microbial communities by bacteriophages as potential plant protection agents of the future are investigated.

The **Institute for Agricultural Technology (Prof. Dr. Engel Hessel)** develops new and evaluates existing technologies for the production of bio-based chemicals and materials using comprehensive, big-picture techniques, including holistic stems-analysis, life cycle assessment and eco-efficiency analysis. In the foreseeable future depleting fossil resources demand a change in the supply of raw materials. In order to bridge the gap from a petrochemical industry to a bio-based economy, renewable resources can and are supposed to substitute fossil raw materials. Biotechnological processes are essential for a sustainable bio-economy in the future. The diverse biocatalysts (like enzymes, bacteria, fungi and algae) are characterized by a high selectivity and mild reaction conditions. This predestines them for an environmental sound conversion of renewable resources to higher value products (**Dr. Anja Kuenz, Dr. Thomas Willke**).

Einladung zur Mitgliederversammlung der VAAM

Hiermit lade ich alle Mitglieder der VAAM zur Mitgliederversammlung 2018 ein. Sie wird am Dienstag, den 17. April, um 18.30 Uhr im CongressPark (Spiegelsaal) in Wolfsburg stattfinden.

Vorläufige Tagesordnung:

1. Festlegung der Tagesordnung und Genehmigung der Niederschrift der Mitgliederversammlung vom 7. März 2017 in Würzburg (siehe BIOSpektrum 3/17, Seiten 312 und 313)
2. Bericht aus dem Präsidium und dem Vorstand, u.a. Fachgruppen, BIOSpektrum, VBIO, DGHM, Öffentlichkeitsarbeit, Ort und Zeit der nächsten Jahrestagung, Haushalt 2017 und Haushaltsplan 2018
3. Bericht der Kassenprüfer
4. Entlastung des Vorstandes
5. Mikrobe des Jahres
6. Verschiedenes

Im Anschluss: Verleihung einer Ehrenmitgliedschaft

Reisekostenzuschüsse für studentische Mitglieder können bei fristgerecht eingegangenen Anträgen und bei Vorliegen der sonstigen Voraussetzungen nur persönlich am Dienstag, den 17. April, von 13.00–18.00 Uhr und Mittwoch, den 18. April, von 09.00–12.00 Uhr am Check-in abgeholt werden.

Hubert Bahl
Schriftführer

MEETINGS OF THE VAAM SPECIAL GROUPS

Monday, 16 April

- | | |
|-------------|--|
| 19:30–20:00 | Regulation and Signaltransduction in Prokaryotes |
| 19:30–20:00 | Environmental Microbiology |
| 19:00–19:30 | Water and Sewage |
| 19:30–20:00 | Symbiotic Interactions |
| 19:00–19:30 | Identification and Systematics
Besprechung des geplanten Ringversuchs |

Tuesday, 17 April

- | | |
|-------------|-------------------------|
| 10:00–10:30 | Microbial Pathogenicity |
|-------------|-------------------------|



**AMERICAN
SOCIETY FOR
MICROBIOLOGY**

Mitgliedertreffen

der American Society for Microbiology (ASM)

Dienstag | 17. April | 12–13 Uhr | Konferenzraum 3

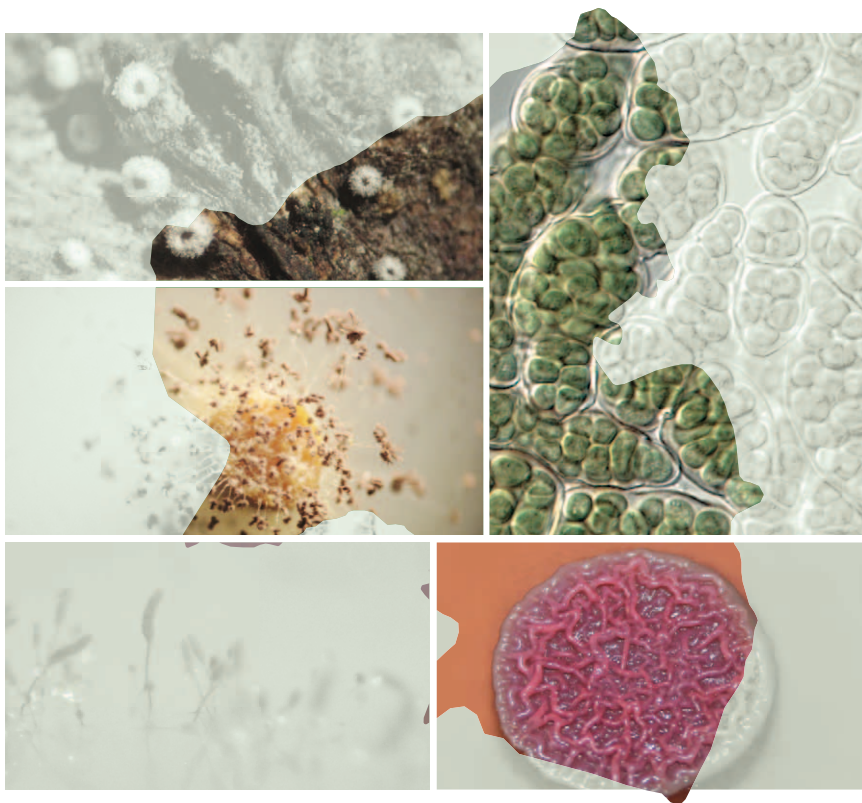
Alle ASM Mitglieder und Interessierte sind herzlich eingeladen.

ANNUAL CONFERENCE

of the Association for General
and Applied Microbiology

2019

SAVE THE DATE



17–20 MARCH 2019 MAINZ | GERMANY

www.vaam-kongress.de

GENERAL INFORMATION



Registration

Registration for the conference is required. Please register online at www.vaam-kongress.de or refer to the check-in desk on-site.



Conference Fees

Member – Regular ¹	280 EUR
Member – Student, Technical Assistant, Unemployed ^{1,2}	90 EUR
Member – Retiree ^{1, 2}	100 EUR
Non-member – Regular	350 EUR
Non-member – Student, Technical Assistant, Unemployed ²	115 EUR
Non-member – Retiree ²	140 EUR

Day Tickets

Member – Regular ¹	140 EUR
Member – Student, Technical Assistant, Unemployed ^{1,2}	60 EUR
Non-member – Regular	180 EUR
Non-member – Student, Technical Assistant, Unemployed ²	75 EUR

¹ Members of the VAAM, DGHM, GBM, DECHEMA

² Please provide proof of status on site, via e-mail to registration@conventus.de or via fax +49 3641 31 16-244 and quote VAAM 2018.

Social Programme

Welcome Reception	included
Mixer	included

Accompanying Person

Welcome Reception	15 EUR
Mixer	25 EUR

Registration Fees include

- Admission to all scientific sessions and access to our industrial exhibition
- Opening ceremony/Public lectures
- Conference documents (programme, digital abstract book, etc.)
- Beverages within the scope of the breaks given in the programme

The conference fee also includes the provision of snacks and drinks at the Welcome Reception as well as buffet and beverages at the social evening (Mixer).



Payment and confirmation of payment

An invoice or confirmation of registration will be sent to you via postal or electronic mail within 14 days. This invoice is a valid invoice which may be submitted to the local tax and revenue office. All fees are due upon receipt of invoice/registration confirmation. Payment transfers must include participant's name and invoice number. Payment is also accepted by credit card (Master-/Eurocard, American Express, VISA). Should you transfer your invoice amount within 10 days of the start of the event, please present your transfer remittance slip on-site.



Accommodation

We have reserved a contingent of rooms at special rates in different categories. Please quote the special conference booking code "VAAM" when booking to benefit from the special conference rates. Further information on accommodation is provided at www.vaam-kongress.de. Conventus GmbH acts as an intermediary for hotel reservations and therefore assumes no liability for reservations. Changes and cancellations have to be addressed to the according hotels directly. The cancellation terms of the individual hotels apply.



General Terms and Conditions

You can find the general terms and conditions on our conference website www.vaam-kongress.de.



Parking

The location offers the following parking space:
Car park "CongressPark" (Fee: 3 EUR per day)



House rules

According to the house rules of the CongressPark Wolfsburg, it is not allowed to bring your own drinks and/or food.

Bags and clothing such as coats, jackets and capes can be checked for their contents. Visitors involved in the securing of objects that endanger the event, or visitors who are not in agreement with the event by the control or security service, will be excluded from the event. The claim of the rejected visitors for reimbursement of the entrance fee does not exist. Depending on the nature of the event, the bags may not be taken into the event.

GENERAL INFORMATION



General Certificate of Attendance

General Certificates of attendance will first be made available on the last day of the conference at the check-in desk.



Name Badge

Please wear your name badge during all congress events, including networking activities. Admission to scientific sessions and to the industrial exhibition is restricted to participants wearing their badge. Participants will receive their name badge at the check-in desk.



Check-in and Self Check-in

The check-in and self check-in desk are located on ground floor.



Cloakroom

The coat and luggage room can be found on ground floor. The fee is 0.50 EUR per garment or luggage.



Social Programme (see page 35)

Sunday, 15 April | Welcome Reception

Time 18:45

Place Congress venue, Industrial Exhibition (first floor)

Tuesday, 17 April | Mixer

Time 20:00

Place Congress venue, Industrial Exhibition (first floor)



Opening Hours

	Sunday	Monday	Tuesday	Wednesday
Industrial Exhibition	13:00–21:00 ¹	09:00–18:00	10:00–23:30 ²	10:00–11:30
Check-in	13:00–19:30	07:15–19:30	07:15–19:30	08:00–14:00
Media Check-in	13:00–19:30	07:15–19:30	07:15–19:30	08:00–12:00
Self-Payer Bistro	13:00–19:00	07:15–18:00	07:15–18:00	07:30–14:00

¹ Welcome Reception

² Mixer



Child care

If you are registered for the child care service, please refer to the check-in.



WIFI Access

WIFI is available throughout the whole conference area. Please choose the network "Telekom".



Online Programme

For current detailed information regarding the scientific programme please scan the QR Code to get to the online programme. Compose your individual programme and review it at any time on your way.



Conference Language

The official conference language is English.



Publication of Abstracts

All abstracts will be published in the digital abstract book and are available online on our conference website.



Poster Awards

From all posters and ePoster presentations the best 10 will be awarded. The awarding of the best posters and ePosters will be on Wednesday, 18 April from 11:45–12:00 in the main lecture hall Großer Saal.



Catering

During the coffee breaks there are four catering stations, which are located within the industrial exhibition:

a) Catering for free: coffee, tea, water

b) Catering with costs (self-payer bistro): snacks, meals, soft drinks

During the Welcome Reception and Mixer, catering will be offered free of charge. Moreover, companies may provide food in their industrial symposia.

TIPS FOR AUTHORS

Submission of a Presentation/Technical Information

The presentation should be prepared as PDF, MS Office PowerPoint for Windows or key for Macintosh DVD in format 4:3. A presentation notebook with a PDF reader and MS Office PowerPoint 2016 will be provided. The use of personal notebooks is possible upon agreement. However, it may interrupt the flow of the programme in the lecture hall. Please provide an adapter for VGA if necessary. To guarantee a smooth running programme please upload your presentation in due time – at least 2 hours before your presentation is due to start. Should you wish to use non-digital equipment, please contact us at vaam-kongress@conventus.de.

Presentation Upload

The media check-in for uploading your presentation is located on the first floor (please follow the signposting). For submission, please use a USB flash drive, CD or DVD disc that is not protected by any software. Professional staff and equipment will be available for you to arrange and preview your presentation.

Time Allocation

Please prepare your presentation for the allotted amount of time. Chairs and moderators may interrupt, should you overrun your time limit.

ePoster Session

Selected posters will be presented as ePosters. The ePoster presentations are taking place during the poster sessions on Monday from 14:30–17:30 and on Tuesday from 14:30–17:00 at our ePoster stations (please see plan on page 38). The duration of each presentation is 3 minutes plus 1 minute for discussion. Please check pages 74 and 102 for details. If your abstract has been chosen as ePoster, the additional presentation as printed poster is not required.

Poster Session

The poster presentations are taking place during the poster sessions on Monday from 14:30–17:30 and on Tuesday from 14:30–17:00.

Please note that there will be a poster change from Monday to Tuesday.

Pins will be provided on your poster board. Please do not use any other type of pins than those provided. All poster boards will be labelled with a poster number. You can find your poster number in the programme book.

For details on the allocation of the posters, please see page 38.

Poster Session 1 | Monday, 16 April | 14:30–17:30

All posters from Session 1 have to be attached until 12:00 on Monday, 16 April and have to be removed until 10:00 on Tuesday, 17 April.

Poster Session 2 | Tuesday, 17 April | 14:30–17:00

All posters from Session 2 have to be attached until 12:00 on Tuesday, 17 April and have to be removed until 12:00 on Wednesday, 18 April at the latest.

Hans-Günter-Schlegel-Lecture

In honor and memory of Prof. Dr. Hans Günter Schlegel, nestor of microbial research and publisher of the first microbial textbook in German, the VAAM awards a renowned expert with a presentation.

Plenary Session

An expert presents his/her point of view on a certain topic within a plenary lecture.

Short Lecture

Similar to the plenary sessions, empirical works, theoretical and methodological findings and innovations, including the experts' point of view on a certain topic, will be presented. The selected presentations have been chosen from submitted abstracts and provide therefore a good platform for (young) scientists and researchers to provide their research.

Minisymposia (VAAM Special Groups)

The minisymposia are organised by the special groups of the VAAM. Speakers have been invited and abstracts have been selected for presentation.

ePoster Presentations

Selected posters will be presented as ePosters. The ePoster presentations are taking place during the poster sessions on Monday from 14:30–17:30 and on Tuesday from 14:30–17:00 at our ePoster terminals (please see plan on page 38).

The duration of each presentation is 3 minutes plus 1 minute for discussion. Please check pages 74 and 102 for details.

In addition, you will have the opportunity to review each ePoster at our self-study counter.

Poster Presentations

During our poster sessions, abstract authors gain the possibility to present their printed poster in a short presentation.

Industrial Symposia

In an industrial symposium companies present interesting topics with selected speakers to an interested audience. Participants can expect attractive presentations and lunch bags may be sponsored by the hosting companies.

Events for Young Scientists

Various sessions for young scientists point out career opportunities and offer support.

LIST OF ABBREVIATIONS

Special Groups

Regulation and Signal Transduction
Environmental Microbiology
Water and Sewage
Symbiotic Interactions
Fungal Biology and Biotechnology
Identification and Systematics
Food Microbiology
Microbial Pathogenicity

Oral/Poster ID

RSV-FG
EMV-FG
WAV-FG
SIV-FG
FBV-FG
ISV-FG
FMV-FG
MPV-FG

Abstract Topics

Archaea
Biochemistry
Biotechnology
Environmental Microbiology and Ecology
Eukaryotic Microbes
Food Microbiology
Fungal Biology
Gene Regulation
Infection Biology
Membranes and Transport
Metabolomics
Microbial Cell Biology
Microbial Diversity and Evolution
Microbiota
Secondary Metabolomics
Systems Biology

ARV; ARP
BCV; BCP
BTV; BTP
EMV; EMP
EuP
FMV; FMP
FBV; FBP
GRV; GRP
IBV; IBP
MTV; MTP
STMV; MetP
MCBV; MCBP
MD(M)V; MDEP
MDMV; MBP
BSMV; SMP
STMV; SBP

Sunday, 15 April | Welcome Reception

The organisers welcome all participants of the conference in the industrial exhibition area. Meet colleagues and other participants by fresh drinks and snacks.

Time 18:45
Place Congress venue
(Industrial exhibition)



Tuesday, 17 April | Mixer

We invite you to join a memorable evening at the Mixer. Enjoy a familiar evening with colleagues and friends, have casual conversations and get to know each other even better: socialise and extend your network! Decide for yourself if you want to enjoy your dinner seated or at a bar table. The band *AnnRed* will accompany the evening and maybe even encourage you to dance...

Time 20:00
Place Congress venue
(Großer Saal and Industrial exhibition)



SPONSORS, FUNDING AND MEDIA COOPERATIONS

We would like to thank our sponsors and exhibitors for their enormous support:

Main Sponsors

Jennewein Biotechnologie GmbH
(Rheinbreitbach/DE)



Leibniz-Institut DSMZ – Deutsche Sammlung von
Mikroorganismen und Zellkulturen
(Braunschweig/DE)



Volkswagen AG (Wolfsburg/DE)



Sponsors

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Bayer Healthcare AG (Leverkusen/DE)
Evonik Degussa (Essen/DE)
New England Biolabs GmbH (Frankfurt am Main/DE)

Sponsor Poster Awards

Springer-Verlag GmbH, BIOSpektrum (Heidelberg/DE)

Funding

FEMS – Federation of European Microbiological Societies
(Delft/NL)



Media Cooperations

pn Verlag (Finning/DE)
KTM Krankenhaus Technik + Management

S. Karger AG (Basel/CH)
Journal of Molecular Microbiology and Biotechnology
Intervirology

TRILLIUM GmbH (Grafrath/DE)
Trillium Diagnostik

State at printing

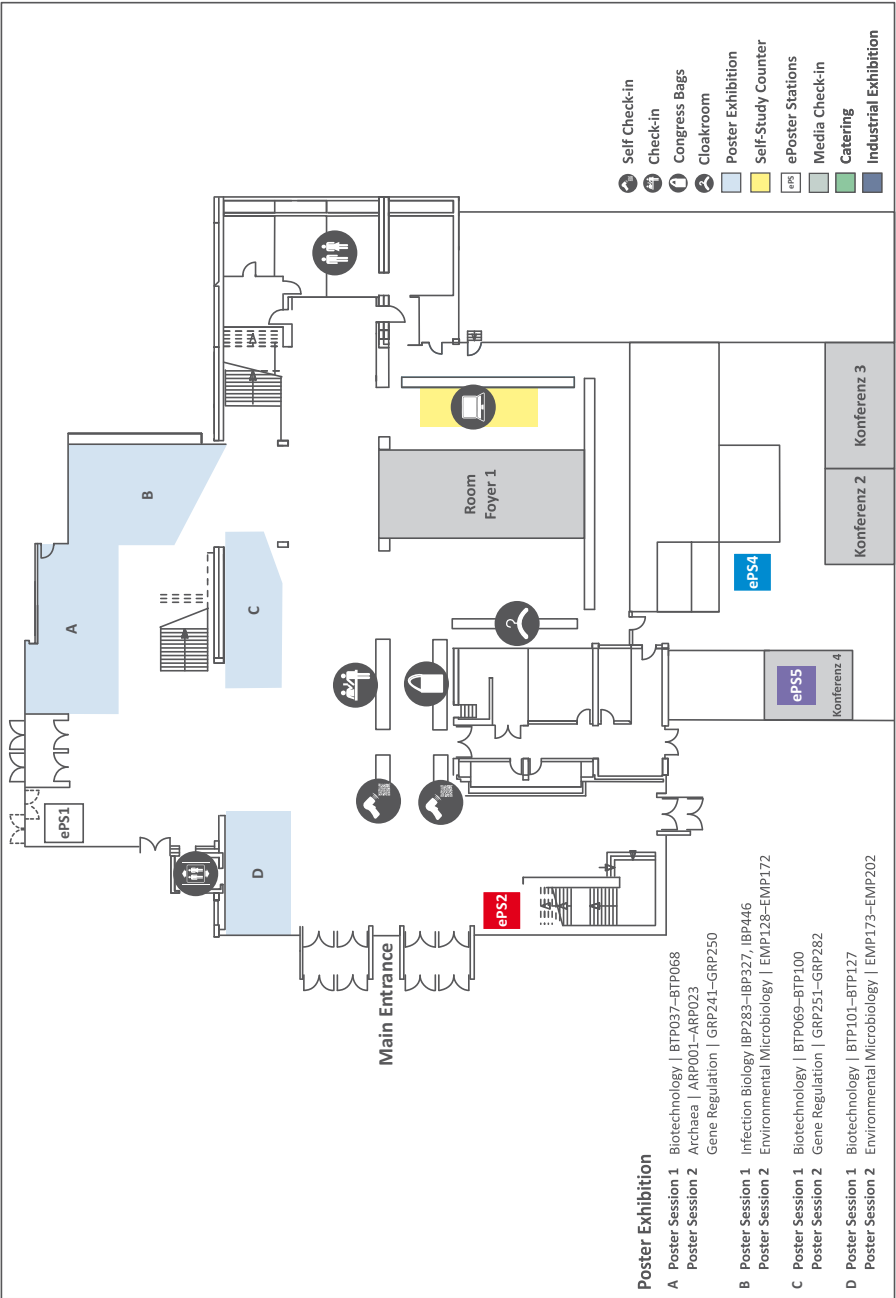
EXHIBITORS (ALPHABETICAL)

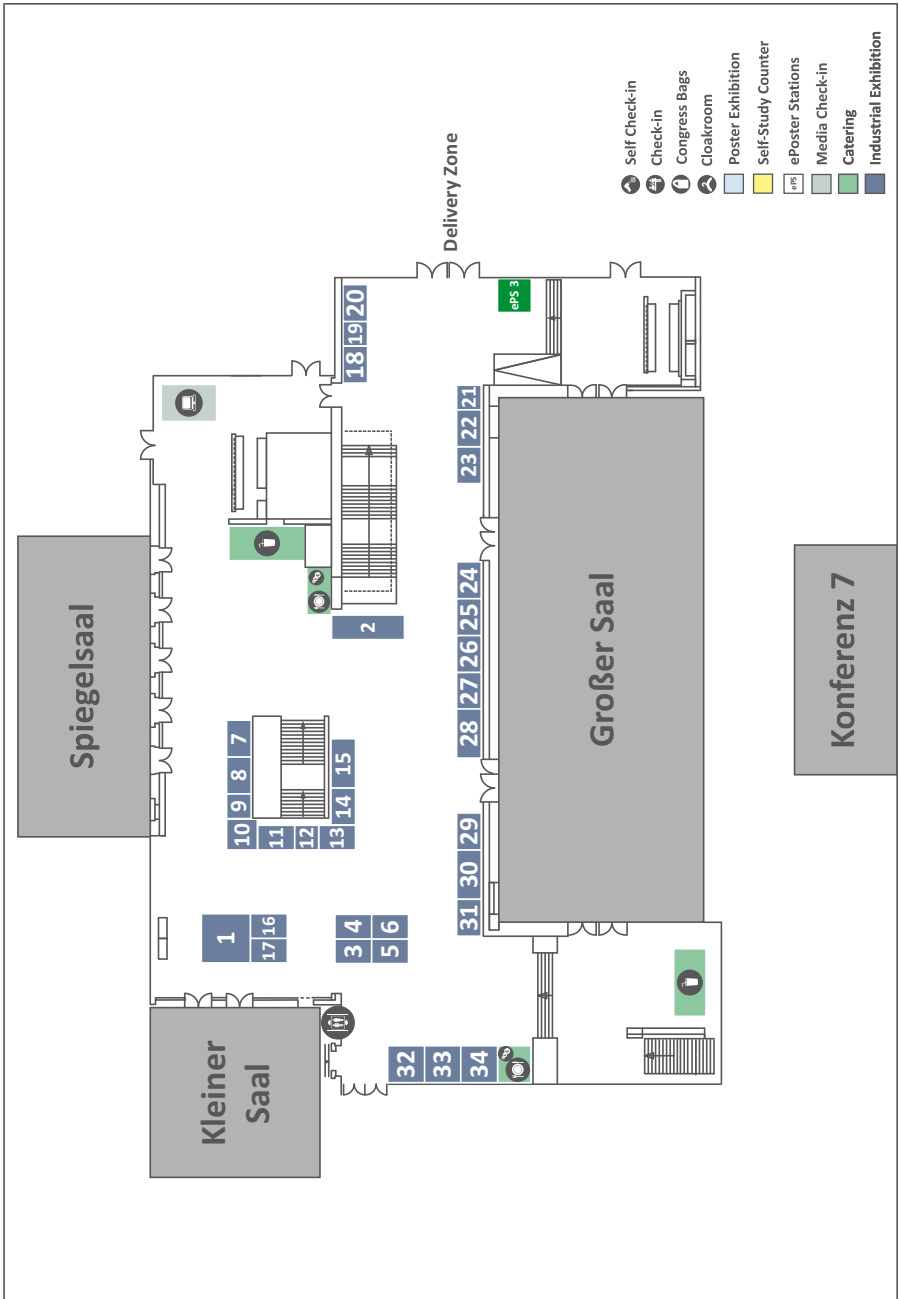
The following companies are looking forward to welcoming you at their booth:

Company	Booth No.
4titude Ltd. (Berlin/DE)	6
7Bioscience GmbH (Hartheim/DE)	31
AID GmbH (Strassberg/DE)	4
aquila biolabs GmbH (Baesweiler/DE)	13
B.I.P.E.A. Proficiency Testing Programs (Paris/FR)	3
BaseClear (Leiden/NL)	18
biomers.net GmbH (Ulm/DE)	26
Biozym Scientific GmbH (Hess. Oldendorf/DE)	8
Eppendorf AG (Hamburg/DE)	5
Gilson International BV Deutschland (Limburg/DE)	12
IBA Lifesciences (Goettingen/DE)	15
INFORS GmbH (Einsbach/DE)	14
Jennewein Biotechnologie GmbH (Rheinbreitbach/DE)	1
Kaneka Eurogentec SA (Seraing/BE)	33
Leibniz-Institut DSMZ – Deutsche Sammlung von Mikroorganismen und Zellkulturen (Braunschweig/DE)	2
LGC Standards GmbH (Wesel/DE)	28
Li-COR Biosciences GmbH (Bad Homburg/DE)	24
m2p-labs Microbioreactors (Baesweiler/DE)	16
MACHEREY-NAGEL GmbH & Co. KG (Dueren/DE)	23
Meintrup DWS Laborgeräte GmbH (Herzlake/DE)	34
MoBiTec GmbH (Goettingen/DE)	27
MP Biomedicals (Illkirch/FR)	29
neoFroxx GmbH (Einhausen/DE)	7
New England Biolabs GmbH (Frankfurt a. M./DE)	11
Nippon Genetics Europe GmbH (Dueren/DE)	22
OLS OMNI Life Science GmbH & Co KG (Bremen/DE)	20
Pearson Deutschland GmbH (Hallbergmoos/DE)	10
Sarstedt AG & Co. KG (Nümbrecht/DE)	25
Springer Spektrum Springer Nature (Heidelberg/DE)	30
SYNMIKRO – Zentrum für Synthetische Mikrobiologie (Marburg/DE)	19
Takara Bio Europe (Saint-Germain-en-Laye/FR)	17
Toepffer Lab Systems IBT (Göppingen/DE)	9
Zymo Research Europe GmbH (Freiburg i. Br./DE)	32

State at printing

FLOOR PLAN – GROUND FLOOR





SCIENTIFIC PROGRAMME | SUNDAY, 15 APRIL

15:00–15:15 Opening of the Conference and Welcome Note

Großer Saal

Welcome Note of the Conference President
Dieter Jahn (Braunschweig/DE)

