

6th JOINT CONFERENCE OF DGHM & VAAM

**8–11
March
2020
Leipzig**



PROGRAMME



72nd Annual Meeting

German Society for
Hygiene and Microbiology



Annual Meeting 2020

Association for General and
Applied Microbiology



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Welcome Notes	
of the Local Organising Committee	5
of the VAAM and DGHM Presidents	6
Microbiology in Leipzig	7
Programme Overview	
Sunday, 08 March	15
Monday, 09 March	16
Tuesday, 10 March	18
Wednesday, 11 March	20
Events for Hygienists	22
Events for Young Scientists	24
Floor Plans	
Ground Floor (Augusteum and Paulinum)	28
Ground Floor (Hörsaalgebäude)	29
First Floor (Hörsaalgebäude)	30
Second Floor (Hörsaalgebäude)	31
Organisation and Imprint	32
General Information	35
General Meeting	
VAAM	38
DGHM	39
Meeting of the DGHM/VAAM Special Groups Treffen der Fachgruppen.....	40
List of Abbreviations	42

TABLE OF CONTENTS

Scientific Programme	
Sunday, 08 March	44
Monday, 09 March	46
Tuesday, 10 March	62
Wednesday, 11 March	82
Poster Session Overview	99
Poster Session 1 Monday, 09 March	100
Poster Session 2 Tuesday, 10 March	137
Social Programme	173
Industrial Symposia	174
Sponsors	176
Funding Media Cooperations	177
Exhibitors and Partners	178
Invited Plenary Speakers	180
Invited Speakers of the Symposia	181
Index of Speakers, Authors and Chairs	182

CONFERENCE APP

A conference app with all programme details will be offered for Apple iOS as well as ANDROID smartphones and tablets

Online Programme



Conference-App



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Google play



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App Store



Welcome to Leipzig!

It is our great pleasure to welcome you to the 2020 joint DGHM/VAAM conference here at the University of Leipzig. We received more than 1,000 abstracts and are expecting about 1,700 delegates this year. The goal of the conference is, as always, to connect fundamental microbiological questions with applications. Here in Leipzig this includes microbiological examples from the medical and clinical worlds, biotechnology, and environmental microbiology. This couldn't be more timely as currently issues on microbial infection and climate change dominate the global agenda.

The key topics are big data, microbial physiology and adaptation, infection prevention, microbial ecology, microbial biotechnology, emerging resistance mechanisms and single cell microbiology, all interspersed with ample space and time for open topics. Three plenary sessions are organised jointly by the DGHM and the VAAM, reflecting the thematic overlap of both societies. At the same time, their individual profiles are portrayed in five additional plenary sessions. The scientific programme will also be accompanied by an industrial exhibition with about 70 companies.

Almost 30 years ago, Leipzig already hosted conferences for both the DGHM (1992) and VAAM (1993) separately. Back then they were organised by Prof. Babel for the VAAM and Prof. Spencker for the DGHM. We're excited to follow in these footsteps of a pioneering spirit and the strong feeling of a joint scientific community. The annual meetings of microbiologists in Germany are always lively, a floor for personal interactions and discussions, all embedded into a productive and most importantly warm and familiar atmosphere, and this year it won't be different. At these meetings different generations of microbiologists get together and the young scientists kickstart their careers by presenting and discussing scientific results sometimes for the first time.

Moreover, they might also initiate first personal networks within their scientific areas and beyond. This year, we will again have an exciting microbe slam and also an inspiring satellite programme. At this conference we still rely on traditional print posters in two sessions as these offer in our opinion the best platform for direct personal interactions to date. We also decided to shorten the time for the presentations to allow as many presentations as possible and we hope that this does not put too much pressure on our presenters.

We are very grateful to the University of Leipzig, to the Rector, Prof. Schücking and the administrative team, for the constructive and strong support of this important conference. We also thank the VAAM and DGHM central offices, especially Dr. Muth and Dr. von Maltzahn, both boards, and the different organisations involved for their active support of this meeting.

Maybe you will even find time to enjoy our beautiful city with its many offers, possibly even some wine in the Saale/Unstrut area or literature on the book fair following the DGHM/VAAM 2020 conference.

Enjoy the conference, the science and the many exciting stories told by microbes and microbiology!
Your local organising committee:

Christoph Baums, Peggy Braun, Katja Bühler, Iris F. Chaberny, Ulisses da Rocha, Hauke Harms, Stephan Klähn, Sabine Kleinsteuber, Jens Krömer, Arne C. Rodloff, Dietmar Schlosser, Andreas Schmid, Uwe Truyen, Anja Worrlich



Dear Friends and Colleagues, dear Guests,

On behalf of the German Society for Hygiene and Microbiology (DGHM) and the Association for General and Applied Microbiology (VAAM), we warmly welcome you to the 6th joint conference of our scientific societies. Our first joint meeting took place in 2000. We are very pleased to continue what we by now can almost call a tradition – a meeting that covers the entire spectrum of microbiology, hosted by the two German societies.

The societies have for some time had a number of joint scientific divisions that are continuously working together and that will convene joint sessions at this meeting. For the first time, the newly founded division *Viruses of Microbes* will join *Microbial Pathogenesis and Food Microbiology* in this respect. The combination of our scientific portfolios will permit a meeting to discuss diverse aspects of microbiology, from Microbial Ecology and Big Data in microbiology, to Microbial Biotechnology and Infection Control and Prevention. Even at present, numerous personal contacts and collaborations between individual members of the societies show how expertise from different areas in the spectrum of microbiology can fertilize and enhance research and science of one field. We expect that such collaboration between individuals and scientific groups and divisions will continue to foster exchange and to strengthen the ties between our two societies, while maintaining their distinct focus and direction. The next step on this way will be the FEMS conference 2021 in Hamburg, where both societies will together form the local organising committee.

We thank all the authors for their scientific contributions to this conference. In addition to the invited presentations, over 1,000 scientific abstracts have been submitted, which will form the basis of oral sessions, symposia, educational workshops and poster sessions at the conference. Special offers to young scientists and young medical doctors will be available, and young colleagues will be able to present and to discuss their results.

We are very grateful to the conference presidents and the other members of the local organising committee, as well as the invited speakers, for their commitment to come to our conference and to present their research. We thank the scientific divisions for their great effort in reviewing the abstracts and in structuring the scientific programme of the conference. We further thank all our sponsors, industrial partners as well as the German Research Foundation, for their generous support of this conference.

We wish all participants a successful meeting. We wish you inspiring discussions; we hope you will utilize this opportunity to form new interactions and to enter into new collaborations; we trust you will enjoy your time in beautiful Leipzig, meeting old and making new friends.

Welcome to Leipzig!

Prof. Dr. Christine Lang
President VAAM

Prof. Dr. Georg Häcker
President DGHM



University of Leipzig Leipzig University Medicine

Institute for Hygiene, Hospital Epidemiology and Environmental Medicine

Director: Prof. Dr. med. Iris F. Chaberny: infection control, improving hand hygiene compliance, surveillance of multi-drug resistance organisms, ongoing multicenter studies: e.g. EFFECT of daily antiseptic body wash with octenidine on nosocomial primary bacteremia and nosocomial multidrug resistant organisms in intensive care units: a multicenter, cluster-randomized, double-blind, cross-over study (DFG-funded, DRKS00011282); promoting compliance with surgical site infection prevention guidelines by psychologically tailored interventions: a multicenter parallel-group cluster-randomized controlled trial "WACH" (Wundinfektionen und Antibiotikaverbrauch in der Chirurgie; BMG-funded, DRKS00015502)

Institute for Medical Microbiology and Epidemiology of Infectious Diseases

Director: Prof. Dr. med. Arne C. Rodloff: Pathomechanisms of anaerobic bacteria, mechanisms and epidemiology of antibiotic resistance

Institute for Virology

Director: Prof. Dr. med. Uwe G. Liebert: Research: Respiratory, gastrointestinal and hepatitis virus infections
Molecular epidemiology and antiviral resistance

Clinic for Infectious Diseases and Tropical Medicine

Director: Prof. Dr. med. Christoph Lübbert: Research interests: Clinical impact of multi-drug resistant organisms and *Clostridioides difficile* Treatment of gastrointestinal and hepatobiliary infections
Implementation of Antibiotic Stewardship (ABS) programmes

Faculty of Veterinary Medicine

Prof. Dr. Peggy Braun: The aim of our research is to ensure a high level of consumer protection. In addition to food pathogen-based basic research, our institute has a microbiological-technologically oriented research profile. Extensive experience with alternative cold decontamination methods such as atmospheric plasma (e.g. *Campylobacter*/*Salmonella* spp. on poultry; reduction of *Listeria monocytogenes* and spoilage organisms on cutting blades), high pressure (e.g. decontamination of herbs), pulsed light (e.g. *Yersinia* spp. on pork) has been gained in interdisciplinary projects, which should guarantee an appropriate food safety/shelf life with high product quality while preserving heat-sensitive ingredients.

Faculty of Life Sciences

Prof. Dr. Severin Sasso: As photosynthetic organisms, algae (unicellular and multicellular) almost make the same contribution to global carbon fixation as the land plants. Our research is focused on algal metabolism and the interactions of microalgae with other microorganisms. Available genome sequences from algae are exploited to find hints for yet unknown metabolites, and to identify biosynthetic routes to known compounds. In the laboratory, we are combining genetic strategies with physiological and chemical-analytical methods to elucidate the benefit of specific compounds and proteins for the algal cell. We hope that our research will provide ecological insights into algal lifestyle and improve our understanding of how algae interact with their environment and other organisms. In addition, the investigation of algal metabolism may lead to the discovery of biotechnologically or pharmaceutically useful compounds and processes.

SenProf. Dr. Christian Wilhelm: Although eukaryotic microalgae are highly important for water quality in freshwater environments and global carbon cycling in the ocean, the molecular mechanisms to maintain high physiological activity under changing environmental conditions is still not understood. The group has studied the energy balance from photons to biomass describing the rate limiting steps in algal growth. The regulatory or stressing function of light intensity and light colour has been intensively studied. The results led to the development of a new concept for algal-based green biotechnology (New Green Chemistry, NGC) by constant and highly efficient glycolate excretion at the expense of biomass formation. Glycolate has the potential to replace glucose in microbial biotechnology. The efficiency of this concept is a magnitude higher than via biomass accumulation because excreted glycolate can be directly used for fermentation minimizing the efforts for harvesting and refinement. This concept will be embedded in other value chain processes for chemical industry to build up closed cycles only driven by photosynthesis.

The Saxonian Institute for Applied Biotechnology – SIAB

The SIAB was founded in 1997 by scientists from Leipzig University with the aim of making the results of biotechnological basic research useable. In addition to this, the company works in co-operation with Leipzig University, the Technical University Dresden, the Helmholtz Centre for Environmental Research (UFZ) and various domestic and international research institutes and companies. The topics of the research are related to technical enzymes to convert organic waste into high valuable products and to integrate the concept of New Green Chemistry in a transformation process leading to climate friendly bioeconomy. The laboratories are situated in the grounds of the science park in the Permoserstraße in Leipzig.

Save the Date



18–21 March 2020 | Bonn

29th Annual Meeting of the German Society for Parasitology (DGP)
www.parasitology-meeting.de

25–28 March 2020 | Berlin

30th Annual Meeting of the Society for Virology (GfV)
www.virology-meeting.de

9–12 September 2020 | Hanover

50th Annual Meeting of the German Society for Immunology (DGfI) and
48th Annual Meeting of the Austrian Society for Allergology and
Immunology (ÖGfI)
www.immunology-conference.de

13–17 September 2020 | Berlin

28th International Complement Workshop (ICW)
www.icw2020.de

20–23 September 2020 | Göttingen

8th European Conference on Prokaryotic and Fungal Genomics
www.prokagenomics.org

10–12 March 2021 | Ulm

14. Ulmer Symposium Krankenhausinfektionen
www.krankenhausinfektionen-ulmer-symposium.de

Helmholtz Centre for Environmental Research – UFZ

Department of Environmental Microbiology (Prof. Dr. Hauke Harms)

The research of our Department includes the entire range of microorganisms (including viruses) in both terrestrial and aquatic environments. Making use of a unique mix of disciplinary backgrounds and expertise, UMB researchers acquire in-depth knowledge of the ecological relationships controlling the functioning of microbial ecosystems. They combine observations in natural environments, lab and field experiments with mathematical modelling and apply ecological concepts to verify, support and explain their findings. This knowledge finds its application in the development of ecologically inspired methods of soil remediation and water treatment, the design of tailored processes and bioreactors for the biochemical and bio-electrochemical synthesis of energy carriers and chemicals from renewable resources, as well as in the development of methods for the monitoring and process control of microbial communities in natural and technical ecosystems.

Bioavailability (Dr. Lukas Wick): Our research interest is related to a process-based (i.e. quantifiable, transferable and scalable) description of the microbial chemodynamics of biotransformation of organic (soil) contaminants for improved environmental (bio-)technology.

Ecothermodynamics/Biocolorimetry (PD Dr. Thomas Maskow): We are highly interested in a quantitative understanding of bioconversions in natural and technical systems. Our current research focuses on energetics of biofilms, extremophiles as source and producers of valuable products (main focus – protector molecules like compatible solutes), biothermodynamic models for complex networks in metabolism (system biology) as well as in ecosystems, new control strategies for bioprocesses basing on physical signals which reflects metabolic changes in statu nascendi, e.g. calorimetry, impedance spectroscopy and redox processes.

Electrobiotechnology (Prof. Dr. Falk Harnisch): Microbial electrochemistry is the study and application of interactions between living microbial cells and electrodes (i.e. electron conductors, capacitive materials). For a long time it has been the interest of mainly fundamental researchers, but this has considerably changed during the last decade. We aim at combining electrochemistry and microbiology for the creation of sustainable technologies. In the centre of our research activities are electroactive microorganisms as well as the interfacing of electrochemical and microbial synthesis of platform and fine chemicals from biomass and waste. Our application inspired research spans from elucidation of microbial and (electro)chemical fundamentals to development of technologies and aims on the transfer of these for practical use.

Environmental Mycology (Dr. Dietmar Schlosser): Our fields of research relate to the microbial degradation and biotransformation of organic compounds (e.g. emerging micro-pollutants, synthetic and natural polymers), with respect to their environmental fate and applications in environmental biotechnology. Fields of special interest are the degradation/biotransformation of xenobiotic and natural compounds by different kinds of fungi and their oxidative enzymes, with emphasis on the involvement of extracellular, radical-based degradation mechanisms initiated by extracellular enzymes (mainly fungal laccases); the contribution of fungi to biodegradation/biotransformation processes in different environmental compartments, and the exploitation of fungi for lignocellulose (pre)treatment.

Flow Cytometry (Prof. Dr. Susann Müller): Most microbial analyses are realized by measuring average properties of bulk data. However, we exploit high-throughput multi-parameter flow cytometry to obtain single cell data and use them for understanding and optimisation of biotechnological and environmental processes. With our methods we are able to provide information about individual cell characteristics along with structural and functional parameters.

Geomicrobial Reactive Transport Systems (Dr. Martin Thullner): Our research activities focus on reactive transport modeling of subsurface environments. Of particular interest are biogeochemical/geomicrobial processes involved in the microbial degradation of organic carbon species (contaminants or natural organic matter) in aquifers, soils or aquatic sediments. Research topics include for instance microbial community dynamics and their implication on biogeochemical reactions.

Microbial Interaction Ecology (Prof. Dr. Antonis Chatzinotas): Our aim is to gain a better understanding of the ecology of multi-trophic microbial systems and the importance of microbial biodiversity and interactions for ecosystem functioning. We use theory, lab experiments and field surveys to study the major microbial players (bacteria, viruses (phage) and protists) and their interactions within and across trophic levels. The application of molecular biological and omics-tools allows us to analyse their dynamics in different habitats and across different temporal and spatial scales. In addition, we assemble laboratory microbial systems to understand the ecological and evolutionary consequences of microbial interactions under controlled experimental conditions.

Microbial Systems Data Science (Dr. Ulisses Nunes da Rocha): Our group strives to assess environmental health of natural and artificial ecosystems by predicting how resilient/stable a microbial community is to specific disturbances. A special emphasis is put on the development of concepts and theories to scale microbial interactions to the real diversity found in nature. The key research topics of the Microbial Systems Data Science group are based on predictive analytics, genetic potential of microbial communities and integration of multi-omics analysis.

Microbiology of Anaerobic Systems (Dr. Sabine Kleinsteuber): The group studies the microbial ecology and physiology of anaerobic microbial communities in natural and engineered environments in order to identify microbial key players and their functions and to elucidate carbon and energy flows as well as microbial interactions. We aim at the biotechnological application of anaerobic microbiota, a deeper understanding of their functions in microbial ecosystem services, and novel insights into the ecophysiology of not yet cultured microbes. In collaboration with the DBFZ (Deutsches Biomasseforschungszentrum), anaerobic bioprocesses for the production of biofuels and platform chemicals from renewable resources are developed.

Systems Biology of Microbial Communities (Dr. Florian Centler): Microorganisms typically occur as highly diverse communities in nature. This allows for a multitude of interactions to occur between members of the community and makes complex transformation processes possible. Anaerobic digestion is a typical example for such a community-driven process in which organic material is transformed to methane. To optimally control this process in biogas plants, mathematical models have been developed. These models, however, typically only consider major process steps and do not directly consider the high phenotypic diversity of involved communities. Both their composition and activity can today be assessed with high accuracy by culture-independent methods including metagenomics, metatranscriptomics, and metaproteomics. Our aim is to use such data to create mathematical models detailing the metabolic transformation network within microbial communities. Towards this end, species-specific metabolic network models are inferred

and coupled to a dynamic community model following the dynamic Flux-Balance-Analysis approach. Due to their predictive power, such models will be used to early detect looming process breakdowns and to initiate proper counter measures, as well as to explore the potential for flexible on-demand biogas production.

Department of Solar Materials (Prof. Dr. Andreas Schmid)

Based on many years of experience in biocatalyst and bioprocess design, we focus on the development of new biotechnology concepts using the principle of “bioartificial photosynthesis”. The concepts exploit the natural ability of photoautotrophic cyanobacteria to split water using solar energy and simultaneously assimilate the greenhouse gas CO₂. As a result two attractive products are formed – hydrogen, which is intensively debated as an efficient source of energy in the future, but also carbon intermediates, which can be environmentally friendly converted via (partly artificial) microbial metabolic pathways into various chemical compounds. Today products are only produced in small quantities, or are directly converted further. In addition, the reaction systems are often very unstable. How to produce these compounds in technically relevant quantities and how to develop scalable photo-capillary bioreactors including catalytic biofilms? The ultimate goal is the technically controlled realization of the biochemical “short circuit” of photosynthesis – the generation of hydrogen directly from water via hydrogenases coupled directly to the photosystems.

Applied Biocatalysis (Prof. Dr. Bruno Bühler): Research in the Applied Biocatalysis group focusses on whole-cell biocatalysis and aims at the development of efficient and stable bioprocesses via an integrated biocatalyst and reaction engineering approach.

Catalytic Biofilms (Prof. Dr. Katja Bühler): Biofilms are microbial communities growing attached at the interphase of aqueous systems. Our aim is the utilization of such naturally immobilized microbes as biocatalysts in continuous flow-through reactor systems, by turning their “problematic” characteristics into a benefit for catalysis. To achieve this goal it is essential to follow an interdisciplinary approach combining engineering and natural sciences.

Molecular Biology of Cyanobacteria (PD Dr. Stephan Klähn): Due to their photosynthetic lifestyle there is a rising interest for cyanobacteria in green biotechnology and hence, for metabolic engineering approaches. However, the latter is hampered by a lack of knowledge about the regulation of metabolic fluxes in this specific bacterial group. Data obtained from typical model bacteria can often not be applied because cyanobacteria evolved various unique regulatory mechanisms to control their metabolism. Accordingly, our research tackles these problems and aims at the basic understanding of key regulatory switches that target cyanobacterial metabolism (at the gene as well as enzyme level). The obtained knowledge will provide a scientific fundament for the design of photosynthesis-driven biocatalysis.

Single Cell Analysis (Dr. Christian Dusny): If life wants to be understood and used for technical purposes, it is mandatory to understand the cell as its minimal unit beyond the bulk of heterogeneous populations. Our research addresses questions regarding the functional boundaries of this unit with microfluidic technologies.

Systems Biotechnology (Dr. Jens Olaf Krömer): The group works in the core areas quantitative physiology and manipulation of redox balances with the overall aim of the sustainable production of chemicals and hydrogen. Currently, this includes production of chemicals in phototrophs, such as *Synechocystis sp.* PCC6803 on the one hand and heterotrophs (e.g. *E. coli*, *P. putida*) on the other hand. The goal is to steer metabolism through systems metabolic engineering as well as redox engineering using bioelectrochemical systems and then directly produce value added chemicals and hydrogen from H_2O , CO_2 and sunlight.

Department of Environmental Biotechnology (Prof. Dr. Matthias Kästner)

The increasing contamination and high persistence of many hazardous and xenobiotic substances is a major challenge for modern environmental biotechnology research. Although the potential for microbial degradation is ubiquitous, many organic contaminants are not or often only poorly transformed in natural environmental conditions. Therefore, the enhancement of natural microbiological degradative activities at contaminated sites is the central challenge of the Department. The aim of our work is the application and establishment of effective pollution control via microbial degradation processes in natural and engineered ecosystems.

Department of Isotope Biogeochemistry (PD Dr. Hans-Hermann Richnow)

In our research we are developing new isotope and microscopy techniques for the investigation of biogeochemical processes. We want to understand the anaerobic microbiological processes involved in the natural attenuation of hydrocarbons and halogenated organic compounds and the new “emerging contaminants” in various ecosystems on the microbiological, biochemical and genetic level in order to quantify ecosystems services. For example, we aim to fundamentally understand key degraders such as *Dehalococcoides mccartyi* involved in the detoxification of organohalides and syntrophic interactions in microbial communities leading to hydrocarbon removal and the biogeochemical cycles of C, N, P, S and various metals in terrestrial systems. We analyse microbially-mediated corrosion to mitigate damage to gas and oil infrastructure. Knowledge of mineral corrosion helps us to develop bioleaching processes with which to extract metals and rare earth elements. Overall, we aim to understand and analyse biochemical reactions from single cell via biofilm up to field scale.