15:15–16:00 Opening Lecture

Großer Saal

Chair Christoph Tebbe (Braunschweig/DE)

15:15 Microbial Systems Ecology for understanding functions of microbiomes
IL01 Paul Wilmes (Esch-sur-Alzette/LU)

16:00–16:45 VAAM Honorary Award

Großer Saal Laudatio VAAM Honorary Award

16:05 A tale of a tail: How bacteria assemble their motility organelle
M. Erhardt (Berlin/DE)

16:45–17:15 Break

17:15–17:30 Presentation of the Microbe of the Year

Großer Saal Harald Engelhardt (Munich/DE)

17:30–19:00 Plenary Session 1

Großer Saal Microbial Reprogramming and Interaction
Chair Dieter Jahn (Braunschweig/DE)

17:30 Bacterial microcompartments and their redesign for biotechnological
IL02 purposes
Martin J. Warren (Kent/GB)

18:00 Host Microbiome Interactions in Health and Disease
IL03 Eran Elinav (Rehovot/IL)

18:30 Sensory and regulatory RNSs shaping host-pathogen interactions of *Yersinia*
IL04 Petra Dersch (Braunschweig/DE)

19:00–21:00 Welcome Reception in the Industrial Exhibition

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production workflow



SCIENTIFIC PROGRAMME | MONDAY, 16 APRIL

08:00–10:00 Short Lecture 1

- Großer Saal Biotechnology 1
Chairs Rebekka Biedendieck (Braunschweig/DE), Ralf Heermann (Munich/DE)
- 08:00 Directing the carbon flow for optimal production of either single cell oil or
BTV01 gluconic acid in *Cryptococcus podzolicus* and *Trichosporon porosum*
X. Qian (Karlsruhe/DE), M. Jiang (Nanjing/CN)
K. Ochsenreither (Karlsruhe/DE)
- 08:15 Cyclic triterpenoid production with tailored *Saccharomyces cerevisiae*
BTV02 B. E. Ebert, E. Czarnotta, K. Walter (Aachen/DE)
A. Lewandowski (Berlin/DE), C. Knuf, S. A. Jacobsen (Lyngby/DK)
T. Polakowski (Berlin/DE), J. Maury (Lyngby/DK), C. Lang (Berlin/DE)
J. Förster (Lyngby/DK), L. M. Blank (Aachen/DE)
- 08:30 Type and capacity of glucose transport influences succinate yield and
BTV03 productivity in two-phase cultivations of *E. coli* K 12
L. Kyselova, D. Kreitmayer, A. Kremling, K. Bettenbrock (Magdeburg/DE)
- 08:45 Identification of key enzymes for bioalcohol formation in the thermophilic
BTV04 bacterium *Thermoanaerobacter* sp. Strain X514
L. Hitschler, J. Roth, M. Basen (Frankfurt a. M./DE)
- 09:00 Improving the production of ethylmalonyl-CoA pathway-derived
BTV05 compounds from methanol
L. Pöschel, E. Gehr, F. Sonntag, J. Schrader (Frankfurt a. M./DE)
L. Schada von Borzyskowski, T. J. Erb (Marburg/DE)
J. A. Vorholt (Zurich/CH), M. Buchhaupt (Frankfurt a. M./DE)
- 09:15 Carbon-efficient feedstock conversion for the production of bio-succinate
BTV06 and further reduced compounds
P. Weyrauch (Midlothian/GB), M. Roger (Dundee/GB)
A. Arnold (Midlothian/GB), W. Gabrielli (St. Andrews/GB)
F. Sargent (Dundee/GB), F. Brown (Midlothian/GB)
- 09:30 Increasing the space-time yield in lactic acid production by use of biofilms
BTV07 L. Cuny, A. Hille-Reichel (Karlsruhe/DE), P. Oedman (Ludwigshafen/DE)
H. Horn (Karlsruhe/DE)

09:45 Highly effective biofilm inhibition by the first metagenome-derived AI-2
 BTV08 Quenching enzyme
N. Weiland-Bräuer (Kiel/DE), M. Kisch (Hamburg/DE), N. Pinnow (Kiel/DE)
 A. Liese (Hamburg/DE), R. A. Schmitz-Streit (Kiel/DE)

08:00–10:00 Short Lecture 2

Kleiner Saal Environmental Microbiology and Ecology 1
 Chairs Adam Schikora, Nemanja Kuzmanovic (Braunschweig/DE)

08:00 The vector function of microplastics for specific bacterial assemblages
 EMV01 depends on environmental conditions
S. Oberbeckmann, B. Kreikemeyer, M. Labrenz (Rostock/DE)

08:15 Indole – A potential agent for chemical grazing defence in bacteria
 EMV02 S. Thiele (Jena/DE), A. Flynn-Carroll, R. Sharma
 M. D. Johnson (Woods Hole, MA/US), E. Vázquez-Rivera (Madison, WI/US)
 M. F. Polz (Cambridge, MA/US), T. J. Mincer (Woods Hole, MA/US)

08:30 Microbial life on a sand grain: from bulk sediment to single grains
 EMV03 D. Probandt, T. Eickhorst, A. Ellrott, R. Amann, K. Knittel (Bremen/DE)

08:45 The β -hydroxyaspartate pathway: A missing link in the marine global carbon
 EMV04 cycle?
L. Schada von Borzyskowski (Marburg/DE), K. Krüger (Bremen/DE)
 L. Hermann, B. Pommerenke, P. Claus, N. Socorro Cortina, T. Glatter
 U. Maier, E. Bremer (Marburg/DE), R. Amann (Bremen/DE)
 T. J. Erb (Marburg/DE)

09:00 Cobaviruses - a phage group infecting marine *Rhodobacteraceae* is found in
 EMV05 highly productive marine regions
V. Bischoff (Oldenburg/DE), B. Bunk, J. P. Meier-Kolthoff
 C. Spröer (Braunschweig/DE), A. Poehlein (Goettingen/DE)
 M. Dogs (Oldenburg/DE), M. Nguyen (Sydney/DE)
 R. Daniel (Goettingen/DE), J. Overmann, M. Göker (Braunschweig/DE)
 M. Simon, T. Brinkhoff, C. Moraru (Oldenburg/DE)

09:15 Turnover rates coupled to transcriptomics reveal dominant microorganisms
 EMV06 responsible for cycling iron, sulfide and hydrogen in Kermadec Arc
 hydrothermal fluids
M. Perner, S. Böhnke-Brandt (Kiel/DE), K. Sass (Hamburg/DE)

SCIENTIFIC PROGRAMME I MONDAY, 16 APRIL

- 09:30 Marine foams: Ephemeral hotspots of microbial life at the air-sea interface
EMV07 J. Rahlff (Essen, Wilhelmshaven/DE)
D. Herlemann (Tartu County/EE; Rostock/DE), H.-A. Giebel (Oldenburg/DE)
N. I. H. Mustaffa, O. Wurl (Wilhelmshaven/DE)
C. Stolle (Wilhelmshaven, Rostock/DE)
- 09:45 Cross-feeding of ammonium from marine methylamine and glycine betaine
EMV08 degrading bacteria to diatoms as a widespread metabolic interaction
K. Zecher, B. Philipp (Muenster/DE)

08:00–10:00 Short Lecture 3

- Spiegelsaal Infection Biology 1
Chairs Simone Bergmann, Can M. Ünal (Braunschweig/DE)
- 08:00 Redox-sensing under hypochlorite stress and infection conditions by the
IBV01 Rrf2-family repressor HypR in *Staphylococcus aureus*
V. L. Vu (Berlin/DE), T. Busche (Berlin, Bielefeld/DE), K. Tedin (Berlin/DE)
J. Bernhardt (Greifswald/DE), J. Wollenhaupt, T. T. H. Nguyen
C. Weise (Berlin/DE), J. Kalinowski (Bielefeld/DE), M. C. Wahl, M. Fulde
H. Antelmann (Berlin/DE)
- 08:15 Targeting the anti-staphylococcal antibody response using a bead-based
IBV02 array approach
T. Meyer, S. Michalik, J. Steinke, B. Bröker, U. Völker (Greifswald/DE)
- 08:30 Studies on the resistance mechanism of the novel Topoisomerase inhibitor
IBV03 Cystobactamid
K. Cirniski, J. Herrmann (Saarbruecken/DE), S. Hüttel
T. Giambatista (Braunschweig/DE)
N. Zaburannyi (Braunschweig, Saarbruecken/DE), M. Stadler
M. Brönstrup (Braunschweig/DE)
R. Müller (Saarbruecken, Braunschweig/DE)
- 08:45 Molecular analysis of regulatory factors and environmental signals
IBV04 controlling secretion systems important for *Yersinia* virulence
V. Knittel, P. Sadana, S. Seekircher, A. K. Heroven, A. Scrima
P. Dersch (Braunschweig/DE)

- 09:00
IBV05 Characterization of inner membrane regulated proteolysis of ToxR, depending on cysteine-thiol-oxido/reduction state and bile salts in *Vibrio cholerae*
M. Lembke, N. Pennetzdorfer, S. Tutz, S. Schild, J. Reidl (Graz/AT)
- 09:15
IBV06 A Genome Database for *Clostridioides difficile* implemented in EnteroBase
M. Frentrup (Braunschweig/DE), M. J. Sergeant, Z. Zhou
N.-F. Alikhan (Warwick/GB), M. Blaschitz, A. Indra (Vienna/AT)
L. von Müller (Coesfeld/DE), M. Steglich, T. Riedel, B. Bunk, C. Spröer
J. Overmann (Braunschweig/DE), O. Zimmermann
U. Groß (Goettingen/DE), M. Achtman (Warwick/GB)
U. Nübel (Braunschweig/DE)
- 09:30
IBV07 Panoramic view on *Staphylococcus aureus* biofilm physiology
A. Graf, S. Maaß, A. Leonard, M. Lalk, D. Becher, J. Pané-Farré
K. Riedel (Greifswald/DE)
- 09:45
IBV08 Aminoglycoside resistance in *Pseudomonas aeruginosa* – the role of active efflux in the clinic
A. Seupt, M. Schniederjans, S. Häußler (Braunschweig/DE)

08:00–10:00 Short Lecture 4

- Konferenz 7 Microbial Cell Biology 1
Chairs Simon Ringgaard (Marburg/DE), Marc Erhardt (Berlin/DE)
- 08:00
MCBV01 Novel factors directing cell division in the stalked budding alpha-proteobacterium *Hyphomonas neptunium*
M. C. F. van Teeseling (Marburg/DE), D. R. Speth (Pasadena, CA/US)
M. Thanbichler (Marburg/DE)
- 08:15
MCBV02 Cell length-dependent transition in MinD-dynamics drives a switch to asymmetric division and determines the site of complete chromosome segregation in polyploid *Vibrio parahaemolyticus* swarmer cells
S. Ringgaard (Marburg/DE)
- 08:30
MCBV03 Everything flows and nothing abides – The regulatory role of the Min system in *Bacillus subtilis*
H. Feddersen (Planegg-Martinsried/DE), L. Hassan, E. Frey (Munich/DE)
M. Bramkamp (Planegg-Martinsried/DE)

SCIENTIFIC PROGRAMME | MONDAY, 16 APRIL

- 08:45
MCBV04 Identifying the biological role of a protein specific to prokaryotes located in bacterial functional membrane microdomains
L. Kricks, D. Lopez (Madrid/ES)
- 09:00
MCBV05 Bacterial microcompartment construction using components of the propanediol utilisation metabolosome from thermophilic *Geobacillus* spp.
Y. Wade (Bath/GB), R. Daniel (Newcastle upon Tyne/GB), D. Leak (Bath/GB)
- 09:15
MCBV06 Cooperative alginate production in the freshwater phototrophic consortium "*Chlorochromatium aggregatum*"
P. Henke (Braunschweig/DE), G. Wanner (Munich/DE), M. Neumann-Schaal J. Overmann (Braunschweig/DE)
- 09:30
MCBV07 Building a filament for all conditions – how spatial flagellin organization affects flagellar function
M. Kühn (Gießen/DE), F. Schmidt (Marburg/DE), N. Farthing
L. Wilson (York/GB), B. Eckhardt (Marburg/DE), K. Thormann (Gießen/DE)
- 09:45
MCBV08 A cyclic-di-GMP phosphodiesterase and its interaction partners constitute essential components of the rhizobial elongasome and divisome
E. Krol, S. Schäper (Marburg/DE), H. Yau, J. Gray
W. Vollmer (Newcastle/GB), A. Becker (Marburg/DE)

08:00–10:00 Short Lecture 5

- Konferenz 3 Fungal Biology 1
Chairs Falk Hillmann (Jena/DE), Ines Teichert (Bochum/DE)
- 08:00
FBV01 Generation of an arginine-tRNA-adapted *Saccharomyces cerevisiae* strain for effective expression of *Aspergillus fumigatus* proteins
M. Noßmann, J. Pieper, F. Hillmann, A. A. Brakhage, T. Munder (Jena/DE)
- 08:15
FBV02 Novel players of unconventional secretion in the smut fungus *Ustilago maydis*
M. Reindl, J. Aschenbroich, J. Stock, M. Feldbrügge
K. Schipper (Duesseldorf/DE)
- 08:30
FBV03 The cell dialog mechanism mediating vegetative cell fusion in fungi is conserved in the plant pathogen *Botrytis cinerea*
A. Serrano, M. Weichert (Braunschweig/DE), R. Marschall (Muenster/DE)
U. Brandt (Braunschweig/DE), P. Tudzynski (Muenster/DE)
A. Fleißner (Braunschweig/DE)

- 08:45 Phosphorylation-dependent regulation of fungal signaling pathways
FBV04 R. Märker (Bochum/DE), B. Blank-Landeshammer
A. Sickmann (Dortmund/DE), U. Kück (Bochum/DE)
- 09:00 *Schizophyllum* pheromone response and dikaryotic development
FBV05 E. Kothe, R. Murry, S. Wirth, E.-M. Jung (Jena/DE)
- 09:15 RNA editing leads to proteome diversification during fungal sexual
FBV06 development
I. Teichert (Bochum/DE), B. Blank-Landeshammer (Dortmund/DE)
T. A. Dahlmann, M. Nowrousian (Bochum/DE), A. Sickmann (Dortmund/DE)
U. Kück (Bochum/DE)
- 09:30 Exploiting fungi for secondary metabolites
FBV07 F. Surup, M. Stadler (Braunschweig/DE)
- 09:45 Transcriptome analysis of the unrelated fungal β -lactam producers
FBV08 *Acremonium chrysogenum* and *Penicillium chrysogenum* reveal Velvets
important role during conventional strain improvement
D. Terfehr, T. A. Dahlmann, U. Kück (Bochum/DE)

08:00–10:00 Short Lecture 6

- Foyer 1 Biochemistry & Secondary Metabolomics
Chairs Marc Stadler, Volker Berndt (Braunschweig/DE)
- 08:00 Exposing the dioxygen-binding mode of a bacterial flavin-dependent
BSMV01 oxygenase
R. Teufel, R. Saleem-Batcha (Freiburg i. Br./DE)
- 08:15 Plasmid replication associated single-strand specific Methyltransferases
BSMV02 A. Fomenkov, I. Murray, Z. Sun (Ipswich/GB), T. Clark
K. Spittle (Menlo Park, CA/US), B. P. Anton, T. Vincze (Ipswich/GB)
J. Kurlach (Menlo Park, CA/US), Y. Yamaichi (Gif-sur-Yvette/FR)
R. J. Roberts (Ipswich/GB)
- 08:30 Structure of the 1.7 MDa hydrazine Dehydrogenase complex from
BSMV03 Anammox bacteria
M. Akram (Heidelberg/DE), S. Prinz (Frankfurt a. M./DE)
A. Dietl (Heidelberg/DE), J. Reimann (Nijmegen/NL)
U. Mersdorf (Heidelberg/DE), M. S. M. Jetten (Nijmegen, Delft/NL)
K. Parey (Frankfurt a. M./DE), T. R. M. Barends (Heidelberg/DE)

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- 08:45
BSMV04 A modified pathway for leucine degradation in bacteria and archaea
F. Borjian Borujeni (Muenster/DE), U. Johnsen, P. Schönheit (Kiel/DE)
I. Berg (Muenster/DE)
- 09:00
BSMV05 Adaptation of the filamentous fungus *Aspergillus nidulans* to low
temperature stress
B. Hanf, T. Krüger (Jena/DE), B. Bunk (Braunschweig/DE)
D. J. Mattern (Jena/DE), J. Overmann (Braunschweig/DE), A. A. Brakhage
O. Kniemeyer (Jena/DE)
- 09:15
BSMV06 What we can learn from microaerophilic bacteria – comparative genome
survey of ϵ -proteobacteria uncovers hidden biosynthetic potential
M. Rischer, L. Raguž, F. Keiff, H. Guo, G. Diekert, T. Goris
C. Beemelmans (Jena/DE)
- 09:30
BSMV07 Approaches to find new antibiotics from novel indonesian Actinomycetes
J. Krause, J. Paterson, W. Wohlleben, Y. Mast (Tuebingen/DE)
- 09:45
BSMV08 The marine γ -proteobacterium *Microbulbifer* sp. HZ11 brominates
Pseudomonas aeruginosa derived alkyl quinolones
N. Ritzmann, S. Ernst, S. L. Drees, U. Hennecke, S. Fetzner (Muenster/DE)

08:00–10:00 Short Lecture 7

- Konferenz 2 Archaea
Chairs Christine Moissl-Eichinger (Graz/CH), Tessa E. F. Quax (Freiburg i. Br./DE)
- 08:00
ARV01 How do coal degrading methanogens make biogas? – Unravelling central
metabolism of *Methermicoccus shengliensis*
J. Kurth, M. Jetten, C. Welte (Nijmegen/NL)
- 08:15
ARV02 Structure and function of the archaeal chemotaxis protein CheY
T. Quax (Freiburg i. Br./DE), F. Altegoer, G. Bange (Marburg/DE)
S.-V. Albers (Freiburg i. Br./DE)
- 08:30
ARV03 Acetate metabolism in *Haloferax volcanii*: Characterization of an acetate
transporter and of enzymes involved in acetate activation and
gluconeogenesis
T. Kuprat, P. Schönheit (Kiel/DE)
- 08:45
ARV04 Requirement of methanogenesis for CO-dependent growth of
Methanosarcina acetivorans
C. Schöne (Dresden/DE), A. Poehlein (Goettingen/DE)
M. Rother (Dresden/DE)

- 09:00
ARV05 Regulation of the mtsDFH-genes from *Methanosarcina acetivorans* as a paradigm of archaeal signal transduction
L. Blasius, N. Frankenberg-Dinkel (Kaiserslautern/DE)
- 09:15
ARV06 Characterization of the putative Radical S-adenosyl-L-methionine methyltransferase responsible for the unique C-5-methylation of arginine in the methyl-coenzyme M reductase
D. Deobald, L. Adrian (Leipzig/DE), C. Schöne, M. Rother (Dresden/DE)
G. Layer (Leipzig/DE)
- 09:30
ARV07 Unraveling the role of 2-keto-3-deoxy(-6-phospho)-gluconate aldolase in hexose and pentose metabolism of *Sulfolobus acidocaldarius* by mutational analyses
L. Shen, B. Siebers, C. Bräsen (Essen/DE), S.-V. Albers
M. Wagner (Freiburg i. Br./DE)
- 09:45
ARV08 CRISPRi as a tool to repress gene expression in archaea
A.-E. Stachler, L.-K. Maier, T. S. Schwarz, A. Marchfelder (Ulm/DE)

10:00–10:30 Break

10:30–11:30 VAAM PhD Awards

Großer Saal
Laudatio Wolfgang Buckel (Marburg/DE)

11:30–12:15 Hans-Günter-Schlegel Lecture

Großer Saal
Laudatio Dieter Jahn (Braunschweig/DE)

11:30
IL05 Lipoproteins of Gram-Positive bacteria – Key players in immune response and commensalism
Fritz Götz (Tuebingen/DE)

12:15–13:30 Lunch Break

12:15–13:30 Karrieresymposium (for details see page 57)

Spiegelsaal
12:15 Joachim Bertram | IBA Lifesciences (Goettingen/DE)
12:40 Regine Szewzyk | Umweltbundesamt Berlin (Berlin/DE)
13:05 Julia Frunzke | Forschungszentrum Jülich (Juelich/DE)

SCIENTIFIC PROGRAMME | MONDAY, 16 APRIL

12:30–13:30 Industrial Symposium – Jennewein Biotechnologie GmbH

Konferenz 7

12:30 Novel functional food ingredients as old as mankind
K. Parschat (Rheinbreitbach/DE)

13:30–14:30 Plenary Session 2

Großer Saal Plant-Microbe-Interaction
Chair Kornelia Smalla (Braunschweig/DE)

13:30 Virulence strategies of *Xanthomonas* bacteria
IL06 Ulla Bonas (Halle a. d. S./DE)

14:00 Microbiome research for biotech and health solutions
IL07 Gabriele Berg (Graz/AT)

14:30–17:30 ePoster and Poster Session 1 (see page 74 for details)

17:30–19:30 Mini Symposium 1 – Regulation and Signaltransduction

Großer Saal Cybergenetics – At the interface between living and non-living regulatory systems
Chairs Ilka Bischofs, Georg Fritz (Marburg/DE)

17:30 Communicating with and controlling biology via biofabrication, synthetic biology, and microelectronics
RSV-FG01 W. E. Bentley (College Park, MD/US)

18:00 FluidFM as emerging tool for force-controlled single-cell manipulation and force measurement
RSV-FG02 M. Mittelviehhaus, O. Guillaume-Gentil, T. Zambelli, J. A. Vorholt (Zurich/CH)

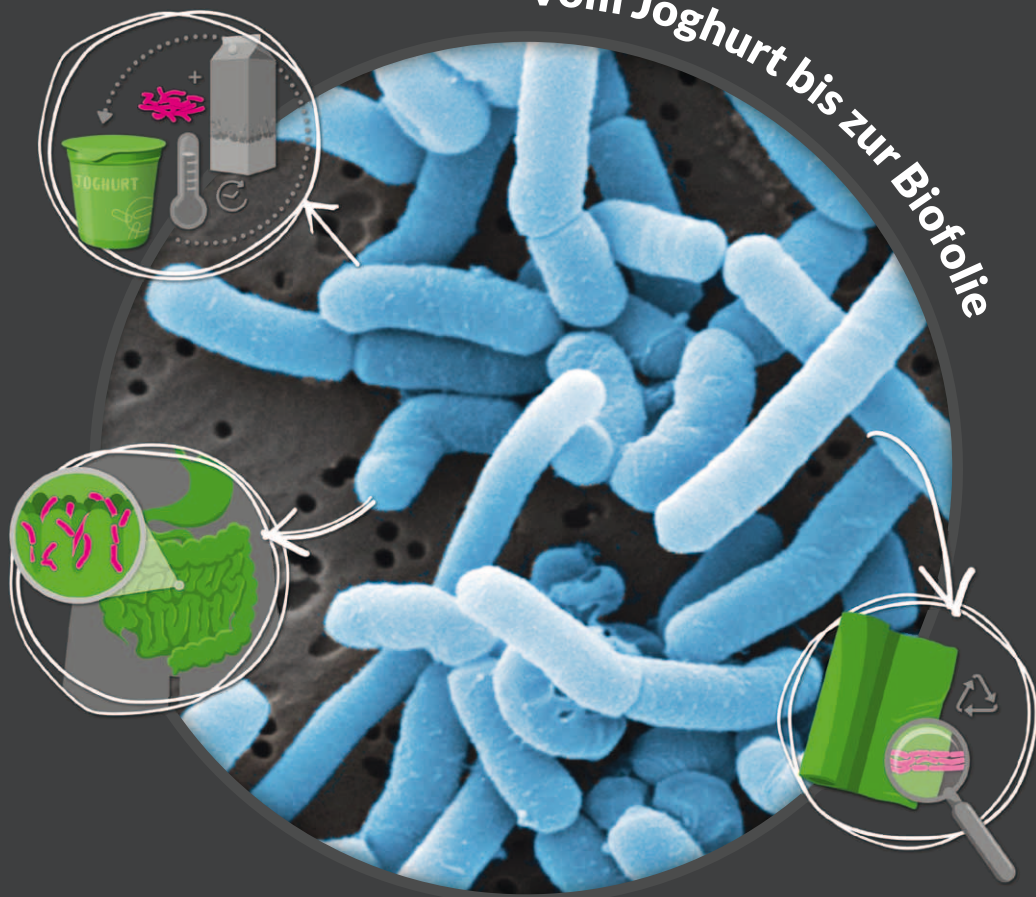
18:30 Design and engineering of cybergenetic systems
RSV-FG03 M. Khammash (Basel/CH)

19:00 Interrogating cellular dynamics with computer aided dynamics in individual bacteria
RSV-FG04 C. Guet (Vienna/AT)

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SCIENTIFIC PROGRAMME I MONDAY, 16 APRIL

17:30–19:30 Mini Symposium 2 – Environmental Microbiology

Kleiner Saal Systems biology approaches in environmental microbiology - Dealing with complex communities

Chairs Florian Centler, Denny Popp (Leipzig/DE)

17:30 Synergistic coevolution speeds up molecular evolution
EMV-FG06 D. Preußger (Jena/DE)

18:00 Strategies for modeling of large-scale metabolic models of microbial communities
EMV-FG02 S. Koch, D. Benndorf, F. Kohrs, P. Lahmann, U. Reichl
S. Klamt (Magdeburg/DE)

18:20 A marriage made in soil – combining individual based models with
EMV-FG03 metabolic networks to quantify bacterial life in heterogeneous habitats
B. Borer (Zurich/CH), M. Ataman (Lausanne/CH), D. Or (Zurich/CH)

18:40 Individual-based metabolic modeling of heterogeneous microbes in
EMV-FG04 complex communities
J. Zimmermann (Kiel/DE)

17:30–19:30 Mini Symposium 3 – Water and Sewage

Spiegelsaal Hygienic impact of wastewater on the environment
Chairs Bernd Bendinger (Hamburg/DE), Ulrich Szewzyk (Berlin/DE)

17:30 Transient pollution of urban surface water by wastewater
WAV-FG01 H.-C. Selinka, F. Kubek, S. Beyer, C. Rien, L. Weise, R. Gnirss
R. Szewzyk (Berlin/DE)

18:00 Test procedure for the retention of viruses by ultrafiltration
WAV-FG02 B. Hamsch, P. Lipp (Karlsruhe/DE)

18:30 Dissemination of antibiotic resistant bacteria via urban wastewater
WAV-FG03 T. Schwartz (Karlsruhe/DE)

17:30–19:30 Mini Symposium 4 – Symbiotic Interactions

- Konferenz 7 The molecular basis of symbiosis
Chair Martin Kaltenpoth (Mainz/DE)
- 17:30 Molecular mechanisms of intracellular coral-algal symbiosis
SIV-FG01 L. Hambleton (Heidelberg/DE)
- 18:00 Metabolic coupling in bacteria
SIV-FG02 S. Shitut (Osnabrueck, Jena/DE), T. Ahsendorf (Heidelberg/DE; Zurich/CH)
S. Pande (Zurich/CH), C. Kost (Osnabrueck, Jena/DE)
- 18:30 Transcriptomic insights into animal-bacteria interactions in marine
SIV-FG03 chemosynthetic symbioses
B. Yuen, J. Petersen (Vienna/AT)
- 18:45 Developmental interdependence of *Hydra viridissima* and *Chlorella*: a
SIV-FG04 window into the evolution of symbiotic interactions
J. Bathia (Kiel/DE), M. Hamada (Okayama/JP), K. Schroeder
T. Bosch (Kiel/DE)
- 19:00 Polysaccharide degrading potential in the hindgut of higher termites
SIV-FG05 M. Vera, V. Hervé, S. Griesel, A. Brune (Marburg/DE)
- 19:15 Chemical and biological lessons from symbiotic microbes of fungus-growing
SIV-FG06 termites
R. Benndorf, H. Guo, K. Martin, C. Weigel, S. Otani (Jena/DE)
Z. W. de Beer (Pretoria/ZA), M. Poulsen, C. Beemelmans (Jena/DE)

17:30–19:30 Mini Symposium 5 – Fungal Biology and Biotechnology

- Konferenz 3 Fungal development in space and time
Chairs Kai Heimel (Goettingen/DE), Ines Teichert (Bochum/DE)
- 17:30 Checkpoints and feedbacks of circadian transcription in *Neurospora crassa*
FBV-FG01 M. Brunner (Heidelberg/DE)
- 18:00 Rapid adaptation of signaling networks in the fungal pathogen
FBV-FG02 *Magnaporthe oryzae*
S. Jacob, E. Thines (Mainz/DE)

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18:15 Velvet domain protein VosA represses the zinc cluster transcription factor
 FBV-FG03 ZtfA regulatory network for *Aspergillus nidulans* asexual development, oxidative stress response and secondary metabolism
K. G. Thieme, J. Gerke, C. Sasse, O. Valerius, S. Thieme (Goettingen/DE)
A. K. Heinrich, H. B. Bode (Frankfurt a. M./DE), A. F. J. Ram (Leiden/NL)
G. H. Braus (Goettingen/DE)

18:30 *Thecaphora thlaspeos* – Smut fungal effectors mediate asymptomatic
 FBV-FG04 colonization of *Brassicaceae*
L. Plücker, V. Göhre, K. Courville, L. Frantzeskakis (Duesseldorf/DE)
R. Kellner (Duesseldorf, Cologne/DE), E. Kemen (Cologne/DE)
A. Brachmann (Munich/DE), M. Feldbrügge (Duesseldorf/DE)

18:45 Volatilom of the mushroom *Agrocybe aegerita* during different
 FBV-FG05 developmental stages
A. Orban, M. Rühl (Gießen/DE)

19:00 BRO-1 interacts with the SO protein and is essential for germling
 FBV-FG06 communication and fusion in *Neurospora crassa*
H. Haj Hammadeh, M. R. Schumann, A. Fleißner (Braunschweig/DE)

19:15 Analysis of Clp1-dependent UPR-modulation in *Ustilago maydis*
 FBV-FG07 N. Pinter, K. Heimel (Goettingen/DE)

17:30–19:30 Mini Symposium 6 – Identification and Systematic

Foyer 1 The role of viable type material in the light of alternative species concepts in
 Chairs prokaryotic taxonomy
 André Lipski (Bonn/DE), Hans-Jürgen Busse (Vienna/AT)

17:30 Uncultivated Bacteria and Archaea in need of their own taxonomy
 ISV-FG01 R. Amann (Bremen/DE), R. Rossello-Mora (Esporles/ES)
K. Konstantinidis (Atlanta, GA/US)

18:00 Valid species description of novel nitrite-oxidizing bacteria – a challenge for
 ISV-FG02 microbiologists
E. Spieck (Hamburg/DE)

18:30 On the taxonomy of microbial dark matter
 ISV-FG03 J. Overmann (Braunschweig/DE)

17:30–19:30 Mini Symposium 7 – Food Microbiology

- Konferenz 2 A quality and diagenostical view on Food microbiology
Chairs Mareike Wenning (Munich/DE), Andreas Seiffert-Störko (Frankfurt a. M.)
- 17:30 Honor thy lodgers? – The microbiome of the built environment of humans
FMV-FG01 M. Egert (Villingen-Schwenningen/DE)
- 17:55 Sinner or Saint – Evaluation of the microbiological quality of domestic
FMV-FG02 appliances
D. Bockmühl (Kleve/DE)
- 18:15 Persistent spore formers constitute a widespread phenomenon in dairy
FMV-FG03 food production lines
E. Doll, A. Dettling, S. Scherer, M. Wenning (Freising/DE)
- 18:35 IHO – Organisation and Services – Disinfection and their uses in the
FMV-FG04 professional sector
N. Neubauer (Frankfurt a. M./DE)
- 18:50 Does bacterial growth influence the prediction accuracy of bioburden
FMV-FG05 measured by fluorescence spectroscopy?
C. Grimmer, H. Schmidt (Kulmbach/DE)
- 19:10 Relevance of species identification for risk assessment of *Bacillus cereus*
FMV-FG06 sensu lato group members
M. Wenning, C. Huptas, S. Scherer (Freising/DE)

19:00–20:00 Special Group Meetings (see page 26 for details)

08:00–10:00 Short Lecture 8

Großer Saal	Biotechnology 2
Chairs	Sarah Wienecke (Braunschweig/DE), Johannes Gescher (Karlsruhe/DE)
08:00	C4 dicarboxylic acid metabolism in <i>Clostridium autoethanogenum</i>
BTv09	<u>R. Breitkopf</u> (Nottingham/GB; Jena/DE), A. T. Wichlacz, H. E. L. Williams N. P. Minton, K. Winzer (Nottingham/GB)
08:15	Role of arginine biosynthesis in salt stress adaption of <i>Clostridium acetobutylicum</i>
BTv10	<u>M. Lehmann</u> , H. Bahl, R.-J. Fischer (Rostock/DE)
08:30	Engineering <i>P. putida</i> for Efficient Production of Bioplastics in Phototrophic Mixed Cultures with <i>S. elongatus</i> cscB
BTv11	<u>H. Löwe</u> , A. Kremling, K. Pflüger-Grau (Garching/DE)
08:45	Establishing a technology platform for the conversion of waste to platform chemicals and electrical energy
BTv12	<u>T. Klessing</u> , A. Schmidt, J. Gescher (Karlsruhe/DE)
09:00	Waste to value - Production of the bioplastic poly(3-hydroxybutyrate) (PHB) and its precursor 3-hydroxybutyrate (3-HB) from waste-gas
BTv13	S. Flüchter, <u>F. Bengelsdorf</u> (Ulm/DE), S. Follonier (Sion/CH) B. Schiel-Bengelsdorf (Ulm/DE), M. Zinn (Sion/CH) P. Dürre (Ulm/DE)
09:15	Hydrogen storage using acetogenic bacteria as biocatalysts:
BTv14	Hydrogen-dependent CO ₂ reductase from a thermophilic Acetogen <u>F. Schwarz</u> , V. Müller (Frankfurt a. M./DE)
09:30	Recombinant production of benzylsuccinate synthase and 2-(methylnaphthyl)succinate synthase
BTv15	<u>I. Salii</u> , J. Heider (Marburg/DE)
09:45	Glycosynthases – Biocatalytic synthesis of glycosides
BTv16	<u>M. Hayes</u> , J. Pietruszka (Juelich/DE)

Karrieresymposium – Studium, Promotion und dann?

Jobperspektiven in den Biowissenschaften – Anregungen und Tipps

Montag, 16. April 2018, 12.15-13.30 Uhr, Spiegelsaal

Dr. Joachim Bertram, IBA Lifesciences

Vom Mikrobenjäger an der Uni zur zellulären Immuntherapie in einem Unternehmen:
Was ist eine wissenschaftliche Karriere?

Dr. Regine Szewzyk, Umweltbundesamt Berlin

Das Umweltbundesamt – eine forschende Bundesbehörde

Prof. Dr. Julia Frunzke, Forschungszentrum Jülich

Work-Life oder Life-Work Balance – zwischen Wissenschaft und Wickeltisch

Außerdem:

DFG-Antragsberatung

Dienstag, 17. April 2018, 12.00-13.30 Uhr und 15.00-16:30 Uhr, Konferenzraum 2
Regina Nickel berät im Einzelgespräch zu den Förderprogrammen der Deutschen Forschungsgemeinschaft → Anmeldung am Check-In

2. Microbe Slam

17. April 2018 17.00 Uhr Kleiner Saal

Teilnehmer (in alphabetischer Reihenfolge):

JANEK MEISSNER, Göttingen

Bacillus subtilis als Ermittler gegen den "Weed-Killer" Glyphosat

JENS RUDAT, Karlsruhe

Starbugs – Was Bakterien im Weltall mit Coffein zu tun haben könnten

YANA WADE, Bath, UK

If you want a thing done well, ask a friend for help

CHARLOTTE WERMSE, Würzburg

Bakterien auf WG-Suche

WAEEL YAKTI, Berlin

The epic battles of fungi



Moderator: Andreas Hebbelmann, Braunschweig

Ihr wählt den/die Gewinner/in!

SCIENTIFIC PROGRAMME | TUESDAY, 17 APRIL

08:00–10:00 Short Lecture 9

- Kleiner Saal Environmental Microbiology and Ecology 2
Chairs Bert Engelen, Cristina Moraru (Oldenburg/DE)
- 08:00 Microbial communities in soil hotspots and the opportunity to use
EMV09 quantitative DNA-SIP data for carbon turnover models
 M. Uksa, K. Müller, C. Poll, H. Pagel (Stuttgart/DE)
 S. Gschwendtner (Neuherberg/DE), D. Fischer (Witzenhausen/DE)
 E. Kandeler (Stuttgart/DE)
- 08:15 Anaerobic oxidation of methane at low temperatures in subaquatic
EMV10 permafrost environments
 M. Winkel (Fairbanks, AK/US; Potsdam/DE), S. Liebner (Potsdam/DE)
 A. Sepulveda-Jauregui, K. Martinez-Cruz (Fairbanks, AK/US)
 J. Mitzscherling (Potsdam/DE), J. Heslop (Fairbanks, AK/US; Kingston/CA)
 P. P. Overduin (Potsdam/DE), C. Knoblauch (Hamburg/DE), F. Horn
 D. Wagner (Potsdam/DE), K. Walter Anthony (Fairbanks, AK/US)
- 08:30 Hotspots of anammox and nitrification in oligotrophic karstic limestone
EMV11 aquifers
 M. Herrmann (Jena, Leipzig/DE), C.-E. Wegner, S. Kumar
 P. Geesink (Jena/DE), B. Thamdrup (Odense/DK), K. U. Totsche (Jena/DE)
 K. Küsel (Jena, Leipzig/DE)
- 08:45 *Filamentous Desulfobulbaceae* as mediators of cryptic sulfur cycling in
EMV12 upland soils and aquifer sediments
 C. Sachs, D. Kanaparthi, T. Lüders (Munich/DE)
- 09:00 Wind-driven emission of *Enterococcus faecium* from agricultural soil
EMV13 fertilized with poultry manure
 N. Thiel, V. Junker (Braunschweig/DE), S. Münch (Muencheberg/DE)
 P. Siller (Berlin/DE), O. Biniash (Potsdam/DE), M. Faust
 K. Schepanski (Leipzig/DE), T. Amon (Potsdam/DE), U. Rösler (Berlin/DE)
 R. Funk (Muencheberg/DE), U. Nübel (Braunschweig/DE)
- 09:15 Unravelling the identity, metabolic potential, and global biogeography of
EMV14 the atmospheric methane-oxidising Upland Soil Cluster α
 J. Pratscher (Edinburgh/GB), J. Vollmers (Eggenstein-Leopoldshafen/DE)
 S. Wiegand (Nijmegen/NL), M. Dumont (Southampton/GB)
 A.-K. Kaster (Eggenstein-Leopoldshafen/DE)
- 09:30 *Burkholderiaceae* are primary acetate assimilating denitrifiers in peat circles
EMV15 of the arctic tundra capable of complete denitrification at pH 4
 S. Hetz (Hanover/DE)

09:45 Biogeography of methanogenic archaea in natural environments
 EMV16 X. Wen (Potsdam/DE; Lanzhou/CN), S. Yang (Lanzhou/CN; Potsdam/DE)
 F. Horn, M. Winkel, D. Wagner, S. Liebner (Potsdam/DE)

08:00–10:00 Short Lecture 10

Spiegelsaal Gene Regulation 1
 Chairs Elisabeth Härtig (Braunschweig/DE), Jörg Stülke (Goettingen/DE)

08:00 Uncovering the regulatory circuits of the glycine betaine synthesizing
 GRV01 pathway in *Bacillus subtilis*
B. Warmbold, S. Ronzheimer, M. Fischer, E. Bremer (Marburg/DE)

08:15 The RirA transcriptional regulator of *Dinoroseobacter shibae* senses iron via
 GRV02 a[3Fe-4S]¹⁺ cluster as cofactor
M. Behringer, D. Jahn, E. Härtig (Braunschweig/DE)

08:30 The components of the unique Zur regulon of *Cupriavidus metallidurans*
 GRV03 L. Bütof, M. Herzberg, D. H. Nies (Halle a. d. S./DE)

08:45 Characterization of LftR, a PadR-like transcription factor in *Listeria*
 GRV04 *monocytogenes*
S. Hauf (Wernigerode/DE), J. Gibhardt, F. M. Commichau (Goettingen/DE)
 S. Fuchs, S. Halbedel (Wernigerode/DE)

09:00 Synthetic countersilencing as an approach to study evolutionary network
 GRV05 expansion
J. Wiechert, J. Frunzke (Juelich/DE)

09:15 Cell cycle regulator DnaA modulates the switch between solo and social
 GRV06 lifestyles of *Sinorhizobium meliloti* via multiple regulatory feed-forward
 loops
M. McIntosh (Gießen/DE), E. Lacanna, J. Serrania (Marburg/DE)

09:30 Unconventional biofilm formation of *E. coli* Nissle 1917
 GRV07 A. Cimdins, M. Kiel, U. Dobrindt (Muenster/DE)

09:45 Differential view on the bile acids stress response of *Clostridioides difficile*
 GRV08 S. Sievers, S. Dittmann, V. Gast, S. M. Tröger, C. Wolff, D. Zühlke
 C. Hirschfeld, R. Schlüter, K. Riedel (Greifswald/DE)

SCIENTIFIC PROGRAMME | TUESDAY, 17 APRIL

08:00–10:00 Short Lecture 11

- Konferenz 7 Microbial Diversity and Microbiota
Chairs Till Strowig, Marius Vital (Braunschweig/DE)
- 08:00 Dead or Alive? Molecular life-dead distinction in human stool samples
MDMV01 reveals significantly different composition of the microbial community
 C. Moissl-Eichinger, A. Perras, K. Koskinen, L. Wink, M. Mora (Graz/AT)
- 08:15 Metatranscriptome analysis of the vaginal microbiota reveals potential
MDMV02 mechanisms for recurrence and protection against metronidazole in
 bacterial vaginosis
 I. Wagner-Döbler, Z.-L. Deng (Braunschweig/DE)
 C. Gottschick (Halle a. d. S./DE), S. Bhuju (Braunschweig/DE), C. Masur
 C. Abels (Bielefeld/DE)
- 08:30 Tight associations – insights on the microbiome of barley seeds
MDMV03 L. Yang, J. Danzenberger, Y. Biggot, M. Schlöter, P. Schröder
 V. Radl (Oberschleißheim/DE)
- 08:45 High-resolution metaproteomics of biogas plants revealed two major
MDMV04 patterns of methanogenesis and highlighted possible impact of
 Bacteriophages on microbial communities
 D. Benndorf, R. Heyer, K. Schallert, C. Siewert, F. Kohrs (Magdeburg/DE)
 I. Maus (Bielefeld/DE), S. Theuerl, M. Klocke (Potsdam/DE)
 M. Hoffmann, R. Zoun, U. Reichl (Magdeburg/DE)
- 09:00 The evolutionary diversity of the „prokaryote“ cell membrane from the
MDMV05 perspective of lipid components
 B. J. Tindall (Braunschweig/DE)
- 09:15 EDGAR: a versatile tool for phylogenomics
MDMV06 J. Blom, M. Dieckmann, T. Juhre, J. G. Schrader, S. P. Glaeser
 A. Goesmann (Gießen/DE)
- 09:30 Genome-scale data resolve phylogeny and classification of various bacterial
MDMV07 phyla
 M. Göker (Braunschweig/DE)
- 09:45 A phylogenetic framework for the kingdom Fungi based on 18S rRNA gene
MDMV08 sequences
 M. Reich, P. Yarza, P. Yilmaz, K. Panzer, F. O. Glöckner (Bremen/DE)

08:00–10:00 Short Lecture 12

Konferenz 3 Fungal Biology 2

Chairs Erika Kothe (Jena/DE), Michael Feldbrügge (Duesseldorf/DE)

08:00 Functional characterization of a candidate core effector protein with
FBV09 endonuclease features in the endophytic fungi *Serendipita indica*
H. Widmer, S. Wawra, A. Zuccaro (Cologne/DE)

08:15 *Exophiala dermatitidis* – stress resistance and pathogenicity
FBV10 C. Poyntner (Vienna/AT), U. Mirastschijski (Bremen/DE), B. Blasi, H. Tafer
K. Sterflinger (Vienna/AT)

08:30 Fungus-feeding amoeba *Protostelium aurantium* identifies the survival
FBV11 strategies of *Candida parapsilosis* during predatory-prey interactions
S. Novohradská, J. Sprague, M. Sprenger (Jena/DE), R. Tóth (Szeged/HU)
J. Linde, T. Wolf, S. Brunke (Jena/DE), A. Gáscer (Szeged/HU)
F. Hillmann (Jena/DE)

08:45 *Randia Spinosa L* – a ptential drug candidate targets cell membrane of
FBV12 *Candida Albicans* and its associated virulence factors
S. Jinendiran (Madurai/IN), R. Rajesh Kumar (Tyler, TX/US)
N. Sivakumar (Madurai/IN), M. Sundararaman (Tiruchirappalli/IN)

09:00 Ability of Extracellular proteases of micromycetes *Aspergillus flavipes*,
FBV13 *Aspergillus ochraceus* and *Aspergillus sydowii* to affect proteins of the
human hemostatic system
A. Osmolovskiy, A. Orekhova, E. Kornienko (Moscow/RU)

09:15 SCF Ubiquitin Ligase F-box Protein Fbx15 Controls Nuclear Co-repressor
FBV14 Localization, Stress Response and Virulence of the Human Pathogen
Aspergillus fumigatus
B. Jöhnk (Goettingen/DE)
Ö. Bayram (Goettingen/DE; Maynooth, County Kildare/IE)
A. Abelmann (Goettingen/DE), T. Heinekamp, D. J. Mattern, A. A. Brakhage
I. D. Jacobsen (Jena/DE), O. Valerius, G. H. Braus (Goettingen/DE)

09:30 A functional homolog of Hippo kinase is required for fungal development
FBV15 D. Radchenko, U. Kück (Bochum/DE)

09:45 About how *Colletotrichum graminicola* shapes its lifestyle
FBV16 D. Nordzieke (Goettingen/DE), A. Raschke, H. Deising (Halle a. d. S./DE)
S. Pöggeler (Goettingen/DE)

SCIENTIFIC PROGRAMME | TUESDAY, 17 APRIL

08:00–10:00 Mini Symposium 8 – Microbial Pathogenicity

- Foyer 1 Microbial Pathogenicity
Chairs Samuel Wagner (Tuebingen/DE), Andreas Diepold (Marburg/DE)
- 08:00 Organization and biological significance of lipid rafts in bacteria
MPV-FG01 Daniel Lopez (Madrid/ES)
- 08:30 Polyphosphate – an important bacterial posttranslational stress defense
MPV-FG02 system against inflammatory oxidants
 J.-U. Dahl, B. Groitl, M. J. Gray, U. Jakob (Ann Arbor, MI/US)
- 08:45 Assembly, structure, and function of the core export apparatus components
MPV-FG03 of bacterial type III secretion systems
 S. Wagner (Tuebingen/DE), C. Robinson (Tuebingen/DE; Oxford/GB)
 S. Lea (Oxford/GB)
- 09:00 The impact of redox regulation on the stress response of *Aspergillus*
MPV-FG04 *fumigatus* and its role in host-pathogen interaction
 L. Ivanova, E. Shekhova, T. Krüger, O. Kniemeyer, A. A. Brakhage (Jena/DE)
- 09:15 C-type lectin receptor (CLR)-Fc fusion proteins as tools to screen for novel
MPV-FG05 CLR/bacteria interactions: an exemplary study on *Campylobacter jejuni*
 isolates
 S. Mayer, R. Möller, J. Monteiro, K. Ellrott (Hanover/DE)
 C. Josenhans (Munich, Hanover/DE), B. Lepenies (Hanover/DE)
- 09:30 Trimeric Autotransporter Adhesins – Understanding adhesive function and
MPV-FG06 screening for inhibitors
 A. Saragliadis, D. Linke (Oslo/NO)
- 09:45 Auto-regulatory control and phenotypic heterogeneity in expression of the
MPV-FG07 flagellar master operon flhDC in *Salmonella enterica*
 C. Kühne, M. Erhardt (Berlin/DE)

10:00–10:30 Special Group Meeting (see page 26 for details)

08:00–10:00 Short Lecture 13

- Konferenz 2 Systems Biology and Metabolomics
Chairs Meina Neumann-Schaal, Boyke Bunk (Braunschweig/DE)
- 09:00 Engineering an artificial bypass for glucose degradation in *Escherichia coli*
STMV01 K12 by expression of a mutant gene of fructose 6-phosphate aldolase (fsaA)
 E. Guitart Font, G. A. Sprenger (Stuttgart/DE)
- 09:15 Making and breaking the wall – a systems approach to cell wall homeostasis
STMV02 in *Bacillus subtilis*
 H. Piepenbreier, G. Fritz (Marburg/DE)
- 09:30 ADM1 + FBA – Bringing anaerobic digestion modeling to the next level
STMV03 S. Weinrich, S. Koch, F. Bonk, D. Popp, D. Benndorf, S. Klamt
 F. Centler (Leipzig/DE)
- 09:45 Adaptation of *Dinoroseobacter shibae* to peroxide stress
STMV04 N. Beier, M. Kucklick, M. Behringer, E. Härtig, D. Jahn (Braunschweig/DE)
 S. Fuchs (Wernigerode/DE), S. Engelmann (Braunschweig/DE)
- 10:00 Metabolome analysis of xylose and xylitol degradation in *Phaeobacter*
STMV05 *inhibens*
 E. V. Majer, H. M. Freese, J. Overmann, D. Schomburg
 M. Neumann-Schaal (Braunschweig/DE)
- 10:15 Metabolic and regulatory adaptation of *Staphylococcus aureus* to different
STMV06 carbon sources
 A. Giese, P. Westhoff, D. Zühlke (Greifswald/DE), C. Liang (Wuerzburg/DE)
 M. Lalk (Greifswald/DE), B. A. Lazazzera (Los Angeles, CA/US)
 S. Engelmann (Braunschweig/DE), S. Fuchs (Wernigerode/DE), M. Hecker
 K. Riedel (Greifswald/DE), T. Dandekar (Wuerzburg/DE)
 J. Pané-Farré (Greifswald/DE)
- 10:30 Arginine deiminase pathway in *Acetobacterium woodii*
STMV07 M. Flaiz, M. H. Beck, F. R. Bengelsdorf, P. Dürre (Ulm/DE)
- 10:45 Characterization of nitrogen metabolism of *Streptococcus pneumoniae* by
STMV08 Isotopologue profiling
 N. Kakar (Greifswald/DE), I. Häuslein (Munich/DE)
 G. Burchhardt (Greifswald/DE), W. Eisenreich (Munich/DE)
 S. Hammerschmidt (Greifswald/DE)

10:00–10:30 Break

SCIENTIFIC PROGRAMME | TUESDAY, 17 APRIL

10:30–11:30 Plenary Session 3

Großer Saal Infection Biology and Evolution
Chair Ulrich Nübel (Braunschweig/DE)

10:30 Suppression of adaptive immunity by *Salmonella*
IL08 David Holden (London/GB)

11:00 Analysis of 100,000 prokaryotic (meta-)genomes shows clear species boundaries
IL09 Kostas Konstantinidis (Atlanta, GA/US)

11:30–13:00 Lunch Break

11:45–12:45 Industrial Symposium – Leibniz Institute German Collection of Microorganisms and Cell Cultures (DSMZ)

Kleiner Saal Are you ready for Nagoya?
Chair Amber Hartmann-Scholz (Braunschweig/DE)

Speaker J. Overmann (Braunschweig/DE)
 M. Teschke (Bonn/DE)
 O. Oswald (Ludwigshafen/DE)
 T. Greiber (Bonn/DE)

12:00–13:00 Industrial Symposium – Takara Bio Europe

Konferenz 7 Next-Gen Tools to Clone and Purify Proteins – Discover In-Fusion® and
 Capture™!
 M. Raman (Saint-Germain-en-Laye/FR)

12:00–13:00 American Society for Microbiology (ASM) (for details see page 26)

Konferenz 3

12:00–13:30 Antragsberatung der Deutschen Forschungsgemeinschaft (DFG)

Konferenz 2 Interested participants are asked to refer to the check-in desk in order to
 register for the consultation.

SCIENTIFIC PROGRAMME | TUESDAY, 17 APRIL

13:00–14:30 Plenary Session 4

Großer Saal Natural Products
Chair Mark Brönstrup (Braunschweig/DE)

13:00 Neglected microbes, cryptic pathways, and ancient molecules
IL10 Christian Hertweck (Jena/DE)

13:30 Environmental dimensions of antibiotic resistance
IL11 Joakim Larsson (Gothenburg/SE)

14:00 Mining the dark – Metabolic novelty from elusive bacteria
IL12 Jörn Piel (Zurich/CH)

14:30–17:00 ePoster and Poster Session 2 (see page 102 for details)

15:00–16:30 Antragsberatung der Deutschen Forschungsgemeinschaft (DFG)

Konferenz 2 Interested participants are asked to refer to the check-in desk in order to register for the consultation.