Aquifer Biogeochemistry (Dr. Carsten Vogt): We investigate biogeochemical processes of major element cycles (carbon, nitrogen, sulphur) in freshwater and subsurface systems, especially those taking place in the absence of molecular oxygen. Special emphasis is placed on questions related to storage of renewable energy and biodegradation of hydrocarbons.

Geobiochemistry (Prof. Dr. Lorenz Adrian): We focus on the investigation of molecular aspects of anoxic microbial processes and how such processes can contribute to match human demands. Human demands can be a clean environment (surface water, ground water, sediments and soils), energy-efficient production processes, waste water treatment (anaerobic digestion, Anammox) or production of fuels (biogas, butane). We understand this as Biotechnology at different Technology Readiness Levels where we mostly work on levels 1-4 (5). In addition we want to find out how and to what extent anoxic processes were involved in the generation and evolution of life and how they are contributing to natural and artificial matter cycles.

Organohalide Geomicrobiology (Dr. Ivonne Nijenhuis): We investigate the anaerobic microbial transformation of halogenated organic contaminants in contaminated aquifers and at surface-groundwater interfaces. We investigate the interactions of the microbiology with the environment, develop new approaches using compound specific stable isotope analysis for the *in situ* assessment of biodegradation and for the understanding of the reaction mechanisms.

ProVIS – Centre for Chemical Microscopy (Dr. Nicolina Musat): Our research is focussed on visualisation and quantification of microbially mediated processes and the role of microorganisms in C, N, S and metal transformation in natural and polluted environments. The aim is *in situ* analysis of function, structure and identity of microorganisms involved in e.g. corrosion, bioleaching and biomineralisation and how single cell metabolism is impacting the ecosystem functioning.

Audimax	Industrial Exhibition (Augusteum & Paulinum)
15:00–15:30	
Opening Ceremony	p. 44
15:30–17:00	
DGHM Lecture & Hans-Günter-Schlegel Lecture	p. 44
	17:00–17:30
	Coffee Break
17:30–19:30	
Award Presentations VAAM & DGHM	
p. 44	
	from 19:30
	Welcome Reception
	p. 173

Audimax	HS 9	HS 1	HS 2	HS 4	HS 5
08:30–10:00	08:30–10:00	08:30–10:00	08:30–10:00	08:30–10:00	08:30–10:00
Oral Session 1 Environmental Microbiology I p. 46	Oral Session 2 Diagnostic & Clinical Microbiology I p. 47	Oral Session 3 Microbial Biotechnology I p. 48	Oral Session 4 Gastrointestinal Infections and Microbial Pathogenicity p. 49	Oral Session 5 Viruses & Phages p. 49	Symposium 1 Omics of Microbial Pathogenicity and Development p. 50
10:00–10:30 Coffee Break				10:00–10:30	10:00–10:30
10:30–12:00	10:30–12:00	10:30–12:00	Special Group Meeting p. 40		Special Group Meeting p. 40
Joint Plenary Session 1 Big Data p. 53	VAH Hygiene- Symposium p. 53	Special Lecture Resistance Epidemiology p. 53			
12:00–13:30 Foyers					
12:15–13:15	Lunch Break			12:15–13:15	12:15–13:15
Karriere- symposium p. 54				Industrial Symposium p. 174	Industrial Symposium p. 174
13:30–14:00	13:30–14:00				
VAAM Award Session p. 54	DGHM Award Session p. 55				
14:00–15:30	14:00–15:30				
Plenary Session 2 Microbial Physio- logy & Adaptation p. 55	Plenary Session 3 Infection Prevention p. 55				
15:45–16:00	15:30–16:00				
Poster Pitches	Corona Virus Epidemic p. 55				
16:00–18:00 Foyers					
Poster Session 1					
					p. 100
18:00–19:30	18:00–20:00	18:00–19:30	18:00–20:30	18:00–20:00	18:00–19:30
Symposium 2 Microbial Life in the Subsurface p. 56	DGHM Assembly General Meeting of the DGHM p. 39	Oral Session 9 Microbial Biotechnology II p. 57	Symposium 3 Space Microbiology: Current Experiments and Outlook p. 57	Symposium 4 Moonlighting Proteins and Promiscuous Enzymes p. 58	Oral Session 10 Microbial Stress Response I p. 59
				20:00–20:30	
				Special Group Meeting p. 40	

HS 6	HS 8	HS 10	SR 202	SR 203	SR 204
08:30–10:00	08:30–10:00	08:30–10:00			
Oral Session 6 Food Microbiology and Hygiene I p. 50	Oral Session 7 Hospital Infection Control, Outbreaks and MDRO I p. 51	Oral Session 8 Ecology and Physiology of Anaerobes p. 52			

12:00–13:30 Foyers Lunch Break

	15:45–16:00 Poster Pitches	15:30–18:00 Consultation of the German Research Foundation (DFG)	15:30–16:00 Treffen FG GI p. 56		
16:00–18:00 Foyers Poster Session 1 p. 100				16:00–17:00 Treffen der Labor- leiter*innen und OÄ p. 56	16:00–17:00 Kaffeegespräch der jDGHM p. 56
18:00–19:30 Oral Session 11 Single Cell Analy- sis and Microbial Cell Biology II p. 60	18:00–20:00 Symposium 5 Influence of Biofilms on Drinking Water Quality p. 61	18:00–19:30 Symposium 6 Recent Challenges in Microbial Systematics p. 61		17:00–17:30 Treffen der jDGHM p. 56	
	20:00–20:30 Special Group Meeting p. 40				

Audimax	HS 9	HS 1	HS 2	HS 4	HS 5
08:30–10:00	08:30–10:00	08:30–10:00	08:30–10:00	08:30–10:00	08:30–10:00
Oral Session 12 Environmental Microbiology II p. 62	Oral Session 13 Hospital Infection Control, Outbreaks & MDRO II p. 63	Oral Session 14 Microbial Biotechnology III p. 63	Oral Session 15 Microbial Patho- genicity I p. 64	Oral Session 16 Eukaryotic Patho- gens: Fighting Back p. 65	Oral Session 17 Diagnostic & Clinical Micro- biology II p. 66
10:00–10:30 Foyers					
Coffee Break					
10:30–12:00	10:30–12:00	10:30–12:00			
Joint Plenary Session 4 Microbial Ecology p. 70	Hygiene- Symposium p. 70	Oral Session 21 Diagnostic & Clini- cal Microbiology III p. 70			
12:00–13:30 Foyers					
12:15–13:15 Fördermöglich- keiten für Nach- wuchswissen- schaftler*innen p. 71	Lunch Break			12:15–12:45 Industrial Symposium p. 174	
13:30–14:00					
VAAM Award Session p. 72	13:45–14:00 DGHM Award Session p. 72				
14:00–15:30	14:00–15:30				
Plenary Session 5 Microbial Biotech- nology p. 72	Plenary Session 6 Emerging Resis- tance Mechanisms p. 73				
	15:30–16:00 Forum krankenhaus- hygienische Implika- tionen von COVID- 2019 p. 73				
15:45–16:00 Poster Pitches		16:00–16:45 Karrieresymposium Med. Fachmikro- biologie p. 73	16:00–18:00 Foyers		
			Poster Session 2 p. 137		
18:00–19:30	18:00–19:30	18:00–19:30	18:00–19:30	18:00–19:30	18:00–19:30
VAAM Assembly General Meeting of the VAAM p. 38	Oral Session 22 Cases in Clinical Microbiology & Infectious Diseases p. 74	Oral Session 23 Desinfektionsver- fahren & tech- nische Hygiene p. 74	Oral Session 24 Microbial Pathogenicity II p. 76	Oral Session 25 Gastrointestinal Infections I p. 77	Oral Session 26 Infection Immunology p. 78
from 20:00 Moritzbastei					
Mixer					p. 173

HS 6	HS 8	HS 10	SR 202	SR 203
08:30–10:00	08:30–10:00	08:30–10:00		
Oral Session 18 Microbial Cell Biology I p. 67	Oral Session 19 Microbiota, Symbiosis and Host I p. 68	Oral Session 20 Microbial Ecology and Evolution I p. 69		
10:00–10:30 Foyers				
Coffee Break				

12:00–13:30 Foyers		
Lunch Break		
	12:30–13:30 Treffen FG EK p. 72	12:30–13:30 Treffen FG PW p. 72

	15:45–16:00 Poster Pitches	15:30–18:00 Consultation of the German Research Foundation (DFG) p. 73	
16:00–18:00 Foyers	Poster Session 2 p. 137		16:00–17:30 Treffen FG PR p. 73
18:00–19:30 Oral Session 27 Zoonoses p. 79	18:00–19:30 Oral Session 28 Molecular Infection Epidemiology p. 80		
			19:30–20:00 Treffen FG MP p. 81
from 20:00 Moritzbastei Mixer p. 173			

Audimax	HS 9	HS 1	HS 2	HS 4
	08:15–09:00 Treffen StAG NRZ/KL p. 82			
09:00–10:30	09:00–10:30	09:00–10:30	09:00–10:30	09:00–10:30
Oral Session 29 Environmental Microbiology III p. 82	Oral Session 30 National Reference Laboratories & Con- siliary Laboratories p. 83	Oral Session 31 Microbiota, Symbiosis and Host II p. 84	Oral Session 32 Metabolic Modelling, Engineering & Synthe- tic Microbiology p. 84	Oral Session 33 Sensing and Signalling I p. 85
10:30–11:00 Foyers Lunch Break				
11:00–12:30	11:00–12:30			
Joint Plenary Session 7 Single Cell Microbiology p. 89	Hygiene-Symposium Pro and Contra p. 89			
12:30–13:00				
Poster Awards & Closing p. 90				
13:00–13:30 Foyers Break				
13:30–14:30				
Microbe Slam p. 26				
14:30–16:00	14:30–16:00	14:30–16:00	14:30–16:00	14:30–16:00
Oral Session 37 Environmental Microbiology IV p. 90	Oral Session 38 Infection Immunology & Zoonoses p. 91	Oral Session 39 Archaea p. 92	Oral Session 40 Microbial Pathogenicity III p. 93	Oral Session 41 Microbial Ecology and Evolution II p. 94

HS 5	HS 6	HS 8	HS 10	SR 202
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09:00–10:30	09:00–10:30	09:00–10:30	09:00–10:30
Oral Session 34 Eukaryotic Pathogens: The Pathogen Side p. 86	Oral Session 35 Food Microbiology and Hygiene II p. 87	Oral Session 36 Zoonoses, Hospital Infection Control, Out- breaks & MDRO III p. 87	JDGHM Investigating the Phy- logeny of Drug-Resis- tant Pathogens p. 88
10:30–11:00 Foyers			
Lunch Break			

11:00–12:30
NFDI4 Microbiota Second Community Workshop p. 89

13:00–13:30 Foyers			
Break			
			13:30–15:30
			Academy Hospital Infection Epidemiology and Outbreak Management p. 90
14:30–16:00	14:30–16:00	14:30–16:00	
Oral Session 42 Sensing and Signalling II & Microbial Stress Response II p. 95	Oral Session 43 Phototrophic Microorganisms p. 96	Oral Session 44 Membranes and Transport p. 97	

Legend

Industrial Symposium
Social Programme
Events for Young Scientists
Plenary Session
Break
Oral Session
(Mini) Symposium/Special Group Meetings
Further
Events for Hygienists (Blaues Band)
Meeting
Poster Session
Opening, Awards, Assemblies

EVENTS FOR HYGIENISTS

Monday, 09 March

- 8:30–10:00 **Oral Session 7 – Hospital Infection Control, Outbreaks and MDRO I**
HS 8 Healthcare-associated Infection
(p. 51)
- 10:30–12:00 **VAH Hygiene-Symposium**
HS 9 Bewertung von Desinfektionsverfahren im Umbruch – Gefahr für eine wirksame Krankenhaushygiene?
Ingeborg Schwebke (Berlin/DE), Jürgen Gebel (Bonn/DE)
Maren Eggers (Stuttgart/DE)
(p. 53)
- 13:30–14:00 **DGHM Award Session – Award Presentations DGHM Awards**
13:30 IT-based Infection Epidemiology in Hospital Hygiene
Rasmus Leistner (Berlin/DE)
- 13:45 One Health – One Hygiene, Ricarda Schmithausen (Bonn/DE)
(p. 55)
- 14:00–15:30 **Plenary Session 3 (DGHM) – Infection Prevention**
HS 9 Tim Eckmanns (Berlin/DE), Alexander Friedrich (Groningen/NL)
Didier Pittet (Geneva/CH)
(p. 55)
- 15:30 **Special Session on Corona Virus Epidemic**
HS9
- 15:30–18:00 **Poster Session 1**
Paulinum Hospital Infection Control, Outbreaks and MDRO I 001-HYP–030-HYP
(p. 100)

Tuesday, 10 March

- 8:30–10 Uhr **Oral Session 13 – Hospital Infection Control, Outbreaks and MDRO II**
HS 9 Same old, same old, but news
(p. 63)
- 10:30–12:00 **Hygiene-Symposium**
HS 9 International Aspects of Hospital-Acquired Infections
Gabriel Birgand (London/GB), Jan Semenza (Solna/SE)
Tjallie van der Kooi (Bilthoven/NL)
(p. 70)

EVENTS FOR HYGIENISTS

- 14:00–15:30
HS 9 **Plenary Session 6 (DGHM) - Emerging Resistance Mechanisms**
Christian G. Giske (Stockholm/SE), Stefan Schwarz (Berlin/DE)
N. N. (Please note the information on-site.)
(p. 73)
- 15:30
HS 9 **Forum krankenhaushygienische Implikationen von COVID-2019**
(Bitte beachten Sie die Informationen vor Ort.)
- 15:30–18:00
Paulinum
2nd Floor **Poster Session 2**
Desinfection and Technical Hygiene | 365-PRP–374-PRP
Food Microbiology and Hygiene | 669-FMP–687-FMP
- 16:00–17:30
SR 202 **Treffen der Fachgruppe**
FG Antibiotikaresistenz und Infektionsprävention (PR)
- 18:00–19:30
HS 1 **Oral Session 23 – Desinfektionsverfahren und technische Hygiene**
Desinfection and Technical Hygiene
(p. 74)
- Wednesday, 11 March
- 9:00–10:30 **Oral Session 36 – Zoonoses & Hospital Infection Control, Outbreaks and MDRO III**
Molecular Epidemiology in Infection Control
(p. 87)
- 11:00–12:30
HS 10 **Hygiene-Symposium**
Pro and Contra – Technische Hygiene – Water, Air, Bacteria, but Infections
Joost Hopman (Nijmegen/NL), Christian Lück (Dresden/DE)
Frank Pitten (Gießen/DE), Peter Bischoff (Berlin/DE)
(p. 89)
- 13:30–15:30
HS 10 **Akademie Infektionsepidemiologie und Ausbruchmanagement**
Tim Eckmanns (Berlin/DE), Nico Mutters (Freiburg i.Br./DE)
Rasmus Leistner (Berlin/DE), Seven Aghdassi (Berlin/DE)
(p. 90).

EVENTS FOR YOUNG SCIENTISTS

Monday, 09 March

12:15–13:15

Audimax

Karrieresymposium – Studium, Promotion und dann?

Jobperspektiven in den Biowissenschaften – Anregungen und Tipps

Chairs

Sprecher*innen

Sabine Haag-Richter (Frankfurt a. M./DE), Nathalie Jazmati (Cologne/DE)

A. Moter (Berlin/DE), S. Pelzer (Halle (Westf.)/DE)

O. Liesenfeld (Burlingame, CA/US), S. Thiele (Braunschweig/DE)

(p. 54)

15:30–18:00

HS 10

Consultation of the German Research Foundation (DFG)/

Fördermöglichkeiten der Deutschen Forschungsgemeinschaft (DFG)

Termine für Einzelberatungen vereinbaren Sie bitte am Check-in.

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

15:45–16:00

Audimax & HS 8

Poster Pitches

Selected poster abstracts will be presented in a short pitch in the in the Audimax (VAAM) and HS 8 (DGHM).

The authors look forward to your visit to their poster during the poster sessions. The selected posters are marked with a * in the programme. Please note the information on-site.

(p.100)

16:00–17:00

SR 204

Kaffeegespräch der Jungen DGHM

Moderation: A. Kaasch (Düsseldorf/DE)

Thema: Aus- und Weiterbildung – wie geht's am besten?

Die Anzahl der Teilnehmer*innen ist begrenzt.

(p. 56)

Tuesday, 10 March

12:15–13:15

Audimax

Fördermöglichkeiten für Nachwuchswissenschaftler*innen – die DFG stellt sich vor

Regina Nickel (Bonn/DE), anschließend Fragen & Antworten mit

Jan Buer (Essen/DE), Petra Dersch (Münster/DE)

Franz Narberhaus Bochum/DE)

(p. 71)

16:00–16:45

HS 1

Karrieresymposium der jDGHM – Die Ausbildung zum medizinischen Fachmikrobiologen (m/w/d)

Chairs

J. Kikhney (Berlin/DE), D. Knaack (Münster/DE)

P. Oberhettinger (Tübingen/DE), K. Becker (Greifswald/DE)

(p.73)

73. Jahrestagung der Deutschen
Gesellschaft für Hygiene
und Mikrobiologie [DGHM] e. V.

SAVE THE DATE

BERLIN

13.–15. SEPTEMBER 2021 | HENRY-FORD-BAU



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Charité – Universitätsmedizin Berlin

Prof. Dr. Petra Gastmeier

Charité – Universitätsmedizin Berlin

ROBERT KOCH INSTITUT



Prof. Dr. Lothar H. Wieler

Robert Koch Institut Berlin

EVENTS FOR YOUNG SCIENTISTS

15:30–18:00
HS 10

**Consultation of the German Research Foundation (DFG)/
Fördermöglichkeiten der Deutschen Forschungsgemeinschaft (DFG)**
Termine für Einzelberatungen vereinbaren Sie bitte am Check-in.

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

15:45–16:00
Audimax & HS 8

Poster Pitches

Selected poster abstracts will be presented in a short pitch in the in the Audimax (VAAM) and HS 8 (DGHM). The authors look forward to your visit to their poster during the poster sessions. The selected posters are marked with a * in the programme.
Please note the information on-site.

Wednesday, 11 March

09:00–10:30
HS 10

Investigating the Phylogeny of Drug-Resistant Pathogens and the Taxonomy of the Gut Microbiome

J. Sommer (Frankfurt a. M./DE), T. Wienemann (Düsseldorf/DE)
K. Schauffer (Greifswald/DE), M. Willmann (Tübingen/DE)
(p.89)

13:30–14:30
Audimax

Microbe Slam

Join the Microbe Slam and choose the winner!



Moderator: Jens Rudat, Karlsruhe

3. Microbe Slam

11. März 2020 | 13.30 Uhr | Audimax

Teilnehmer (in alphabetischer Reihenfolge):

INGEBORG HEUSCHKEL, Leipzig
United in Slime

MARTIN KALTENPOTH, Mainz
Leben am Limit: Was uns Käfer-Symbionten über den minimalen Metabolismus verraten

KAI LUCABEN, Köln
Aci und die starken Männer

MARINA PEZMEKOVIC, Jena
Yeasts as divas and spies

KEVIN SIMON, Aachen
The age of the phage - What's next in the era of the an.bio.c crisis?

XIN YOU, Leipzig
Go with the flow and meet the phages

Ihr wählt den/die Gewinner/in!

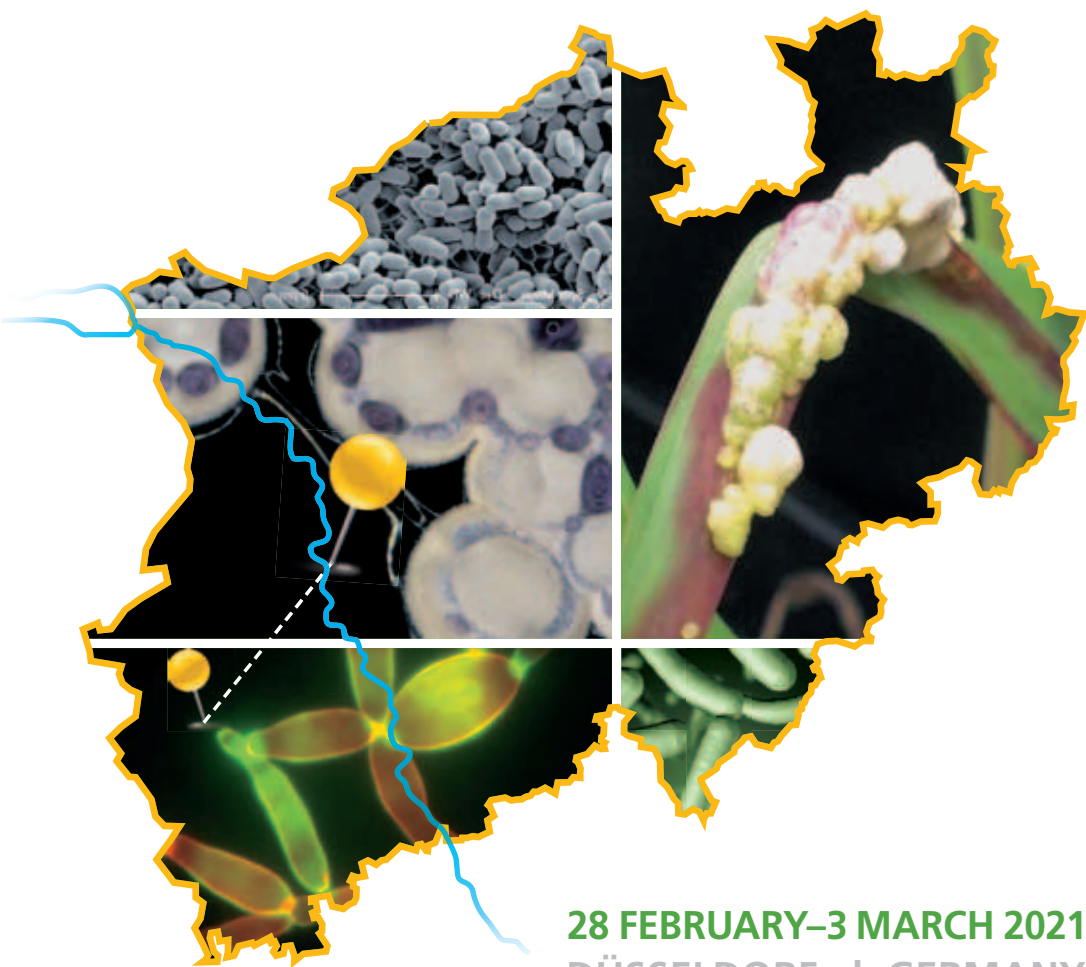


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of the Association for
General and Applied Microbiology

2021



28 FEBRUARY–3 MARCH 2021
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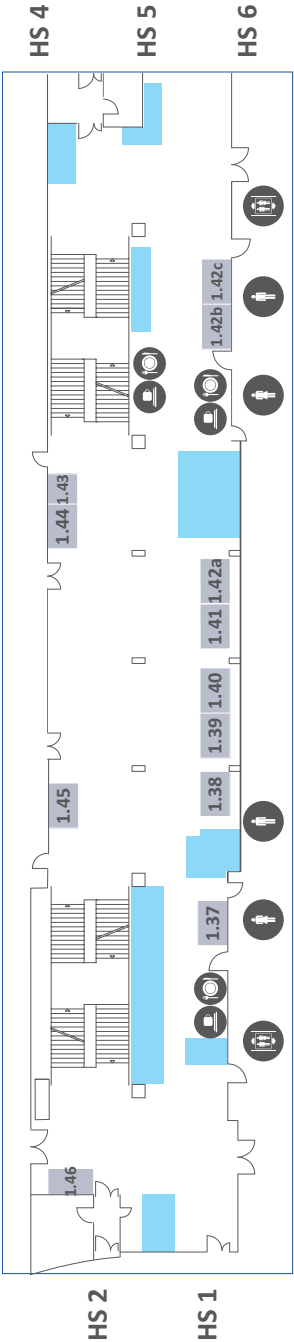
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Poster Exhibition



Industrial Exhibition

Poster Exhibition

Poster Session 1

Viruses & Phages

231-VPP–242-VPP

Single Cell Analysis

243-SCAP–250-SCAP

Microbial Stress Response

251-MSRP–286-MSRP

Poster Session 2

Phototrophic Microorganisms

597-PMP–615-PMP

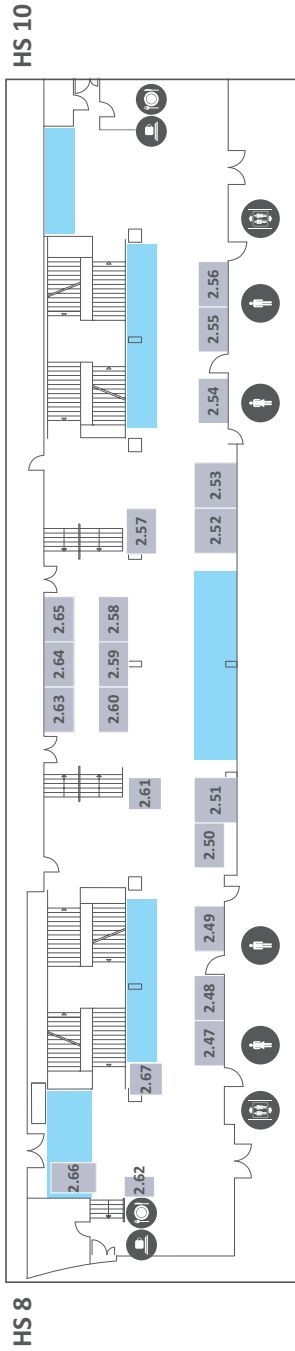
Synthetic Microbiology

616-SMP–632-SMP

Microbial Ecology and Evolution

633-MEEP–657-MEEP

2nd Floor (Hörsaalgebäude) HS 9



Catering



Lift



Restroom



Poster Exhibition



Industrial Exhibition

Poster Exhibition

Poster Session 1

Zoonoses

287-ZOP-311-ZOP

Microbiota, Symbiosis and Host

312-MSHP-341-MSHP

Open Topics

342-OTP-352-OTP

Gastrointestinal Infections

353-GIP-361-GIP

Recent Challenges in Bacterial Systematics

362-RCP-364-RCP

Poster Session 2

Eukaryotic Pathogens: Fighting Fungi and Parasites

658-EPP-668-EPP

Food Microbiology and Hygiene

669-FMP-687-FMP

Infection Immunology

688-IIP-705-IIP

National Reference Laboratories and Consiiliary Laboratories

706-NRZP-722-NRZP

Venue

University of Leipzig
Augustusplatz 10 | 04109 Leipzig (DE)

Date

8–11 March 2020

Hosting Societies and Institutions

Association for General and Applied Microbiology (VAAM)



German Society for Hygiene and Microbiology (DGHM)



Helmholtz-Centre for Environmental Research GmbH – UFZ
University of Leipzig Medical Centre
University of Leipzig

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www.dghm.org



Registration

Registration for the conference is required.



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).



General Terms and Conditions

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



Name Badge

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.



Cloak Room

The coat and luggage room is free of charge and can be found in the Paulinum.



WiFi Access

WiFi is available throughout the whole conference area.

Please use the following access data:

WiFi network	eduinfo
Event name	DGHM/VAAM Kongress 2020
Access password	f3e8f-2020



Catering

The catering stations are located in the industrial exhibition area.

Water dispensers are distributed in the foyers. During the coffee breaks, coffee, tea and lunch are offered free of charge at the catering stations. At the Welcome Reception and Mixer (takes place in the Morizbastei), catering and drinks will be offered free of charge. Moreover, companies may provide food in their lunch symposia.



Conference Language

The official conference language is English. Certain sessions will be held in German. Please check the programme for details.



Online Programme

Compose your individual programme and review it at any time on your way by using our online programme at <https://programm.conventus.de/dghm-vaam2020>.

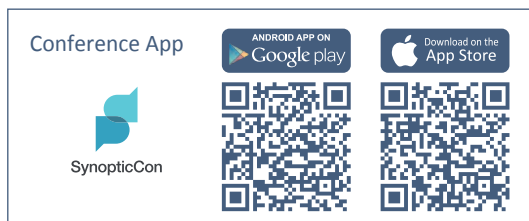


Conference App

A conference app with all programme and exhibition details will be offered for Apple iOS as well as ANDROID smartphones and tablets.

The app offers the following advantages:

- the congress programme at a glance
- daily changes to the programme
- a memory function for own congress planning
- further information about the congress
- the evaluation of the conference



Please download the App "SynopticCon" in advance and download the event DGHM & VAAM to your mobile device.



Publication of Abstracts

All accepted abstracts are published in the digital abstract book and available online at www.dghm-vaam.de.



Poster Awards

From all poster presentations, the best 10 will be awarded. The awarding of the best posters will be on Wednesday, 10 March from 12:00–13:00 in the Audimax (Augusteum). Posters which are on the short list for the poster prize will find a notification on their poster board.



VAAM Travel Grant

Travel grants for student members will be paid out on Tuesday, 10 March 2020 from 13:00–18:00 and on Wednesday, 11 March 2020 from 9:00–14:00. Please refer to the check-in desk.

Preconditions:

- Application until the given deadline
- Fulfilment of the mentioned conditions
- Travel grant must be picked up personally



Certification | Certificates of Attendance

Medical Chamber of Saxony

Sunday, 08 March	15:00–19:30	Category B	6 points
Monday, 09 March	08:30–20:00	Category B	6 points
Tuesday, 10 March	08:30–19:30	Category B	6 points
Wednesday, 11 March	09:00–16:00	Category B	6 Points

Academy Hospital Infection Epidemiology and Outbreak Management

Wednesday, 10 March	13:00–15:30	Category A	3 points
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An individual QR code is printed on your name badge. Please scan the code twice a day (morning and afternoon) at the certification desk for crediting the corresponding CME points. You will receive a personalised certificate of participation.

A confirmation of participation for physicians who have registered their EFN at the registration is automatically transmitted to the Medical Chamber. If you have not entered your EFN in advance, you can do this at the check-in or directly at the certification desk.

Doctors without EFN are requested to submit their certificate of participation to their responsible Medical Chamber or their competent association for the recognition of further credit points.

Deutsches Institut zur Weiterbildung Technischer Assistentinnen/Assistenten in der Medizin e. V. (DIW-MTA)

The conference has been accredited with 18 points of category B.

MTAs are asked to sign up daily to the participant lists available at the certification desk. You will receive your certificate of participation at the check-in desk.

Akademie für tierärztliche Fortbildung

Please note the information on-site.

GENERAL MEETING



Einladung zur Mitgliederversammlung der VAAM

Hiermit lade ich alle Mitglieder der VAAM zur Mitgliederversammlung 2020 ein. Sie wird am Dienstag, den 10. März, um 18 Uhr im Audimax der Universität Leipzig stattfinden.

Vorläufige Tagesordnung:

1. Festlegung der Tagesordnung und Genehmigung der Niederschrift der
2. Mitgliederversammlung vom 19. März 2019 in Mainz (siehe BIOSpektrum 3/19, Seiten 319, 322 und 323)
4. Bericht aus dem Präsidium und dem Vorstand, u.a. Fachgruppen, BIOSpektrum, VBIO, Öffentlichkeitsarbeit, Ort und Zeit der nächsten Jahrestagung, Haushalt 2019 und Haushaltsplan 2020
5. Bericht der Kassenprüfer
6. Entlastung des Vorstandes
7. Neugründung einer Fachgruppe
8. Änderung der Geschäftsordnung (Wiederwahl der Fachgruppensprecher/innen)
9. Mikrobe des Jahres
10. Verschiedenes

Reisekostenzuschüsse für studentische Mitglieder können bei fristgerecht eingegangenen Anträgen und bei Vorliegen der sonstigen Voraussetzungen nur persönlich von Dienstag, den 10. März, 13.00 Uhr, bis Mittwoch, den 11. März 2020, 14.00 Uhr am Check-in abgeholt werden.

Hubert Bahl
Schriftführer

Änderung der Geschäftsordnung:

V. Einrichtung von Fachgruppen

Alt:

Die Mitglieder der Fachgruppen wählen auf einer Mitgliederversammlung oder online aus ihrer Mitte – jeweils auf 2 Jahre – eine/n Sprecher/in der Gruppe und seine/n Stellvertreter/in, was durch das Präsidium der VAAM zu bestätigen ist. Wiederwahl ist zulässig.

Neu:

Die Mitglieder der Fachgruppen wählen auf einer Mitgliederversammlung oder online aus ihrer Mitte – jeweils auf 2 Jahre – eine/n Sprecher/in der Gruppe und seine/n Stellvertreter/in, was durch das Präsidium der VAAM zu bestätigen ist. Eine Wiederwahl ist zweimal zulässig, davon aber nur einmal in der gleichen Position.

GENERAL MEETING



Einladung zur Mitgliederversammlung der DGHM

Liebe Mitglieder,

im Namen des Präsidenten der DGHM, Herrn Prof. Dr. Georg Häcker, lade ich Sie ganz herzlich zur Mitgliederversammlung anlässlich der 72. Jahrestagung der DGHM am **Montag, den 9. März, ab 18 Uhr im HS 9 der Universität Leipzig, Hörsaal- und Seminargebäude, Augustusplatz 10, 04109 Leipzig** ein.

Als Tagesordnung ist vorgesehen

- TOP 1: Annahme der Tagesordnung
- TOP 2: Bericht des Präsidenten
- TOP 3: Bericht des Schriftführers
- TOP 4: Bericht des Schatzmeisters
- TOP 5: Wissenschaftlicher Beirat (Bericht des Sprechers)
- TOP 6: Junge DGHM (Bericht der Sprecherin)
- TOP 7: Bericht der Kassenprüfer
- TOP 8: Wahl von 2 neuen Kassenprüfern
- TOP 9: Wahl des Präsidenten und von zwei der drei VizepräsidentInnen
- TOP 10: Verschiedenes

Über Ihre Teilnahme würde ich mich sehr freuen und verbleibe mit freundlichen Grüßen,

Ihre Nicole von Maltzahn

Monday, 09 March

- 10:00–10:30 FG Mikrobielle Viren (DGHM & VAAM)
HS 4
- 10:00–10:30 FG Funktionelle Genomik und Bioinformatik (VAAM)
HS 5
- 15:30–16:00 FG Gastrointestinale Infektionen (GI) (DGHM)
SR 202
- 19:30–20:00 FG Regulation und Signaltransduktion in Prokaryoten (VAAM)
HS 4
- 20:00–20:30 FG Wasser und Abwasser (VAAM)
HS 8

Tuesday, 10 March

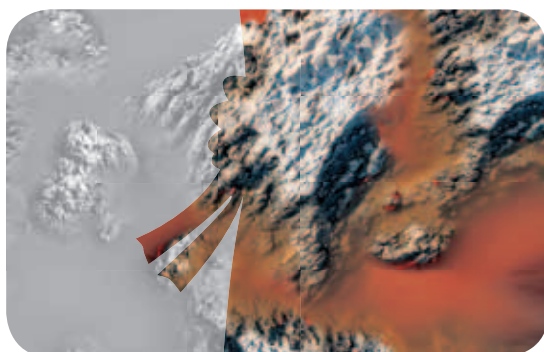
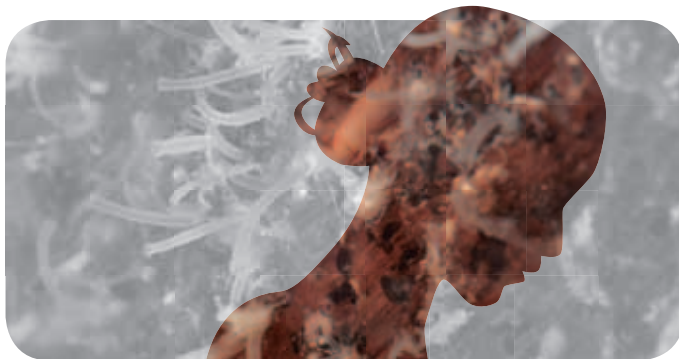
- 12:00–12:30 FG Diagnostische und Klinische Mikrobiologie (DKM) (DGHM)
HS 1 StAG Diagnostische Verfahren (DV) (DGHM)
- 12:00–12:30 FG Mikrobiota, Probiotika und Wirt (PW) (DGHM)
SR 203
- 12:30–13:30 FG Eukaryotische Krankheitserreger (EK) (DGHM)
SR 202
- 16:00–17:30 FG Infektionsprävention und Antibiotikaresistenz in der
SR 202 Krankenhaushygiene (PR) (DGHM)
- 19:30–20:00 FG Mikrobielle Pathogenität (MP) (DGHM & VAAM)
SR 202

Wednesday, 11 March

- 08:15–09:00 StAG Nationale Referenzzentren und Konsiliarlaboratorien (NRZ/KL) (DGHM)
HS 9

20–23 SEPTEMBER

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Desinfection and Technical Hygiene	PRV; PRP
Diagnostic and Clinical Microbiology	DKMV; DKMP
Ecology and Physiology of Anaerobes	EPAV; EPAP
Environmental Microbiology	EMV; EMP
Eukaryotic Pathogens – Fighting Fungi and Parasites	EPV; EPP
Food Microbiology and Hygiene	FMV; FMP
Gastrointestinal Infections	GIV; GIP
Hospital Infection Control, Outbreaks and MDRO	HYV; HYP
Infection Immunology	IIV; IIP
Membranes and Transport	MTP; MTV
Metabolic Modelling and Engineering	MMEV; MSMV; MMEP
Microbial Biotechnology	MBTV; MBTP
Microbial Cell Biology	MCBV; SCMCV; MCBP
Microbial Ecology and Evolution	MEEV; MEEP
Microbial Pathogenicity	MPV; MPP
Microbial Stress Response	MSPV; MSPP
Microbiota, Symbiosis and Host	MSHV; MSHP
Molecular Infection Epidemiology	MIEV; MIEP
National Reference Laboratories and Consiliary Laboratories	NRZV; NRZP
Open Topics	OTP
Phototrophic Microorganisms	PMV; PMP
Recent Challenges in Bacterial Systematics	RCV; RCP
Sensing and Signalling	SeSiV; SeSiP
Single Cell Analysis	SCMCV; SCAP
Synthetic Microbiology	MSMV; SMP
Viruses & Phages	VPV; VPP
Zoonoses	ZOV; ZOP



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8th EUROPEAN CONGRESS OF VIROLOGY 2022



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8–11 May 2022

Gdansk
Poland

15:00–15:30 Opening Ceremony & Welcome Notes

Audimax

Welcome Note on behalf of the Conference Chairs
Iris F. Chaberny, Hauke Harms, Arne C. Rodloff, Andreas Schmid (Leipzig/DE)

Welcome Note of the Presidents of the DGHM and VAAM
Christine Lang (Berlin/DE), Georg Häcker (Freiburg i. Br./DE)

Welcome Note of the Rector of the University of Leipzig
Beate A. Schücking (Leipzig/DE) (requested)

15:30–17:00 DGHM Lecture & Hans-Günter-Schlegel Lecture

Audimax

15:30 Laudatio DGHM Lecture
Georg Häcker (Freiburg i. Br./DE)

DGHM Lecture
The Bacterial Pathogen *Listeria Monocytogenes* – A Multifaceted Model
Pascale Cossart (Paris/FR)

16:15 Laudatio Hans-Günter-Schlegel Lecture
Hauke Harms (Leipzig/DE)

Hans-Günter-Schlegel Lecture
Nitrifying Microbes – Gatekeepers of the Nitrogen Cycle – New Players, New
Physiologies, New Interactions
Michael Wagner (Vienna/AT)

17:00–17:30 Coffee Break in the Industrial Exhibition Area

17:30–19:30 Award Presentations – VAAM and DGHM

Audimax

17:30 Laudatio VAAM Honorary Award
Christine Lang (Berlin/DE)

17:35 Delving Deeply into the Continental Biosphere
Alexander J. Probst (Essen/DE)

18:05 VAAM PhD Awards
Jörg Stülke (Göttingen/DE)

- 18:20 Laudatio DGHM Research Awards
(Haupt-, Förder-, Becton Dickinson-, bioMérieux-Preis)
Klaus Pfeffer (Düsseldorf/DE), Volkhard A. J. Kempf (Frankfurt a. M./DE)
- 18:40 A Journey Through Fungal Infections
DGHM Hauptpreis
Oliver Kurzai (Würzburg/DE)
- 19:10 Laudatio DGHM PhD Awards
Klaus Pfeffer (Düsseldorf/DE), Volkhard A. J. Kempf (Frankfurt a. M./DE)
- DGHM-Promotionspreise
M. Luu (Marburg/DE), Y. Regier (Frankfurt a. M./DE)
- DZIF-Promotionspreis der DGHM
J. R. Richardson (Tübingen/DE)
- Medical Microbiology and Immunology – Young Scientist Award
(Springer-Verlag)
S. Herp (Munich/DE)
- 19:25 Presentation of the Microbe of the Year 2020
Harald Engelhardt (Munich/DE)

19:30–21:45 Welcome Reception (please refer to p. 173)

Augusteum & Paulinum

08:30–10:00	Oral Session 1 – Environmental Microbiology I
Audimax	Microbial Response to Changing Environments, Antibiotic Resistance and Biocontrol of Pathogens
Chairs	Martina Herrmann, Falk Hillmann (Jena/DE)
08:30 001-EMV	Impact of ocean acidification on microbial eukaryotes from the Timor Sea <u>J. Rahlff</u> (Wilhelmshaven, Essen/DE), S. Khodami (Wilhelmshaven/DE) L. Voskuhl (Essen/DE), M. P. Humphreys (Southampton/GB, Texel/NL) C. Stolle (Wilhelmshaven, Rostock/DE), P. M. Arbizu M. Ribas-Ribas (Wilhelmshaven/DE)
08:41 002-EMV	Microbial community response to submarine permafrost warming and thaw <u>J. Mitzscherling</u> , F. Horn, J. Kallmeyer, P. P. Overduin M. Winkel (Potsdam/DE), M. N. Grigoriev (Yakutsk/RU) D. Wagner, S. Liebner (Potsdam/DE)
08:52 003-EMV	Abundance and community composition of methanotrophic bacteria depend on small spatial scale changes in an arctic-alpine system <u>K. Frindte</u> , J. Löffler, C. Knief (Bonn/DE)
09:03 004-EMV	Skin microbiome composition of three different frog species and distribution of a pathogenic fungus in Pyrenean lakes <u>A. Cravo</u> (Leipzig/DE, Toulouse/FR), R. Kallies (Leipzig/DE) A. Loyau (Toulouse/FR, Berlin/DE), D. S. Schmeller (Toulouse/FR) A. Kuppardt-Kirmse, A. Chatzinotas (Leipzig/DE)
09:14 005-EMV	Extended-spectrum beta lactamase (ESBL)-producing <i>E. coli</i> released with manure and biogas plant digestates into the environment <u>O. E. Aigbekaen</u> , H. M. M. Khan, S. P. Glaeser, P. Kämpfer (Gießen/DE)
09:25 006-EMV	Dissemination of antibiotic residues, antibiotic resistant bacteria and antibiotic resistance genes through hospital wastewater – a weekly profile <u>E. Sib</u> , C. Felder, A. M. Voigt, F. Lenz-Plet, H. Färber, M. Exner D. Skutlarek, R. Schmithausen (Bonn/DE)
09:36 007-EMV	Rapid antibiotic susceptibility testing of <i>Enterobacterales</i> isolated from drinking water systems using MALDI-TOF mass spectrometry direct-on-target microdroplet growth assay (DOT-MGA) S. Schwerthöffer (Gelsenkirchen/DE), <u>I. D. Nix</u> , E. A. Idelevich (Münster/DE) O. Drews, K. Sparbier, M. Kostrzewa (Bremen/DE), A. Bauwens H. Schünke (Gelsenkirchen/DE), K. Becker (Greifswald/DE)
09:47 008-EMV	Consortium of Indigenous Endophytic Bacteria for Control of Fusarium Wilt disease (<i>Fusarium oxysporum</i> f.sp <i>lycopersici</i>) and Promote Growth and Yield of Tomato (<i>Lycopersicon esculentum</i> Mill.) <u>Y. Yanti</u> , W. Warnita, H. Hamid (Padang/ID)