17:00–18:30 Microbe Slam (for details see page 57)

Kleiner Saal

18:30–20:00 VAAM Annual General Meeting (for details see page 25)

Spiegelsaal

From 20:00 Mixer (for details see page 35)

Großer Saal and Industrial Exhibition

09:00–11:00 Short Lecture 14

Großer Saal	Biotechnology 3
Chairs	José M. Borréro de Acuña (Braunschweig/DE) Katja Bettenbrock (Magdeburg/DE)
09:00 BTV17	Metagenomic analysis of community response to fluctuating environments in anaerobic digestion <u>D. Taraba</u> , F. Bonk, D. Popp, H. Harms, F. Centler (Leipzig/DE)
09:15 BTV18	Analysis of a thermophilic anaerobic microbial community and its potential for plant biomass degradation by using “omic” technologies <u>P. Busch</u> , M. Suleiman, C. Schäfers, G. Antranikian (Hamburg/DE)
09:30 BTV19	Metabolic grafting of <i>Escherichia coli</i> for the biosynthesis of aromatic amines <u>B. Mohammadi Nargesi</u> , G. Sprenger, B. Nebel, <u>J.-W. Youn</u> (Stuttgart/DE)
09:45 BTV20	Metabolic engineering of Oligotropha carboxidovorans OM5 for the aerobic utilization of syngas <u>D. Siebert</u> , M. Rama, A. Grenzner, B. J. Eikmanns (Ulm/DE)
10:00 BTV21	Manipulation of the hydrocarbon biosynthesis pathway in <i>Micrococcus luteus</i> A. Angelov, <u>M. Surger</u> , M. Übelacker, W. Liebl (Freising/DE)
10:15 BTV22	<i>In vivo</i> functionalization of bacterial magnetic nanoparticles by magnetosome expression of peptides and reporter enzymes <u>F. Mickoleit</u> , D. Schöler (Bayreuth/DE)
10:30 BTV23	Phage surface display derived short peptides for the development of new biosorbents for the recovery of valuable elements from primary and secondary sources <u>S. Matys</u> , F. Lederer (Dresden/DE), N. Schönberger (Freiberg/DE), R. Braun K. Pollmann (Dresden/DE)
10:45 BTV24	Bio-based α,ω -functionalized hydrocarbons from multi-step reaction sequences with bio- and metallo-catalysts based on the fatty acid decarboxylase OleTJE S. Bojara, <u>A. Gomez Baraibar</u> , D. Reichert, M. Grote, C. Mügge R. Kourist (Bochum/DE), A. Denning, B. Nidetzky (Graz/AT)

09:00–11:00 Short Lecture 15

- Kleiner Saal Environmental Microbiology and Ecology 3
 Chairs Dietmar H. Pieper (Braunschweig/DE), Marcus A. Horn (Hanover/DE)
- 09:00 Anaerobic degradation of phenanthrene by a novel sulfate-reducing
 EMV17 bacterial enrichment culture
 I. Kraiselburd (Essen/DE), T. Bruls (Paris/FR)
 A. M. Himmelberg (Neuherberg/DE), R. U. Meckenstock (Essen/DE)
- 09:15 Two dedicated class C radical SAM methyltransferases synthesize the
 EMV18 low-potential redox mediators 8-methylmenaquinone and
 7,8-dimethylmenaquinone
 S. Hein, O. Klimmek, M. Kern, J. von Irmer, M. Gallei, R. Meusinger
 J. Simon (Darmstadt/DE)
- 09:30 Abstract has been withdrawn.
 EMV19
- 09:45 Heterotrophic $^{13}\text{CO}_2$ -Fixation – A new indicator for microbial dissolved
 EMV20 organic carbon utilisation?
 M. Spona-Friedl, A. Braun (Oberschleißheim/DE)
 W. Eisenreich (Garching/DE), C. Griebler (Oberschleißheim/DE)
 A. Kappler (Tuebingen/DE), M. Elsner (Oberschleißheim, Garching/DE)
- 10:00 Identification of LaoABC as a novel system for the oxidation of long-chain
 EMV21 alcohols derived from SDS- and alkane degradation in *Pseudomonas*
 aeruginosa
 G. Panasia, B. Philipp (Muenster/DE)
- 10:15 Microbial biodegradation of natural rubber latex
 EMV22 W. Röther, J. Birke, D. Jendrossek (Stuttgart/DE)
- 10:30 Microbiology of the terrestrial „plastisphere“ – enrichment and
 EMV23 characterization of plastic-associated microbial communities
 J. MacLean, S. Mayanna, S. Liebner, D. Wagner (Potsdam/DE)
- 10:45 Establishment of a promising electrochemical coculture for current
 EMV24 production from glycerol
 S. Thiel, B. Bunk (Braunschweig/DE), F. Schattenberg, S. Müller (Leipzig/DE)
 J. Overmann, D. Jahn, R. Biedendieck (Braunschweig/DE)

SCIENTIFIC PROGRAMME | WEDNESDAY, 18 APRIL

09:00–11:00 Short Lecture 16

- Spiegelsaal Infection Biology 2
Chairs Nicole Frankenberg-Dinkel (Kaiserslautern/DE)
 Susanne Engelmann (Braunschweig/DE)
- 09:00 Abstract has been withdrawn.
IBV09
- 09:15 Trehalose, a temperature- and salt-induced solute with implications in
IBV10 pathobiology of *Acinetobacter baumannii*
 S. Zeidler, J. Hubloher, V. Müller (Frankfurt a. M./DE)
- 09:30 The role of two pemIK/mazEF family toxin-antitoxin systems in the
IBV11 acquisition of vancomycin resistance by staphylococci
 A. Madry, B. Wladyka, M. Bukowski (Krakow/PL)
- 09:45 Take it with a pinch of salt – Zinc intoxication to control mycobacteria
IBV12 infection!
 C. Barisch, V. Kalinina, L. Lefrançois, J. Appiah (Geneva/CH)
 H. Koliwer-Brandl, H. Hilbi (Zurich/CH), T. Soldati (Geneva/CH)
- 10:00 Biochemistry and bactericidal effect of porcine Calprotectin
IBV13 S. Knogl, C. Toulouse, G. Fritz, J. Steuber (Stuttgart/DE)
- 10:15 Functionality, complex composition and sensitivity of ClpP proteins against
IBV14 acyldepsipeptide antibiotics in *Streptomyces lividans* cells
 D. Thomy, L. Reinhardt, P. Sass, H. Brötz-Oesterhelt (Tuebingen/DE)
- 10:30 Proteomic response of *Streptococcus pneumoniae* to iron limitation
IBV15 J. Hoyer, J. Bartel, A. Gómez-Mejia (Greifswald/DE)
 M. Rohde (Braunschweig/DE), C. Hirschfeld, N. Heß, T. Sura, S. Maaß
 S. Hammerschmidt, D. Becher (Greifswald/DE)
- 10:45 Combining multiple sequencing technologies to investigate mono- and
IBV16 multispecies communities in necrotizing soft tissue infections
 R. Thänert, A. Itzek, J. Hoßmann, E. Medina, D. H. Pieper (Braunschweig/DE)

09:00–11:00 Short Lecture 17

- Konferenz 7 Microbial Cell Biology 2 and Gene Regulation 2
 Chairs Michael Steinert (Braunschweig/DE)
 Elena Evguenieva-Hackenberg (Gießen/DE)
- 09:00 Disaggregation by AAA+ ATPase ClpC in *B. subtilis* cells is facilitated by
 MCBV09 daptor protein McsB
 I. Hantke, R. Kramer, K. Turgay (Hanover/DE)
- 09:15 Dynamics in live cells and single-molecule tracking of DNA polymerases
 MCBV10 from *Bacillus subtilis* reveals distinct functions for the three major
 polymerases
 R. Hernandez Tamayo, P. Graumann (Marburg/DE)
- 09:30 Identification of the first complete *in vivo* interactome of a
 MCBV11 genome-reduced bacterium
 C. Blötz, J. Stülke (Goettingen/DE)
- 09:45 Deciphering the glycogen mobilization strategy that enables resuscitation
 MCBV12 of a dormant cyanobacterium from chlorosis
 S. Doello, A. Klotz (Tuebingen/DE), K. Gutekunst (Kiel/DE)
 K. Forchhammer (Tuebingen/DE)
- 10:00 A glutamine riboswitch is a key element for the regulation of glutamine
 MCBV13 synthetase in cyanobacteria
 S. Klähn (Leipzig, Freiburg i. Br./DE), P. Bolay
 P. R. Wright (Freiburg i. Br./DE), R. M. Atilho
 K. Brewer (New Haven, CT/US), M. Hagemann (Rostock/DE)
 R. Breaker (New Haven, CT/US), W. Hess (Freiburg i. Br./DE)
- 10:15 Posttranscriptional regulation of SAM and m6A modification of RNA in the
 MCBV14 alpha-proteobacterium *Sinorhizobium meliloti*
 H. Melior, O. Rossbach, J. Bathke, C. Preußner (Gießen/DE)
 K. U. Förstner (Wuerzburg/DE), A. Goesmann
 E. Evguenieva-Hackenberg (Gießen/DE)
- 10:30 The involvement of the antisense RNA RSaspufl in regulated formation of
 MCBV15 photosynthesis complexes in *Rhodobacter sphaeroides*
 C. M. Reuscher, G. Klug (Gießen/DE)
- 10:45 CRISPR RNA-guided target recognition by minimal Class I surveillance
 MCBV16 complexes
 H. Müller-Esparza, D. Gleditsch, L. Randau (Marburg/DE)

SCIENTIFIC PROGRAMME | WEDNESDAY, 18 APRIL

09:00–11:00 Short Lecture 18

Konferenz 3 Microbial Diversity - Drivers of Bacterial Evolution

Chairs Jörn Petersen, Silke Pradella (Braunschweig/DE)

09:00 Reconsidering microfossil morphologies via induced cellular plasticity of
MDV01 iron cycling bacteria

D. Kanaparthi (Neuherberg/DE), A. Klingl (Planegg-Martinsried/DE)

B. Zhu (Neuherberg/DE), T. Lueders (Neuherberg/DE)

09:15 Diversity of timing systems in Bacteria

MDV02 I. M. Axmann, N. Schmelling (Duesseldorf/DE)

09:30 The pan-genome of *Geobacillus* and *Parageobacillus* species: an insight into
MDV03 protein repertoire and evolution of the „geobacilli“

H. Aliyu (Karlsruhe/DE; Pretoria/ZA), P. Lebre (Pretoria/ZA)

A. Neumann (Karlsruhe/DE), D. Cowan (Pretoria/ZA)

P. De Maayer (Johannesburg/ZA)

09:45 Evolution of marine surface-associated bacteria revealed by population
MDV04 genomics of *Phaeobacter*

H. M. Freese, J. Sikorski, J. Overmann (Braunschweig/DE)

10:00 A new order of homoacetogenic *Deltaproteobacteria* from insect guts
MDV05 (*Acetispirales* ord. nov.)

D. Tegtmeier, K. Klomann, A. Faber (Marburg/DE), R. Radek (Berlin/DE)

V. Hervé, A. Brune (Marburg/DE)

10:15 Underlying convection currents and cell diffusion drive the evolution of
MDV06 Wrinkly Spreaders in static microcosms

A. Kuśmierska (Łódź/PL), R. Jerdan, A. Spiers (Dundee/GB)

10:30 Global warming shifted the composition of the bacterial phyllosphere
MDV07 microbiota of *Galium album* and *Arrhenatherum elatius* plants grown in a
long-term warming field-experiment

S. P. Glaeser, E. L. Aydogan, O. Budich, M. Hardt (Gießen/DE)

Y. H. Choi (Leiden/NL), G. Moser, C. Müller, P. Kämpfer (Gießen/DE)

10:45 Apple roots recruit different microorganisms from the same soil type but
MDV08 with different Apple Replant Disease history

A. Balbín-Suárez (Braunschweig/DE), M. Lucas

D. Vetterlein (Halle a. d. S./DE), K. Smalla (Braunschweig/DE)

09:00–11:00 Short Lecture 19

- Foyer 1 Environmental Microbiology and Ecology 4
Chairs Irene Wagner-Döbler (Braunschweig/DE), Ralf Rabus (Oldenburg/DE)
- 09:00 Important late stage symbiotic role of *Sinorhizobium meliloti*
EMV25 exopolysaccharides
 M. Arnold, J. Penterman, M. Shabab (Cambridge, MA/US)
 E. Chen (Fullerton, CA/US), G. Walker (Cambridge, MA/US)
- 09:15 High diversity of soil microbiome reduces survival of *Salmonella* in the
EMV26 phytosphere
 J. Schierstaedt (Braunschweig, Grossbeeren/DE), H. J. Barkowski
 A. Shrestha (Braunschweig/DE), S. Jechalke (Gießen/DE)
 K. Smalla (Braunschweig/DE), R. Grosch (Grossbeeren/DE)
 A. Schikora (Braunschweig/DE)
- 09:30 Understanding the chemical ecology of freshwater sponge-bacteria
EMV27 interspecies interaction
 T. Kohn (Nijmegen/NL), P. Rast (Hanover/DE), O. Jeske, C. Boedeker
 B. Sandargo, A. Heuer (Braunschweig/DE), S. Wiegand (Nijmegen/NL)
 F. Surup, M. Rohde (Braunschweig/DE), F. Brümmer
 R. W. Müller (Stuttgart/DE), M. Stadler (Braunschweig/DE)
 C. Jogler (Nijmegen/NL), M. Jogler (Braunschweig/DE)
- 09:45 N-acyl-homoserine lactones are required for root colonization and
EMV28 beneficial activities of the Alphaproteobacterium *Rhizobium radiobacter*
 RrF4
 I. Alabid, J. Imani, S. P. Glaeser, E. Stein (Gießen/DE), D. Li, M. Rothballer
 A. Hartmann (Neuherberg/DE), K.-H. Kogel (Gießen/DE)
- 10:00 Diversity, specificity, co-occurrence and hub taxa of the bacterial-fungal
EMV29 pollen microbiome
 B. Ambika Manirajan, C. Maisinger, S. Ratering (Gießen/DE), V. Rusch
 A. Schwiertz (Herborn/DE), S. Schnell, M. Cardinale (Gießen/DE)
- 10:15 The quorum-sensing molecule N-hexanoyl-L-homoserine lactone applied in
EMV30 seed priming effects phytosphere microflora, chlorophyll levels and crop
 yield of winter wheat
 O. Moshynets, L. Babenko (Kiev/UA), J. Foster (Dundee/GB), I. Kosakivska
 O. Iungin (Kiev/UA), G. Potters (Antwerp/BE), S. Rogalsky (Kiev/UA)
 R. Bamanga, R. Jerdan, A. Spiers (Dundee/GB)

SCIENTIFIC PROGRAMME I WEDNESDAY, 18 APRIL

10:30 A lichens' symbiotic community elucidated by a metaproteomics approach
EMV31 J. Bernhardt, D. Zühlke, C. Eymann (Greifswald/DE)
U. Schiefelbein (Rostock/DE), O. A. Fritsch (Greifswald/DE), M. Grube
G. Berg (Graz/AT), K. Riedel (Greifswald/DE)

10:45 Real-time monitoring of a synthetic bacterial community under variable
EMV32 selection and increasingly strong dispersal
S. Fodelianakis, A. Lorz, A. Valenzuela-Cuevas, J. Booth
D. Daffonchio (Thuwal/SA)

09:00–11:00 Short Lecture 20

Konferenz 2 Membranes and Transport
Chairs Thomas Brüser (Hanover/DE), Jürgen Moser (Braunschweig/DE)

09:00 The dynamic adaptation of the type III secretion injectisome to external cues
MTV01 S. Wimmi, A. Diepold (Marburg/DE)

09:15 Deletion of phospholipase PlaF affects membrane lipid composition and
MTV02 expression of virulence-related proteins in *Pseudomonas aeruginosa*
M. Caliskan, R. Molitor (Juelich/DE), M. Siebers (Bonn/DE)
D. Waldera-Lupa, K. Stühler (Duesseldorf/DE), P. Dörmann (Bonn/DE)
F. Kovacic, K.-E. Jaeger (Juelich/DE)

09:30 The Rnf complex of *Acetobacterium woodii* is a ferredoxin:
MTV03 NAD⁺-oxidoreductase essential for energy conservation and redox
balancing
A. Wiechmann, L. Westphal (Frankfurt a. M./DE), J. Baker
N. P. Minton (Nottingham/GB), V. Müller (Frankfurt a. M./DE)

09:45 Biochemical characterization of a MobH-family relaxase
MTV04 J.-H. Heilers (Freiburg i. Br./DE), E.-M. Heller, J. Koch (Marburg/DE)
S. Smits (Duesseldorf/DE), C. van der Does (Freiburg i. Br./DE)

10:00 *In vivo* validation of the “charge zipper” model for toxin TisB in *Escherichia coli*
MTV05 B. Asian, B. Berghoff (Gießen/DE)

10:15 Partitioning of *Escherichia coli* FOF1-ATP-synthase into disordered lipid
MTV06 domains in the cytoplasmic membrane
M. Gohrbandt (Osnabrueck/DE), H. Strahl (Newcastle/GB), R. Kurre
G. Deckers-Hebestreit (Osnabrueck/DE)

SCIENTIFIC PROGRAMME I WEDNESDAY, 18 APRIL

10:30 The application of an alternative uptake system for fructose/mannose
MTV07 utilization in *Corynebacterium glutamicum*
 E. Kühborth, G. A. Sprenger, J.-W. Youn (Stuttgart/DE)

10:45 Copper pump and metallochaperone in a single gene – programmed
MTV08 translational frameshifting and cytoplasmic copper resistance in *Escherichia*
 coli
 S. L. Drees, M. Lübben (Bochum/DE)

11:00–11:30 Break

11:30–11:45 Die VAAM im VBIO – Arbeit im Dachverband der Biowissenschaften

Großer Saal F. Pfeifer (Darmstadt/DE)
 Sprecherin der Fachgesellschaften im VBIO

11:45–12:00 VAAM Poster Awards

Großer Saal

12:00–13:00 Plenary Session 5

Großer Saal Genome Evolution
Chair Jörg Overmann (Braunschweig/DE)

12:00 Plasmids as turtles in an evolutionary race
IL13 Tal Dagan (Kiel/DE)

12:30 Population genomics of bacterial pathogens and novel antibiotic producers
IL14 Ulrich Nübel (Braunschweig/DE)

13:00–13:15 Closing Remarks

14:30–17:30 ePoster and Poster Session 1

ePoster Session 1

Station	Topic Room	Abstract ID
ePS 1	Microbial Cell Biology Foyer Ground Floor	MCBP351–MCBP369
ePS 2	Membranes and Transport Foyer Ground Floor	MTP328–MTP345
ePS 3	Secondary Metabolomics Foyer First Floor	SMP421–SMP434
ePS 4	Microbiota and Eukaryotic Microbes Foyer Konferenzraum 4	SMP421–SMP434
ePS 5	Fungal Biology Konferenzraum 4	FBP219–FBP240

Poster Session 1

Biotechnology	BTP037–BTP127
Infection Biology	IBP283–IBP327, IBP446

ePoster Session 1

ePS 1	Microbial Cell Biology MCBP351–MCBP369
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Chairs	Doreen Babin (Braunschweig/DE), Anke Treuner-Lange (Marburg/DE)
15:00 MCBP351	Functional membrane microdomain dynamics in <i>Bacillus subtilis</i> <u>R. Wagner</u> , D. Lopez (Madrid/ES, Wuerzburg/DE)
15:06 MCBP352	The Missing Cyanobacterial Inorganic Carbon Sensor – the PII-like signaling protein SbtB integrates the cAMP sensing to modulate the inorganic carbon response <u>K. Selim</u> , M. Hartmann (Tuebingen/DE), M. Hagemann (Rostock/DE) K. Forchhammer (Tuebingen/DE)
15:12 MCBP353	Characterisation of the Hydrogenase Chaperone HycH of the <i>Escherichia coli</i> Formate Hydrogenlyase (FHL) Complex <u>P. Skorupa</u> , S. König, U. Lindenstrauß, C. Pinske (Halle a. d. S./DE)
15:18 MCBP354	Heterogeneity of the biofilm regulator CsgD and the extracellular matrix components curli and cellulose production in <i>E. coli</i> macrocolony biofilms <u>T. K. L. Nguyen</u> , D. O. Serra, G. Klauck, R. Hengge (Berlin/DE)

- 15:24
MCBP355 Minor pilins & PilY1 proteins in type IV pili-dependent motility in *Myxococcus xanthus*
A. Treuner-Lange (Marburg/DE), Y.-W. Chang (Marburg/DE; Pasadena, CA/US)
M. Herfurth (Marburg/DE), G. Jensen (Pasadena, CA/US)
L. S gaard-Andersen (Marburg/DE)
- 15:30
MCBP356 Characterization of polyphosphate granules of *Ralstonia eutropha*
H. Rosigkeit, C. Frank, D. Jendrossek (Stuttgart/DE)
- 15:36
MCBP357 Influence of the Network of Ferredoxin-like proteins on Hydrogen Metabolism in *Escherichia coli*
C. Pinske (Halle a. d. S./DE)
- 15:42
MCBP358 Characterization of acidocalcisomes of *Agrobacterium tumefaciens*
C. Frank, H. Rosigkeit, D. Jendrossek (Stuttgart/DE)
- 15:48
MCBP359 Characterization of a serine/threonine kinase, VPA1044 in *Vibrio parahaemolyticus*
S. Iyer (Marburg/DE)
- 15:54
MCBP360 Architecture of *Vibrio parahaemolyticus* swarm-colonies
C. Duarte de Freitas, S. Ringgaard (Marburg/DE)
- 16:00
MCBP361 Biosynthesis of cell wall glycopolymers in *Streptomyces coelicolor* A3(2)
N. Steblau, S. Sigle, G. Muth, W. Wohlleben (Tuebingen/DE)
- 16:06
MCBP362 Effect of Eukaryotic-Type Serine/Threonine Protein Kinases (eSTPKs) on Differentiation and Spore Wall Synthesis of *Streptomyces Coelicolor* A3(2)
B. Vollmer, N. Ladwig, G. Muth, B. Macek, W. Wohlleben (Tuebingen/DE)
- 16:12
MCBP363 Regulatory mechanisms of swimming motility in *Shewanella putrefaciens*
A. Pecina, K. M. Thormann (Gießen/DE)
- 16:18
MCBP364 Chromosome organization in *Corynebacterium glutamicum*
K. B hm, M. Bramkamp (Planegg-Martinsried/DE)
- 16:24
MCBP365 Polar localisation dynamics of the SRP-GTPase FlhF in *Shewanella putrefaciens*
J. C. Hook, F. Rossmann (Gießen/DE), D. Mrusek (Marburg/DE)
U. Ruppert (Gießen/DE), G. Bange (Marburg/DE)
K. M. Thormann (Gießen/DE)
- 16:30
MCBP366 Examination of the cell wall structure of a vancomycin resistant *Staphylococcus aureus* strain
M. Hort (Bonn/DE), U. Bertsche (Tuebingen/DE), G. Bierbaum (Bonn/DE)

ePOSTER AND POSTER SESSION 1 | MONDAY, 16 APRIL

- 16:36
MCBP367 Identification of a novel cell division protein in *Listeria monocytogenes*
S. Wamp (Wernigerode/DE), J. Rismondo (Wernigerode/DE; London/GB)
S. Halbedel (Wernigerode/DE)
- 16:42
MCBP368 A new cell cycle regulator in *Hyphomonas neptunium*
C. Reif, O. Leicht (Marburg/DE), G. Panis, P. Viollier (Geneva/CH)
M. Thanbichler (Marburg/DE)
- 16:48
MCBP369 The denitrification machinery super-complex of *Pseudomonas aeruginosa*
J. M. Borréro de Acuña, D. Jahn (Braunschweig/DE)

ePS 2 Membranes and Transport | MTP328–MTP345

- Chairs Milan Wiesselmann (Braunschweig/DE), Samuel Wagner (Tuebingen/DE)
- 15:00
MTP328 Resistance against lantibiotics: the BceAB type transporter NsrFP of
S. agalactiae
J. Zschke-Kriesche, S. H. J. Smits (Duesseldorf/DE)
- 15:06
MTP329 Expression and functional characterization of cation transporters in *Vibrio*
natriegens
L. Schleicher, V. Muras, B. Blombach (Stuttgart/DE)
P. Dibrov (Winnipeg/CA), J. Steuber (Stuttgart/DE)
- 15:12
MTP330 Adoption of a microbial transmembrane function links corals to betaine
biogeochemistry in the ocean
D. Ngugi, M. Ziegler, C. Duarte, C. Voolstra (Thuwal/SA)
- 15:18
MTP331 Natural transformation and type IV pilus biogenesis in *Thermus*
thermophilus – Characterization of an unusual motor ATPase and a unique
secretin complex
K. Kruse, L. Kirchner, B. Averhoff (Frankfurt a. M./DE)
- 15:24
MTP332 Functional analysis of the bacterial dynamin-like protein DynA
L. Guo, M. Bramkamp (Planegg/DE)
- 15:30
MTP333 Spatial dynamics of bacterial phosphotransferase systems in
Corynebacterium glutamicum
G. Benevides Martins, M. Bramkamp, G. Giacomelli (Munich/DE)
- 15:36
MTP334 Respiration with Oxygen and Nitrate by Spores of *Streptomyces coelicolor*
Requires a Functional Cytochrome bc1 Complex
D. Falke, M. Fischer, G. Sawers (Halle a. d. S./DE)