08:30–10:00 Oral Session 2 – Diagnostic and Clinical Microbiology I



- HS 9 Advances in culture-based Diagnostics, Serology and Susceptibility Testing
FG Diagnostische und Klinische Mikrobiologie/StAG Diagnostische Verfahren
Chairs Karsten Becker (Greifswald/DE), Jürgen Held (Erlangen/DE)
- 08:30 Applicability and performance of EUCAST's rapid antibiotic susceptibility
009-DKMV testing (RAST) on sterile body fluid in blood culture bottle
J. K. Jasuja, S. Zimmermann, I. Burckhardt (Heidelberg/DE)
- 08:41 MALDI-TOF MS-based optochin susceptibility testing for differentiation of
010-DKMV *Streptococcus pneumoniae* from other *Streptococcus mitis* group streptococci
I. D. Nix, E. A. Idelevich, A. Schlattmann (Münster/DE), K. Spärbier
M. Kostrzewa (Bremen/DE), K. Becker (Greifswald/DE)
- 08:52 Automated antimicrobial susceptibility testing of common gram-negative
011-DKMV pathogens – How exact are commercial systems?
J. Dick, M. Marschal, U. Schoppmeier, S. Peter (Tübingen/DE)
- 09:03 Tick-borne encephalitis virus (TBEV) non-structural protein (NS1) IgG ELISA
012-DKMV differentiating infection vs. vaccination antibody responses
P. Girtl (Munich/DE), M. Bestehorn-Willmann (Freiburg i. Br./DE)
S. Zange (Munich/DE), J. Borde (Oberkirch/DE), G. Dobler
H. von Buttlar (Munich/DE)
- 09:14 False elevated minimal inhibitory concentrations for colistin due to residual
013-DKMV detergent in re-used plastic ware
N. Joß, M. Rhein, N. Gold, N. Pfennigwerth, F. D. von Loewenich (Mainz/DE)
- 09:25 Synergism of ampicillin, gentamicin, ceftaroline and ceftriaxone against
014-DKMV *Enterococcus faecalis* assessed *in vivo* using the *Galleria mellonella*
infection model
L. Thieme, A. Hartung, O. Makarewicz, M. W. Pletz (Jena/DE)
- 09:36 Performance of the sōna *Aspergillus* Galactomannan Lateral Flow Assay
015-DKMV from serum samples for the diagnosis of Invasive Aspergillosis in Patients
after allogeneic Hematopoietic Stem Cell Transplantation
T. Erb (Erlangen/DE), T. Held (Fürth/DE), R. Meyer (Erlangen/DE)
E. Kotter, H. Bertz (Freiburg i. Br./DE), J. Held (Erlangen/DE)
- 09:47 Comparison of serologic biomarkers of invasive aspergillosis – evaluation of
016-DKMV galactomannan, β -1,3-D-glucan, and galactomannoprotein antigen testing
K. Dichtl, U. Seybold, H. Horns, S. Ormanns (Munich/DE), J. Forster
J. Wagener (Würzburg/DE)

08:30–10:00 Oral Session 3 – Microbial Biotechnology I

- HS 1 New Artificial Pathways
Chairs Bernhard Eikmanns (Ulm/DE), Rohan Karande (Leipzig/DE)
- 08:30 Heterologous production of the agrochemical pamamycin in metabolically
017-MBTv engineered *Streptomyces albus* J1074/R2
J. Stegmüller, L. Gläser, M. Kuhl, Y. Rebets (Saarbrücken/DE), C. Rückert
J. Kalinowski (Bielefeld/DE), A. Luzhetskyy, C. Wittmann (Saarbrücken/DE)
- 08:41 Construction of *in vivo* cascades for the sustainable production of
018-MBTv monomers
L. Schäfer, R. Karande, A. Schmid, B. Bühler (Leipzig/DE)
- 08:52 Metabolic Engineering of *Corynebacterium glutamicum* for Production of
019-MBTv UDP-N-acetylglucosamine
C. Desiderato, R. Gauttam (Ulm/DE), D. Radoš (Marburg/DE)
A. Schwentner, G. M. Seibold (Ulm/DE), H. Link (Marburg/DE)
B. Eikmanns (Ulm/DE)
- 09:03 Bromination of L-tryptophan in a fermentative process with
020-MBTv *Corynebacterium glutamicum*
K. H. Veldmann, S. Dachwitz, J. M. Risse (Bielefeld/DE), J.-H. Lee (Busan/KR)
N. Sewald, V. F. Wendisch (Bielefeld/DE)
- 09:14 Valorization of lignin-derived aromatics using metabolically engineered
021-MBTv *Corynebacterium glutamicum*
J. Becker, M. Kuhl, M. Kohlstedt, C. Wittmann (Saarbrücken/DE)
- 09:25 Microbial aromatics production using streamlined *Pseudomonas*
022-MBTv *taiwanensis* VLB120 chassis
B. Wynands, M. Otto (Jülich/DE), L. M. Blank (Aachen/DE)
N. Wierckx (Jülich/DE)
- 09:36 Design of a H₂-driven enzymatic cascade for the synthesis of methylated
023-MBTv N-heterocycles
A. Al-Shameri (Berlin/DE), N. Borlinghaus, L. Weinmann, P. Scheller
B. Nestl (Stuttgart/DE), L. Lauterbach (Berlin/DE)
- 09:47 Comparative evaluation of expression modules for recombinant
024-MBTv biosurfactant-production by *Pseudomonas putida*
S. Kubicki (Jülich/DE), I. Bator (Aachen/DE), R. Weihmann, S. Linden
A. Loeschcke, T. Drepper (Jülich/DE), T. Tiso, L. M. Blank (Aachen/DE)
K.-E. Jaeger (Jülich/DE), S. Thies (Jülich/DE)

08:30–10:00 Oral Session 4 – Gastrointestinal Infections & Microbial Pathogenicity

HS 2

Chairs Mathias Hornef (Aachen/DE), Samuel Wagner (Tübingen/DE)

08:30 Host Nutrients Extraction by Pathogenic Bacteria

Invited Speaker I. Rosenshine (Jerusalem/IL)

09:00 Identification of antibiotics that do not cause Shiga-toxin mediated renal
025-GIMPV disease in *C. rodentium* ϕ stx2dact-infected miceS. Mühlen (Münster, Braunschweig/DE), I. Ramming (Braunschweig/DE)

M. Pils (Münster, Braunschweig/DE), M. Koepfel, B. Stecher-Letsch (Munich/DE)

P. Dersch (Münster, Braunschweig/DE)

09:11 Cross-feeding in the gut between different *Salmonella* Typhimurium
026-GIMPV populationsM. Winter, L. Spiga, E. Hughes, A. Ray, S. Winter (Dallas, TX/US)09:22 The fate of phytate in the gut – myo-inositol degradation by *Salmonella*
027-GIMPV Typhimurium

T. M. Fuchs (Jena/DE)

09:33 Global discovery of small regulatory RNAs in *Clostridium difficile*028-GIMPV M. Fuchs, V. Lamm, F. Faber (Würzburg/DE)

08:30–10:00 Oral Session 5 – Viruses & Phages

HS 4

Chairs Julia Frunzke (Jülich/DE), Herbert Schmidt (Stuttgart/DE)

08:30 Isolation of therapeutic bacteriophages against carbapenem-resistant
029-VPV *Acinetobacter baumannii*A. Madi, F. Stachon, S. Schubert, G. Maschkowitz, H. Fickenscher (Kiel/DE)08:41 Biology and genetics of phages from German waste water treatment plants
030-VPV of livestock slaughterhouses and their potential to combat
multidrug-resistant *P. aeruginosa* isolates

S. Schnehle, C. Jäckel (Berlin/DE), M. Savin (Bonn/DE), S. Schmoger (Berlin/DE)

A. Käsbohrer (Berlin/DE, Vienna/AT), M. Borowiak (Berlin/DE)

J. Kreyenschmidt (Bonn/DE), J. A. Hammerl (Berlin/DE)08:52 Go with the Flow – Quantifying the Waterborne Transport of Phages in a
031-VPV Soil MatrixX. You, R. Kallies, K. Hild (Leipzig/DE), A. Hildebrandt (Leipzig, Jena/DE)

H. Harms, A. Chatzinotas, L. Y. Wick (Leipzig/DE)

09:03 The viral community along the Holtemme River

032-VPV R. Kallies (Leipzig/DE), G. Christian (Vienna/AT), A. Chatzinotas (Leipzig/DE)

- 09:14
033-VPV Genome-informed microscopy reveals viral infections of uncultivated archaea in a terrestrial subsurface aquifer
V. Turzynski, J. Rahlff (Essen/DE), C. Moraru (Oldenburg/DE)
A. J. Probst (Essen/DE)
- 09:25
034-VPV Environmental risks of nanomaterials through prophage activation: What we can learn from the metabolic heat evolution
T. Maskow (Leipzig/DE), J. Xu, F.-L. Jiang, Y. Liu (Wuhan/CN), B. Kiesel R. Kallies (Leipzig/DE)
- 09:36
035-VPV Microviscosity control in *Pantoea stewartii* biofilms by an intrinsic exopolysaccharide modifying enzyme and by bacteriophage tailspike proteins
T. Irmscher (Potsdam/DE), Y. Roske (Berlin/DE), V. Dunsing, A. Singhal A. Grafmüller (Potsdam/DE), U. Heinemann (Berlin/DE), S. Chiantia S. Barbirz (Potsdam/DE)
- 09:47
036-VPV Phage-prophage association network – Inferring functional similarity on large scale
O. Popa (Düsseldorf/DE)

08:30–10:00 Symposium 1 – Omics of Microbial Pathogenicity and Development

- HS 5
Chairs Special Group Functional Genomics and Bioinformatics
Rolf Daniel (Göttingen/DE), Katharina Riedel (Greifswald/DE)
- 08:30 Studying Antisense Transcription in *Bacillus subtilis* and *Staphylococcus aureus* – General Features and Physiological Roles
U. Mäder (Greifswald/DE)
- 09:00 Functional Genomics of the Mushroom-Forming Basidiomycete *Schizophyllum commune*
R. Ohm (Utrecht/NL)
- 09:30 Strain-Resolved Dynamics of the Lung Microbiome in Patients with Cystic Fibrosis
C. von Mering (Zurich/CH)

08:30–10:00 Oral Session 6 – Food Microbiology and Hygiene I

- HS 6
Chairs Charles M. A. P. Franz (Kiel/DE), Agnes Weiß (Stuttgart/DE)
- 08:30 Bacterial Diversity and Antimicrobial Resistance in Ready-to-Eat Fruit and Vegetable Juices
Invited Speaker A. Gálvez (Jaén/ES)
- 09:14
037-FMV Phylogenetic relationship of toxinogenic *C. difficile*-strains isolated from chicken meat samples processed in different cutting plants
J. Heise, P. Witt, C. Maneck, S. Maurischat (Berlin/DE)

- 09:25
038-FMV Assessing the enteropathogenic potential of *Bacillus cereus* by means of secreted and surface-located markers
M. Kranzler (Vienna/AT), N. Jeßberger (Oberschleißheim/DE)
C. Rademacher (Vienna/AT), R. Dietrich (Oberschleißheim/DE)
T. Buchacher (Vienna/AT), E. Märtlbauer (Oberschleißheim/DE)
M. Ehling-Schulz (Vienna/AT)
- 09:36
039-FMV Genetic and phenotypic characterization of *Vibrio cholerae* non-O1/non-O139 isolated from German retail seafood and coastal areas
S. Fleischmann, E. Strauch, I. Eichhorn (Berlin/DE), L. Landoïn (Brest/FR)
R. Plickert, T. B. Schille, T. Alter (Berlin/DE)
- 09:47
040-FMV Long-term stability of a recombinant *Listeria monocytogenes* 9prf – A strain in the VBNC state as an internal sample process control (ISPC)
C. Robben, B. Bromberger, D. Schoder, P.-J. Mester, P. Rossmanith (Vienna/AT)

08:30–10:00 Oral Session 7 – Hospital Infection Control, Outbreaks and MDRO I

- HS 8
Chairs Healthcare-Associated Infection
Iris F. Chaberny (Leipzig/DE), Nico Mutters (Freiburg i. Br./DE)
- 08:30
041-HYV Data from a 5-year interventional study – a strict mask policy effectively reduces nosocomial influenza
A. Ambrosch, D. Luber (Regensburg/DE), F. Klawonn (Braunschweig/DE)
- 08:45
042-HYV Nosocomial influenza – what really matters?
N. Metzger, M. Kaase, A. E. Zautner, D. Fenz, S. Scheithauer (Göttingen/DE)
- 09:00
043-HYV Reduction of surgical site infections after the Implementation of a new bundle of infection prevention measures by the infection control physician
M. Neuwirth, R. Otchwemah, F. Mattner (Cologne/DE)
- 09:15
044-HYV Surveillance of surgical site infections – methodical comparison of IQTIG- and KISS- strategy
S. Rittmeier, R. M. Waeschle, T. Artelt, P. Fehling, I. Thalmann, A. Suckow
S. Scheithauer (Göttingen/DE)
- 09:30
045-HYV Implementation of universal preoperative decolonization with polihexanide in primary joint arthroplasty and its effect on surgical site infections: A multicentre prospective cohort study
T. Kramer, B. Wandhoff, C. Schröder, U. Nöth (Berlin/DE), R. Krause
B. Schmidt (Potsdam/DE), S. David (Lutherstadt Wittenberg/DE)
E.-E. Scheller, M. Behnke, P. Gastmeier (Berlin/DE)
- 09:45
046-HYV Use of clinical microbiological methods to differentiate nosocomial and community acquired pneumonias during a nosocomial outbreak within the same hospital
C. Lück (Dresden/DE), B. Langer (Gelsenkirchen/DE), K. Lück (Dresden/DE)
S. Pleischl, M. Exner (Bonn/DE), B. Hornei (Oberhausen/DE)

08:30–10:00 Oral Session 8 – Ecology and Physiology of Anaerobes

HS 10

Chairs Sabine Kleinsteuber (Leipzig/DE), Diana Sousa (Wageningen/NL)

08:30 Assigning a putative role in energy-conservation to the membrane subunits
047-EPAV of the formate hydrogenlyase complex from the enterobacterium
Trabulsiella guamensis
S. Zantop Linares, U. Lindenstrauß, C. Pinske (Halle a. d. Saale/DE)

08:41 Pyrite formation from FeS and H₂S – a novel microbial energy metabolism
048-EPAV J. Thiel (Konstanz/DE), J. Byrne, A. Kappler (Tübingen/DE)
B. Schink (Konstanz/DE), M. Pester (Braunschweig/DE)

08:52 Citrate cleavage through citrate synthase – the reversed oxidative TCA
049-EPAV cycle and its distribution
L. M. Steffens, E. Pettinato, A. Mall, I. Berg (Münster/DE)

09:03 Spotlight on the energy harvest of electroactive microorganisms:
050-EPAV The impact of the redox potential of the solid terminal electron acceptor
B. Korth, F. Harnisch (Leipzig/DE)

09:14 The nitrate-ammonifying bacterium *Wolinella succinogenes* couples nitric
051-EPAV oxide detoxification to laughing gas production
V. Mijić (Darmstadt/DE), D. Mania, L. Bakken, Å. Frostegård (Ås/NO)
J. Simon (Darmstadt/DE)

09:25 Uncovering key players in anaerobic benzene degradation under
052-EPAV nitrate-reducing conditions from over 2,000 metagenome-assembled
genomes in a microcosm experiment
F. Borim Corrêa, S. Eziuzor (Leipzig/DE)
S. Peng (Leipzig/DE, Chongqing/CN), J. Schultz (Rio de Janeiro/BR)
L. Adrian, S. Kleinsteuber, C. Vogt, U. Nunes da Rocha (Leipzig/DE)

09:36 Turnover of intermediates and the active microbiota during degradation of
053-EPAV ¹³C-maize in a biogas digester by RNA-based stable isotope probing
(RNA-SIP)
N. Rüppel, K. Schäfer (Hanover/DE), F. Buegger (Munich/DE)
M. A. Horn (Hanover/DE)

09:47 A new metabolic pathway for the conversion of pentoses in gut microbiota
054-EPAV L. Garschagen, U. Deppenmeier (Bonn/DE)

10:00–10:30 Coffee Break in the Industrial Exhibition Area

10:00–10:30 Special Group Meeting – VAAM & DGHM Special Group Microbial Viruses

HS 4

10:00–10:30 Special Group Meeting – VAAM Special Group Functional Genomics and Bioinformatics

HS 5 General Meeting

10:30–12:00 Joint Plenary Session 1 – Big Data

Audimax

Chairs Sven Hammerschmidt (Greifswald/DE), Wolfgang R. Hess (Freiburg i. Br./DE)

10:30 Towards a SWATH-MS Digital Biobank of Proteome Maps for Sepsis:
A Resource for Precision Medicine
Johan Malmström (Lund/SE)

11:00 High-Throughput Analysis with the European Galaxy Server
Rolf Backofen (Freiburg i. Br./DE)

11:30 Critical Assessment of Metagenome Interpretation
Alice McHardy (Braunschweig/DE)

10:30–12:00 VAH Hygiene-Symposium



HS 9 Bewertung von Desinfektionsverfahren im Umbruch – Gefahr für
eine wirksame Krankenhaushygiene?

Chairs Frauke Mattner (Cologne/DE), Christian Brandt (Berlin/DE)

Update zu Rahmenbedingungen der Desinfektionsmitteltestung und-listung im
Lichte der EU-Biozidgesetzgebung
I. Schwebke (Berlin/DE)

Update zur Weiterentwicklung der mikrobiologischen Desinfektionsmitteltestung
J. Gebel (Bonn/DE)

Update zur Weiterentwicklung der virologischen Desinfektionsmitteltestung
M. Eggers (Stuttgart/DE)

Diskussion Praktische Konsequenzen für den verantwortlichen
Krankenhaushygieniker

10:30–12:00 Special Lecture

HS 1 Resistance Epidemiology
Chairs Karsten Becker (Greifswald/DE), Arne C. Rodloff (Leipzig/DE)

10:30 Global Antimicrobial Resistance and AMR in European Region
Roman Kozlov (Smolensk/RU)

- 11:00 The Changing Face of Epidemiology of Invasive Fungal Disease
Cornelia Lass-Flörl (Innsbruck/AT)
- 11:30 Molecular Epidemiology of Oxazolidinone-Resistant Gram-Positive Cocci from Humans and Animals
Stefan Schwarz (Berlin/DE)

12:00–13:30 Lunch Break in the Industrial Exhibition Area

12:15–13:15 Karrieresymposium – Studium, Promotion und dann?



Audimax
Chairs Jobperspektiven in den Biowissenschaften – Anregungen und Tipps
Sabine Haag-Richter (Frankfurt a. M./DE), Nathalie Jazmati (Cologne/DE)

12:15 Konzepte und Strategien – Was wir von Biofilmen für die Karriere lernen können
A. Moter (Berlin/DE)

12:30 Erfahrungen in der biotechnologischen Forschung und Entwicklung – ein Spagat zwischen Industrie und Akademia
S. Pelzer (Halle (Westf.)/DE)

12:45 Karriereoptionen in forschenden diagnostischen Unternehmen:
Pros und Contras der globalen Player vs. Start-Ups
O. Liesenfeld (Burlingame, CA/US)

13:00 Wissenschaftskommunikatorin mit einem Faible für Mikroben
S. Thiele (Braunschweig/DE)

12:15–13:15 Industrial Symposium – Takara Bio Europe (please refer to p. 174)

HS 4

12:15–13:15 Industrial Symposium – Bruker Daltonik (please refer to p. 174)

HS 5

13:30–14:00 VAAM Award Session – Award Presentations PhD Awards

Audimax
Chair Wolfgang Buckel (Marburg/DE)

13:30 The Stress-Protectants and Chemical Chaperones Ectoine and Hydroxy-Ectoine:
Enzymes, Importer, Exporter and Transcriptional Regulation
Laura Czech (Marburg/DE)

13:45 Structure, Function and Microbial Biosynthesis of Methylated Menaquinone
Derivatives
Sascha Hein (Darmstadt/DE)

13:30–14:00 DGHM Award Session – Award Presentations DGHM Awards

HS 9

Chair Thomas von Lengerke (Hanover/DE), Frauke Mattner (Cologne/DE)

13:30 IT-based Infection Epidemiology in Hospital Hygiene
Rasmus Leistner (Berlin/DE)13:45 One Health – One Hygiene
Ricarda Schmithausen (Bonn/DE)**14:00–15:30 Plenary Session 2 (VAAM) – Microbial Physiology and Adaptation**

Audimax

Chairs Martin Hagemann (Rostock/DE), Jens Krömer (Leipzig/DE)

14:00 The Hardware and the Software of the Gene Expression Flow in
Environmental Bacteria
Victor de Lorenzo (Madrid/ES)14:30 Engineered Microbiomes for Syngas Conversion
Diana Sousa (Wageningen/NL)15:00 Operation of Carbon/Nitrogen Homeostasis in Cyanobacteria
Karl Forchhammer (Tübingen/DE)**14:00–15:30 Plenary Session 3 (DGHM) – Infection Prevention**

HS 9

Chairs Thomas von Lengerke (Hanover/DE), Frauke Mattner (Cologne/DE)

14:00 Infection Prevention and Antibiotic Resistance – A Global Perspective
Tim Eckmanns (Berlin/DE)14:30 Infection Prevention in a Connected World – Focusing on the Causes behind
the Reasons
Alexander Friedrich (Groningen/NL)15:00 Adapt to Adopt – Key to Successful Change in Infection Control
Didier Pittet (Geneva/CH)**15:30–16:00 Special Session on Corona Virus Epidemic (please note the information on-site)**

HS 9

Chair Helmut Fickenscher (Kiel/DE)

15:45–16:00 Poster Pitches (please see list on-site)

Audimax & HS 8 The selected posters are marked with a * in the programme.

16:00–18:00 Poster Session 1 (please refer to p. 100)

15:30–18:00 Consultation of the German Research Foundation (DFG)

HS 10 Interested participants are asked to refer to the check-in desk in order to register for the consultation.

15:30–16:00 Treffen der Fachgruppe

SR 202 FG Gastrointestinale Infektionen (GI)

16:00–17:00 Treffen der Laborleiter*innen und Oberärzt*innen

SR 203

16:00–17:00 Kaffeegespräch der Jungen DGHM



SR 204 Moderation: A. Kaasch (Düsseldorf/DE)
Thema: „Aus- und Weiterbildung- wie geht’s am besten?“
Die Anzahl der Teilnehmer*innen ist begrenzt.

17:00–17:30 Treffen der Jungen DGHM

SR 204

18:00–19:30 Symposium 2 – Microbial Life in the Subsurface

Audimax
Chairs VAAM Special Group Environmental Microbiology
Panagiotis Adam, Lisa Voskuhl (Essen/DE)

18:00 Uncovering the sedimentary archaeal biosphere of Guaymas Basin
A. Teske (Chapel Hill, NC/US)

18:40 High taxonomic predictability of tiny microbial communities enclosed in oil
V. Brauer (Essen/DE)

18:55 Carbon dioxide degassing enhances microbial metabolism in the
continental subsurface
T. L. V. Bornemann (Duisburg/DE)

19:10 A microbiologist dream – Elucidating the functional differences of thick and
slimy cave biofilms by applying environmental metagenomics
C. Karwautz (Vienna/AT)

19:25 Temperature limits to deep seafloor life in the Nankai Trough
subduction zone
K.-U. Hinrichs (Bremen/DE)

18:00–20:00 DGHM Assembly – General Meeting of the DGHM (please refer to p. 39)

HS 9

18:00–19:30 Oral Session 9 – Microbial Biotechnology II

- HS 1 Pathway Analysis and Optimization
Chairs Bruno Bühler (Leipzig/DE), Dirk Tischler (Bochum/DE)
- 18:00 Lactic acid bacteria – The „sCapedGoat“ for effective medium-chain
055-MBTV carboxylate production
J. Lambrecht, N. Cichocki, F. Schattenberg, S. Kleinsteinuber, H. Harms
S. Müller, H. Sträuber (Leipzig/DE)
- 18:11 Genetic analysis of cellulose synthesis in acetic acid bacteria
056-MBTV M. Bimmer (Freising/DE), G. Wanner (Planegg-Martinsried/DE)
W. Liebl, A. Ehrenreich (Freising/DE)
- 18:22 Construction of an *Aspergillus oryzae* triple amylase deletion mutant as
057-MBTV a chassis to produce industrially relevant amylases using multiplex
CRISPR/Cas9 editing technology
G. Haeger (Jülich/DE), A. Grankin, M. Wagner (Krefeld/DE)
- 18:33 Deciphering the metabolic burden in *P. putida* during heterologous protein
058-MBTV production – Development of a genetic toolbox
A. S. Ortega Arbulu, A. Kremling, K. Pflüger-Grau, H. Löwe
K. Hobmeier (Garching/DE)
- 18:44 The novel phosphatase RosC catalyzes the last unknown step of roseoflavin
059-MBTV biosynthesis in *Streptomyces dawaonensis*
C. Schneider, M. Mack (Mannheim/DE)
- 18:55 Identification of fungal limonene-3-hydroxylases for biotechnological
060-MBTV menthol production
F. M. Schempp, M. M. W. Etschmann, I. Strobel, E. Bierwirth, J. Schrader
M. Buchhaupt (Frankfurt a. M./DE)
- 19:06 Metagenomics meets Electrochemistry – harnessing the catalytic potential
061-MBTV from the uncultured microbial majority for energy-storage
N. Adam (Kiel/DE), S. Schlicht (Erlangen/DE), Y. Han (Hamburg/DE)
M. Bechelany (Montpellier/FR), J. Bachmann (Erlangen/DE, Saint-Petersburg/RU)
M. Perner (Kiel/DE)
- 19:17 Biophotovoltaics using Cyanobacteria
062-MBTV B. Lai, H. Schneider, J. Tschörtner, J. Krömer (Leipzig/DE)

18:00–20:30 Symposium 3 – Space Microbiology – Current Experiments & Outlook

- HS 2 VAAM Special Group Space Microbiology
Chairs Ralf Möller, Katharina Siems (Cologne/DE)



- 18:00 Welcome
R. Möller (Cologne/DE)
- 18:05 Key Note – Overview of NASA Aerobiology Research Activities
D. J. Smith (Washington, D.C./US)
- 18:25 Efficiency of two antimicrobial surface coatings, AGXX® and GOX, in the reduction of bacterial contamination during the SIRIUS-19 simulated space mission
D. Wischer (Berlin/DE)
- 18:40 *Staphylococci* in space – Characterization of a *Staphylococcus capitis*’ ISS isolate for the upcoming space flight project (BIOFILMS)
K. Siems (Cologne/DE)
- 18:55 *Ralstonia* prophages as indicators of dispersal over the space analogue Antarctica
J. Rahlff (Essen/DE)
- 19:10 Discovering the Earth’s extremes – Bioprospecting for extremozymes in volcano-associated habitats in Costa Rica
A. Krüger (Hamburg/DE)
- 19:25 Fungal biotechnology in space – Why & How?
V. Meyer (Berlin/DE)
- 19:45 Mold in space – *Aspergillus niger* adaptation to space radiation and microgravity
M. Cortesao (Cologne/DE)
- 20:00 Exocube – an astrobiological exposure platform for *in-situ* monitoring of microbial samples on board the International Space Station
D. Burr (Berlin/DE)
- 20:15 In search for Iranian extremists
J. Rudat (Karlsruhe/DE)
- 20:30 Summary and farewell
R. Möller (Cologne/DE)

18:00–20:00 Symposium 4 – Moonlighting Proteins and Promiscuous Enzymes

- HS 4 VAAM Special Group Regulation and Signal Transduction in Prokaryotes
Chairs Fabian Commichau (Senftenberg/DE), Jürgen Lassak (Munich/DE)
- 18:00 CpgA, a checkpoint protein for ribosome assembly, moonlights as an essential metabolite-proofreading enzyme
J. Helman (Ithaca, NY/US)

- 18:30 A small RNA binding protein for cell envelope precursor sensing and signaling in *Escherichia coli*
B. Görke (Vienna/AT)
- 19:00 Ancestral Origins of Ribosome-Associated Quality Control
C. Joazeiro (Heidelberg/DE)
- 19:30 Functional promiscuity of members of the solute/sodium symporter family
H. Jung (Munich/DE)
- 19:45 Enzymatic decarboxylation of the glycation compound
N- ϵ -Carboxymethyllysine (CML)
M. Hellwig (Dresden/DE)

18:00–19:30 Oral Session 10 – Microbial Stress Response I

HS 5

Chairs Haike Antelmann (Berlin/DE), Ilka Maria Axmann (Düsseldorf/DE)

18:00 Formation of reactive oxygen species in an ATP-Synthase deficient mutant
063-MSRV of *Salmonella* Typhimurium
S. Braetz, P. Schwerk (Berlin/DE), A. Thompson (Berlin/DE, Norwich/GB)
K. Tedin, M. Fulde (Berlin/DE)

18:11 Responses to reactive oxygen and chlorine species in uropathogenic
064-MSRV *Escherichia coli*
J.-U. Dahl, G. Anderson, S. Sultana (Normal, IL/US)
K. P. Hoffmann (Normal, IL/US, Braunschweig/DE), M. Hall
K. Ledoux (Normal, IL/US)

18:22 TisB-dependent persister cells fail to induce an SOS response due to
065-MSRV impeded protein biosynthesis
D. Edelmann, N. E. Schmid, B. Berghoff (Gießen/DE)

18:33 Investigation of the post-transcriptional regulation of the emerging
066-MSRV cancer-associated bacterium *Fusobacterium nucleatum*
F. Ponath, F. Faber, J. Vogel (Würzburg/DE)

18:44 Hfq-dependent and – independent mechanisms of RNA-based regulation in
067-MSRV *Caulobacter crescentus*
K. Fröhlich (Jena/DE)

18:55 The destructive side of gene regulation – or the impact of RNA degradation
068-MSRV in stress responses
L. Youssar, G. Kostova, W. R. Hess, J. Georg (Freiburg i. Br./DE)

19:06 Analysis of ultrastructure of akinetes and the role of *hetM* in heterocyst and
069-MSRV akinete envelope formation
R. Garg, I. Maldener (Tübingen/DE)

19:17 Quantification of outer membrane vesicles – a potential tool to compare
070-MSRV response in *Pseudomonas putida* KT2440 to stress caused by alkanols
C. Eberlein, S. Starke, H. J. Heipieper (Leipzig/DE)

18:00–19:30 Oral Session 11 – Single Cell Analysis & Microbial Cell Biology II

HS 6

Chairs Christian Jogler (Jena/DE), Andreas Schmid (Leipzig/DE)

18:00 Phenotypic growth heterogeneity of *C. glutamicum* under dynamic growth
071-SCMCV limiting environmental conditions
S. Täuber, C. Golze, H. Steinhoff, A. Grünberger (Bielefeld/DE)

18:11 BiofilmQ, a software
072-SCMCV R. Hartmann, H. Jeckel, E. Jelli, P. K. Singh, S. Vaidya, M. Bayer, L. Vidakovic
F. Díaz-Pascual (Marburg/DE), J. C. N. Fong (Santa Cruz, CA/US)
D. Anna (Kongens Lyngby/DK), O. Besharova (Marburg/DE)
C. Nadell (Hanover, NH/US), V. Sourjik (Marburg/DE)
Á. T. Kocács (Kongens Lyngby/DK), F. H. Yildiz (Santa Cruz, CA/US)
K. Drescher (Marburg/DE)

18:22 Characterizing host-pathogen interaction dynamics in single cells using
073-SCMCV scSLAM-seq
A.-E. Saliba (Würzburg/DE), S. Helaine, P. Hill (Boston, MA/US)
C. Toussaint (Würzburg/DE)

18:33 Antibiotics impact on natural microbial communities – immediate effects on
074-SCMCV single cell activities and microbial diversity
F. Calabrese, S.-C. Chen, H. Stryhanyuk, F. Musat (Leipzig/DE),
M. Brauns (Magdeburg/DE), H.-H. Richnow, N. Musat (Leipzig/DE)

18:44 Using Click-CLEM to reveal the mechanism of the bactericidal effect of
075-SCMCV azido modified ceramides against *Neisseria meningitidis*
S. Peters, L. Kaiser, J. Fink, J. Schlegel, C. Stigloher, M. Sauer, J. Seibel
A. Schubert-Unkmeir (Würzburg/DE)

18:55 Role of sRNA 5'-phosphorylation state for target RNA regulation in *E. coli*
076-SCMCV A. Schilder, B. Görke (Vienna/AT)

19:06 A gap junction analog confers cell-cell communication in multicellular
077-SCMCV cyanobacteria
A.-K. Kieninger (Tübingen/DE), G. Weiss, M. Pilhofer (Zurich/CH)
R. Garg, K. Forchhammer, L. Maldener (Tübingen/DE)

19:17 Regulation of polar flagellar assembly in *Shewanella putrefaciens*
078-SCMCV M. Schwan (Gießen/DE), D. Mrusek, V. Blagotinsek
T. Glatter (Marburg/DE), A. Khaledi, S. Häußler (Braunschweig/DE)
K. Papenfort (Jena/DE), G. Bange (Marburg/DE), K. Thormann (Gießen/DE)

18:00–20:00 Symposium 5 – Influence of Biofilms on Drinking Water Quality

- HS 8
Chairs VAAM Special Group Water and Waste Water
Bernd Bendinger (Mühlheim a. d. R./DE), Ulrich Szewzyk (Berlin/DE)
- 18:00 Nitrifying biofilms in full-scale chloraminated drinking water distribution system
S. Wuertz (Davis, CA/US)
- 18:40 Managing microbial quality of drinking water in buildings
F. Hammes (Dübendorf/CH)
- 19:20 Legionella in drinking water – legal regulations and new methods for detection
C. Förster (Berlin/DE)

18:00–19:30 Symposium 6 – Recent Challenges in Microbial Systematics

- HS 10
Chairs VAAM Special Group Identification and Systematics
DGHM Special Group Microbial Systematics
André Lipski (Bonn/DE), Ulrich Nübel (Braunschweig/DE)
- 18:00 Controversies in bacterial taxonomy – the example of the genus *Borrelia*
079-RCV G. Margos, V. Fingerle, A. Sing, S. Cutler, A. Gofton, B. Stevenson
A. Estrada-Peña (Oberschleißheim/DE)
- 18:11 Taxonomy of the genus *Lactobacillus* – Description of 24 novel genera and emended description of the genus *Lactobacillus* Beijerinck 1901
C. M. A. P. Franz (Kiel/DE)
- 18:41 Recent Challenges in Bacterial Systematics – Reclassification of Mollicutes
D. R. Brown (Gainesville, FL/US)
- 19:11 The Disruptive Effects of Nomenclature – Time to abandon Trivia
B. J. Tindall (Braunschweig/DE)

20:00–20:30 Special Group Meeting – VAAM Special Group Regulation and Signal Transduction in Prokaryotes

HS 4

20:00–20:30 Special Group Meeting – VAAM Special Group Water and Waste Water

HS 8

08:30–10:00 Oral Session 12 – Environmental Microbiology II

- Audimax
Chairs Biodegradation and Biodeterioration
Katja Bühler, Lukas Y. Wick (Leipzig/DE)
- 08:30
080-EMV Microbial biofilm formation and degradation of the UV absorber octocrylene
P. Busch, M. Suleiman, C. Schröder, M. Kuhn, A. Simon, A. Stahl
H. Frerichs, G. Antranikian (Hamburg/DE)
- 08:41
081-EMV Effect of fertilizer regimes on microbial degradation of glyphosate in agricultural soil
S. Aslam, L. Adrian (Leipzig/DE), K. Nowak (Berlin/DE)
- 08:52
082-EMV Biogeochemical effects of temperature changes on microbial communities and groundwater contaminations
M. S. Bin Hudari, C. Vogt, H.-H. Richnow (Leipzig/DE)
- 09:03
083-EMV Novel clades of biphenyl-degrading microorganisms revealed by stable isotope probe (SIP) integrated with metagenomics, metaproteomics and nanometer-scale secondary ion mass spectrometry (nanoSIMS)
S.-C. Chen, R. Budhraj, L. Adrian, F. Calabrese, H. Stryhanyuk, N. Musat
H.-H. Richnow (Leipzig/DE), G.-L. Duan, Y.-G. Zhu (Beijing/CN)
F. Musat (Leipzig/DE)
- 09:14
084-EMV The Degradation Pathway of 2-Methylpropene (2-MP) 2-MP is elucidated on the genetic level in *M. gordonae* IBE200: A 6-component T4MO/isoprene-like Monooxygenase is the key enzyme initiating the catabolic sequence
S. Helbich, K.-H. Engesser (Stuttgart/DE), D. H. Pieper (Braunschweig/DE)
K. Sohn (Stuttgart/DE)
- 09:25
085-EMV Evidence of a novel side-chain degradation pathway during bile-salt degradation in *Novosphingobium* sp. strain Chol11
F. M. Feller (Münster/DE), L. Wöhlbrand, R. Rabus (Oldenburg/DE)
B. Philipp (Münster/DE)
- 09:36
086-EMV *Pseudomonas* spp. are key players in agricultural biogas substrate degradation
C. Buettner (Coburg/DE), M. von Bergen, N. Jehmlich (Leipzig/DE)
M. Noll (Coburg/DE)
- 09:47
087-EMV Why should we care about microorganisms in the bentonite back fill material for the storage of high-level radioactive waste in deep geological repositories?
N. Matschiavelli, M. Dressler, T. Neubert, S. Kluge, A. Schierz,
A. Cherkouk (Dresden/DE)

08:30–10:00 Oral Session 13 – Hospital Infection Control, Outbreaks and MDRO II

- HS 9 Same Old, Same Old, But News – MDRO
Chairs Rasmus Leistner (Berlin/DE), Wulf Schneider (Regensburg/DE)
- 08:30 Colonization after MRSA-contacts – Is prophylactic separation of contact
088-HYV patients reasonable?
A. Kühn, P. Schipper, B. Schock, J. Stahlmann, I. F. Chaberny (Leipzig/DE)
- 08:45 Results of the prevalence study on the occurrence of multi-drug resistant
089-HYV organisms in Saxony 2017/2018
L. Sommer (Chemnitz/DE), T. Hackel (Dresden/DE)
A. Hofmann (Chemnitz/DE), J. Hoffmann, E. Hennebach, B. Köpke
W. Sydow, I. Ehrhard (Dresden/DE), I. F. Chaberny (Leipzig/DE)
- 09:00 Genome-based surveillance of clinical vancomycin-resistant
090-HYV *Enterococcus faecium* (VRE) reveals increased prevalence of vanB-type
isolates of ST117/CT71 in German hospitals, 2010–2016
B. Neumann (Wernigerode/DE), M. Kresken (Cologne, Rheinbach/DE)
G. Werner (Wernigerode/DE)
- 09:15 The ongoing challenge of vancomycin-resistant *Enterococcus faecium* in
091-HYV Germany and Europe – an epidemiological analysis of blood stream infections
O. Ayobami, N. Willrich, I. Noll, A. Reuss, T. Eckmanns
R. Markwart (Berlin/DE)
- 09:30 Detecting associations of antibiotic consumption and resistance in
092-HYV infections with *E. coli* with ARVIA – a new surveillance tool for integrated
analysis of data from ARS and AVS
A. Hoffmann, M. J. Schneider, M. Feig, B. Zacher, H.-P. Blank, I. Noll
B. Schweickert, K. Gröschner, M. Abu Sin, T. Eckmanns (Berlin/DE)
- 09:45 Ongoing supraregional outbreak of clonal
093-HYV OXA-244-carbapenemase-producing *Escherichia coli* (CPE) in
Germany, 2017–2019
K. Kremer, R. Kramer (Berlin/DE), J. B. Hans (Bochum/DE)
S. Haller (Berlin/DE), N. Pfennigwerth (Bochum/DE), Y. Pfeiffer, B. Neumann
G. Werner, T. Eckmanns (Berlin/DE), S. G. Gatermann (Bochum/DE)

08:30–10:00 Oral Session 14 – Microbial Biotechnology III

- HS 1 New Processes and Products
Chairs Alexander Grünberger (Bielefeld/DE), Jörg Toepel (Leipzig/DE)
- 08:30 Optimized bioprocess for production of high-value omega-3 fatty acids
094-MBTV using recombinant *Yarrowia lipolytica*
D. Dietrich, S. Jovanovic, K. Gemperlein, M. Kohlstedt, S. Wenzel
R. Müller, C. Wittmann (Saarbrücken/DE)

- 08:41
095-MBTv A new metallophore from *Variovorax paradoxus* EPS
M. Hofmann, L. Malik (Freiberg/DE), J. H. Diettrich, M. Nett (Dortmund/DE)
D. Tischler (Freiberg, Bochum/DE), T. Heine (Freiberg/DE)
- 08:52
096-MBTv Utilization of cyanobacterial TCA cycles for the production of
trans-4-hydroxy-L-proline
F. Brandenburg, E. Theodosiou, C. Köster, S. Klähn, A. Schmid
J. Krömer (Leipzig/DE)
- 09:03
097-MBTv Evaluation of biological phosphorous removal effects in a full scale
wastewater treatment plant
S. Günther, C. Süring, S. Müller (Leipzig/DE)
- 09:14
098-MBTv Bacterial magnetosomes as versatile tool for biomedical and
biotechnological applications
F. Mickleit, D. Schüler, V. Jérôme, R. Freitag (Bayreuth/DE)
C. Jörke, J. H. Clement (Jena/DE), S. Geimer (Bayreuth/DE)
- 09:25
099-MBTv Multiplexing antibiotic screening in droplet microfluidics using an
optofluidic platform
S. Hengoju, K. Martin, L. Mahler, O. Shvydkiv, M. Tovar, M. Roth
M. Rosenbaum (Jena/DE)
- 09:36
100-MBTv Automated Fed-Batch process for microbial lipid production using volatile
fatty acids
X. Qian, M. Jiang (Nanjing/CN), K. Ochsenreither (Karlsruhe/DE)
- 09:47
101-MBTv Microbiology impacting coffee culture – Defined fermentation for
improving taste and quality of coffee
C. Burkhardt, P. Busch (Hamburg/DE), C. J. Bolten (Lausanne/CH)
G. Antranikian (Hamburg/DE)

08:30–10:00 Oral Session 15 – Microbial Pathogenicity I

- HS 2
Chairs Host Adaptation During Invasive and Colonizing Life-Styles
Holger Rohde (Hamburg/DE), Christiane Wolz (Tübingen/DE)
- 08:30
102-MPV Within-host evolution of bovine *Staphylococcus aureus* selects for a
SigB-deficient pathotype characterized by reduced virulence but enhanced
proteolytic activity and biofilm formation
H. Marbach, K. Mayer, C. Vogl (Vienna/AT), J. Y. H. Lee
I. Monk (Melbourne/AU), D. O. Sordelli (Melbourne/AU, Buenos Aires/AR)
F. R. Buzzola (Buenos Aires/AR), M. Ehling-Schulz, T. Grunert (Vienna/AT)
- 08:41
103-MPV Inter- and intraclonal diversity in *S. epidermidis* prosthetic joint infection
A. Both, J. Huang, C. Lausmann, S. Weißelberg, H. Büttner
H. Rohde (Hamburg/DE)

- 08:52
104-MPV *Staphylococcus aureus* pathogenicity in cystic fibrosis patients – virulence genes, phylogeny and horizontal gene transfer
J. Lange, D. Görlich, B. C. Kahl (Münster/DE)
- 09:03
105-MPV *Staphylococcus aureus* pneumonia – preceding influenza infection paves the way for low virulent strains
S. Deinhardt-Emmer (Jena/DE), K. F. Haupt (Jena/DE), M. Garcia-Moreno J. Geraci (Jena/DE), C. Forstner, M. W. Pletz, C. Ehrhardt, B. Löffler (Jena/DE)
- 09:14
106-MPV Pneumococcal adaptation to the nasopharynx and lung during colonization and infection
M. R. Abdullah, C. Hentschker, D. Dittmar, P. Hildebrandt, S. Michalik U. Völker, S. Hammerschmidt (Greifswald/DE)
- 09:25
107-MPV Identification of drug-resistance determinants in a clinical isolate of *Pseudomonas aeruginosa* by high-density transposon mutagenesis
M. Sonnabend, K. Klein, E. Walter, A. Angelov, R. Kluj, C. Mayer I. Autenrieth, M. Schütz, E. Bohn (Tübingen/DE)
- 09:36
108-MPV Genome-based analyses of *Klebsiella pneumoniae* to detect possible host- associations, host-adaptation and effects on virulence
K. Klaper, L. Heinrich, R. Gerlach, S. Fuchs, Y. Pfeifer G. Werner (Wernigerode/DE)
- 09:47
109-MPV Prevalence and diversity of the colibactin-encoding *pks* island in prokaryotes
H. Wami, A. Wallenstein, K. Tegelkamp (Münster/DE)
R. von Buenau (Herdecke/DE), U. Dobrindt (Münster/DE)