- 15:42
MTP335 Biological role of outer membrane vesicle-associated small proteins of the phytopathogen *Agrobacterium tumefaciens*
L. R. Knoke, K. Götz, S. Schäkermann, J. E. Bandow, M. Aktas (Bochum/DE)
- 15:48
MTP336 Negamycin uses multiple routes for crossing of the cytoplasmic membrane
D. Hörömpöli (Tuebingen/DE), C. Ciglia (Duesseldorf/DE)
K.-H. Glüsenkamp (Marl/DE), H. Falkenstein-Paul, G. Bendas (Bonn/DE)
A. Berscheid, H. Brötz-Oesterhelt (Tuebingen/DE)
- 15:54
MTP337 PlaB, a novel phospholipase A of *Pseudomonas aeruginosa*
A. J. Weiler, J. Berger, C. H. Strunk (Juelich/DE), J. Bender
A. Flieger (Wernigerode/DE), K.-E. Jaeger, F. Kovačić (Juelich/DE)
- 16:00
MTP338 Fatty acids and phospholipids as regulators of *Pseudomonas aeruginosa* phospholipase PlaF function
C. H. Strunk, F. Bleffert, J. Granzin, R. Batra-Safferling (Juelich/DE)
H. Gohlke (Duesseldorf, Juelich/DE), F. Kovačić, K.-E. Jaeger (Juelich/DE)
- 16:06
MTP339 Identification of a potential late intermediate of Tat-dependent protein translocation
H. Geise, T. Brüser (Hanover/DE)
- 15:12
MTP340 Analysis of an unusual thermophilic TatCA system in *Bacillus subtilis*
M. Pape (Hanover/DE), J. M. van Dijl (Groningen/NL)
T. Brüser (Hanover/DE)
- 15:18
MTP342 Analysis of the role of cation/proton antiporters in *Corynebacterium glutamicum* for pH homeostasis
D. Weixler (Ulm/DE), A. Bartsch, R. Krämer (Cologne/DE)
G. M. Seibold (Ulm/DE)
- 15:24
MTP343 Lon-dependent proteolysis of the signal recognition particle component Ffh in *Escherichia coli*
B. Sauerbrei, J. Arends, F. Narberhaus (Bochum/DE)
- 16:30
MTP344 Evidence for a protein transport functionality encoded within the *Clostridium difficile* pathogenicity locus PaLoc
D. Mehner-Breitfeld, C. Rathmann, T. Brüser (Hanover/DE)
- 16:36
MTP345 Outer membrane vesicles of *Dinoroseobacter shibae* – proteome, DNA content and signalling molecules
I. Wagner-Döbler, H. Wang, N. Beier, S. Schulz, S. Engelmann
M. Rohde (Braunschweig/DE)

ePS 3	Secondary Metabolomics SMP421–SMP434
Chair	Jan Jasper (Braunschweig/DE)
15:00 SMP421	Preliminary investigation of the phytochemical properties of aqueous and ethanolic crude extracts of <i>Hunteria umbellata</i> K. (Schum) seeds and its antihypertensive effects on salt induced hypertension in Wistar Rats. C. O. Udinyiwe, F. I. Okolafor, S. Uwansojie, <u>F. O. Ekhaize</u> (Benin City/NG)
15:06 SMP422	Rapid reporter strain-based screening approach for the detection of antibacterial natural products <u>K. Wex</u> , A. Berscheid, H. Brötz-Oesterhelt (Tuebingen/DE)
15:12 SMP423	Investigation of new potential protein synthesis inhibitors from uncharacterized Streptomycetes of the 'Tübingen strain collection' <u>F. Handel</u> , K. Wex, W. Wohlleben, Y. Mast (Tuebingen/DE)
15:18 SMP424	Conversion of the <i>Pseudomonas aeruginosa</i> virulence factor 2-heptyl-4-hydroxyquinoline N-oxide by <i>Mycobacterium abscessus</i> and <i>Bacillus subtilis</i> <u>P. Sartor</u> , S. Thierbach, S. Fetzner (Muenster/DE)
15:24 SMP425	Biosynthesis of cyclic peptides with unique chemical properties in fungi <u>T. Schafhauser</u> (Tuebingen/DE), L. Jahn (Dresden/DE), A. Kulik, N. Kirchner H. Groß (Tuebingen/DE), J. Ludwig-Müller, K.-H. van Pée (Dresden/DE) W. Wohlleben (Tuebingen/DE)
15:30 SMP426	An integrated functional genomics approach to unravel the mode-of-action of novel anti-infective compounds <u>C. Wolff</u> (Greifswald/DE), J. Herrmann (Saarbruecken/DE), D. Zühlke J. Bernhardt (Greifswald/DE), R. Müller (Saarbruecken/DE), K. Riedel J. Pané-Farré (Greifswald/DE)
15:36 SMP427	The putative PAINs nostotrebin 6 and derivatives from <i>Nostoc</i> sp. inhibit the trypanosomal cysteine protease rhodesain R. Kossack, S. Breinlinger (Halle a. d. S./DE), T. Nguyen (Tuebingen/DE) <u>T. Schirmeister</u> (Mainz/DE), H. Enke (Berlin/DE) T. H. J. Niedermeyer (Halle a. d. S./DE)

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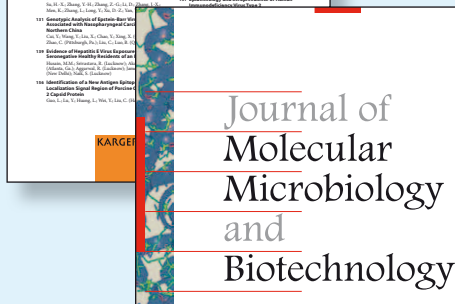


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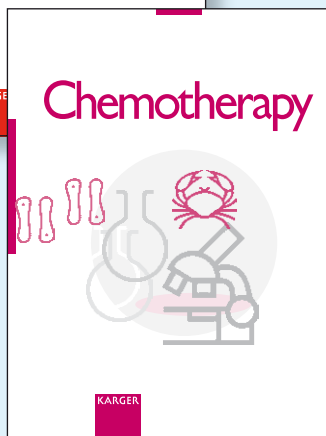
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- 15:42
SMP428 The secreted metabolome of *Streptomyces chartreusis* and implications for bacterial chemistry
C. H. R. Senges (Bochum/DE), A. Al-Dilaimi (Bielefeld/DE)
D. Marchbank (Charlottetown/CA), D. Wibberg, A. Winkler (Bielefeld/DE)
B. Haltli (Charlottetown/CA)
M. Nowrousian (Charlottetown/CA; Bochum/DE)
J. Kalinowski (Bielefeld/DE), R. Kerr (Charlottetown/CA)
J. E. Bandow (Bochum/DE)
- 15:48
SMP429 Fungus-growing Termites – a Prolific Source of new Actinobacteria and Natural Products
R. Benndorf, H. Guo, K. Martin, C. Weigel (Jena/DE), S. Otani
M. Poulsen (Copenhagen/DK), C. Beemelmans (Jena/DE)
- 15:54
SMP430 Identification of siderophores produced by Esca-associated fungi
I. Büttel (Mainz/DE), L. Antelo (Kaiserslautern/DE), K. Andresen (Mainz/DE)
E. Thines (Kaiserslautern, Mainz/DE)
- 16:00
SMP431 Heterologous expression of two putative NRPS-like coding genes from *Guignardia bidwellii* in *Magnaporthe oryzae*
H. Neumann (Mainz/DE)
- 16:06
SMP432 Emission of Volatiles changes due to interaction of *Serratia plymuthica* 4Rx13 and *Bacillus subtilis* B2g
M. Kai, J. Bartels, L. Thiele (Rostock/DE)
- 16:12
SMP433 Proteasome inhibitors from *Nocardia* spp. and their Role in Pathogen Survival
A. Engelbrecht, N. Staudt, L. Kaysser (Tuebingen/DE)
- 16:18
SMP434 Identification of volatiles mediating interactions between marine bacteria
T. Harig (Braunschweig/DE), P. R. Jensen (La Jolla, CA/US)
S. Schulz (Braunschweig/DE)

ePS 4	Microbiota and Eukaryotic Microbes MBP404–MBP420; EuP203
Chairs	Carlo Marzini (Braunschweig/DE), Nina Bziuk (Braunschweig/DE)
15:00 MBP404	Establishing of a robust metaproteomic pipeline to characterize respiratory and intestinals wine microbiota during bacto-viral co-infections <u>L. C. Gierse</u> (Greifswald/DE), T. Schwaiger C. Schröder (Greifswald - Insel Riems/DE), D. Zühlke K. Riedel (Greifswald/DE)
15:06 MBP405	Abstract has been withdrawn
15:12 MBP406	Effect of a high fat diet on the bile acid metabolism of bacteria in the murine gut N. Treichel, S. Pfeiffer (Neuherberg/DE), Z. Prevorsek, B. Stres (Ljubljana/SI) M. Schlöter (Neuherberg/DE)
15:18 MBP407	Preliminary analysis of the bacterial microbiota on worn spectacles using next generation sequencing of 16S rRNA genes. B. Fritz, S. Weis (Villingen-Schwenningen/DE), C. Lappe (Aalen/DE) S. Wahl (Tuebingen/DE), M. Egert (Villingen-Schwenningen/DE)
15:24 MBP408	Illumina MiSeq and Ion Torrent-based search for human intestinal bacteria with a potential role in Parkinson's disease <u>S. Weis</u> (Villingen-Schwenningen/DE), S. Ratering (Gießen/DE) A. Schwiertz (Herborn/DE), M. Unger (Homburg/DE) K.-H. Schäfer (Zweibrücken/DE), S. Schnell (Gießen/DE) M. Egert (Villingen-Schwenningen/DE)
15:30 MBP409	Influence of environmental factors on the bacterial microbiota of domestic washing machines <u>S. Jacksch</u> , D. Kaiser, S. Weis (Villingen-Schwenningen/DE) M. Weide (Duesseldorf/DE), M. Egert (Villingen-Schwenningen/DE)
15:36 MBP410	Small differences may turn the scale – How carbonate effects the growth of <i>Prevotella copri</i> in contrast to <i>Bacteroides</i> spp. <u>T. Franke</u> , U. Deppenmeier (Bonn/DE)
15:42 MBP411	Full-length 16S rRNA Sequencing – new Perspectives in Microbiome Research <u>I. Abellan-Schneyder</u> , K. Neuhaus (Freising/DE)

- 15:48
MBP412 Plant microbiome stability upon pathogen attack – lessons from the Brassicaceae smut fungus *Thecaphora thlaspeos*.
R. Kellner (Cologne, Duesseldorf/DE), A. Kuroczik (Cologne/DE), V. Göhre M. Feldbrügge (Duesseldorf/DE), E. Kemen (Cologne, Tuebingen/DE)
- 15:54
MBP413 A small intestine model allows to assess the interaction of probiotics with the intestinal microbiota
A. Kavraz (Berlin/DE), P. Olsen (Bagsvaerd/DK), M. Vehreschild R. Cruz Aguilar (Cologne/DE), C. Lang, D. Saulnier (Berlin/DE)
- 16:00
MBP414 Characterization of the diversity and community composition of the gut microbiota of *Hermetia illucens* larvae and its effects on substrate associated bacterial communities
Y. A. Cifuentes Triana, S. P. Glaeser, J. Mvie (Gießen/DE)
H. Gutzeit (Dresden/DE), A. Vilcinskas, P. Kämpfer (Gießen/DE)
- 16:06
MBP415 Trimethylamine-producing bacteria in the gut
S. Rath, T. Rud, K. Rox (Braunschweig/DE), A. Mößeler (Hanover/DE)
D. H. Pieper, M. Vital (Braunschweig/DE)
- 16:12
MBP416 Exploiting termite nest microbiomes for antibiotic discovery by using an ultra-high throughput Microfluidics/FACS driven pipeline combined with a microtiter plate based cultivation strategy
M. Oberpaul, M. Spohn, J. Fracowiak (Gießen/DE), R. Plarre D.-P. McMahon (Berlin/DE), P. Hammann (Hoechst, Gießen/DE)
A. Vilcinskas, J. Glaeser (Gießen/DE)
- 16:18
MBP417 The correspondence of the nasal microbiome and olfactory function – or: the nose-brain axis
C. Moissl-Eichinger, C. Kumpitsch, K. Koskinen, F. Fischmeister V. Schöpf (Graz/AT)
- 16:24
MBP418 Worlds apart – transcriptome profiles of key oral microbes in the periodontal pocket compared to single laboratory culture reflect synergistic interactions
Z.-L. Deng, I. Wagner-Döbler, S. Bhujia, H. Sztajer M. Jarek (Braunschweig/DE)
- 16:30
MBP419 Functional profiling and crystal structures of isothiocyanate hydrolases
T. van den Bosch (Nijmegen/NL), K. Tan, A. Joachimiak (Argonne, IL/US)
C. Welte (Nijmegen/NL)

- 16:36
MBP420 Evolutionary origin and metabolic roles of termite gut spirochetes: comparative genome analysis of 54 uncultured lineages and the first isolate from cockroach guts
Y. Song, V. Hervé (Marburg/DE), R. Radek (Berlin/DE)
A. Brune (Marburg/DE)
- 16:42
EuP203 Molecular characterization of *Babesia canis* strains detected in naturally infected dogs in Lithuania
J. Radzijeuskaja, D. Tamoliūnaitė, A. Paulauskas, V. Sabūnas, B. Karvelienė
G. Zamokas (Kaunas/LT)

ePS 5 ePoster Slam: Fungal Biology | FBP219–FBP240

- Chairs Kai Heimel (Goettingen/DE), Ines Teichert (Bochum/DE)
- 15:00
FBP219 Biological control of root-knot nematode *Meloidogyne incognita* infesting Eggplant by the nematode-trapping fungus *Dactylaria brochopaga* and the nematode egg parasitic fungus *Verticillium chlamydosporium* under field conditions
E. Noweer (Dokky, Cairo/EG)
- 15:02
FBP220 The fungal peroxiredoxin Asp f3 is essential for virulence of *Aspergillus fumigatus* and protects against protein oxidation by reactive oxygen species
J. Boysen, E. Shekhova, O. Kniemeyer, F. Hillmann (Jena/DE)
- 15:04
FBP221 Fruiting-body formation in *Sordaria macrospora* involves nutrient recycling and remodeling by autophagy
A. Werner, B. Herzog, O. Voigt, O. Valerius, G. H. Braus
S. Pöggeler (Goettingen/DE)
- 15:06
FBP222 Taxonomic identification of strains from the mycophenolic acid producer *Penicillium brevicompactum* by using mating-type loci
y. Mahmoudjanlou, T. A. Dahlmann, U. Kück (Bochum/DE)
- 15:08
FBP223 Different phagocytic efficiencies of yeast species by a fungivorous amoeba shed light on ancient patterns for the recognition of fungi
J. Sprague, S. Novohradská, F. Hillmann (Jena/DE)
- 15:10
FBP224 Heavy Metal Induced Expression of PcaA Provides Cadmium Tolerance to *Aspergillus fumigatus* and Supports its Virulence
F. Bakti (Goettingen/DE, Debrecen/HU), C. Sasse (Goettingen/DE)
I. Pócsi (Debrecen/HU), G. H. Braus (Goettingen/DE)

- 15:12
FBP225 The trimeric CandA complex of *A. nidulans* comprises the 20 kDa CandA-C1 protein for CullinA E3 ligase activity and fungal growth
A. M. Köhler, R. Harting (Goettingen/DE)
A. E. Langeneckert (Goettingen, Hamburg/DE), C. Meister, O. Valerius
J. Gerke, G. H. Braus (Goettingen/DE)
- 15:14
FBP226 Biological control of mango dieback disease caused by *Lasiodiplodia theobromae* by actinomycetes in the United Arab Emirates
K. El-Tarabily, F. Kamil, E. E. Saeed, S. AbuQamar (Al-Ain/AE)
- 15:16
FBP227 Chemical control of mango dieback disease caused by the fungal pathogen *Lasiodiplodia theobromae* in the United Arab Emirates
K. El-Tarabily, E. E. Saeed, A. Sham, S. AbuQamar (Al-Ain/AE)
- 15:18
FBP228 Degradation of fungal dihydroxynaphthalene type melanin – a Proteomics approach
A. Pschibul, T. Krüger, O. Kniemeyer, A. A. Brakhage (Jena/DE)
- 15:20
FBP229 The potential of anaerobic fungi for utilization of lignocellulosic biomass
V. Dollhofer, V. Dandikas, T. M. Callaghan (Freising/DE)
S. Dorn-In (Oberschleißheim/DE), C. Bauer, M. Lebuhn
J. Bauer (Freising/DE)
- 15:22
FBP230 The *Verticillium dahliae* transcription factors Som1 and Vta3 control microsclerotia formation and sequential steps of plant root penetration and colonization to induce disease
T. Bui, R. Harting, S. Braus-Stromeyer, T. Tran, O. Valerius, A. Abelmann
F. Bakti, A. Höfer, M. Leonard (Goettingen/DE), R. Schlüter (Greifswald/DE)
C. Stanley (Zurich/CH), A. Ambrosio, G. H. Braus (Goettingen/DE)
- 15:24
FBP231 Time- and development dependent localization of the STRIPAK complex
S. Schmidt, U. Kück, I. Teichert (Bochum/DE)
- 15:26
FBP232 The UspA deubiquitinating enzyme supports multicellular development by influencing abundance of the velvet protein VeA in *Aspergillus nidulans*
C. Meister, O. Valerius, G. H. Braus (Goettingen/DE)
- 15:28
FBP233 Real-time monitoring of fungal metabolic activity on solid substrates using biocalorimetry
H. L. Duong, D. Schlosser, T. Maskow (Leipzig/DE)

- 15:30
FBP234 Development of optimized *Aspergillus niger* strains for highly efficient D-galacturonic acid generation from pectin-rich, agricultural residues
K. Schmitz, J. P. Benz (Freising/DE)
- 15:32
FBP235 The Ca²⁺-binding penta-EF-hand protein PEF-1 is part of a fungal resistance mechanism against cell fusion-induced lysis and membrane-destabilizing antifungals
M. R. Schumann, A. Oostlander, Y. Nonnenmacher, U. Brandt, K. Hiller
A. Fleißner (Braunschweig/DE)
- 15:34
FBP236 Systematic analysis of UPR crosstalk reveals novel connections to known signaling pathways
L. Schmitz, K. Heimeel (Goettingen/DE)
- 15:36
FBP237 Exploring iron acquisition, transport and utilisation in *Lichtheimia corymbifera*
F. A. Stanford, V. Schwartze, K. Voigt (Jena/DE)
- 15:38
FBP238 The chitin synthase regulator CSR-3 promotes cell fusion fidelity and contributes to stress-induced cell wall remodeling in *Neurospora crassa*
S. Herzog, T. Sedlacek, K. Roth, U. Brandt, A. Fleißner (Braunschweig/DE)
- 15:40
FBP239 Sem1, 26S proteasome degradation and cellular redox state
M. Kolog Gulko, G. Heinrich, C. Gross, B. Popova, O. Valerius, P. Neumann
R. Ficner, G. H. Braus (Goettingen/DE)
- 15:42
FBP240 How to boost marine fungal research: a first step towards a multidisciplinary approach by combining molecular fungal ecology and natural products chemistry
M. Reich (Bremen/DE), A. Labes (Flensburg/DE)

Poster Session 1 | Biotechnology | BTP037–BTP127

- BTP037 Solving the diterminal alkane oxidation puzzle
Y. van Nuland, G. Eggink, R. Weusthuis (Wageningen/NL)
- BTP038 *Monascus ruber* as cell factory for lactic acid production at low pH
R. Weusthuis (Wageningen/NL)
- BTP039 Structural characterization of the thermostable *Bradyrhizobium japonicum*
D-sorbitol dehydrogenase
F. Fredslund, H. Otten (Copenhagen/DK), S. Gemperlein (Saarbruecken/DE)
J.-C. Poulsen (Copenhagen/DK), Y. Carius (Homburg/DE)
G.-W. Kohring (Saarbruecken/DE), L. Lo Leggio (Copenhagen/DK)
- BTP040 Valorizing N-acetylmuramic acid as feedstock for production of value-added
products by engineered *Corynebacterium glutamicum*
E. Sgobba, L. Blombaum, V. F. Wendisch (Bielefeld/DE)
- BTP041 Online Measurement of pH, Oxygen, Biomass and CO₂ in Shake Flasks
G. John (Regensburg/DE), H. Tietgens, K. Bettenbrock (Magdeburg/DE)
- BTP042 Identification of Monoterpenoid Resistance Mechanisms in
Pseudomonas Putida
F. M. Schempp, J. Mi, K. Hofmann, F. Kirchner, H. Schewe, J. Schrader
M. Buchhaupt (Frankfurt a. M./DE)
- BTP043 *Vibrio natriegens* as novel production host for industrial biotechnology
B. Blombach, E. Hoffart, S. Grenz, J. Lange, R. Nitschel, F. Müller
A. Schwentner, A. Feith, M. Lenfers-Lücker, R. Takors (Stuttgart/DE)
- BTP044 Two UDP-glucose dehydrogenases originating from Actinobacteria
A. Pollender, A. Kumpf (Freiberg/DE), D. Tischler (Freiberg, Bochum/DE)
I. Bento (Hamburg/DE)
- BTP045 Engineered peroxisomes as a new platform for the production of
monoterpenoids in yeast
J. Gerke, H. Frauendorf (Goettingen/DE)
M. Hallvardsdotter Stafsnes (Trondheim/NO)
T. Hofmeister (Regensburg/DE), K. Vanhessche (Geneva/CH), Z. Zebec
N. Scrutton (Manchester/GB), P. Bruheim (Trondheim/NO)
E. Takano (Manchester/GB), G. H. Braus (Goettingen/DE)

- BTP046 Towards a competitive expression platform: Strategies to optimize protein export via unconventional secretion in *Ustilago maydis*
K. P. Hußnätter, M. Terfrüchte (Duesseldorf, Juelich/DE)
J. Stock (Duesseldorf/DE), M. Artz, M. Feldbrügge
K. Schipper (Duesseldorf, Juelich/DE)
- BTP047 Production of levan-based prebiotics in *Gluconobacter* sp.
M. Hövels, U. Deppenmeier (Bonn/DE)
- BTP048 Pyrophosphorylases of Actinobacteria for the enzymatic production of UDP-glucose
A. Kumpf (Freiberg, Hamburg/DE), A. Partzsch, A. Pollender (Freiberg/DE)
D. Tischler (Bochum/DE), D. Kowalczykiewicz, M. Musioł
K. Szymanska (Gliwice/PL), I. Bento (Hamburg/DE)
- BTP049 *In vitro* characterization of the thioester reductase FclG in the fabclavine biosynthesis
S. Wenski, G. L. C. Grammbitter, H. B. Bode (Frankfurt a. M./DE)
- BTP050 RNAseq analysis of acetic acid bacterium *Gluconobacter oxydans* 621H
A. Kranz (Juelich/DE), T. Busche (Bielefeld/DE), A. Vogel
B. Usadel (Aachen/DE), J. Kalinowski (Bielefeld/DE), M. Bott
T. Polen (Juelich/DE)
- BTP051 Compatible Duet expression vectors for co-expression of recombinant proteins in *Corynebacterium glutamicum*
R. Gauttam, C. Desiderato, B. J. Eikmanns (Ulm/DE)
- BTP052 Engineering *Pseudomonas putida* KT2440 for isobutanol production
R. Nitschel, A. Ankenbauer, N. Wirth (Stuttgart/DE), N. Ahmad, S. McColm
I. Fotheringham (Edinburgh/GB), R. Takors, B. Blombach (Stuttgart/DE)
- BTP053 Change of co-substrate specificity from FADH₂ to NADH in the flavin monooxygenase PqsL
S. Ernst, S. L. Drees, N. Ritzmann, S. Fetzner (Muenster/DE)
- BTP054 Metabolic engineering to guide evolution – creating a novel mode for L-valine production with *Corynebacterium glutamicum*
A. Schwentner, A. Feith, E. Münch (Stuttgart/DE), T. Busche, C. Rückert
J. Kalinowski (Bielefeld/DE), R. Takors, B. Blombach (Stuttgart/DE)

- BTP055 RGB-S Reporter – a Novel Multi-Stress Whole-Cell Biosensor
A. E. Zoheir, C. M. Niemeyer, K. S. Rabe (Eggenstein-Leopoldshafen/DE)
- BTP056 Ferulic acid synthesis in engineered *E. coli* is limited by methyl-group supply
M. Dornheim, B. Moritz, M. Pietzsch (Halle a. d. S./DE)
- BTP057 MenD, a thiamine-dependent enzyme having 1,2- and 1,4-addition activity with Michael acceptors
M. Schapfl, S. Baier, N. Heidari (Stuttgart/DE), A. Fries, S. Ferlaino
S. Waltzer, M. Müller (Freiburg i. Br./DE), G. A. Sprenger (Stuttgart/DE)
- BTP058 Stereochemistry of the ene-reductase OYERo2a and its cysteine variants
E. Gädke (Bochum/DE), A. Scholtissek (Freiberg/DE)
C. E. Paul (Wageningen/NL), D. Tischler (Bochum/DE)
- BTP059 Stable Immobilization of Lipase Variants by Site-Directed Coupling Methods
M. Wolfram (Halle a. d. S./DE), J. Modregger (Vienna/AT)
M. Pietzsch (Halle a. d. S./DE)
- BTP060 Electrode-assisted fermentation of acetoin in *Escherichia coli* and *Shewanella oneidensis*
T. Bursac, S. Beblawy, J. Gescher (Karlsruhe/DE)
- BTP061 Indigoid dyes produced by FAD-dependent epoxidases of soil bacteria
D. Tischler (Bochum, Freiberg/DE), C. Großmann, S. Hofmann
T. Heine (Freiberg/DE)
- BTP062 Preparative synthesis of Dolichol phosphate mannose by immobilized Yeast Dpm1 expressed in *E. coli*
M. Schöpfer, M. Pietzsch (Halle a. d. S./DE)
- BTP063 Physiology of the thermophilic acetogenic bacterium *Thermoanaerobacter kivui* during growth on mannitol
J. Moon, L. Henke, M. Basen (Frankfurt a. M./DE)
- BTP064 Cell-free protein synthesis from non-growing, stressed *Escherichia coli*
M. Siemann-Herzberg, J. Failmezger (Stuttgart/DE)

- BTP065 Development of a genetic system for the thermophilic acetogenic bacterium *Thermoanaerobacter kivui*
M. Basen, I. Geiger, L. Henke, J. Moon, V. Müller (Frankfurt a. M./DE)
- BTP066 Application of ICEBs1, an integrative and conjugative element of *Bacillus subtilis*, for DNA transfer and genome editing of *Bacillus* strains with low competence
A. Toymentseva (Kazan/RU, Stuttgart/DE), J. Altenbuchner (Stuttgart/DE)
- BTP067 Molecular and optogenetic tools for efficient biosynthesis of structurally diverse secondary metabolites
F. Hilgers, F. Hogenkamp, D. Binder, A. Loeschcke, J. Pietruszka, K.-E. Jaeger T. Drepper (Juelich/DE)
- BTP068 Engineering *Hydrogenophaga pseudoflava* for carboxydotrophic aerobic production of chemicals and fuels from synthesis gas
S. Grenz, P. Baumann (Stuttgart/DE), C. Rückert J. Kalinowski (Bielefeld/DE), R. Takors, B. Blombach (Stuttgart/DE)
- BTP069 *In vitro* modifications of bacterial cyanophycin and cyanophycin-dipeptides using chemical agents
L. Wiefel, F. Bachmann, J. Behnen, J. Terwort, A. Steinbüchel (Muenster/DE)
- BTP070 Lactate production with metabolically engineered strains of *Acetobacterium woodii*
M. H. Beck, F. R. Bengelsdorf (Ulm/DE), J. Baker N. P. Minton (Nottingham/GB), P. Dürre (Ulm/DE)
- BTP071 Development of an enzyme cascade process for the production of chiral β -amino acids
U. Engel, C. Lohmann (Karlsruhe/DE)
- BTP072 How to program your TA to like it hot
J. Rudat, O. Buß, D. Muller (Karlsruhe/DE), S. Jager (Darmstadt/DE) K. S. Rabe (Eggenstein-Leopoldshafen/DE)
- BTP073 Microbial Leaching of Skutterudite by an Acidophilic Mixed Culture
F. Giebner, L. Kaden, K. Walter, O. Wiche, M. Schlömann S. Schopf (Freiberg/DE)
- BTP074 Combining ABE and Syngas Fermentations
A. Infantes (Karlsruhe/DE)