08:30–10:00 Oral Session 16 – Eukaryotic Pathogens: Fighting Back

- HS 4
Chairs Sascha Jung (Berlin/DE), Johannes Wagener (Würzburg/DE)
- 08:30 Fungicidal Combination of Miconazole and Comiphen Bromide for *Candida* Biofilm-Related Infections
Invited Speaker K. Thevissen (Leuven/NL)
- 09:00 Elucidating the role of *Candida albicans* Ece1 peptides
110-EPV R. Müller, A. König, D. Yildirim, L. Dally, L. Kasper, S. Mogavero, S. Allert B. Hube (Jena/DE)
- 09:11 Changes in the sterole composition of *Candida glabrata* can be linked to increasing Amphotericin B tolerance
111-EPV A.-M. Aldejohann, E. Huprich (Würzburg/DE), C. Müller (Munich/DE)
R. Martin (Würzburg/DE), O. Kurzai (Jena, Würzburg/DE)

- 09:22
112-EPV Living with mold? Decontamination and prevention of fungal growth in manned space flight
S. M. Koch, M. Cortesao, C. E. Hellweg (Cologne/DE)
D. Müller (Saarland/DE), M. Fiebrandt (Bochum/DE), R. Möller (Cologne/DE)
- 09:33
113-EPV Fungal Attack – Chemical Communication and Protection Strategies based on the Secondary Metabolism associated with Tree Canker
L. Heck (Mainz/DE), S. K. Bühring (Kaiserslautern/DE), T. Huber
L. Djurdjevic (Mainz/DE), L. Antelo (Kaiserslautern/DE)
K. Andresen (Mainz/DE), E. Thines (Mainz, Kaiserslautern/DE)
- 09:44
114-EPV Structural redesign of antifungal peptides and analysis of their antifungal activity
C. Feurstein, S. Jung, V. Meyer (Berlin/DE)

08:30–10:00 Oral Session 17 – Diagnostic and Clinical Microbiology II



- HS 5 Advances in Molecular Diagnostic Approaches
FG Diagnostische und Klinische Mikrobiologie
StAG Diagnostische Verfahren
FG Qualitätssicherung und Diagnostik
- Chairs Karsten Becker (Greifswald/DE), Andreas Seiffert-Störiko (Frankfurt a. M./DE)
- 08:30
115-DKMV Impact of molecular assays on malaria screening and differentiation
E. Altangerel, U. Loderstädt, E. Tannich (Hamburg/DE)
H. Frickmann (Hamburg, Rostock/DE)
- 08:41
116-DKMV GUARDIAN – Genome based ultrafast detection of bioterrorism agents
K. Müller (Munich/DE), S. Daßen, J. Stehr, L. Ullerich
F. Bürsgens (Planegg-Martinsried/DE), S. Holowachuk (Suffield, CT/CA)
K. Stoecker (Munich/DE)
- 08:52
117-DKMV Sternum osteomyelitis – impact of molecular and microscopic diagnostics
J. Kikhney (Berlin/DE), N. Spindler (Leipzig/DE), A. Wießner, A. Moter (Berlin/DE)
- 09:03
118-DKMV Specific and Rapid Detection of *Bacillus anthracis* Cells by Fluorescent Phage Receptor Binding Fusion Proteins
P. Braun, L. Bachstein, A. C. Jacinto, C. Tocantins Santos
G. Grass (Munich/DE)
- 09:14
119-DKMV Prediction of antibiotics resistance in methicillin-resistant *Staphylococcus aureus* from whole genome sequencing data
D. De Coninck, L. Hauben (Sint-Martens-Latem/BE), S. Guedes (Marcy/FR)
K. De Rauw (Sint-Martens-Latem/BE)

- 09:25
120-DKMV Proteotyping – Proteomics- and Genomics-Based Diagnostics of Infectious Bacteria, Virulence and Anti-Microbial Resistance
E. R. B. Moore (Gothenburg/SE)
F. Salvà-Serra (Gothenburg/SE, Palma de Mallorca/ES), D. Jaén-Luchoro
R. Karlsson (Gothenburg/SE)
- 09:36
121-DKMV A host response mRNA signature from blood accurately diagnoses and prognoses acute infections and sepsis in emergency department patients
W. Bauer, K. Kappert, N. Galtung (Berlin/DE), J. Wacker
O. Liesenfeld (Burlingame, CA/US), R. Tauber, R. Somasundaram (Berlin/DE)
- 09:47
122-DKMV Improved microbiological identification and antimicrobial resistance testing of clinical *Nocardia ssp.* isolates by 16s rRNA analysis and whole genome sequencing
P. Chhatwal, S. Woltemate, T. Welte, S. Ziesing, D. Schlüter
M. Vital (Hanover/DE)

08:30–10:00 Oral Session 18 – Microbial Cell Biology I

- HS 6
Chairs Iris Maldener (Tübingen/DE), Martin Thanbichler (Marburg/DE)
- 08:30
123-MCBV Stalk-terminal budding in *Hyphomonas neptunium* proceeds via an FtsZ-driven process involving two spatially distinct divisome-like complexes
M. van Teeseling, S. Eisheuer, J. Zimmer, M. Thanbichler (Marburg/DE)
- 08:41
124-MCBV New flat embedding method for transmission electron microscopy reveals an unknown mechanism of tetracycline
M. Wenzel (Göteborg/SE), M. P. Dekker, B. Wang, M. J. Burggraaf
W. Bitter, J. R. T. van Weering, L. W. Hamoen (Amsterdam/NL)
- 08:52
125-MCBV Predicting membrane lipid composition from *in silico* data – How far can we go?
B. J. Tindall (Braunschweig/DE)
- 09:03
126-MCBV Formation of magnetic organelles
R. Uebe (Bayreuth/DE)
- 09:14
127-MCBV The novel shapeshifting bacterial phylum *Saltatorellota*
S. Wiegand (Nijmegen/NL, Karlsruhe/DE), M. Jogler (Jena/DE)
T. Kohn (Nijmegen/NL), R. P. Awal (Bayreuth/DE), S. Oberbeckmann
K. Keszy (Warnemünde/DE), O. Jeske, P. Schuhmann (Braunschweig/DE)
S. H. Peeters, N. Kallscheuer (Nijmegen/NL),
M. Strauss (Planegg-Martinsried/DE), A. Heuer (Braunschweig/DE)
M. S. M. Jetten (Nijmegen/NL), M. Labrenz (Warnemünde/DE)
A.-K. Kaster (Karlsruhe/DE), M. Rohde, C. Boedeker (Braunschweig/DE)
H. Engelhardt (Planegg-Martinsried/DE), D. Schüler (Bayreuth/DE)
C. Jogler (Nijmegen/NL, Jena/DE)

- 09:25
128-MCBV Analysis of the *Clostridioides (Clostridium) difficile* motility behaviour by video microscopy revealed a novel swimming pattern
J. Schwanbeck, I. Oehming, A. E. Zautner, U. Groß
W. Böhne (Göttingen/DE)
- 09:36
129-MCBV Caught in the act – pervasive transcription during the low-energy phase of the budding yeast growth cycle
R. Machne (Düsseldorf/DE), S. Bernhard (Leipzig/DE)
I. M. Axmann (Düsseldorf/DE), P. F. Stadler (Leipzig/DE)
D. B. Murray (Tsuruoka/JP)
- 09:47
130-MCBV The uncharacterized DUF1127 protein from *Rhodobacter sphaeroides* binds RNA
J. Grützner, G. Klug (Gießen/DE)

08:30–10:00 Oral Session 19 – Microbiota, Symbiosis and Host I

- HS 8
Chairs Thomas Clavel (Aachen/DE), Till Strowig (Braunschweig/DE)
- 08:30
Invited Speaker S. P. Rosshart (Freiburg i. Br./DE)
- 09:00
131-MSHV Microbiota Changes in Primary Sclerosing Cholangitis
C. Bang, M. C. Rühlemann (Kiel/DE), T. Liwinski, R. Zenouzi (Hamburg/DE)
M. Kummén (Oslo/NO), W. Lieb (Kiel/DE), J. R. Hov (Oslo/NO)
C. Schramm (Hamburg/DE), A. Franke (Kiel/DE)
- 09:11
132-MSHV Spore formers are initial butyrate producers during infant gut microbiota development
C. Schwab (Prag/CZ, Zurich/CH), O. Appert, A. Ramirez Garcia (Zurich/CH)
R. Ferstl, E. Bersuch, S. Loeliger (Davos/CH), C. Lacroix (Zurich/CH)
R. Lauener (St. Gallen/CH), R. Frei (Davos/CH), C. Roduit (Zurich/CH)
- 09:22
133-MSHV Exploring novel small proteins in a simplified human gut microbiome
H. Petruschke (Leipzig/DE), C. Schori, C. H. Ahrens (Wädenswil/CH)
N. Jehmlich, M. von Bergen (Leipzig/DE)
- 09:33
134-MSHV Exploring pathogenic functions of host microbiota
M. Vital (Hanover/DE), S. Rath, D. H. Pieper (Braunschweig/DE)
D. Schlüter (Hanover/DE)
- 09:44
135-MSHV Single-Cell Dispensing for High-Throughput Bacterial Isolation
A. Afrizal, A. Viehof, T. Hitch, T. Clavel (Aachen/DE)

08:30–10:00 Oral Session 20 – Microbial Ecology and Evolution I

HS 10

Chairs Ulisses Nunes da Rocha (Leipzig/DE), Miriam Dormeyer (Holzminden/DE)

08:30 Distribution patterns of *Brocadiaceae* and *Nitrospiraceae* reflect high
136-MEEV spatial heterogeneity of anammox and nitrification in oligotrophic groundwater

M. Krüger (Jena/DE), B. Thamdrup (Odense/DK), K. U. Totsche (Jena/DE)
K. Küsel (Jena, Leipzig/DE), M. Herrmann (Leipzig/DE)

08:41 A novel promiscuous *Roseobacter* plasmid mediates antibiotic resistance in
137-MEEV the ocean

L. Birmes, H. Freese, J. Petersen (Braunschweig/DE)

08:52 Tree root-associated microbiomes across Europe – respective impacts of
138-MEEV sites' specificities and an oak clone

J. d. D. Habiyaemye (Halle a. d. Saale, Leipzig/DE, Kigali/RW)
K. Goldmann (Halle a. d. Saale/DE), T. Reitz, S. Herrmann
F. Buscot (Halle a. d. Saale, Leipzig/DE)

09:03 The lag phase in batch cultivation is determined by differential growth
139-MEEV rather than adaptation

P. Mishra, R. U. Meckenstock (Essen/DE)

09:14 Mechanistic microbial ecosystem model inference – a new method to
140-MEEV analyze time series data

F. Hellweger, J. Hoffmann (Berlin/DE)

09:25 Analysis of microbial ecology by mass spectrometry-based metabolomics
141-MEEV techniques

L. Castaño (Glasgow/GB), P. Rakowska (Teddington/GB)
B. Johnston (Teddington, Glasgow/GB), M. Chrubasik
K. Duncan (Glasgow/GB)

09:36 Negative hysteresis as a novel principle to improve antibiotic therapy
142-MEEV

H. Schulenburg, R. Roemhild (Plön/DE)

09:47 Heatwaves cause long-term restructuring of freshwater bacterioplankton
143-MEEV communities mediated by dispersal and zooplankton grazing

M. Bengtsson (Greifswald/DE), D. Murray (Norwich/GB)
K. Mironova (Moscow/RU), A. Abonyi (Lunz/AT)
A. Endredi (Budapest/HU), C. Vad, R. Ptacnik (Lunz/AT)

10:00–10:30 Coffee Break in the Industrial Exhibition Area

10:30–12:00 Joint Plenary Session 4 – Microbial Ecology

Audimax

Chairs Georg Häcker (Freiburg i. Br./DE), Hauke Harms (Leipzig/DE)

10:30 Metabolism of the Gut Microbiota during Health and Disease
Sebastian Winter (Dallas, TX/US)11:00 Diversity and Activity of Cyanobacteria in the Global Ocean
Zackary Johnson (Beaufort, NC/US)11:30 Life on N₂O – Ecology of Nitrous Oxide Reducing Microbes
Sara Hallin (Uppsala/SE)

10:30–12:00 Hygiene-Symposium

HS 9 International Aspects of Hospital-Acquired Infections
Chairs Simone Scheithauer (Göttingen/DE), Ulrich Vogel (Würzburg/DE)10:30 Control of Vancomycin-Resistant Enterococci (VRE)
Highlights on the French Strategy
G. Birgand (London/GB)11:00 Climate Change and Other Drivers of Infectious Disease Threat Events
in Europe
J. Semenza (Solna/SE)11:30 Healthcare-Associated Infection and Mortality – Statistics and Clinical Review
T. van der Kooi (Bilthoven/NL)

10:30–12:00 Oral Session 21 – Diagnostic and Clinical Microbiology III

HS 1 News from Clinical Microbiology
FG Diagnostische und Klinische Mikrobiologie
StAG Diagnostische Verfahren

Chairs Jürgen Held (Erlangen/DE), Stefan Zimmermann (Heidelberg/DE)

10:30 Evolutionary trajectories of antibiotic resistance in *Pseudomonas*
144-DKMV *aeruginosa* generated in a morbidostat device
M. Javed, B. Jentzsch, V. Ueltzhoeffer, M. Heinrich (Tübingen/DE)
R. Neher (Basel/CH), M. Willmann (Tübingen/DE)10:41 ESBL-E infections after rectal colonization with ESBL-producing
145-DKMV Enterobacterales – The clinically relevant difference between
ESBL-*Klebsiella pneumoniae* and ESBL-*Escherichia coli*
L. Denkel, F. Maechler, F. Schwab, A. Kola, A. Weber, P. Gastmeier (Berlin/DE)
G. Werner, Y. Pfeifer, P. Michael (Wernigerode/DE), R. Leistner (Berlin/DE)

10:52 Antimicrobial efficiency of antisense PNAs in *Streptococcus pyogenes*
146-DKMV G. Barkowsky, A.-L. Lemster, R. Pappesch, S. Krüger (Rostock/DE)
A. Jacob (Heidelberg/DE), B. Kreikemeyer, N. Patenge (Rostock/DE)

11:03 Therapeutic drug monitoring of antibiotics in intensive care patients
147-DKMV treated with extracorporeal membrane oxygenation (ECMO) – an
observational single-center study
D. Kühn, C. Metz, H. Wehrfritz, M. Alqudrah, A. Becker, M. Hoffmann
R. Bals, U. Hübner, J. Geisel, P. Lepper, S. Becker (Homburg/DE)

11:14 Review on 5 years of screening for carbapenemase-producing strains
148-DKMV N. Dietze, N. Lippmann, A. C. Rodloff (Leipzig/DE)

11:25 Epidemiological, microbiological and clinical aspects of Linezolid- and
149-DKMV Vancomycin- resistant *Enterococcus faecium* in a tertiary hospital in
Germany – a retrospective study
F. Olearo, C. E. Belmar Campos, A. Both, H. Hilgarth, E.-M. Klupp
J. L. Hansen, F. Mauer, H. Rohde (Hamburg/DE)

11:36 Gram-negative bloodstream infections – a quality of care assessment
150-DKMV C. L. Correa-Martinez, H. Tönnies, A. Mellmann
S. Kampmeier (Münster/DE)

11:47 Antimicrobial resistance of bacteraemia in the emergency department of
151-DKMV a German university hospital (2013–2018) – potential carbapenem-sparing
empiric treatment options in light of the new EUCAST recommendations
K. Rothe, N. Wantia, D. Busch, B. Waschulzik, C. Spinner (Munich/DE)

12:00–13:30 Lunch Break in the Industrial Exhibition Area

12:00–12:30 Treffen der DGHM Fachgruppe und Ständigen Arbeitsgemeinschaft

HS 1 FG Diagnostische und Klinische Mikrobiologie (DKM)
StAG Diagnostische Verfahren (DV)

12:15–13:15 Fördermöglichkeiten für Nachwuchswissenschaftler*innen – die DFG
stellt stellt sich vor



Audimax

12:15 Fördermöglichkeiten für Nachwuchswissenschaftler*innen – die DFG
stellt sich vor
Regina Nickel (Bonn/DE)

Anschließend Mitglieder der Fachkollegien und des Senats geben im Anschluss Tipps und
beantworten Fragen
Franz Narberhaus (Bochum/DE), Petra Dersch (Münster/DE), Jan Buer (Essen/DE)

12:15–12:45 Industrial Symposium – HiSS Diagnostics GmbH (please refer to p. 174)

12:30–13:30 Treffen der DGHM Fachgruppe

SR 202 FG Eukaryotische Krankheitserreger (EK)

12:30–13:00 Treffen der DGHM Fachgruppe

SR 203 FG Mikrobiota, Probiotika und Wirt (PW)

13:30–14:00 VAAM Award Session – Presentations PhD Awards

Audimax

Chair Wolfgang Buckel (Marburg/DE)

13:30 Screw Thread Motility of Polarly Flagellated Bacteria Enhances Movement Through Structured Environments
Marco Kühn (Gießen/DE, Lausanne/CH)

13:45 The Impact of Selection Regimes on Plastid Stability Evolution in Bacteria
Tanita Wein (Kiel/DE, Negev/IL)

13:45–14:00 DGHM Award Session – Presentation bioMérieux Diagnostikpreis

HS 9

Chairs Martin Aepfelbacher (Hamburg/DE), Sören G. Gatermann (Bochum/DE)

13:45 Approved Drugs and Bacterial Zincophores as Inhibitors of Metallo- β -lactamases – A Strategy to Combat Multidrug-Resistant Bacteria
Thomas A. Wichelhaus (Frankfurt a. M./DE)

14:00–15:30 Plenary Session 5 (VAAM) – Microbial Biotechnology

Audimax

Chairs Andreas Schmid (Leipzig/DE), Oskar Zelder (Ludwigshafen/DE)

14:00 A Field of Dreams – Valorization of Renewables into bio-based Chemicals and Materials
Christoph Wittmann (Saarbrücken/DE)

14:30 Industrial Biotechnology – From Science to Market
Andrea Herold (Ludwigshafen/DE)

15:00 Cyanobacterial Biofilms as Light-Driven Biocatalysts – Obstacles and Achievements
Katja Bühler (Leipzig/DE)

14:00–15:30 Plenary Session 6 (DGHM) – Emerging Resistance Mechanisms

HS 9

Chairs Martin Aepfelbacher (Hamburg/DE), Sören G. Gatermann (Bochum/DE)

14:00 Resistance Mechanisms of High Clinical Importance
Christian G. Giske (Stockholm/SE)

14:30 One Health Approach for Exploring the Emergence and Spread of
Resistances against last-resort Antibiotics
Stefan Schwarz (Berlin/DE)

15:00 N.N.
Please note the information on-site.

15:30 Forum krankenhaushygienische Implikationen von COVID-2019



HS 9 Bitte beachten Sie die Informationen vor Ort.

15:45–16:00 Poster Pitches 2 (please see list on-site)

Audimax & HS 8 The selected posters are marked with a * in the programme.

16:00–18:00 Poster Session 2 (please refer to p. 137)

15:30–18:00 Consultation of the German Research Foundation (DFG)

HS 10 Interested participants are asked to refer to the check-in desk in order to
register for the consultation.

16:00–16:45 Karrieresymposium der jDGHM



HS 1 Die Ausbildung zum medizinischen Fachmikrobiologen (m/w/d)
Chairs Judith Kikhney (Berlin/DE), Dennis Knaack (Münster/DE)

16:00 Fachmikrobiologie – Sicht eines Naturwissenschaftlers und Fachmikrobiologen
Philipp Oberhettinger (Tübingen/DE)

16:15 Medizinische/r Fachmikrobiologe/in – Voraussetzungen und Inhalte für ein
diagnostisch-orientiertes Berufsbild in der Medizinischen Mikrobiologie
Karsten Becker (Greifswald/DE)

16:30 Fragen & Antworten

16:00–17:30 Treffen der DGHM Fachgruppe

SR 202 FG Antibiotikaresistenz und Infektionsprävention (PR)

18:00–19:30 VAAM Assembly (please refer to p. 38)

Audimax



18:00–19:30 Oral Session 22 – Cases in Clinical Microbiology and Infectious Diseases



- HS 9 TED Session (interactive)
Chairs Nina Wantia (Munich/DE), Stefan Zimmermann (Heidelberg/DE)
- 18:00 Fall 1
TED 1 S. Zange, E. Georgi, H. C. Scholz, S. Mantel (Munich/DE)
F. Roemmeler-Dreher (Rosenheim/DE), M. C. Walter
M. H. Antwerpen (Munich/DE), W. Manert (Hausham/DE)
- 18:21 Fall 2
TED 2 S. Rößler, J. Lenk (Dresden/DE)
- 18:42 Fall 3
TED 3 M. Karrasch, M. Baier, H. Axer, O. W. Witte, M. Nürnberger (Jena/DE)
- 19:03 Fall 4
TED 4 H. H. Niller, K. Angstwurm (Regensburg/DE)
D. Rubbenstroith (Greifswald/DE), J. Jantsch (Regensburg/DE)
M. Beer (Greifswald/DE), B. Schmidt (Regensburg/DE)

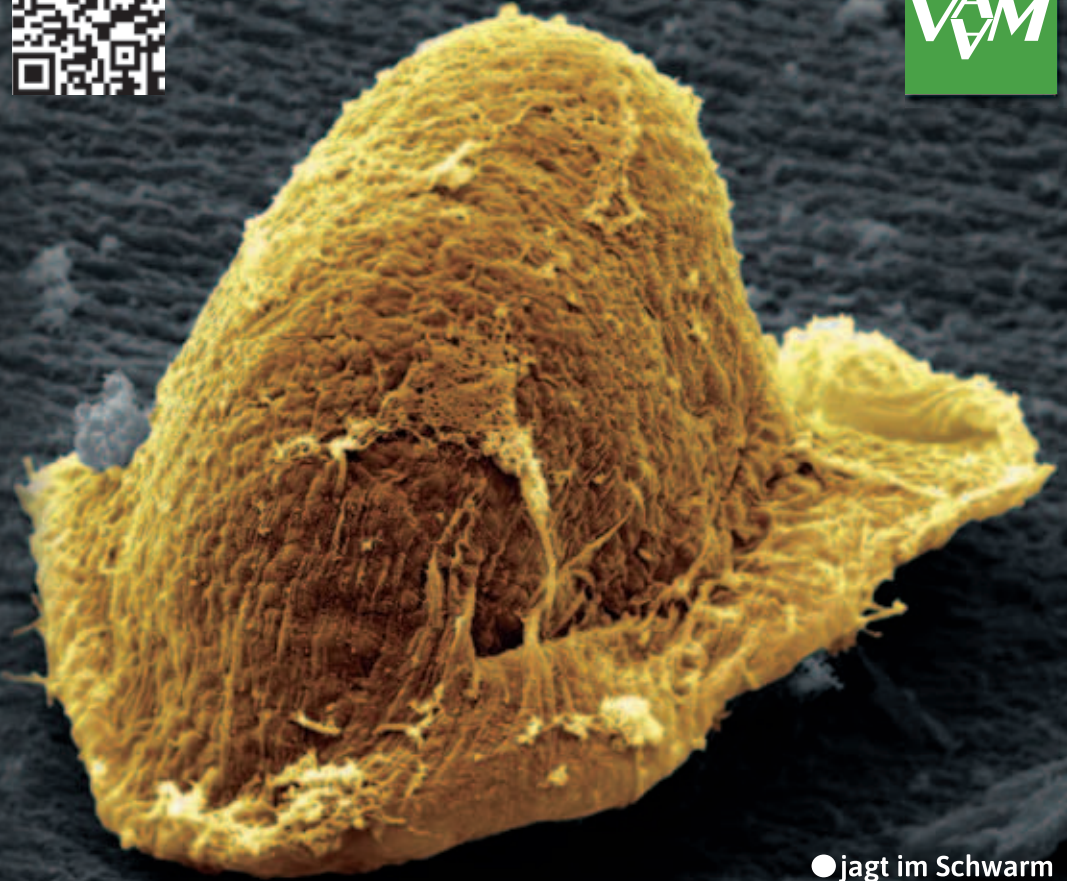
18:00–19:30 Oral Session 23 – Desinfektionsverfahren und technische Hygiene



- HS 1 Desinfection and Technical Hygiene
Chairs Simone Scheithauer (Göttingen/DE), Ulrich Vogel (Würzburg/DE)
- 18:00 Low energy electron irradiation is a promising novel method for
152-PRV sterilization of bacteria- or virus-containing liquids
J. Fertej, S. Reißhauer (Leipzig/DE), B. Standfest, M. Thoma (Stuttgart/DE)
J. Beckmann, J. Portillo, F.-H. Rögner (Dresden/DE), T. Grunwald
S. Ulbert (Leipzig/DE)
- 18:15 Prevalence of multidrug resistant gram-negative bacteria in siphons of
153-PRV ICU patient rooms with and without disinfection procedures
C. E. Belmar Campos, G. Franke, E.-M. Klupp, A. Kollotzek
J. K.-M. Knobloch (Hamburg/DE)
- 18:30 Plasma activated water inactivates efficiently gram-negative and
154-PRV gram-positive microorganisms
M. Hummert (Münster/DE), P. H. M. Leenders, P. van Ooij (Nijmegen/NL)
T. Kuczias (Münster/DE)
- 18:45 Removal of antibiotic residues, antibiotic-resistant bacteria and antibiotic-
155-PRV resistance genes from hospital wastewater, by using ultrasonic treatment
C. Felder, A. M. Voigt, E. Sib, F. Lenz-Plet, D. Skutlarek, H. Färber
R. Schmithausen, M. Exner (Bonn/DE)

Myxococcus xanthus

Mikrobe des Jahres 2020



- jagt im Schwarm
- kommuniziert über Botenstoffe
- bewegt sich gezielt und gemeinsam in Gruppen
- entwickelt bei Nahrungsmangel große Fruchtkörper mit Dauersporen
- produziert mögliche Stoffe für Antibiotika, Medikamente, Pflanzenschutzmittel

19:00 Change of adherence to infection prevention measures in operating rooms
 156-PRV as part of the HYGARZT Project
J. Hoffmann (Cologne/DE), S. Herbrandt (Dortmund/DE)
 M. Neuwirth (Cologne/DE), S. Akca (Freiburg i. Br./DE)
 U. Ligges (Dortmund/DE), C. Kugler (Freiburg i. Br./DE), F. Mattner (Cologne/DE)

19:15 “When push comes to nudge” – Is it time to nudge healthcare workers’
 157-PRV compliance to prevent nosocomial infections and antimicrobial resistance?
 Results of two systematized reviews on effects of nudging on hand hygiene
 and antibiotic use
 J. Schewe, T. von Lengerke (Hanover/DE)

18:00–19:30 Oral Session 24 – Microbial Pathogenicity II

HS 2 Molecular Mechanisms and Host Interactions in Bacterial Pathogenesis
 Chairs Andreas Diepold (Marburg/DE), Anja Lührmann (Erlangen/DE)

18:00 Caspase-3 dampens macrophage infiltration into *Staphylococcus aureus*
 158-MPV abscess lesions
V. Winstel (Hanover/DE, Chicago, IL/US), O. Schneewind
 D. Missiakas (Chicago, IL/US)

18:11 *Staphylococcus epidermidis* biofilms alter the pro-inflammatory
 159-MPV immune response in primary human macrophages
S. Weißelberg, A. Both, H. Büttner, H. Rohde (Hamburg/DE)

18:22 Coinfection of a porcine precision-cut lung slice model with *Bordetella*
 160-MPV *bronchiseptica* and *Streptococcus suis*
D. Vötsch, M. Willenborg, W. Baumgärtner
 P. Valentin-Weigand (Hanover/DE)

18:33 Zinc metalloprotease ProA contributes to dissemination of *Legionella*
 161-MPV *pneumophila* in human lung tissue explants
L. Scheithauer, S. Thiem, S. Schmelz, A. Dellmann, K. Büssow
 R. M. H. J. Brouwer, C. Ünal, W. Blankenfeldt
 M. Steinert (Braunschweig/DE)

18:44 The role of the global regulators *sarA* and *sae* in *S. aureus* biofilm formation
 162-MPV *in vitro* and *in vivo*
 H. Van de Vyver, M. Fröhlich, S. Schelhaas, S. Hermann, M. Herrmann
 M. Kuhlmann, S. Niemann (Münster/DE)

18:55 Group A streptococcal pyrogenic exotoxin B (SpeB) responses to
 163-MPV intracellular environment in necrotizing skin and soft tissue infections
 P. Shumba, T. Sura (Greifswald/DE), J. Hoßmann (Braunschweig/DE)
 D. Becher, N. Siemens (Greifswald/DE)

19:06 164-MPV	Describing the Interaction between <i>Bartonella</i> Adhesin A and Fibronectin as a Novel Therapeutic Concept to Treat Bacterial Infections <u>D. J. Vaca</u> , A. Thibau, M. S. Leisegang (Frankfurt a. M./DE), J. Malmström L. Happonen (Lund/SE), V. A. J. Kempf (Frankfurt a. M./DE)
19:17 165-MPV	Media-mediated difference in virulence and resistance of <i>Pseudomonas aeruginosa</i> V. Behrends (London/GB)
18:00–19:30 Oral Session 25 – Gastrointestinal Infections I	
HS 4 Chairs	Antje Flieger (Wernigerode/DE), Christine Josenhans (Munich/DE)
18:00 166-GIV	Genome characterization of two multidrug-resistant <i>Arcobacter butzleri</i> isolates and prevalence of antibiotic resistance genes in strains isolated from poultry in Ghana <u>A. E. Zautner</u> (Göttingen/DE), K. G. Boahen, C. W. Akenten (Kumasi/GH) T. Riedel, J. Overmann (Braunschweig/DE), J. May, D. Dekker (Hamburg/DE)
18:11 167-GIV	New sustainable therapeutic options for <i>Clostridioides difficile</i> therapy <u>M. Brauer</u> (Greifswald/DE), S. Wagner (Jena/DE) J. Herrmann (Saarbrücken/DE), S. Sievers, D. Zühlke V. I. Pauker (Greifswald/DE), R. Müller (Saarbrücken/DE) T. M. Fuchs (Jena/DE), K. Riedel (Greifswald/DE)
18:22 168-GIV	IFN-STAT1-MLKL axis drives necroptosis during gastrointestinal infection by controlling host cell death <u>I. Stolzer</u> , M. T. Chiriac, M. F. Neurath, C. Günther (Erlangen/DE)
18:33 169-GIV	The HopQ-CEACAM interaction controls CagA translocation, phosphorylation and phagocytosis of <i>Helicobacter pylori</i> in neutrophils <u>I.-K. Behrens</u> , B. Busch, P. Palamides (Munich/DE) J. E. Shively (Duarte, CA/US), C. Stanners (Montréal, Québec/CA) C. Chan (Iowa City, IA/US), N. Leung, S. Gray-Owen (Toronto/CA) R. Haas (Munich/DE)
18:44 170-GIV	Deciphering the bewildering variety of O-glycans derived from mammalian mucins by state-of-the-art mass spectrometry <u>M. Mormann</u> , G. Pohlentz, S. Kruse, I. Yilmaz, J. Müthing (Münster/DE)
18:55 171-GIV	Proteoglycan-Dependent Endo-Lysosomal Fusion Affects Intracellular Survival of <i>Salmonella typhimurium</i> in Epithelial Cells <u>A. Galeev</u> , A. Suwandi, A. Oktiviyari, H. Bakker, F. Routier (Hanover/DE) M. Hensel (Osnabrück/DE), G. A. Grassl (Hanover/DE)
19:06 172-GIV	Application of NGS as method for typing of <i>Salmonella enterica</i> serovar Typhi <u>E. Trost</u> , S. Simon, S. Fuchs, A. Fruth, A. Flieger (Wernigerode/DE)

- 19:17 Early *in vivo* genome and methylome adaptation of the *cag*-negative
173-GIV *Helicobacter pylori* strain BCS 100 during an experimental human infectio study
I. Estibariz, F. Ailloud (Munich/DE), S. Woltemate (Hanover/DE), B. Bunk
C. Spröer, J. Overmann (Braunschweig/DE), T. Aebischer, T. F. Meyer (Berlin/DE)
C. Josenhans, S. Suerbaum (Hanover, Munich/DE)

18:00–19:30 Oral Session 26 – Infection Immunology

HS 5

Chairs Dunja Bruder (Braunschweig/DE), Bastian Opitz (Berlin/DE)

- 18:00 Tracking of influenza-specific memory B-lymphocytes in blood by single cell
174-IIV analysis and deep sequencing of the variable B-cell receptor regions
C. Jassoy, S. Reiche, S. Horn, Y. Dwai (Leipzig/DE)

- 18:11 Single-cell RNA-seq reports growth condition-specific global transcriptomes
175-IIV of individual bacteria
J. Vogel (Würzburg/DE)

- 18:22 Modulation of macrophage transcription and epigenetics by *Yersinia*
176-IIV *enterocolitica*
I. Bekere, J. Huang, M. Schnapp, M. Aepfelbacher (Hamburg/DE)

- 18:33 Plasma Kallikrein as a novel host pathogenicity factor in *Streptococcus*
177-IIV *pyogenes* sepsis
J. Köhler, C. Maletzki, D. Koczan, M. Frank (Rostock/DE)
C. Trepesch (Berlin, Rostock/DE), A. S. Revenko, J. R. Crosby
A. R. M. Macleod (Carlsbad, CA/US), S. Mikkat
S. Oehmcke-Hecht (Rostock/DE)

- 18:44 Enhanced phagocytosis and dissemination of *Staphylococcus aureus* via
178-IIV Formyl-peptide receptor activation
E. Weiß (Tübingen/DE), K. Schlatterer, C. Beck, A. Peschel (Tübingen/DE)
D. Kretschmer (Tübingen/DE)

- 18:55 Characterization of *Staphylococcus aureus* isolated from
179-IIV hyper-IgE syndrome patients by whole genome sequencing
V. Schwierzeck (Münster/DE), R. Effner, F. Abel, M. Reiger, G. Notheis
A. de Tomassi (Munich, Augsburg/DE), J. Held (Erlangen/DE)
V. Simon, S. Dinter (Augsburg/DE), S. Stentzel, B. Bröker (Greifswald/DE)
R. Hoffmann (Augsburg/DE), J. Hübner (Munich/DE)
B. Hagel (Munich, Augsburg/DE), A. Mellmann (Münster/DE)
C. Traidl-Hoffmann, E. D. Renner (Munich, Augsburg/DE; Davos/CH)

- 19:06
180-IIV
NCX1-dependent Na⁺ sensing represents a novel ionic danger amplification mechanism in macrophages
P. Neubert, A. Homann, D. Wendelborn, A.-L. Bär
A. Schröder (Regensburg/DE)
S. Ebner (Regensburg, Planegg-Martinsried/DE)
A. Weichselbaum, V. Schatz (Regensburg/DE), P. Linz
R. Veelken (Erlangen/DE), J. Schulte-Schrepping (Bonn/DE)
A. C. Aschenbrenner (Bonn/DE, Nijmegen/NL), T. Quast, C. Kurts (Bonn/DE)
S. Geisberger (Berlin/DE), K. Kunzelmann, K. Hammer (Regensburg/DE)
K. J. Binger (Bundoora/AU), J. Titze (Singapore/SG), D. N. Müller (Berlin/DE)
W. Kolanus, J. L. Schultze (Bonn/DE), S. Wagner, J. Jantsch (Regensburg/DE)
- 19:17
181-IIV
The mitochondrial apoptosis apparatus contributes to the cell-autonomous defence in the absence of cell death
D. Brokatzky, B. Dörflinger, A. Haimovici, A. Weber, S. Kirschnek, J. Vier
A. Metz, J. Henschel (Freiburg i. Br./DE), T. Steinfeldt (Freiburg i. Br./DE)
G. Häcker (Freiburg i. Br./DE)

18:00–19:30 Oral Session 27 – Zoonoses

HS 6

Chairs

Stefan Bereswill, Kerstin Stingl (Berlin/DE)

- 18:00
182-ZOV
Comparative transcriptomics combined with RNA interference reveals basis for differential cellular Shiga toxin sensitivity
A. Kehl, I. U. Kouzel, P. Berger, D. Steil (Münster/DE)
W. Makalowski (Münster/DE), Y. Suzuki (Tokyo/JP), H. Karch
A. Mellmann, J. Muthing (Münster/DE)
- 18:11
183-ZOV
Transcriptome analysis reveals profound effect of Shiga toxin phage carriage on *E. coli* O104:H4 motility and virulence gene expression
P. Berger (Münster/DE), I. U. Kouzel (Bergen/DE), M. Berger (Münster/DE)
N. Haarmann (Stuttgart/DE), H. Karch, A. Mellmann (Münster/DE)
- 18:22
184-ZOV
Role of phage-encoded NanS-p *O*-acetyl esterases of pathogenic *E. coli* O157:H7 and O104:H4 strains in mucin degradation and adherence to epithelial cell lines
H. Schmidt, N. Saile, S. Feuerbaum (Stuttgart/DE), G. Pohlentz
J. Muthing (Münster/DE), N. Haarmann (Stuttgart/DE)
- 18:33
185-ZOV
Effect of global regulators on pathogenicity of locus of enterocyte effacement-negative Shiga toxin-producing *E. coli*
L. Heinisch, M. Krause, H. Schmidt (Stuttgart/DE)
- 18:44
186-ZOV
Whole genome sequencing reveals extended natural transformation in *Campylobacter* impacting diagnostics and the pathogens adaptive potential
J. Golz, L. Epping, M.-T. Knüver, M. Borowiak, F. Hartkopf, C. Deneke
B. Malorny, T. Semmler, K. Stingl (Berlin/DE)

- 18:55 Carvacrol ameliorates acute campylobacteriosis in a clinical murine
187-ZOV infection model
S. Bereswill, S. Mousavi, U. Escher, A.-M. Schmidt (Berlin/DE)
S. Kittler (Hanover/DE), C. Kehrenberg (Gießen/DE)
E. Thunhorst (Hanover/DE), M. M. Heimesaat (Berlin/DE)
- 19:06 Impact of milk and peptide utilization on the metabolic fitness and
188-ZOV proliferation of *Brucella melitensis* and *Brucella abortus*
A. Stephan, S. Al Dahouk, D. Hofreuter (Berlin/DE)
- 19:17 Functional analysis of *ica*-like genes in livestock-associated *Staphylococcus*
189-ZOV *sciuri* isolates
G. Marincola, G. Jaschkowitz, A.-K. Kieninger (Würzburg/DE)
A. Feßler, S. Schwarz (Berlin/DE), W. Ziebuhr (Würzburg/DE)

18:00–19:30 Oral Session 28 – Molecular Infection Epidemiology

HS 8

Chair Stefan Niemann (Borstel/DE), Torsten Semmler (Berlin/DE)

- 18:00 Molecular characterization of pneumococcal isolates from children
190-MIEV vaccinated with PCV-13 in Cape Coast, Ghana
R. O. Mills (Greifswald/DE, Cape Coast/GH), M. R. Abdullah (Greifswald/DE)
S. Akwetey, D. Sappor (Cape Coast/GH), J. A. B. Muñoz, G. Gámez (Medellín/CO)
M. P. G. van der Linden, S. Hammerschmidt (Greifswald/DE)
- 18:11 ASA³P – an automatic and scalable pipeline for the assembly, annotation and
191-MIEV higher level analysis of closely related bacterial isolates
O. Schwengers, A. Hoek, M. Fritzenwanker, L. Falgenhauer, T. Hain
T. Chakraborty, A. Goesmann (Gießen/DE)
- 18:22 Genome-wide identification of Host-Specificity of *Campylobacter jejuni* in
192-MIEV Germany based on Whole Genome Data
L. Epping, R. M. Piro, M.-T. Knüver, M. Borowiak, C. Huber, A. Thürmer
B. Malorny, K. Stingl, A. Fruth, L. H. Wieler, T. Semmler (Berlin/DE)
- 18:33 Surveillance of *Salmonella* Agona outbreaks in Bavaria by Next Generation
193-MIEV Sequencing
A. Dangel, A. Berger, U. Messelhäuser, R. Konrad, S. Hörmansdorfer
A. Sing (Oberschleißheim/DE)
- 18:44 Penicillin binding proteins – the one and only key to β -lactam resistance in
194-MIEV *Staphylococcus aureus*?
A. Sommer, M. B. Erdmann, S. Fuchs, G. Werner
B. Strommenger (Wernigerode/DE)

18:55 195-MIEV	Molecular analysis of a <i>Serratia marcescens</i> colonisation outbreak in a neonatal intensive care unit indicates a role for the type 6 secretion system M. Werner, A. Ensser, G. Valenza, F. Fahlbusch (Erlangen/DE) S. Coulthurst (Dundee/GB), B. Kunz, C. Bogdan, <u>R. Lang</u> (Erlangen/DE)
19:06 196-MIEV	A publicly accessible database for <i>Clostridioides difficile</i> genome sequences supports tracing of transmission chains and epidemics <u>M. Frentrup</u> (Braunschweig/DE), Z. Zhou (Warwick/GB), M. Steglich J. Meier-Kolthoff, M. Göker, T. Riedel, B. Bunk, C. Spröer J. Overmann (Braunschweig/DE), M. Blaschitz, A. Indra (Vienna/AT) L. von Müller (Coesfeld/DE), T. A. Kohl, S. Niemann (Borstel/DE) C. Seyboldt (Jena/DE), F. Klawonn (Braunschweig, Wolfenbüttel/DE) N. Kumar, T. D. Lawley (Hinxton/GB), S. García-Fernández, R. Cantón R. del Campo (Madrid/ES), O. Zimmermann, U. Groß (Göttingen/DE) M. Achtman (Warwick/GB), U. Nübel (Braunschweig/DE)
19:17 197-MIEV	Molecular epidemiology of Vancomycin-resistant Enterococci – four years of state-wide surveillance in North Rhine-Westphalia <u>C. L. Correa-Martinez</u> (Münster/DE), A. Jurke (Bochum/DE), J. Schmitz S. Kampmeier, A. Mellmann (Münster/DE)
19:30–20:00	Treffen der DGHM & VAAM Fachgruppe
SR 202	FG Mikrobielle Pathogenität (MP)
From 20:00	Mixer (please refer to p. 173)
Moritzbastei	

08:15–09:00 Treffen der Ständigen Arbeitsgemeinschaft

HS 9 StAG Nationale Referenzzentren und Konsiliarlaboratorien (NRZ/KL)

09:00–10:30 Oral Session 29 – Environmental Microbiology III

Audimax
Chairs Microbial Interactions, Adaptation and Communication
Mia Bengtsson (Greifswald/DE), Anja Worrich (Leipzig/DE)

09:00 Population-level transcriptional responses to wetting and desiccation in an
198-EMV arid biological soil crust
S. Imminger, D. Meier, A. Schintlmeister, D. Woebken (Vienna/AT)

09:11 Chemolithoautotrophic primary production sustains microbial food webs in
199-EMV oxic groundwater
M. Taubert, G. Azemtsop, R. Houhou (Jena/DE), N. Jehmlich
M. von Bergen (Leipzig/DE), P. Rösch, J. Popp (Jena/DE)
K. Küsel (Jena, Leipzig/DE)

09:22 The Good, the Bad, and the Smelly – Ecology of the Human Axillary
200-EMV Microbiome
C. Koch, S. Nordzieke, G. Schmaus (Holzminden/DE)

09:33 Cultivation experiments and genomic analysis suggest adaptation towards
201-EMV a host-independent lifestyle of a symbiont-related marine bacterium
K. Sass (Kiel, Hamburg/DE), S. Güllert, W. R. Streit (Hamburg/DE)
M. Perner (Kiel/DE)

09:44 The influence of precursor feeding on the production of calcimycin
202-EMV derivatives in *Streptomyces chartreusis*
K. Arend, C. Senges, J. Bandow (Bochum/DE)

09:55 Biological and ecological relevance of unusual sesquiterpene, sodorifen
203-EMV from *Serratia plymuthica* 4Rx13
M. C. Lemfack, P. K. Ruciaka, N. Magnus, B. Piechulla (Rostock/DE)

10:06 *In vivo* Mapping of the Mycosphere pH at the Microscale
204-EMV B.-J. Xiong, C. Dusny, K. Lindstaedt, D. Schlosser, L. Y. Wick (Leipzig/DE)

10:17 Discovering a novel planctomycetal quorum sensing molecule
205-EMV N. Kallscheuer (Nijmegen/NL), O. Jeske, B. Sandargo
C. Boedeker (Braunschweig/DE), S. Wiegand (Nijmegen/NL),
P. Bartling (Braunschweig/DE), M. Jogler (Jena/DE), M. Rohde,
J. Petersen (Braunschweig/DE), M. Medema (Wageningen/NL)
F. Surup (Braunschweig/DE), C. Jogler (Jena/DE)

09:00–10:30 Oral Session 30 – National Reference Laboratories and Consiliary Laboratories

HS 9

Chairs Volkhard A. J. Kempf (Frankfurt a. M./DE), Ulrich Vogel (Würzburg/DE)

09:00 Update on diagnosis of Whipple's disease – From the gut over the heart
206-NRZV valve into the urine?