- BTP075 A novel α -amylase with remarkable characteristics for biotechnological applications
N. Meyer-Heydecke, A. Krüger, A. Peters, G. Antranikian (Hamburg/DE)
- BTP076 *Sarocladium strictum* - as new producer of a complex trombolytic enzymes with plasminogen activator activity
E. Kornienko, A. Orekhova, A. Osmolovskiy (Moscow/RU)
- BTP077 Combinatorial antibiotic effects of prodigiosin and surfactants
J. Hage-Hülsmann, S. Thies, A. S. Klein, J. Pietruszka, T. Drepper
K.-E. Jaeger, A. Loeschcke (Juelich/DE)
- BTP078 German Network for Bioinformatics Infrastructure
I. Maus, T. Dammann-Kalinowski, D. Jording, F. Sprengel, A. Tauch
D. Wibberg, A. Pühler (Bielefeld/DE)
- BTP079 Biotransformation of the pectin degradation product D-galacturonic acid to L-galactonate in *Saccharomyces cerevisiae*
S. Harth, M. Oreb (Frankfurt a. M./DE)
- BTP080 Integrated Succinic acid production using xylose from pretreated Lignocellulose and carbon dioxide from biogas production
P. Ballmann, M. Wilkins, S. Dröge (Pirmasens/DE)
- BTP081 A Low-cost Thin Layer Spectroelectrochemical Cell to Study Bacterial Redoxproteins
A. Dietl, M. Steigleder, T. R. M. Barends (Heidelberg/DE)
- BTP082 Modulation of the N-metabolism for an optimized secondary metabolite production in *Streptomyces coelicolor*
M. Hinder, A. Bera, W. Wohlleben (Tuebingen/DE)
- BTP083 Production of *monolignols* in engineered *E. coli* is limited by a negative feedback mechanism
A. Dillmann, B. Moritz, M. Pietzsch (Halle a. d. S./DE)
- BTP084 Cationic biocides as potential antifouling agents for polymeric coatings/plastic systems
O. Moshynets, S. Rogalsky, O. Iungin, S. Voychuk, O. Tarasyuk (Kiev/UA)
G. Potters (Antwerp/BE)

- BTP085 Process engineering and microbiological characterization of on demand biogas production through sugar beet silage application
W. Karad, F. R. Bengelsdorf, S. Ahmed, K. Maurus, M. Kazda (Ulm/DE)
- BTP086 Different growth properties of ackA compared to pta and ackA-pta mutants of *Escherichia coli* K-12 at aerobic and anaerobic conditions
K. Bettenbrock, A. Schütze (Magdeburg/DE)
- BTP087 Discovery of novel cystobactamid variants with superior activity in a multidisciplinary screening approach
S. Hüttel (Braunschweig, Saarbruecken/DE)
J. Herrmann (Saarbruecken/DE), G. Testolin (Braunschweig/DE), T. Planke
F. Gille, M. Moreno (Hanover/DE), M. Stadler
M. Brönstrup (Braunschweig/DE), A. Kirschning (Hanover/DE)
R. Müller (Saarbruecken/DE)
- BTP088 Self-immobilizing Biocatalysts for fluidic Reaction Cascades
P. Bitterwolf, S. Gallus, T. Peschke, K. S. Rabe
C. M. Niemeyer (Karlsruhe/DE)
- BTP089 New insights into enzyme family GH9 – characterization of a novel endo- β -glucanase
C. Burkhardt, C. Schröder, P. Busch, G. Antranikian (Hamburg/DE)
- BTP090 Production of the low-caloric sweetener 5-Ketofructose in *Gluconobacter oxydans*
A. Siemen, K. Kosciow, J. Hoffmann, J. Schiessl, U. Deppenmeier (Bonn/DE)
- BTP091 Engineering *Rhodobacter capsulatus* for the heterologous production of different terpene classes
O. Klaus, A. Loeschcke, K. Linke, J. Hage-Hülsmann, K. Troost, K.-E. Jaeger
T. Drepper (Juelich/DE)
- BTP092 The yTREX-toolbox for rapid cloning, transfer and expression of biosynthetic pathways in bacteria
R. Weihmann, S. Kubicki, A. Loeschcke, S. Thies, A. Domröse, T. Drepper
K.-E. Jaeger (Juelich/DE)
- BTP093 Improvement of recombinant production of industrial relevant enzymes in *Coprinopsis cinerea*
M. Schulze, M. Rühl (Gießen/DE)

- BTP094 Whole-genome sequencing and analysis of *Penicillium chrysogenum* MAT1-2 wild-type strain Pc3
T. A. Dahlmann, U. Kück (Bochum/DE)
- BTP095 Transcriptome analysis of the unrelated fungal β -lactam producers *Acremonium chrysogenum* and *Penicillium chrysogenum* reveal Velvets important role during conventional strain improvement
D. Terfehr, T. A. Dahlmann, U. Kück (Bochum/DE)
- BTP096 Isolation of an electroautotrophic „Knallgas“-bacterium – Towards an aerobic, thermophilic electrosynthesis process for the production of polyhydroxyalkanoates (PHAs)
J. E. Reiner, T. Jung, C. J. Lapp (Karlsruhe/DE), M. Fink
S. Kerzenmacher (Freiburg i. Br./DE), M. Hackbarth
J. Gescher (Karlsruhe/DE)
- BTP097 Engineering of a Non-natural Carboxylase for Synthetic Photorespiration
M. Scheffen, J. Lehmann, P. Pfister (Marburg/DE)
T. Beneyton (Bordeaux/FR), J. Zarzycki (Marburg/DE)
J.-C. Baret (Bordeaux/FR), A. Bar-Even (Potsdam-Golm/DE)
T. J. Erb (Marburg/DE)
- BTP098 Quorum quenching compounds of entomopathogenic bacteria – a strategy to prevent bacterial biofilm formation
A. Gazanis (Planegg-Martinsried/DE), H. B. Bode (Frankfurt a. M./DE)
R. Heermann (Planegg-Martinsried/DE)
- BTP099 Reporter constructs in *Corynebacterium glutamicum* for the analysis of CO₂/HCO₃⁻ induced regulatory response
F. Müller, J. Rapp, R. Takors, B. Blombach (Stuttgart/DE)
- BTP100 Engineering of quorum quenching enzymes
S. Wullich, S. Thierbach (Muenster/DE), S. Kobus
S. H. J. Smits (Duesseldorf/DE), S. Fetzner (Muenster/DE)
- BTP101 Crystal structures of different thermostable Penicillin G acylases from Gram-positive organisms
J. Mayer, G. Günther, A. Lauermann, J. Pippel, W. Blankenfeldt
R. Biedendieck (Braunschweig/DE)

- BTP102 Dynamics of a chain elongating reactor microbiome producing medium-chain carboxylates
B. Liu, S. Kleinsteuber, H. Harms, H. Sträuber (Leipzig/DE)
- BTP103 Generation of a thermo-resistant microbial Transglutaminase and studies on the thermal inactivation behavior.
B. Schrank, B. Moritz, M. Pietzsch, T. Hertel (Halle a. d. S./DE)
- BTP104 Novel Enzymes from Metagenomes for the Biodegradation of Polyethylene Terephthalate
D. Danso, J. Chow, C. Vollstedt, W. R. Streit (Hamburg/DE)
- BTP105 Heterologous expression of a hyperthermophilic lipase from *Ignicoccus hospitalis* KIN4/I [Crenarchaeota] in *Pichia pastoris*
P. Pérez-García, N. Holzschek, J. Chow, W. R. Streit (Hamburg/DE)
- BTP106 Nutrition in root-fungi interactions.
W. Yakti (Großbeeren, Berlin/DE), D. R. Andrade-Linares (Munich/DE)
B. Ngwene, M. Bitterlich (Großbeeren/DE), G. M. Kovács (Budapest/HU)
P. Franken (Großbeeren, Berlin/DE)
- BTP107 Investigating the molecular mechanisms of polyketide synthases
P. Gerlinger, B. Vögeli, K. Geyer, N. Cortina, T. J. Erb (Marburg/DE)
- BTP108 Analysis of fast intracellular NADPH accumulation kinetics in *C. glutamicum* using the genetically encoded sensor-probe mBFP_Cg
O. Goldbeck, G. M. Seibold (Ulm/DE)
- BTP109 Persulfide dioxygenase from *Acidithiobacillus caldus*: Identification of essential cysteine and hydrogen bond residues by mutagenesis and modification analysis
P. Rühl, P. Haas, D. Seipel (Darmstadt/DE), F. Folgosa, C. Frazão (Oeiras/PT)
A. Kletzin (Darmstadt/DE)
- BTP110 Virus-X Project: Viral Metagenomics for Innovation Value
L. Wang, H. Watzlawick, J. Altenbuchner (Stuttgart/DE)

- BTP111 Comprehensive Transcriptome Characterization of the Xanthan Producer *Xanthomonas campestris* pv. *campestris* B100 Using Next Generation RNA Sequencing
R. S. Alkhateeb, F. J. Vorhölter, C. Rückert (Bielefeld/DE)
G. Hublik (Pernhofen/AT), K. Niehaus, A. Pühler (Bielefeld/DE)
- BTP112 From field to skin - Production of seco-pseudopterosin derivatives in *E. coli* grown on straw hydrolysate
M. Reinbold, D. Garbe, T. Brück (Garching/DE)
- BTP113 Synechocystis sp. PCC 6803 as new hosts for cyclic plant triterpene biosynthesis
M. Dietsch (Duesseldorf/DE), D. Dienst (Uppsala/SE)
I. M. Axmann (Duesseldorf/DE), V. Wewer (Cologne/DE)
- BTP114 Understanding Substrate Specificity and Stereochemistry of Polyketide Synthases
K. Geyer, S. S. Sundaram, M. Richter, N. Cortina, U. Koert (Marburg/DE)
M. Grininger (Frankfurt a. M./DE), T. J. Erb (Marburg/DE)
- BTP115 Multispecies biofilm formation: Application of a novel cultivation device
T. Kabbeck (Karlsruhe/DE), S. H. Hansen (Eggenstein-Leopoldshafen/DE)
S. Krause, J. Gescher (Karlsruhe/DE)
- BTP116 Towards Artificial Chloroplasts – the Design and Realisation of two Synthetic CO₂ Fixation Cycles
C. Diehl, R. J. McLean, T. Miller (Marburg/DE), D. Pischel
R. J. Flassig (Magdeburg/DE), T. J. Erb (Marburg/DE)
- BTP117 Heterologous production and characterization of water dependent Steroid-C25-dehydrogenases: Mo-dependent key enzymes of anaerobic steroid catabolism
C. Jacoby (Freiburg i. Br./DE)
- BTP118 Bottlenecks in the whole-cell biotransformation process for the production of glass-forming ectoine derivatives
J. Brauner, A. Meffert, C. Ruprecht, C. Molitor, E. A. Galinski (Bonn/DE)
- BTP119 Extent of compatibility between stress tolerance and melanin production in dark septate endophytes (DSEs)
D. Gaber (Großbeeren/DE), C. Berthelot, D. Blaudez (Nancy/FR)
G. M. Kovács (Budapest/HU), P. Franken (Berlin/DE)

- BTP120 Stereospecific reduction of substituted β -keto-esters using whole cell catalysis and purified enzymes from yeasts
C. Drewniok, B. Akadil, C. Schuster, C. Trapp, J. Heinrich, K. Barková
D. Greif, A. Fuchs, M. J. Pecyna, T. Wiegert (Zittau/DE)
- BTP121 Increasing Mass Transfer In Syngas Fermentation – Effects Of Elevated Pressure
F. Oswald (Karlsruhe, Frankfurt a. M./DE)
I. K. Stoll (Eggenstein-Leopoldshafen/DE), M. Zwick (Karlsruhe/DE)
S. Herbig, N. Boukis, J. Sauer (Eggenstein-Leopoldshafen/DE)
A. Neumann (Karlsruhe/DE)
- BTP122 Genetic engineering for optimisation of PHA production by *Pseudomonas putida* in nitrate containing media
K. Hobmeier, H. Löwe, A. Kremling, K. Pflüger-Grau (Garching/DE)
- BTP123 P4SB – From Plastic waste to Plastic value using *Pseudomonas putida* Synthetic Biology
L. M. Blank (Aachen/DE)
- BTP124 Strategies for improvement of heterologous rhamnolipid production in *Pseudomonas putida*
A. Wittgens, F. Rosenau (Ulm/DE)
- BTP125 Enhanced biotechnological production of antibacterial melleolides with *Armillaria ostoyae*
E. Löwen, K. Wittstein, S. Hüttel, M. Stadler (Braunschweig/DE)
- BTP126 Fine-tuned gene expression in *Pseudomonas putida* KT2440
M. Selzer, N. Barton, J. Stolzenberger, A. Rogsch, M. Kohlstedt
C. Wittmann (Saarbruecken/DE)
- BTP127 Enabling the valorization of guaiacol-based lignin – Integrated chemical and biochemical production of cis,cis-muconic acid using metabolically engineered *Amycolatopsis* sp. ATCC 39116
N. Barton, L. Horbal, S. Starck, M. Kohlstedt, A. Luzhetskyy
C. Wittmann (Saarbruecken/DE)

Poster Session 1 | Infection Biology | IBP283–IBP327, IBP446

- IBP283 The role of the Coenzyme A disulfide reductase Cdr in the defense against hypochlorite stress in the human pathogen *Staphylococcus aureus*
S. Wellner, V. L. Vu, H. Antelmann (Berlin/DE)
- IBP284 Real-time imaging of the mycothiol redox potential using the Mrx1-roGFP2 biosensor in *Corynebacterium glutamicum*
N. T. Quach, V. L. Vu (Berlin/DE), T. Busche, J. Kalinowski (Bielefeld/DE)
H. Antelmann (Berlin/DE)
- IBP285 Impact of the BarA/UvrY two component system on fitness and competitiveness of *Escherichia coli* in urine
E. Zaldastanishvili, B. Ewert, U. Dobrindt (Muenster/DE)
- IBP286 Biological Control of the date Palm tree borers, *Oryctes* spp.
(Coleoptera: Scarabaidae: Dynastinae)
M. Khalaf-Al-Juboori (Baghdad/IQ)
- IBP287 Characterization of multiple secondary active transporters of the betaine/choline/carnitine transporter family in *A. baumannii*
J. Breisch, B. Averhoff (Frankfurt a. M./DE)
- IBP288 Abstract has been withdrawn
- IBP289 Transcriptional landscape of *Yersinia enterocolitica* O:8 and O:3
C. Schmühl, M. Beckstette, A. K. Heroven, P. Dersch (Braunschweig/DE)
- IBP290 Identification of small peptides expressed under virulence-relevant conditions in the gastrointestinal pathogen *Yersinia pseudotuberculosis*
M. Volk, A. K. Heroven, P. Dersch (Braunschweig/DE)
- IBP291 Regulation of the major virulence activator LcrF by the *Yersinia pseudotuberculosis* carbon storage regulator system
M. Kusmieriek, J. Hoßmann, R. Steinmann, W. Opitz, A. K. Heroven
P. Dersch (Braunschweig/DE)

- IBP292 Characterization of a novel ECF-type heme transporter in *Staphylococcus lugdunensis*
A. Jochim, A. Peschel, S. Heilbronner (Tuebingen/DE)
- IBP293 Analysis of the RNA-based regulatory mechanisms controlling type III secretion systems – a crucial virulence system of bacterial pathogens
I. Vollmer, M. Kusmierek, J. Hoßmann, R. Steinmann, A. K. Heroven
P. Dersch (Braunschweig/DE)
- IBP294 Molecular and functional analysis of the exotoxin CNFY of *Yersinia pseudotuberculosis* YPIII during infection
P. Chaoprasid, S. Mühlen, P. Dersch (Braunschweig/DE)
- IBP295 Susceptibility of different respiratory epithelial cells to the cytotoxic effect of sulilysin, the cytolysin of *Streptococcus suis*
D. Vötsch, M. Willenborg, Y. B. Weldearegay
P. Valentin-Weigand (Hanover/DE)
- IBP296 PrsA2 of *Clostridium difficile* is an active parvulin-type PPIase that modulates virulence
C. M. Ünal (Braunschweig/DE, Istanbul/TR), M. Berges
N. Smit (Braunschweig/DE), C. Schiene-Fischer (Halle a. d. S./DE), C. Priebe
T. Strowig, D. Jahn, M. Steinert (Braunschweig/DE)
- IBP297 Transfer of Hematopoietic Stem Cells Improved Outcome of *P. aeruginosa* Lung Infection in a Cystic Fibrosis Mouse Model
A. Munder, S. Hedtfeld, K. Brinkert, A. C. Jirmo, R. Gastmeier, J. Rothschuh
C. Kloth, F. Stanke, A. Schambach, G. Hansen, B. Tümmler (Hanover/DE)
- IBP298 Uptake, Survival and TNF Response of a *Mycobacterium abscessus* ssp. abscessus Rough Colony Type Isolate Obtained from a Cystic Fibrosis Patient in Murine Bone Marrow Derived Macrophages
N. Ruangkiattikul, K. Laarmann (Hanover/DE), C. Schwarz
A. Lewin (Berlin/DE), R. Goethe (Hanover/DE)
- IBP299 Role of PGRS domain of *Mycobacterium tuberculosis* PE_PGRS protein in ER-stress mediated apoptosis
T. Sharma, S. Grover, N. Z. Ehtesham, S. E. Hasnain (New Delhi/IN)

- IBP300 Quality control and standardization of diagnostic tools for enzootic bovine eucosis
O. Blotska (Kyiv/UA)
- IBP301 Oxidative stress in depolarized cells and its effects on persister formation in *Escherichia coli*
D. Edelmann, A. Nolte, B. Asian, B. Berghoff (Gießen/DE)
- IBP302 Host adaptation of *Streptococcus equi* subsp. *zooepidemicus*
M.-C. Jentsch, A. Uhlig, U. Müller (Leipzig/DE)
M. van der Linden (Aachen/DE), M. Rasmussen (Lund/SE), C. Baums
R. Bergmann (Leipzig/DE)
- IBP303 Synthetic oligomers as inhibitors of *Pseudomonas aeruginosa* virulence factor lectin LecB
N. Babic (Juelich/DE), K. Bücher (Duesseldorf/DE), T. Schwabroch
F. Kovačić, K.-E. Jaeger (Juelich/DE), L. Hartmann (Duesseldorf/DE)
- IBP304 A reference compendium of proteomic responses for classification of novel antibiotics against *Pseudomonas aeruginosa*
D. Wüllner, M. Gesper, C. H. R. Senges, A. Haupt, J. E. Bandow (Bochum/DE)
- IBP305 Investigations of the repercussions of photodynamic inactivation on *Bacillus atrophaeus* under the influence of biological relevant ion
A. Böllmann, D. Eckl, M. Nemmert, J. Dirscherl, A. Eichner, W. Bäumler
H. Huber (Regensburg/DE)
- IBP306 *In silico* analysis and heterologous expression of Clp proteins of *Chlamydia trachomatis*
S. Pan, H. Brötz-Oesterhelt, P. Sass (Tuebingen/DE)
- IBP307 Chelocardin and Chlorotonil A/B as novel therapeutics for the treatment of *Clostridioides difficile* infections
M. Brauer (Greifswald/DE), J. Herrmann (Saarbruecken/DE)
S. Sievers (Greifswald/DE), T. M. Fuchs (Jena/DE)
R. Müller (Saarbruecken/DE), K. Riedel (Greifswald/DE)
- IBP308 Functional characterization of a lipid anchored protein in *Staphylococcus aureus*
J. Bosselmann, M. Kucklick, S. Engelmann (Braunschweig/DE)

- IBP309 Human Von Willebrand factor, a new adhesion-co factor of *Streptococcus pneumoniae*
H. Jagau, I.-K. Behrens, V. Elspaß, K. Lahme, G. Lorz
R. W. Köster (Braunschweig/DE), R. Schneppenheim, T. Obser, M. A. Brehm
G. König (Hamburg/DE), M. Rohde (Braunschweig/DE), T. Kohler
S. Hammerschmidt (Greifswald/DE), R. Frank, W. Tegge (Braunschweig/DE)
M. Fulde (Berlin/DE), M. Steinert, S. Bergmann (Braunschweig/DE)
- IBP310 Identifying genetic determinants related to antibiotic resistance in clinical isolates of *P. aeruginosa* by Transposon-Sequencing
S. Schinner, A. Khaledi, M. Preuße, S. Häußler (Braunschweig/DE)
- IBP311 Transcriptional regulation of the c-di-GMP binding protein FlgZ and its role in the regulation of motility in *Pseudomonas aeruginosa*
S. Bense, J. Düvel, S. Häußler (Braunschweig/DE)
- IBP312 Human lung tissue explants, a powerful infection model for *Legionella pneumophila*
L. Scheithauer, S. Thiem, C. M. Ünal, R. M. H. J. Brouwer, A. Dellmann
M. Steinert (Braunschweig/DE)
- IBP313 Etiology of crown gall of rhododendron in Germany
N. Kuzmanovic, E. Idczak, S. Wagner, M. Götz, K. Smalla (Braunschweig/DE)
- IBP314 Genetic diversity and prevalence of *Bartonella* species in small rodents and their ectoparasites in Lithuania
D. Mardosaitė-Busaitienė, J. Radzijeuskaja, A. Paulauskas, I. Lipatova
P. Amšiejūtė (Kaunas/LT), L. Balčiauskas (Vilnius/LT)
- IBP315 How commensal staphylococci adapt to our immune system
M.-T. Nguyen (Tuebingen/DE), J. Uebele (Langen/DE)
N. Kumari (Tuebingen/DE), H. Nakayama (Saitama/JP), L. Peter
O. Ticha (Langen/DE), A.-K. Woischnig, M. Schmalzer (Basel/CH)
N. Dohmae (Saitama/JP), I. Bekeredjian-Ding (Langen/DE)
F. Götz (Tuebingen/DE)

- IBP316 Pathological changes observed in *Mycoplasma mycoides* infected caprine and bovine Precision-cut lung slices (PCLS)
Y. B. Weldearegay, R. Brehm, A. Schulze, S. Müller
P. Valentin-Weigand (Hanover/DE), J. Jores (Bern/CH)
J. Meens (Hanover/DE)
- IBP317 Surface coating with D-amino acids impairs biofilm formation of *Clostridium difficile*
J. Fischer, H. Bahl, K. Kriebel (Rostock/DE)
- IBP318 Proteomic investigation of the pneumococcal kinase and phosphatase couple StkP/PhpP
C. Hirschfeld, C. Hentschker, A. Gómez-Mejia (Greifswald/DE)
M. Rohde (Braunschweig/DE), S. Maaß, S. Hammerschmidt
D. Becher (Greifswald/DE)
- IBP319 Zebrafish models for early *in vivo* evaluation of anti-infective natural products
A. Andreas, J. Herrmann, K. Cirnski, V. Schmitt (Saarbruecken/DE)
A. Abou Fayad (Saarbruecken/DE; Beirut/LB), R. Müller (Saarbruecken/DE)
- IBP320 Sigma proteins X and Y of *Mycobacterium indicus pranii* alter host immune responses: A moonlighting function
K. Sharma, K. Mohammad, J. Sheikh (New Delhi/IN)
S. E. Hasnain (New Delhi, Hamdard Nagar/IN)
- IBP321 Artificial increment of intracellular NADH confers ciprofloxacin resistance and decreases the formation of reactive oxygen species (ROS) in *Pseudomonas aeruginosa*
A. Arce-Rodriguez, S. Häußler (Braunschweig/DE)
- IBP323 Proteome analysis of *Streptococcus suis* under stress conditions and in host-pathogen interaction
D. Dittmar (Greifswald/DE), C. Weiße (Leipzig/DE), P. Hildebrandt
U. Mäder, M. Gesell Salazar, S. Michalik (Greifswald/DE), C. Baums
U. Völker (Leipzig/DE)
- IBP324 Novel digital image analysis for automated bacterial cell and colony counting
J. Noack, R. Hiemann, J. Schiebel, J. Weinreich, M. Sowa
S. Rödiger (Senftenberg/DE)
D. Roggenbuck (Senftenberg, Dahlewitz, Berlin/DE)
P. Schierack (Senftenberg/DE)

- IBP325 Survival and exit from dormancy in *M. tuberculosis*
A. Sturm, P. Sun, J. A. Pacheco, J. Alexander, J. Livny
D. Hung (Cambridge, MA/US)
- IBP326 Staphylococcal cyclic dipeptides: a tale of pathogen and host
A. Moldovan, M. Krischke, P. Heinrich, S. Das, M. Müller, T. Rudel
M. Fraunholz (Wuerzburg/DE)
- IBP327 Chemotaxis in *Clostridioides difficile*
J. Schwanbeck, I. Oehming, A. Zautner, U. Groß, W. Böhne (Goettingen/DE)
- IBP446 The role of posttranscriptional control mechanisms during the infection of
Ustilago maydis using a KH domain protein as an example
S. Sankaranarayanan (Duesseldorf/DE)

ePOSTER AND POSTER SESSION 2 | TUESDAY, 17 APRIL

14:30–17:00 ePoster and Poster Session 2

ePoster Session 2

Station	Topic Room	Abstract ID
ePS 1	Microbial Cell Biology II Foyer Ground Floor	MCBP370–MCBP387 MCBP447
ePS 2	Food Microbiology Foyer Ground Floor	FMP204–FMP218
ePS 3	Biochemistry Foyer First Floor	BCP024–BCP036
ePS 4	Systems Biology and Metabolomics Foyer Konferenzraum 4	SBP435–SBP444 MetP347–MetP350
ePS 5	Microbial Diversity and Evolution Konferenzraum 4	MDEP388–MDEP403 MDEP445

Poster Session 2

Environmental Microbiology and Ecology	EMP128–EMP202
Gene Regulation	GRP241 –GRP282
Archaea	ARP001–ARP023

ePoster Session 2

ePS 1	Microbial Cell Biology II MCBP370–MCBP387
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Chairs	Janine Mayer (Braunschweig/DE), Regina Kramer (Hanover/DE)
15:00 MCBP370	Product formation of an aerotolerant mutant of <i>Clostridium acetobutylicum</i> under oxidative stress <u>C. Döring</u> , H. Bahl (Rostock/DE)
15:06 MCBP371	Tolerance of <i>E. coli</i> against oxidative stress generated by atmospheric pressure plasmas <u>M. Krewing</u> , J. Stepanek, F. Jarzina (Bochum/DE) J.-W. Lackmann (Greifswald/DE), J. Benedikt (Kiel/DE), P. Awakowicz L. I.-O. Leichert (Bochum/DE), U. Jakob (Ann Arbor, MI/US) J. E. Badow (Bochum/DE)
15:12 MCBP372	The DUF1127 protein family in <i>Agrobacterium tumefaciens</i> <u>A. Kraus</u> , M. Weskamp, J. Zierles, R. Busch, F. Narberhaus (Bochum/DE)

- 15:18 (p)ppGpp binding targets and influence on conditional proteolysis in
MCBP373 *Escherichia coli*
F. Müller, L.-M. Bittner, J. Arends, M. Schäkermann
F. Narberhaus (Bochum/DE)
- 15:24 Stochastic modelling of the growth behavior of *Corynebacterium*
MCBP374 *glutamicum* on single cell level
F. Meyer (Planegg-Martinsried/DE), J. Messelink, C. Broedersz (Munich/DE)
M. Bramkamp (Planegg-Martinsried/DE)
- 15:30 AmiC, a peptidoglycan hydrolase with unusual function in multicellular
MCBP375 cyanobacteria of the order *Nostocales*
E. Bok, U. Bertsche, M. Stahl, K. Forchhammer, I. Maldener (Tuebingen/DE)
- 15:36 The role of the septal protein SepJ in pore formation and cell-cell
MCBP376 communication in filamentous cyanobacteria of the order *Nostocales*
A.-K. Kieninger (Tuebingen/DE), D. A. Ivanova
C. W. Mullineaux (London/GB), I. Maldener (Tuebingen/DE)
- 15:42 The ultimate steps of Riboflavin biosynthesis in *Bacillus subtilis* occur in a
MCBP377 single and dynamic cluster of microcompartments
D. A. O. Rotter, C. Heger, S. L. Dersch, L. M. Oviedo-Bocanegra
P. L. Graumann (Marburg/DE)
- 15:48 Sensitivity of FtsZ to ADEP-activated ClpP peptidase
MCBP378 N. Silber, H. Brötz-Oesterhelt, P. Sass (Tuebingen/DE)
- 15:54 Conjugative DNA transfer in *Streptomyces*
MCBP379 L. Thoma, G. Muth (Tuebingen/DE)
- 16:00 A small alarmone synthetase and a hydrolase extend (pp)pGpp metabolism
MCBP380 in *Corynebacterium glutamicum*
M. Persicke, M. Ruwe, J. Kalinowski (Bielefeld/DE)
- 16:06 Inhibition and recovery of cell division in ADEP-treated *Bacillus subtilis*
MCBP381 C. Mayer, H. Brötz-Oesterhelt, P. Sass (Tuebingen/DE)
- 16:12 Differentiation of small non-coding and small coding RNAs in *Bacillus subtilis*
MCBP382 A. Reder, M. Schedlowski, U. Mäder, U. Völker (Greifswald/DE)
- 16:18 Interactomic studies of proteins involved in the Stickland fermentation of
MCBP383 *Clostridium difficile*
K. E. Rennhack, D. Jahn, J. M. Borréro de Acuña (Braunschweig/DE)

ePOSTER AND POSTER SESSION 2 | TUESDAY, 17 APRIL

- 16:24
MCBP384 Polar localization of the phosphodiesterase PdeB
T. Rick, F. Rossmann, D. Mrusek, A. Pecina, L. Sprankel, G. Bange
K. M. Thormann (Gießen/DE)
- 16:30
MCBP385 Dynamics and regulation of native and engineered multi-replicon systems
in *Sinorhizobium meliloti*
M. Wagner, J. Döhlemann, M. Brennecke, A. Becker (Marburg/DE)
- 16:36
MCBP386 Packaging of *Dinoroseobacter shibae* DNA into Gene Transfer Agent
particles is not random
I. Wagner-Döbler, J. Tomasch, H. Wang, S. Koppenhoefer, M. Preuße
J. Petersen, H. Brinkmann, B. Bunk, S. Bhujju, M. Jarek
R. Geffers (Braunschweig/DE), A. Lang (Braunschweig/DE, St. John's/CA)
- 16:42
MCBP387 The hidden lipoproteome of *Staphylococcus aureus*
A. Graf (Greifswald/DE), R. J. Lewis (Newcastle upon Tyne/GB)
S. Fuchs (Wernigerode/DE), M. Pagels (Greifswald/DE)
S. Engelmann (Braunschweig/DE), K. Riedel, J. Pané-Farré (Greifswald/DE)
- 16:48
MCBP447 A novel sactipeptide produced by *Staphylococcus spec.*
K. Kehl, M. Müllender, C. Szekat, M. Josten, G. Bierbaum (Bonn/DE)

ePS 2 Food Microbiology | FMP204–FMP218

- Chairs Mareike Wenning (Munich/DE), André Lipski (Bonn/DE)
- 15:00
FMP204 Proficiency-testing scheme for Hepatitis A, Norovirus GI and Norovirus GII
in strawberry
C. Mazzoni, A. Boubetra, R. Le Neve, A. Tirard (Paris/FR)
- 15:06
FMP205 Comparison of *Vibrio cholerae* non-O1, non-O139 from aquatic
environments and from seafood in Germany with clinical strains
K. Schwartz, A. Konietzny, E. Strauch (Berlin/DE)
- 15:12
FMP206 Monitoring the microbial status of raw and pasteurized milk from milk
filling stations in Brandenburg, Germany
R. Pöther, F. Scheffel, D. Krowas (Oranienburg/DE)
- 15:18
FMP207 Microbiological analysis of packaged lamb's lettuce for total viable count,
yeasts and total coliforms
M. J. Kraus, D. Becker, J. Seedorf (Osnabrueck/DE)

- 15:24
FMP208 Towards a functional CRISPRi system for *Listeria monocytogenes*
P. Crauwels, M. Zetzmann, M. Seow (Ulm/DE)
F. Bucur (Galati/RO, Ulm/DE), L. Schäfer, R. Chandramohan (Ulm/DE)
A. Niolau (Galati/RO), C. Riedel (Ulm/DE)
- 15:30
FMP209 Bacterial diversity of high bacterial count raw cows' milk from the bulk
tanks of different dairy farms in Germany
J. Hahne, D. Isele, A. Lipski (Bonn/DE)
- 15:36
FMP210 Milking machine biofilms – Bacterial community composition and prevalence
of antibiotic resistance
M. Weber, A. Lipski (Bonn/DE)
- 15:42
FMP211 Increased isoprenoid quinone concentration modulates membrane fluidity
in *Listeria monocytogenes* at low temperatures
W. Seel, A. Flegler, A. Lipski (Bonn/DE)
- 15:48
FMP212 Inhibition of isoprenoid quinone synthesis reveals the function of
menaquinones in membrane adaptation to low growth temperatures for
Listeria monocytogenes
A. Flegler, W. Seel, A. Lipski (Bonn/DE)
- 15:54
FMP213 Abstract has been withdrawn.
- 16:00
FMP214 Comparing different media to detect *Pseudomonas aeruginosa* in Water
Flow Meter using GreenLight® System
H.-D. Werlein, G. Hanco (Hanover/DE)
- 16:06
FMP215 The effect of UV-C radiation in a range of 253.7 to 285 nm on food-relevant
gram-negative and gram-positive bacteria
C. Lotz, H.-D. Werlein (Hanover/DE)
- 16:12
FMP216 Abstract has been withdrawn.
- 16:18
FMP217 Improvement of cell extraction from filters after bioaerosol sampling
I. Schulze-Hessing, D.-C. Pöther, U. Jäckel (Berlin/DE)
- 16:24
FMP218 AprA peptidase production of *Pseudomonas* isolates from raw milk
C. Maier, G. Lücking, v. N. Mario, C. Huptas, S. Scherer
M. Wenning (Freising/DE)

ePS 3	Biochemistry BCP024–BCP036
Chairs	Gary Sawers (Halle a. d. S./DE), Heinrich Schäfer (Hanover/DE)
15:00 BCP024	Aldehyde – ferredoxin oxidoreductase (AOR): purification, characterisation and maturation factors <u>F. Arndt</u> , G. Schmitt, A. Rosin, J. Heider (Marburg/DE)
15:06 BCP025	Understanding the Role of HypD in Diatomic Ligand Biosynthesis of NiFe-Hydrogenases <u>K. Nutschan</u> (Halle a. d. S./DE), C. Kulka, I. Zebger (Berlin/DE) G. Sawers (Halle a. d. S./DE)
15:12 BCP026	Hydrogen-Dependent Organohalide Reduction Without Quinone-Involvement by a Soluble Multiprotein Complex from <i>Dehalococcoides mccartyi</i> Strain DCMB5 <u>N. Dragomirova</u> (Halle a. d. S./DE), K. Seidel, L. Adrian (Leipzig/DE) G. Sawers (Halle a. d. S./DE)
15:18 BCP027	Nitrogenase-like biosynthesis of bacteriochlorophylls <u>J. Jasper</u> , M. Wiesselmann, M. Massmig, D. Jahn J. Moser (Braunschweig/DE)
15:24 BCP028	Structure and function of novel bilin biosynthesis enzymes from marine metagenome <u>B. Ledermann</u> (Kaiserslautern/DE), J. Sommerkamp E. Hofmann (Bochum/DE), O. Béjà (Haifa/IL) N. Frankenberg-Dinkel (Kaiserslautern/DE)
15:30 BCP029	Reaction mechanism of corrinoid-reducing metallo-ATPases <u>H. Dürichen</u> , G. Diekert, S. Studenik (Jena/DE)
15:36 BCP030	Structure of a Unique 3-hydroxyacyl Dehydratase (FabZ) and its Complex with an Acyl Carrier Protein (ACP) from Anammox Bacteria <u>S. Winter</u> , N. Mertes, A. Dietl, T. R. M. Barends (Heidelberg/DE)
15:42 BCP031	Biophysical properties of TsdA from <i>Allochromatium vinosum</i> and <i>Campylobacter jejuni</i> <u>S. van Helmont</u> (Bonn/DE), L. P. Jenner, J. Butt (Norwich/GB) C. Dahl (Bonn/DE)
BCP032	Switched to topic Microbial Cell Biology (ID MCBP447)

15:48
BCP033 Abstract has been withdrawn.

15:54
BCP034 Reconstitution of a proteolytically active Clp complex of streptomycetes *in vitro*
L. Reinhardt, D. Thomy, J. Hauser, P. Sass
H. Brötz-Oesterhelt (Tuebingen/DE)

16:00
BCP035 Abstract has been withdrawn.

16:06
BCP036 Uncommon Mechanism of a PKS II-derived Aryl Polyene Pigment produced by *Xenorhabdus doucetiae*
G. L. C. Grammbitter, K. Karimi, N. Morgner, H. B. Bode (Frankfurt a. M./DE)

ePS 4 Systems Biology and Metabolomics | SBP435–SBP444; MetP347–MetP350

Chairs Marco Massmig, Kerstin Schmidt-Hohagen (Braunschweig/DE)

15:00
SBP435 What is flux balance analysis and how to simulate a gut microbiome
D. Popp, F. Centler (Leipzig/DE)

15:06
SBP436 Oligopermeases determine systems-level properties of extracellular peptide signaling in *Bacillus subtilis*
H. Babel, P. Naranjo Meneses, S. Trauth, V. Sourjik, I. Bischofs (Marburg/DE)

15:12
SBP437 Protein-protein interactions of the *Pseudomonas aeruginosa* aerobic respiratory chain supracomplex
K. Müller, J. M. Borréro de Acuña, M. Jahn, D. Jahn (Braunschweig/DE)

15:18
SBP438 Proteomic map of 3,3'-thiodipropionic acid utilization by *Variovorax paradoxus* TBEA6
C. Meinert, V. Heine, J. Lück (Muenster/DE), B. Voigt
K. Riedel (Greifswald/DE), A. Steinbüchel (Muenster/DE)

15:24
SBP439 Adaption of *Clostridioides difficile* to osmotic stress
A.-M. Michel (Braunschweig/DE), T. Hoffmann, E. Bremer (Marburg/DE)
J. M. Borréro de Acuña, D. Jahn (Braunschweig/DE)

- 15:30
SBP440 Understanding optimal resource allocation during cyanobacterial diurnal growth
R. Steuer (Berlin/DE)
- 15:36
SBP441 A metabolic labelling strategy for protein quantification in *Clostridium difficile*
A. Trautwein-Schult, M. Sandra, A. Otto, D. Becher (Greifswald/DE)
- 15:42
SBP442 Characterization of clinical isolates using the pan peptidome and SWATH-MS
K. Plate, A. Otto, D. Becher (Greifswald/DE)
- 15:48
SBP443 Prediction and identification of small proteins in *Staphylococcus aureus* using a proteogenomics approach
M. Kucklick, E. Lehmann, A. Mustafayeva, T. Ludwig, M. Diwo, J. Wissing
L. Jänsch (Braunschweig/DE), S. Fuchs (Wernigerode/DE)
S. Engelmann (Braunschweig/DE)
- 15:54
SBP444 Carbon Flux in Biotransformation of Glycerol to Ectoine
L. Bethlehem, K. Moritz, M. Sümmermann, P. Voß, E. A. Galinski (Bonn/DE)
- 16:00
MetP347 The impacts of Metabolomics and molecular profiling on preterm gut microbiota; a case of Probiotics supplementation.
B. Abdulkadir (Katsina/NG)
- 16:06
MetP348 Smuggling a Trojan horse with a deadly cargo into osmotically stressed *Escherichia coli* cells
A. Dornes, L. Teichmann (Marburg/DE), M. Jebbar (Plouzane/FR)
E. Bremer (Marburg/DE)
- 16:12
MetP349 A semi-automatic metabolomics platform to investigate underexplored natural product producers
M. Marner, F. Zubeil (Gießen/DE), P. Hammann (Hoechst/DE)
A. Vilcinskis (Gießen/DE), A. Bauer (Hoechst/DE), J. Glaeser (Gießen/DE)
- 16:18
MetP350 Characterization of CsrA-mediated modulation of bacterial metabolism and its effect on pathogenicity
V. Berndt, M. Beckstette, P. Dersch, M. Brönstrup (Braunschweig/DE)

ePS 5 Microbial Diversity and Evolution | MDEP388–MDEP403, MDEP445

- Chairs Alicia Balbín-Suárez (Braunschweig/DE), Michelle Voss (Hanover/DE)
- 15:00 A new anti-fungus Sesquiterpenoid originating in an actinomycete isolated from *Elephas maximus* feces
MDEP388 Y. Jiang (Kunming/CN), G. Li, X. Chen (Shenyang, Kunming/CN), M. Yin Q. Li (Kunming/CN), L. Han, X. Huang (Shenyang/CN), C. Jiang (Kunming/CN)
- 15:06 Spectrum of mutations in pathoadaptive loci of *P. aeruginosa*.
MDEP389 S. Fischer, N. Cramer, J. Klockgether, B. Tümmler (Hanover/DE)
- 15:12 Regulation of P4-type integrase expression in uropathogenic *Escherichia coli*
MDEP390 M. Chitto, M. Berger, U. Dobrindt (Muenster/DE)
- 15:18 Novel strategies for autotrophic carbon fixation in thermophilic prokaryotes
MDEP391 A. Mall (Muenster, Freiburg i. Br./DE), I. Berg (Freiburg i. Br., Muenster/DE)
- 15:24 Marker free intraclonal competitive fitness experiments of sequential
MDEP392 *P. aeruginosa* strains analysed by a multiplex PCR amplicon pipeline
N. Cramer, S. Fischer, S. Hedtfeld, M. Dorda, J. Klockgether, L. Wiehlmann
B. Tümmler (Hanover/DE)
- 15:30 *Pseudomonas aeruginosa* microevolution in cystic fibrosis lungs
MDEP393 J. Klockgether, N. Cramer, S. Fischer, L. Wiehlmann
B. Tümmler (Hanover/DE)
- 15:36 Analysis of Bacterial Gene Neighborhood Conservation
MDEP394 A. Sim, G. Fritz (Marburg/DE)
- 15:42 Next Generation Biodiversity Analysis: the Bacterial Metadatabase BacDive
MDEP395 L. Reimer, C. Söhngen, A. Vetscinova, J. Overmann (Braunschweig/DE)
- 15:48 Phylogenetic distribution of RsbR orthologs and sequence conservation in
MDEP396 stressosome proteins and their putative output modules
M. Conway, K. Wicke (Greifswald/DE), A. Mikšys (Regensburg/DE)
S. Ejder (Newcastle/GB), L. Cutugno, A. Boyd (Galway/IE), J. Marles-Wright
R. Lewis (Newcastle/GB), C. Ziegler (Regensburg/DE), M. Fischer, K. Riedel
J. Pané-Farré (Greifswald/DE)

- 15:54
MDEP397 New members of the family Eggerthellaceae isolated from a human fecal sample: *Rubneribacter badeniensis* gen. nov., sp. nov., *Enteroscipio rubneri*, gen. nov., sp. nov.
N. Danylec, A. Göbl, D. A. Stoll, B. Hetzer, S. E. Kulling
M. Huch (Karlsruhe/DE)
- 16:00
MDEP398 Diversity study of *Ochrobactrum* spp. isolated from medicinal leeches
A. Raslan (Gießen/DE), H. Galatis (Biebertal/DE), P. Kämpfer
S. P. Glaeser (Gießen/DE)
- 16:06
MDEP399 Different diversity of abundant heterotrophic and methylotrophic bacteria cultivated by dilution-to-extinction cultivation from the phyllosphere of *Arrhenatherum elatius* and *Galium album* plants, exposed to ambient and elevated atmospheric CO₂
O. Budich, E. L. Aydogan, M. Hardt, G. Moser, C. Müller, P. Kämpfer
S. P. Glaeser (Gießen/DE)
- 16:12
MDEP400 The evolution of phage resistance in *Vibrio alginolyticus* K01M1 in response to two different filamentous bacteriophages
C. Chibani (Goettingen/DE), H. Goehlich, C. C. Wendling (Kiel/DE)
R. Hertel (Goettingen/DE), O. Roth (Kiel/DE), H. Liesegang (Goettingen/DE)
- 16:18
MDEP401 On The Evolution of Earth and Circadian Clocks
N. Schmelling (Duesseldorf/DE)
- 16:24
MDEP402 Insights into the genome and metabolism of *Clostridioides difficile* CD3022, a clade 5 representative with active expression solely of the binary toxin
T. Riedel, M. Neumann-Schaal, J. Wittmann, I. Schober, J. D. Hofmann
B. Bunk, A. Lakowitz, C. Spröer (Braunschweig/DE), O. Zimmermann
U. Groß (Goettingen/DE), J. Overmann (Braunschweig/DE)
- 16:30
MDEP403 Metagenomic reconstruction of the genetic potential of uncultivated prokaryotic key players in the redoxcline of the Black Sea
J. Werner, N. V. Srikanth, T. Schott (Rostock-Warnemuende/DE)
D. Herlemann (Rostock-Warnemuende/DE; Tartu County/EE)
K. Jürgens (Rostock-Warnemuende/DE)
- 16:36
MDEP445 Assembly of a thermophilic giant virus genome from Icelandic hot springs with an expanded set of translation system component genes
T. Luttermann, D. Brandt, C. Henke, A. Sczyrba (Bielefeld/DE)
E. Gudmundsdottir, A. Aevarsson, O. Fridjonsson, Bjorn T. Aðalsteinsson
J. Vanhalst, G. O. Hreggvidsson (Reykjavik/IS), J. Kalinowski (Bielefeld/DE)

Poster Session | Environmental Microbiology and Ecology | EMP128–EMP202

- EMP128 Sulfite respiration in *Wolinella succinogenes*: the role of MccC and MccD
J. Eller, S. Hein, J. Simon (Darmstadt/DE)
- EMP129 Making the stress-protectant Ectoine: Structural and Biochemical Insights into the Acetyltransferase EctA
A. A. Richter (Marburg/DE), S. Kobus (Duesseldorf/DE)
L. Czech (Marburg/DE), A. Höppner (Duesseldorf/DE), L. Lauterbach
J. S. Dickschat (Bonn/DE), J. Heider (Marburg/DE)
S. H. J. Smits (Duesseldorf/DE), E. Bremer (Marburg/DE)
- EMP130 The effect of genetic modification of maize on soil fungi, bacteria, and bacterial denitrifiers at different field sites across Europe
M. Szoboszlai, A. Näther, C. Tebbe (Braunschweig/DE)
- EMP131 Abstract has been withdrawn.
- EMP132 *Vibrio cholerae* Combines Individual and Collective Sensing to Trigger Biofilm Dispersal
P. K. Singh, S. Bartalomej, R. Hartmann (Marburg/DE)
C. D. Nadell (Hannover/DE), K. Drescher (Marburg/DE)
- EMP133 Myxobacterial diversity: we only see the tip of the iceberg
K. I. Mohr, T. Zindler (Braunschweig/DE), M. Stechling (Wolfenbuettel/DE)
M. Stadler, J. Wink (Braunschweig/DE)
- EMP134 Bacterial-algal interactions mediated by siderophores
C. Kurth (Jena/DE), M. Nett (Dortmund/DE)
- EMP135 Microbial diversity, abundance and activity in a dry CO₂ degassing mofette in Hartoušov, NW Bohemia
Q. Liu, F. Horn, H. Kämpf (Potsdam/DE), R. Bussert (Berlin/DE), P. Krauze
B. Plessen, D. Wagner, M. Alawi (Potsdam/DE)

- EMP136 Actinobacterium that can produce ibuprofen via a novel styrene degradation pathway
T. Heine, J. Zimmerling, A. Ballmann, S. Kleeberg, A. Scholtissek
M. Oelschlägel (Freiberg/DE), C. Rückert, J. Kalinowski (Bielefeld/DE)
A. Poetsch (Bochum/DE), D. Tischler (Freiberg, Bochum/DE)
- EMP137 Metaproteomic analyses of antibiotic resistances and antibiotic resistant bacteria in wastewater treatment plants
D. Zühlke (Greifswald/DE), D. Schneider, R. Daniel (Goettingen/DE)
K. Riedel (Greifswald/DE)
- EMP138 A glyphosate pulse to a brackish long-term microcosm leads to a prolonged shift in the stoichiometric composition of the phn operon within the bacterial metagenome
R. Janßen (Rostock/DE), J. Alneberg (Rostock/DE; Stockholm/SE)
W. Skeff (Rostock/DE), A. Andersson (Stockholm/SE), B. Kreikemeyer
D. Schulz-Bull, M. Labrenz (Rostock/DE)
- EMP139 The distribution of active iron-cycling bacteria in marine and freshwater sediments is decoupled from geochemical gradients
J. M. Otte, N. Blackwell, A. Kappler, S. Kleindienst (Tuebingen/DE)
- EMP140 Establishment of a metaproteomics pipeline to unravel the mechanisms of polysaccharide degradation of particle-associated microbial communities
D. Schultz, D. Zühlke, B. Fuchs, K. Riedel (Greifswald/DE)
- EMP141 Molecular detection of denitrifying bacteria and N-transformation processes in groundwater and surface water
C. Schäfer, B. Lotz, J. Armbruster (Karlsruhe/DE), C.-H. Li, C. Ye (Beijing/CN)
A. Thiem (Karlsruhe/DE)
- EMP142 Organic soil amendments impact on bacterial community structure and co-occurrence patterns in a long-term field trial
C. Schmid, P. Schröder (Neuherberg/DE), M. Armbruster (Speyer/DE)
M. Schlöter (Neuherberg/DE)
- EMP143 Nitrogen metabolism in aquaponic systems
J. Heise, R. U. Meckenstock (Essen/DE)
- EMP144 Droplet Digital PCR for quantification of *Macrococcus* spp. in bioaerosols
A. Grünberg, D.-C. Pöther, U. Jäckel (Berlin/DE)

- EMP145 The distribution of benthic *Roseobacter* group members in the Pacific is shaped by nutrient availability at the seafloor and productivity in the water column
M. Pohlner, J. Degenhardt (Oldenburg/DE), A. von Hoyningen-Huene
B. Wemheuer (Goettingen/DE), B. Engelen (Oldenburg/DE)
- EMP146 Acetone degradation in sulfate-reducing bacteria
J. Frey, D. Spiteller, T. Huhn, D. Schleheck, B. Schink (Konstanz/DE)
- EMP147 Microbial mineral precipitation - a smart tool in fossil preservation
A. Kamran, V. Thiel, D. Schneider, M. Hoppert (Goettingen/DE)
- EMP148 It's the mix: substrate diversity activates soil anaerobes in earthworm gut contents
L. Zeibich, O. Schmidt, H. L. Drake (Bayreuth/DE)
- EMP149 The first evaluation report of *Nostoc entophyllum* ISC32 cell response to the stress caused by exposure to cadmium at the cellular, molecular and ultrastructural levels
L. Alidoust, H. Shahbani Zahiri, H. Vali, K. Akbari Noghabi (Tehran/IR)
- EMP150 Microbial community of the volcanic area at Pantelleria Island, Italy
C. Hogendoorn, N. Picone, R. Schmitz, A. Pol
H. Op den Camp (Nijmegen/NL)
- EMP151 Impact of the viral shunt on microbial community structures and organic matter composition in deep-sea sediments
M. Heinrichs, D. Tebbe, B. Engelen (Oldenburg/DE)
- EMP152 Towards the Response Threshold for p-Hydroxyacetophenone in the Denitrifying Bacterium „*Aromatoleum aromaticum*” EbN1
J. Vagts, S. Scheve, M. Kant, L. Wöhlbrand, R. Rabus (Oldenburg/DE)
- EMP153 Amino Acid and Sugar Catabolism in the Marine Bacterium *Phaeobacter inhibens* from an Energetic Viewpoint
D. Wünsch, K. Trautwein (Oldenburg/DE)
D. Schomburg (Braunschweig/DE), R. Rabus (Oldenburg/DE)

- EMP154 The influence of bursting bubbles on marine bacterial communities – from transport into the air-water interface to atmospheric export
C. Stolle (Rostock, Wilhelmshaven/DE), T.-B. Robinson (Wilhelmshaven/DE)
D. Herlemann (Elva/EE), E. Bahlmann (Bremen/DE), K. Jürgens (Rostock/DE)
O. Wurl (Wilhelmshaven/DE)
- EMP155 The impact of groundwater seepage on benthic microbial community structures of a sandy beach
J. Degenhardt, V. Vandieken, B. Engelen (Oldenburg/DE)
- EMP156 Molecular biological live/dead differentiation in water treatment
J. Ho (Karlsruhe/DE), J. Sidhu, S. Toze (Brisbane/DE)
A. Tiehm (Karlsruhe/DE)
- EMP157 Fermentative microbes in gut contents of the tropical earthworm *Rhinodrilus alatus*
T. Oppermann, P. S. Depkat-Jakob, S. Hunger, O. Schmidt (Bayreuth/DE)
G. G. Brown (Colombo/BR), S. M. Tsai (Piracicaba/BR)
H. L. Drake (Bayreuth/DE)
- EMP158 You beta believe it: β -amino acid degradation by a newly isolated *Paraburkholderia* strain clearly differs from type strain PsJN and we don't know why
J. Rudat, O. Buß, S.-M. Dold, D. Litty (Karlsruhe/DE)
- EMP159 Discovery of new *Pseudomonas* spp. by isolation of siderophore producing bacteria from acidic habitats
M. Mehnert, V. Schulz (Freiberg/DE), D. Tischler (Freiberg, Bochum/DE)
- EMP160 Multiple resistance to toxic compounds of soil microbial community from Ecuador
O. lungin, V. Govorukha, O. Tashyrev, O. Havryliuk, O. Bielikova (Kyiv/UA)
- EMP161 The influence of complex substrates on microbial diversity from four Azorean hot springs
M. Suleiman, B. Klippel, P. Busch, C. Schäfers, G. Antranikian (Hamburg/DE)
- EMP162 Purification of 2-naphthoate:CoA-Ligase, the second enzyme of the anaerobic naphthalene degradation pathway
M. Arnold, F. Yampang Tchoukio, R. U. Meckenstock (Essen/DE)

- EMP163 The rhizosphere of methane-emitting fens: An oasis for H₂-cycling anaerobes
A. Meier, S. Hunger, H. L. Drake, O. Schmidt (Bayreuth/DE)
- EMP164 Genetic studies on biofilm formation in *Sphingomonas* sp. strain S2M10 isolated from drinking-water filtration membranes
M. Czieborowski, B. Philipp (Muenster/DE)
- EMP165 Effect of salt stress on aerobic methane oxidation and associated methanotrophs
A. Ho (Hanover/DE), Y. Mo, Z. Jia (Beijing/CN), M. A. Horn (Hanover/DE)
- EMP166 German-Australian Cooperation for Water Microbiology
C. Stange (Karlsruhe/DE), J. Sidhu (Brisbane/DE), J. Ho (Karlsruhe/DE)
S. Toze (Brisbane/DE), A. Tiehm (Karlsruhe/DE)
- EMP167 Occurrence of Antibiotic Resistant Bacteria and Resistance Genes in Surface and Ground Water
C. Stange (Karlsruhe/DE), J. Sidhu, S. Toze (Brisbane/DE), J. Ho
A. Tiehm (Karlsruhe/DE)
- EMP168 Machine-assisted cultivation and analysis of biofilms
S. H. Hansen, K. S. Rabe (Eggenstein-Leopoldshafen/DE), H. Horn
J. Hubbuch (Karlsruhe/DE)
J. Gescher (Eggenstein-Leopoldshafen, Karlsruhe/DE)
C. M. Niemeyer (Eggenstein-Leopoldshafen/DE)
- EMP169 Deciphering the interaction between *Rhizoglossus irregularis*, hyphae attached phosphate-solubilizing bacteria and their impact on *Solanum lycopersicum*
S. Sharma (Erfurt/DE), M. Ballhausen (Berlin/DE)
S. Ruppel (Großbeeren/DE), S. Compant (Tulln/AT), P. Franken (Erfurt/DE)
- EMP170 Comparative Transcriptomics and Proteomics of Dehalococcoides mccartyi strain CBDB1 Indicates Induction of a 1,2,4-Trichlorobenzene-Dependent Reductive Dehalogenase
F. Greiner-Haas, S. Schwach (Halle a. d. S./DE), D. Türkowsky
N. Jehmlich (Leipzig/DE), U. Lechner (Halle a. d. S./DE)

- EMP171 Bacterial potential to produce exopolysaccharides and lipopolysaccharides during the development of biological soil crusts
B. Cania, S. Kublik, M. Schloter, S. Schulz (Neuherberg/DE)
- EMP172 Microbial community in salt-tolerant and autotrophic perchlorate-reducing enrichment culture
Y.-H. Kim, Y. Ahn (Busan/KR)
- EMP173 Amino acid acquisition and longevity of the deep-ocean microbial cells
G. Giljan, B. Fuchs (Bremen/DE), M. Zubkov (Southampton/GB)
- EMP174 Influence of long-term organic or mineral fertilization practices on the rhizosphere microbiome and plant health
D. Babin (Braunschweig/DE), S. Paul Chowdhury (Munich/DE)
M. Sandmann (Großbeeren/DE), A. Fließbach, P. Mäder (Frick/CH)
J. Geistlinger (Bernburg/DE), M. Rothballer (Munich/DE)
R. Grosch (Großbeeren/DE), K. Smalla (Braunschweig/DE)
- EMP175 Could cyanobacteria have made the salinity transition during the late Archean?
A. Herrmann, M. Gehringer (Kaiserslautern/DE)
- EMP176 Isolation and characterization of an anaerobic biofilm-forming microbial consortium from Costa Rica
L. Dengler, M. Althammer, A. Bellack (Regensburg/DE)
A. Klingl (Planegg-Martinsried/DE), R. Rachel, H. Huber (Regensburg/DE)
- EMP177 Is the lag phase in microbial growth real?
P. Mishra, R. U. Meckenstock (Essen/DE)
- EMP178 The relationship between cable bacteria and submerged plants
V. Scholz, H. Müller, R. U. Meckenstock (Essen/DE)
- EMP179 Flagellar motility of *Rhodobacteraceae* – Evolution of three flagellar systems and characterization of the archetypical fla-type1 flagellum
P. Bartling, H. Brinkmann, J. Vollmers
C. Ellebrandt-Sperling (Braunschweig/DE), L. Wöhlbrand (Oldenburg/DE)
M. Rohde (Braunschweig/DE), R. Rabus (Oldenburg/DE)
J. Petersen (Braunschweig/DE)

- EMP180 Role of (pro)phages in *Shewanella oneidensis* MR-1
M. Kreienbaum, I. Oberheim, F. Hager, J.-C. Kramer
K. M. Thormann (Gießen/DE)
- EMP181 Unraveling the phylum Planctomycetes
S. Wiegand, C. Jogler (Nijmegen/NL)
- EMP182 Optimum O₂:CH₄ ratio promotes synergy between aerobic
methanotrophs and denitrifiers to enhance nitrogen removal
J. Zhu (Marburg/DE, Hangzhou/CN), W. Wu (Hangzhou/CN)
- EMP183 Comparative genomics of linuron-mineralizing *Variovorax* sp. isolated from
geographically distant locations
B. Öztürk (Leuven/BE), J. Werner (Warnemuende/DE)
P. Albers (Leuven/BE; Warnemuende/DE), B. Weytjens (Leuven/BE)
K. Marchal (Ghent/BE), D. Springael (Leuven/BE)
- EMP184 Governing factors of bacterial communities in temperate grassland plant
rhizospheres
S. Vieira, J. Sikorski, J. Overmann (Braunschweig/DE)
- EMP185 Microbiological characterization of initial soils on James Ross Island,
Maritime Antarctica
P. Krauze (Potsdam/DE), L. A. Meier (Tuebingen/DE), I. Prater (Freising/DE)
F. Horn (Potsdam/DE), T. Scholten, P. Kühn (Tuebingen/DE)
C. W. Mueller (Freising/DE), D. Wagner (Potsdam/DE)
- EMP186 Welcome to the Neighborhood -The Capability of Planctomycetes to shape
Biofilms
T. Kohn (Nijmegen/NL), O. Jeske, C. Boedeker, P. Rast, B. Sandargo
P. Bartling, J. Petersen (Braunschweig/DE), N. Kallscheuer (Juelich/DE)
M. H. Medema (Wageningen/NL), A. Heuer (Braunschweig/DE)
S. Wiegand (Nijmegen/NL), J. Vollmers (Karlsruhe/DE)
F. Surup (Braunschweig/DE), F. Brümmer (Stuttgart/DE)
P. Hornburger (Munich/DE), A.-K. Kaster (Karlsruhe/DE), S. Oberbeckmann
M. Labrenz (Rostock/DE), M. Stadler, J. Overmann
M. Rohde (Braunschweig/DE), M. S. M. Jetten (Nijmegen/NL)
M. Jogler (Braunschweig/DE), C. Jogler (Nijmegen/NL)

- EMP187 Does nitric oxide dismutation (NOD) play a role in petroleum-contaminated groundwater treatment system?
B. Zhu (Neuherberg, Munich/DE), A. Táncsics (Gödöllő/HU), G. Vestergaard
M. Schlöter, T. Lueders (Neuherberg, Munich/DE)
- EMP188 Biodiversity of Nitrate-Reducers in grassland soils by massive cultivation and genomics
T. Spanner (Hanover/DE), U. Behrendt, A. Ulrich
S. Kolb (Muencheberg/DE), M. A. Horn (Hanover/DE)
- EMP189 Microplastics harbor non-native bacterial communities, which could develop into different genotypes of bacteria potentially harmful for corals
A. Franco, J. Reichert, M. Hardt, P. Schubert, T. Wilke
S. P. Glaeser (Gießen/DE)
- EMP190 Investigating novel *Dehalococcoides mccartyi* strains from dioxin contaminated river sediments
H. Dam, J. Vollmers, A.-K. Kaster (Eggenstein-Leopoldshafen/DE)
M. Haggblom (New Brunswick, NJ/US)
- EMP191 Factors influencing the survival of *Salmonella enterica* in soil and the colonization of crop plants
S. Jechalke (Gießen/DE), J. Schierstaedt (Großbeeren/DE)
M. Becker (Braunschweig/DE), R. Grosch (Großbeeren/DE), K. Smalla
A. Schikora (Braunschweig/DE)
- EMP192 Determination of assimilable organic carbon in anaerobic groundwater
A. M. Trimbach, B. Bendinger (Hamburg/DE)
- EMP193 Aluminum hydroxides and iron sulfides promote cell attachment and sulfate reduction at low pH
M. Maar, V. Rüffel, B. Hauröder (Koblenz/DE), T. R. Neu (Magdeburg/DE)
J. Meier (Koblenz/DE)
- EMP194 Multi-parametric characterization of methanotrophic bacteria in groundwater treatment
J. Schmitt, B. Bendinger (Hamburg/DE)

- EMP195 Old yellow flavoenzymes: Typical enzymes involved in the anaerobic degradation of polycyclic hydrocarbons
M. Willistein, J. Haas (Freiburg i. Br./DE), U. Demmer (Frankfurt a. M./DE)
J. Fuchs, M. Müller, S. Lüdeke, M. Boll (Freiburg i. Br./DE)
- EMP196 Characterization of MbdNOPQ, a novel type of class I benzoyl-CoA reductase
J. Fuchs, O. Tiedt, M. Boll (Freiburg i. Br./DE)
- EMP197 The glyoxylate cycle speeds up C₂-assimilation in the ethylmalonyl-CoA pathway-employing Alphaproteobacterium *Paracoccus denitrificans*
K. Kremer, L. Schada von Borzyskowski, T. J. Erb (Marburg/DE)
- EMP198 Potential soil management dependent priming capacity through barley rhizosphere bacterial communities
N. Bziuk, K. Pohl, D. Lauterbach, A. Schikora, K. Smalla (Braunschweig/DE)
- EMP199 A novel methylotrophic Roseobacter group isolate with an unusually large genome
J. Vollmers (Eggenstein-Leopoldshafen/DE), A. Howat
C. Murrell (Norwich/GB), A.-K. Kaster (Eggenstein-Leopoldshafen/DE)
- EMP200 Inoculation with plant growth promoting *Pseudomonas* sp. RU47 shifts phosphomonoesterase gene abundances and activities in the tomato rhizosphere
M. Uksa, D. Nassal (Stuttgart/DE), Y. Abdullaeva (Stuttgart, Gießen/DE)
S. Marhan (Stuttgart/DE), S. Schulz (Neuherberg/DE)
E. Kandeler (Stuttgart/DE)
- EMP201 A non-bifurcating electron transferring flavoprotein involved in coupling fatty acid oxidation to biogas formation
C. Seelmann, M. Agne, S. Estelmann, M. Boll (Freiburg i. Br./DE)
- EMP202 Effect of Sodium Chloride on Cell Viability and Respiratory Rate by Moderately Thermophilic Iron & Sulfur Oxidizing *Sulfobacillus thermosulfidooxidans*
D. Huynh, S. Kaschabek, W. Sand, M. Schlömann (Freiberg/DE)

Poster Session | Gene Regulation | GRP241 –GRP282

- GRP241 Osmosensing by the bacterial PhoQ/PhoP two-component system
J. Yuan, F. Jin, T. Glatter, V. Sourjik (Marburg/DE)
- GRP242 CRISPR interference in *Paenibacillus riograndensis*
L. Fernandes de Brito, K. Schultenkämper, V. F. Wendisch (Bielefeld/DE)
- GRP243 EnuR – The chief regulator of Ectoin catabolism in *Ruegeria pomeroyi* DSS3
L. Hermann, A. Schulz, S.-A. Freibert, T. Hoffmann (Marburg/DE)
J. S. Dickschat (Bonn/DE), J. Heider, E. Bremer (Marburg/DE)
- GRP244 The aldehyde dehydrogenase AldA contributes to the hypochlorite defense and is redox-controlled by protein S-bacillithiolation in *Staphylococcus aureus*
M. Imber, L. Vu Van (Berlin/DE), S. R. Reznikov (Newcastle upon Tyne/GB)
V. N. Fritsch (Berlin/DE), A. J. Pietrzyk-Brzezinska (Łódź/PL)
J. Prehn (Berlin/DE), C. Hamilton (Norwich/GB), M. C. Wahl (Berlin/DE)
A. K. Bronowska (Newcastle upon Tyne/GB), H. Antelmann (Berlin/DE)
- GRP245 Transmembrane Redox Signaling and Proteolysis of CSS Domain c-di-GMP Phosphodiesterases in Bacterial Biofilm Formation
M. Lorkowski, S. Herbst, O. Sarenko, K. Nguyen, R. Hengge (Berlin/DE)
- GRP246 The complex regulation of the unique microbial volatile compound sodorifen of *Serratia plymuthica*
N. Magnus, B. Piechulla (Rostock/DE)
- GRP247 Effect of an altered 5'-UTR in *Serratia plymuthica* AS9 on its capability to produce sodorifen
S. E. Kurrer, N. Magnus, B. Piechulla (Rostock/DE)
- GRP248 Characterization of the LOV (light-oxygen-voltage) histidine kinase Dshi_1135 and its role in the light-dependent regulation of bacteriochlorophyll a biosynthesis in *Dinoroseobacter shibae*
M. Becker, E. Härtig, D. Jahn (Braunschweig/DE)
- GRP249 Regulatory features of colibactin production in *Escherichia coli*
A. Wallenstein, N. Mariani Corea, U. Dobrindt (Muenster/DE)

- GRP250 Footprints in bacteria – Ribosome covered mRNAs pieces are better indicators for protein expression than RNAseq data
F. Giehren, M. Kreitmeier, S. Fischer, Z. Ardern, K. Neuhaus (Freising/DE)
- GRP251 GTP-Cyclohydrolase I – the second member of the Zur-regulated cobW1-gene cluster
V. Schulz, M. Herzberg, D. H. Nies (Halle a. d. S./DE)
- GRP252 Tracking gene expression and oxidative damage of O₂-stressed *Clostridioides difficile* by a multi-omics approach
M. Neumann-Schaal (Braunschweig/DE), D. Troitzsch (Greifswald/DE)
A. M. Nuss, J. Hofmann, M. Beckstette (Braunschweig/DE), A. Otto
S. Sievers (Greifswald/DE)
- GRP253 A novel antisense overlapping gene completely embedded in EDL933_1238 of *Escherichia coli* O157:H7 strain EDL933 is regulated under sodium chloride stress conditions
S. Vanderhaeghen (Freising/DE)
- GRP254 CRIMoClo: conditional-replication, integration, and modular cloning plasmids for synthetic biology applications in *Escherichia coli*
S. Vecchione, A. Diehl, G. Fritz (Marburg/DE)
- GRP255 Expansion, promoter prediction and genomic context of the extracytoplasmic function (ECF) sigma factor family
D. Casas Pastor (Marburg/DE), R. Müller, A. Goesmann (Gießen/DE)
G. Fritz (Marburg/DE)
- GRP256 Structural dynamics in DcuS signal transduction in *E. coli*
M. Stopp, P. A. Steinmetz, G. Uden (Mainz/DE)
- GRP257 Regulation of Mo- and Fe-nitrogenase genes in *Rhodobacter capsulatus*
L. Demtröder, B. Masepohl (Bochum/DE)
- GRP258 Metagenomic and mutagenesis studies uncover novel features for regulating RubisCO expression in an uncultured deep-sea vent bacterium
S. Böhnke-Brandt, M. Perner (Kiel/DE)
- GRP259 PspACT is a dual function domain within PspA
E. Heidrich, T. Brüser (Hanover/DE)

- GRP260 Transcriptional regulation during NO-induced dispersal of *Pseudomonas aeruginosa* biofilms
K. Gerbracht, S. Zehner, N. Frankenberg-Dinkel (Kaiserslautern/DE)
- GRP261 Cyclic di-AMP mediated control in *Corynebacterium glutamicum*: Functional analysis of two putative c-di-AMP dependent riboswitches
S. J. Reich, D. Weixler, G. M. Seibold (Ulm/DE)
- GRP262 Characterization of new genes regulated by the sigma factor PfrI in *Pseudomonas putida* KT2440
T. Henriquez, K. Laus, J. Schwarz, M. Hauke, H. Jung (Martinsried/DE)
- GRP263 Photooxidative stress-response in *Rhodobacter capsulatus*: from physiology to omics
G. Klug, M. K. Licht (Gießen/DE), A. Konzer (Bad Nauheim/DE)
- GRP264 *In vitro* analysis of xylose repressor XylR from *Bacillus megaterium*
S. Wienecke, R. Biedendieck, D. Jahn (Braunschweig/DE)
- GRP265 The MarR-type regulator MalR is involved in stress-responsive cell envelope remodeling in *Corynebacterium glutamicum*
M. Hünnefeld, J. Frunzke (Juelich/DE)
- GRP266 Plant infection-related micro-proteins in *Sinorhizobium fredii* NGR234 are involved in symbiotic plasmid copy number regulation
K. Petersen, H. Duin (Hamburg/DE), S. Güllert (Kiel/DE)
C. Schmeisser (Hamburg/DE), K. U. Förstner (Wuerzburg/DE)
H. Krishnan (Columbia, MO/US), W. R. Streit (Hamburg/DE)
- GRP267 Abstract has been withdrawn.
- GRP268 PAS4-LuxR solos as inter-kingdom-signaling receptors in *Photorhabdus luminescens*
J. Brehm, E. Rothmeier (Martinsried/DE), H. B. Bode (Frankfurt a. M./DE)
R. Heermann (Martinsried/DE)

- GRP269 Regulation of Polar Flagellar Assembly in *Shewanella putrefaciens* CN-32
M. Schwan, J. C. Hook (Gießen/DE), T. Glatter (Marburg/DE), A. Khaledi
S. Häußler (Braunschweig/DE), K. M. Thormann (Gießen/DE)
- GRP270 The role of the small protein RSP_6037 in the oxidative stress response in
Rhodobacter sphaeroides
J. Grützner, G. Klug (Gießen/DE)
- GRP271 A SigB-dependent antisense RNA affects osmotic induction of opuB
expression in *Bacillus subtilis*
H. Rath (Greifswald/DE), T. Hoffmann, M. Thüring
B. Warmbold (Marburg/DE), A. Reder, L. Steil (Greifswald/DE)
E. Bremer (Marburg/DE), U. Völker, U. Mäder (Greifswald/DE)
- GRP272 Characterization of the transcriptional landscape of *Escherichia coli* by
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- GRP273 Establishing CRISPRi in *Halomonas elongata* to uncover metabolic pathways
J. Vandrigh, G. Alfaro-Espinoza, H.-J. Kunte (Berlin/DE)
- GRP274 Investigation of pristnamycin signalling molecules
M. Fischer (Tuebingen/DE)
- GRP275 Transcriptional analysis of magnetosome gene cluster expression in
Magnetospirillum gryphiswaldense
C. Riese, D. Schüler (Bayreuth/DE)
- GRP276 Functional analysis of magnetosome biosynthesis and gradual genome
reduction by large-scale deletion mutagenesis in *Magnetospirillum*
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T. Zwiener, D. Schüler (Bayreuth/DE)
- GRP277 The targeted GudB degradation in *Bacillus subtilis*
L. Lilge, Y. Müller, C. Neu (Greifswald/DE), F. M. Commichau (Goettingen/DE)
K. Riedel, M. Hecker, U. Gerth (Greifswald/DE)
- GRP278 yfeS mutant of *Escherichia coli* is comparatively hypersensitive to boric acid
and may play a role in boron stress response
B. I, M. Sezer, E. Dibek (Mugla/TR)

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- GRP279 Reengineering of a synthetic toehold switch for posttranscriptional activation of gene expression in *Synechocystis* sp. PCC 6803
M. Dreesbach, A. Behle, I. M. Axmann (Duesseldorf/DE)
- GRP280 *Burkholderia glumae* CRISPR-Cas gene cluster expression depends on quorum-sensing
E. K. Oellingrath, C. Vollstedt, M. Himmel, W. R. Streit (Hamburg/DE)
- GRP281 Identification and analysis of mRNA levels of an antiporter, excinuclease subunit and endonuclease genes in response to boron in a *Pseudomonas* isolate
B. I, E. Dibek, M. Sezer, N. Akgüç (Mugla/TR)
- GRP282 The HTH-type regulator MalT is a transcriptional activator of a large genomic region in *Actinoplanes* sp. SE50/110
J. Droste, T. Wolf, M. Persicke, S. Schneiker-Bekel (Bielefeld/DE)
T. Zemke (Wuppertal/DE), A. Pühler, J. Kalinowski (Bielefeld/DE)

Poster Session | Archaea | ARP001–ARP023

- ARP001 *Halobacterium salinarum* under heavy metal stress – a proteomic comparison between planktonic cells and biofilms
S. Völkel (Darmstadt/DE), C. Lenz (Goettingen/DE), N. Benker, S. Hein G. Losensky, F. Pfeifer (Darmstadt/DE)
- ARP002 Deletions of putative pilin genes in *Halobacterium salinarum* R1
G. Losensky, F. Pfeifer (Darmstadt/DE)
- ARP003 An ultramicrobial Vampirococcus-like epibiont on Archaea and Bacteria
J. Kizina, S. Jordan, A. Resteu, G. Martens, C. Probian (Bremen/DE)
R. Mellwig (Heidelberg/DE), S. Littmann (Bremen/DE)
E. Rhiel (Oldenburg/DE), S. Markert (Greifswald/DE)
M. Richter (Bremen/DE), K. Stüber (Cologne/DE)
T. Schweder (Greifswald/DE), R. Reinhardt (Cologne/DE)
J. Harder (Cologne, Bremen/DE)
- ARP004 C-di-AMP as second messenger in the Euryarchaeon *Haloferax volcanii*
F. Braun, S.-V. Albers (Freiburg i. Br./DE)
- ARP005 Interaction of accessory gas vesicle proteins determined by split-GFP in *Haloferax volcanii*
K. Winter, F. Pfeifer (Darmstadt/DE)

- ARP006 Communication between the chemotaxis and motility machinery in archaea
Z. Li, T. E. F. Quax, S.-V. Albers (Freiburg i. Br./DE)
- ARP007 Insights into substrate specificity of archaeal Entner-Doudoroff aldolases:
the structure of *Picrophilus torridus* 2-keto-3-deoxygluconate aldolase
V. Zaitsev (St. Andrews/GB), U. Johnsen, M. Reher, M. Ortjohann (Kiel/DE)
G. L. Taylor (St. Andrews/GB), M. J. Danson (Bath/GB)
P. Schönheit (Kiel/DE), S. J. Crennell (Bath/GB)
- ARP008 Identification of a potential transcriptional activator of
D-glucose-catabolism in *Haloferax volcanii*
A. Reinhardt, U. Johnsen, M. Ortjohann, P. Schönheit (Kiel/DE)
- ARP009 Different growth behavior of *Sulfolobus acidocaldarius* and *Sulfolobus*
solfatarius on L-glutamate or L-pyroglutamate as carbon source
A. M. Vetter, J. Helmecke, D. Schomburg
M. Neumann-Schaal (Braunschweig/DE)
- ARP010 Investigation of Extracellular Polymeric Substances (EPS) from
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J. Born, R. Wloch, F. Pfeifer (Darmstadt/DE)
- ARP011 Analysis of two heme-based sensor kinases and their role in putative
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K. Fiege (Kaiserslautern/DE), C. Laurich, W. Lubitz (Muelheim/DE)
N. Frankenberg-Dinkel (Kaiserslautern/DE)
- ARP012 Translational coupling via termination/reinitiation in *Haloferax volcanii* and
Escherichia coli
M. Huber, E. Kolbe, K. Vogtmann, C. Wehrheim, S. Laass
J. Soppa (Frankfurt a. M./DE)
- ARP013 Translation initiation factor network in *Haloferax volcanii*
F. Schmid, K. Gäbel, J. Soppa (Frankfurt a. M./DE)
- ARP014 Single-domain zinc finger μ -proteins in *Haloferax volcanii*
S. Zahn, A. Machulla, J. Soppa (Frankfurt a. M./DE)

- ARP015 PhyMet2: complex database containing records on methanogens with unique feature (MethanoGram) allowing prediction of culture conditions based on 16S rRNA
M. Burdukiewicz, P. Gagat, S. Jabłoński, J. Chilimoniuk, M. Gaworski
P. Mackiewicz, M. Łukaszewicz (Wrocław/PL)
- ARP016 Trehalose metabolism in the hyperthermophilic Crenarchaeon *Sulfolobus acidocaldarius*: Enzymatic and functional analyses of the newly identified trehalose-6-phosphate synthase
C. Stracke, C. Bräsen, B. Siebers (Essen/DE)
- ARP017 Development of a MurB based biosensor system for application in *Sulfolobus acidocaldarius*
S. Krevet, C. Bräsen, B. Siebers (Essen/DE)
- ARP018 Investigation of the central carbohydrate metabolism in *S. solfataricus* P2 with a special focus on the upper Embden-Meyerhof-Parnas pathway
A. Neu, Y. Rottmann, D. Esser, T. Kouril, C. Bräsen, B. Siebers (Essen/DE)
- ARP019 Regulation of pentose transport and metabolism in *S. acidocaldarius*
N. van der Kolk, M. Wagner, S.-V. Albers (Freiburg i. Br./DE)
- ARP020 Small proteins in *Methanosarcina mazei* strain Gö1
M. Gutt, M. Gudzuhn, D. Prasse, K. Weidenbach, R. A. Schmitz-Streit (Kiel/DE)
- ARP021 Improving protocols for the detection and quantification archaeal signatures in human tissue samples
C. Moissl-Eichinger, M. Pausan, K. Koskinen, M. Blohs (Graz/AT)
- ARP022 Enzymes of the 3-hydroxypropionate/4-hydroxybutyrate cycle in *Nitrosopumilus maritimus*
L. Liu (Muenster, Freiburg i. Br./DE), M. Könneke (Bremen/DE), D. Schubert
P. Brown (Freiburg i. Br./DE), I. Berg (Muenster, Freiburg i. Br./DE)
- ARP023 Analysis of transcription factor 3 in *Sulfolobus acidocaldarius* using RNA-Seq
A. Albersmeier (Bielefeld/DE), F. Schult, B. Siebers (Essen/DE)
J. Kalinowski (Bielefeld/DE)

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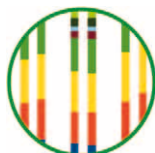
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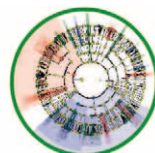
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