J. Kikhney, A. Wießner, V. Moos (Berlin/DE), M. Wolters
H. Rohde (Hamburg/DE), A. Moter (Berlin/DE)

09:11 The jigsaw puzzle of genomics – Evaluation of sequencing and assembly
207-NRZV strategies for *Francisella tularensis*, a re-emerging zoonotic pathogen

K. Neubert (Berlin/DE), E. Zuchantke (Jena/DE), R. Leidenfrost,
R. Wünschiers (Mittweida/DE), H. Brendebach, S. Al Dahouk (Berlin/DE)
H. Hotzel (Jena/DE), K. Reinert (Berlin/DE), H. Neubauer, H. Tomaso
A. Busch (Jena/DE)

09:22 Whole genome sequencing of *Neisseria meningitidis* W from Germany
208-NRZV 2012 – 2018 during the European outbreak

M. Krone, T.-T. Lâm, U. Vogel, H. Claus (Würzburg/DE)

09:33 The rise of *Enterococcus faecium* ST117 – A 20 years longitudinal analysis of
209-NRZV a successful hospital-adapted lineage

J. Bender (Berlin/DE), C. Fleige, B. Neumann, R. Weber, I. Klare,
G. Werner (Wernigerode/DE)

09:44 Molecular surveillance of listeriosis in Germany – Identification of large
210-NRZV listeriosis outbreaks by whole genome sequencing

S. Halbedel (Wernigerode/DE), H. Wilking, S. Kleta, A. Holzer
R. Lachmann (Berlin/DE), M. Fischer (Wernigerode/DE)
A. Pietzka (Vienna/AT), S. Lüth (Berlin/DE), S. Huhulescu (Vienna/AT)
S. Al Dahouk (Berlin, Aachen/DE), K. Stark (Berlin/DE)
A. Flieger (Wernigerode/DE)

09:55 High heterogeneity of plasmid-mediated quinolone resistance in
211-NRZV *Escherichia coli* isolates recovered from livestock and food in Germany

K. Juraschek, M. Grobbel, A. Käsbohrer, B.-A. Tenhagen
J. A. Hammerl (Berlin/DE)

10:06 Causative agents of invasive fungal infections in Germany and their
212-NRZV antifungal susceptibilities determined by the National Reference Centre
for Invasive Fungal Infections (NRZMyk)

G. Walther (Jena/DE), O. Kurzai (Jena, Würzburg/DE)

10:17 Report of the German Consulting Laboratory on Tick-Borne Encephalitis
213-NRZV G. Dobler (Munich/DE)

09:00–10:30 Oral Session 31 – Microbiota, Symbiosis and Host II

HS 1

Chair Martin Kaltenpoth (Mainz/DE)

09:00 Symbiont Metabolic Contributions Impact Tsetse Vector Competency

Invited Speaker B. Weiss (New Haven, CT/US)

09:30 Metamorphosis of the marine Hydrozoan *Hydractinia echinata* is mediated
214-MSHV by bacterial membrane componentsM. Rischer, H. Guo, C. Beemelmans, M. Westermann (Jena/DE)09:41 The RWV bioreactor – a 3D cell culture model to characterize the molecular
215-MSHV mechanisms of bacterial (probiotic *E. coli* Nissle 1917) and host interactionJ. Gonzalez (Münster/DE), R. von Buenau (Herdecke/DE), P. Dersch
U. Dobrindt, C. Cichon (Münster/DE)

09:52 Predatory bacteria enhance microbiome diversity and host health

216-MSHV J. Johnke, H. Schulenburg (Kiel/DE)10:03 Dual-Seq of *Caedibacter taeniospiralis* genome and transcriptome, obligate
217-MSHV endosymbiont of *Paramecium*

M. Pirritano (Wuppertal/DE), N. Zaburanyi (Saarbrücken/DE)

K. Grosser (Freiburg i. Br./DE), G. Gasparoni, R. Müller (Saarbrücken/DE)

M. Simon (Wuppertal/DE), M. Schrallhammer (Freiburg i. Br./DE)10:14 Priority effects in *Pantoea agglomerans* colonization of the wheat root218-MSHV R. Soluch, N. Hülter, T. Dagan (Kiel/DE)

09:00–10:30 Oral Session 32 – Metabolic Modelling and Engineering & Synthetic Microbiology

HS 2

Chairs Jens Krömer (Leipzig/DE), Jan Marienhagen (Jülich/DE)

09:00 Deciphering the lifestyle of *Pseudomonads* and related species using a
219-MSMV novel high resolution ¹³C metabolic flux approachM. Kohlstedt, C. Wittmann (Saarbrücken/DE)09:11 Genome-scale microbial community modeling with μ bialSim220-MSMV F. Centler, D. Popp (Leipzig/DE)09:22 Observation of fluorescent FAST-tagged protein production during growth
221-MSMV of the strict anaerobic acetogen *Eubacterium limosum*M. Flaiz, J. Gaibler, F. R. Bengelsdorf, P. Dürre (Ulm/DE)

09:33 Modelling phototrophic growth – from single cells to microbial communities

222-MSMV R. Steuer (Berlin/DE)

- 09:44
223-MSMV Lights on and action – optogenetic control of biosynthetic pathways
F. Hilgers, N. Bitzenhofer, D. Binder (Jülich/DE)
A. Burmeister (Jülich, Bielefeld/DE), A. Grünberger (Bielefeld, Jülich/DE)
A. Loeschcke, F. Hogenkamp, J. Pietruszka, K.-E. Jaeger
T. Drepper (Jülich/DE)
- 09:55
224-MSMV Marburg Collection – a highly flexible cloning toolbox for the emerging
SynBio chassis *Vibrio natriegens*
D. Stukenberg, T. Hensel, J. Hoff (Marburg/DE)
B. Daniel (Marburg, Zuerich/DE), R. Inckemann (Marburg/DE)
G. Fritz (Perth/AU)
- 10:06
225-MSMV Recombinant production of prodiginines in engineered *Pseudomonas*
putida strains
R. Weihmann, F. Kofler, S. Ibrahim, F. Gätgens, J. Gebauer
A. Domröse, S. Thies, S. Kubicki, H. U. C. Brass, A. S. Klein, J. Pietruszka
T. Drepper, K.-E. Jaeger, A. Loeschcke (Jülich/DE)
- 10:17
226-MSMV Development of *Vibrio natriegens*, and its prophage-free variant, as a novel
host for biotechnology
R. Stella, E. Pfeifer, S. Lorke, J. Frunzke (Jülich/DE)
- 09:00–10:30 Oral Session 33 – Sensing and Signalling I
- HS 4
Chairs Jörg Stülke (Göttingen/DE), Annegret Wilde (Berlin/DE)
- 09:00
227-SeSiV Characterization of a novel Ser/Thr kinase in *Escherichia coli*
F. Gratani, T. Englert, M. Semanjski, B. Mačák (Tübingen/DE)
- 09:11
228-SeSiV Transcription of the PCE regulon in organohalide-respiring *Sulfurospirillum*
species is controlled by a two-component system
J. Esken, T. Schubert (Jena/DE)
- 09:22
229-SeSiV Control of the bifunctional O₂-sensor kinase NreB of *Staphylococcus*
carnosus by the nitrate sensor NreA
R. Klein, A.-K. Kretzschmar, G. Uden (Mainz/DE)
- 09:33
230-SeSiV Phenotypical and functional characterization of the bacterial phytochrome
PaBphP of *Pseudomonas aeruginosa*
C. Huber, J. Pielage, N. Frankenberg-Dinkel, K. Bilici
L. Denig (Kaiserslautern/DE)
- 09:44
231-SeSiV Control of light-dependent type 4 pilus activity during cyanobacterial
phototaxis
N. Schuergers, Y. Han, A. Jakob, A. Wilde (Freiburg i. Br./DE)

- 09:55 Regulation of motility in *Vibrio cholerae* by RNA-binding protein ProQ
232-SeSiV D. Devlitsarov, K. Papenfort (Jena/DE)
- 10:06 How the most abundant ions become toxic to *Bacillus subtilis*
233-SeSiV L. Krüger, C. Herzberg, J. Stülke (Göttingen/DE)
- 10:17 Staying or leaving – c-di-GMP regulated cell behavior in probiotic *E. coli*
234-SeSiV Nissle 1917
A. M. Cimdins-Ahne, V. Mete, M. Kiel (Münster/DE), H. Bähre
V. Kaefer (Hanover/DE), U. Dobrindt (Münster/DE)

09:00–10:30 Oral Session 34 – Eukaryotic Pathogens – The Pathogen Side

- HS 5
Chairs Sascha Brunke (Jena/DE), Christian Klotz (Berlin/DE)
- 09:00 Konsiliarlabor für Kryptokokose und seltene Systemmykosen
DMYK Lecture: V. Rickerts (Berlin/DE)
- 09:30 Molecular characterization of *Giardia duodenalis*
235-EPV A. Woschke, M. Faber, K. Stark (Berlin/DE), M. Holtfreter (Düsseldorf/DE)
T. Regnath (Stuttgart/DE), I. Sobottka (Geesthacht/DE), A. Diefenbach
R. Ignatius, A. Aebischer, C. Klotz (Berlin/DE)
- 09:41 A novel protein essential for unconventional secretion of chitinase Cts1 in
236-EPV *Ustilago maydis*
M. Reindl, J. Stock, K. Hussnaetter, S. Wolf, M. Feldbrügge
K. Schipper (Düsseldorf/DE)
- 09:52 Human serum albumin differentially modulates *Candida*-induced damage
237-EPV of vaginal epithelium on a species level
M. Pekmezovic (Jena/DE), A.-K. Kaune (Jena/DE, Aberdeen/GB)
S. Austermeier, S. Mogavero, M. Gresnigt, B. Hube (Jena/DE)
- 10:03 Conidial melanin of the human pathogenic fungus *Aspergillus fumigatus*
238-EPV disrupts cell autonomous defenses in amoebae
I. Ferling (Jena/DE), J. D. Dunn (Geneva/CH), A. Ferling (Heidenheim/DE)
T. Soldati (Geneva/CH), F. Hillmann (Jena/DE)
- 10:14 The gut commensal *Bacteroides vulgatus* mpk reduces *Candida albicans*
239-EPV pathogenicity *in vitro* and *in vivo*
M. J. Niemiec, I. Auge, P. van Leeuwen, F. Gorki (Jena/DE)
A. Steimle (Tübingen/DE, Luxembourg/LU), M. Brüggemann (Jena/DE)
J.-S. Frick (Tübingen/DE), I. D. Jacobsen (Jena/DE)

09:00–10:30 Oral Session 35 – Food Microbiology and Hygiene II

HS 6

Chairs Markus Egert (Furtwangen/DE), Mareike Wenning (Oberschleißheim/DE)

09:00 Combining isothermal microcalorimetry and microbiological analytics for
240-FMV fast and reliable detection of microbial contaminations
C. Fricke, H. Harms, T. Maskow (Leipzig/DE)

09:11 Repeated microwave sanitization adversely alters the genetic potential of
241-FMV the kitchen sponge microbiome
S. Jacksch, J. Thota, M. Egert (Villingen-Schwenningen/DE)

09:22 Effect of wash water additives on the microbial and sensory quality of curly parsley
242-FMV S. Nübling, F. Hägele, R. M. Schweiggert (Stuttgart/DE)
R. Carle (Stuttgart/DE, Jeddah/SA), H. Schmidt, A. Weiß (Stuttgart/DE)

09:33 Time-dependent variation of biofilm community composition on stainless
243-FMV steel surfaces in milking machine
M. Weber, A. Lipski (Bonn/DE)

09:44 Revaluation of decontamination strategies against *Campylobacter jejuni*
244-FMV and ESBL-producing *Escherichia coli* on chicken skin by viability qPCR
I. F. Wulsten, M. Thieck, A. Göhler, E. Schuh, K. Stingl (Berlin/DE)

09:55 Effect of calcium on specific genes of the proteolytic system of *Lactococcus*
245-FMV *lactis* starter strains
B. Forler, A. Weiß, H. Schmidt (Stuttgart/DE)

10:06 Typing of *Salmonella enterica* by Fourier Transform Infrared (FTIR) Spectroscopy
246-FMV M. Cordovana (Bologna/IT), N. Mauder (Bremen/DE), S. Pongolini
L. Soliani (Parma/IT), S. Ambretti (Bologna/IT), M. Kostrzewa (Bremen/DE)

10:17 Plasma Treated Water – from lab to prototype for fresh food safety
247-FMV U. Schnabel (Greifswald/DE, Dublin/IE), J. Stachowiak (Greifswald/DE)
P. Bourke (Dublin/IE), J. Ehlbeck (Greifswald/DE)

09:00–10:30 Oral Session 36 – Zoonoses & Hospital Infection Control, Outbreaks and MDRO III

HS 8

Chairs Molecular Epidemiology in Infection Control
Nico Mutters (Freiburg i. Br./DE), Birgit Strommenger (Berlin/DE)

09:00 Independent bioinformatics methods in bacterial genomics:
248-ZHYV Clustering *Francisella tularensis* isolates reveals old structures in a new light
T. Homeier-Bachmann (Riems/DE), A. Busch, M. Abdel-Gilil, A. Hackbart
H. Hotzel, H. Tomaso (Jena/DE)

- 09:11
249-ZHYV "CoxBase" – a unique interactive genotyping database for Q fever (*Coxiella burnetii*)
D. Frangoulidis, M. C. Walter (Munich/DE), T. Dandekar (Würzburg/DE)
A. Helbich (Munich/DE), K. Förstner (Cologne/DE)
M. Fasemore (Munich, Würzburg/DE)
- 09:22
250-ZHYV Vitamin C alleviates acute enterocolitis in *Campylobacter jejuni* infected mice
S. Mousavi (Berlin/DE), E. Thunhorst, S. Kittler (Hanover/DE)
S. Bereswill, M. M. Heimesaat (Berlin/DE)
- 09:33
251-ZHYV Risk Factors for Anti-Hantavirus and Anti-Leptospira-Seropositivity amongst Forestry Workers in Lower Saxony, Germany
C. Klier, C. Princk, M. Mylius, K. Meyer-Schlinkmann, S. Schmitz
M. Monazahian, A. Baillot, S. Rettenbacher-Riefler
J. Dreesman (Hanover/DE)
- 09:44
252-ZHYV IS26-mediated transfer of *bla*_{NDM-1} as the main route of resistance transmission during a polyclonal, multispecies outbreak in a German hospital
R. Weber, M. Pietsch, A. Frühauf, Y. Pfeifer (Wernigerode/DE), M. Martin
D. Luft (Heilbronn/DE), S. G. Gatermann, N. Pfennigwerth
M. Kaase (Göttingen/DE), G. Werner, S. Fuchs (Wernigerode/DE)
- 09:55
253-ZHYV Mutations of resistance-nodulation-cell division efflux pump regulators in tigecycline-resistant *Acinetobacter baumannii* observed in a worldwide surveillance study
K. Lucaßen (Cologne/DE), C. Müller, J. Wille, K. Xanthopoulou (Cologne/DE), M. Hackel (Schaumburg, IL/US)
H. Seifert, P. G. Higgins (Cologne/DE)
- 10:06
254-ZHYV Emergence of ceftazidime/avibactam resistance in KPC-3 producing *Klebsiella pneumoniae* *in vivo*
S. Göttig, D. Frank, E. Mungo, A. Nolte, M. Hogardt, S. Besier
T. A. Wichelhaus (Frankfurt a. M./DE)
- 10:17
255-ZHYV Transmission Surveillance of Multi-drug Resistant (MDR-) *Escherichia coli* Using Fourier-Transform Infrared (FTIR) Spectroscopy and Whole Genome Sequencing as Strain Typing Methods
S. Vogt, K. Löffler, B. Bader, S. Peter, J. Liese (Tübingen/DE)

09:00–10:30 jDGHM – Investigating the Phylogeny of Drug-Resistant Pathogens and the Taxonomy of the Gut Microbiome

HS 10

- 09:00 Introduction to Bioinformatics: Sample to Sequence
J. Sommer (Frankfurt a. M./DE), T. Wienemann (Düsseldorf/DE)

09:22 Investigating the Phylogeny of multidrug-resistant Pathogens
K. Schaufler (Greifswald/DE)

09:44 The taxonomy of the Gut Microbiome
M. Willmann (Tübingen/DE)

10:30–11:00 Lunch Break in the Industrial Exhibition Area

11:00–12:30 Joint Plenary Session 7 – Single Cell Microbiology

Audimax

Chairs Jan Buer (Essen/DE), Andreas Schmid (Leipzig/DE)

11:00 Mechanisms of Bacterial Surface Adhesion
Yves V. Brun (Montréal/CA)

11:30 Dynamics of the Cytome – Insights into the Ecology of Microbial Communities
Susann Müller (Leipzig/DE)

12:00 Sleeping Beauty – Impact of Xenogeneic Silencing on Phage-Host Interaction
Julia Frunzke (Jülich/DE)

11:00–12:30 Hygiene-Symposium



HS 9 Pro and Contra – Technische Hygiene – Water, Air, Bacteria, but Infections
Chairs Petra Gastmeier (Berlin/DE), Christian Brandt (Berlin/DE)

11:00 Water in healthcare facilities – Risks and medication strategies
J. Hopman (Nijmegen/NL)

11:25 Legionella im Krankenhaus – Wie soll man reagieren?
C. Lück (Dresden/DE)

11:50 Turbulenzarme Verdrängungsströmung im OP-Saal – Pro und Contra aus hygienischer Sicht
F. Pitten (Gießen/DE), P. Bischoff (Berlin/DE)

11:00–12:30 NFDI4 Microbiota – Second Community Workshop

SR 202 The National Research Data Infrastructure for the Research of Microbiota
With this workshop we would like to present NFDI for the Research of Microbiota (NFDI4Microbiota, <https://nfdi4microbiota.de/>), share its vision and collect feedback from the community.

11:00 The National Research Data Infrastructure for the Research of Microbiota (NFDI4Microbiota)
 A. Becker (Marburg/DE), P. Bork (Heidelberg/DE), B. Bunk (Braunschweig/DE)
 T. Clavel (Aachen/DE), U. Nunes da Rocha (Leipzig/DE), K. Förstner (Cologne/DE)
 A. Goesmann (Gießen/DE), M. Marz (Jena/DE), A. McHardy
 J. Overmann (Braunschweig/DE), A. Pühler (Bielefeld/DE)
 L. Reimer (Braunschweig/DE), A. Sczyrba, J. Stoye (Bielefeld/DE)
 T. Van Rossum (Heidelberg/DE), J. Vandendorpe (Cologne/DE)

12:30–13:00 Poster Awards

Audimax

13:00–13:30 Coffee Break in the Industrial Exhibition Area

13:30–14:30 Microbe Slam (please refer to p. 26)

Audimax

13:30–15:30 Academy Hospital Infection Epidemiology and Outbreak Management



HS 10 Akademie Infektionsepidemiologie und Ausbruchsmangement

13:30 Grundlagen des Ausbruchsmangements
 T. Eckmanns (Berlin/DE)

14:00 Molekularbiologische Methoden der Ausbruchsdagnostik
 N. Mutters (Freiburg i. Br./DE)

14:45 Beispiel einer Ausbruchsaufklärung
 R. Leistner (Berlin/DE)

15:15 Automatisierte Detektion von Ausbrüchen
 S. Aghdassi (Berlin/DE)
 Attention: The registration for the workshop is mandatory.

14:30–16:00 Oral Session 37 – Environmental Microbiology IV

Audimax Novel Approaches to Explore Microbial Habitats and Biogeochemical Cycles
 Chairs Hauke Harms (Leipzig/DE), Martin Taubert (Jena/DE)

14:30 Bacterial N and P Cycle in Biological Soil Crusts of Temperate Forests of Germany
 256-EMV J. Kurth (Freising, Munich/DE), M. Albrecht, U. Karsten (Rostock/DE)
 S. Kublik (Munich/DE), M. Schlöter (Freising, Munich/DE), S. Schulz (Munich/DE)

14:41 A bacterial isolate from the Black Sea oxidizes sulfide with manganese(IV) oxide
 257-EMV J. Henkel, O. Dellwig, F. Pollehne (Rostock/DE)
 D. Herlemann (Rostock/DE, Vehendi Village/EE), T. Leipe
 H. Schulz-Vogt (Rostock/DE)

- 14:52
258-EMV Isolation and characterization of halo-tolerant iron-oxidizing bacteria,
Alicyclobacillus spp.
N. D. Huynh, G. Haferburg, S. Kaschabek, M. Schlömann (Freiberg/DE)
- 15:03
259-EMV Dissecting sedimentary microbial populations in reactive hot spots of the
transition zone between groundwater and surface water of first-order streams
Z. Wang (Bayreuth, Munich/DE), Ó. J. Fernández (Tübingen, Leipzig/DE)
M. Schwientek (Tübingen/DE), G. Barthel (Neuherberg/DE)
T. Lüders (Bayreuth/DE)
- 15:14
260-EMV Targeted metagenomics of environmental bacteria
A. Grieb (Bremen/DE), R. M. Bowers (Walnut Creek, CA/US)
M. Oggerin (Bremen/DE), D. Goudeau, J. Lee, R. R. Malmstrom
T. Woyke (Walnut Creek, CA/US), B. M. Fuchs (Bremen/DE)
- 15:25
261-EMV A high-pressure concept for cultivation of not-yet-cultivated
microorganisms from different subsurface ecosystems
T. Trubold (Nuremberg/DE), M. Hügler (Karlsruhe/DE)
R. Moeller (Cologne/DE), A. J. Probst (Essen/DE)
M. Könneke (Bremen/DE), M. Huth (Berlin/DE)
- 15:36
262-EMV Life in the Freezer?! – A culture-independent approach to assess potential
microbial colonization of liquid nitrogen storage tanks
F. Bajerski (Braunschweig/DE), A. Bürger (Munich/DE)
B. Glasmacher (Hanover/DE), E. R. J. Keller (Seeland, OT Gatersleben/DE)
K. Müller, K. Mühldorfer (Berlin/DE)
M. Nagel (Seeland, OT Gatersleben/DE), H. Rüdél (Schmallenberg/DE)
T. Müller (Sulzbach/DE), J. Schenkel (Heidelberg/DE)
J. Overmann (Braunschweig/DE)
- 15:47
263-EMV A breath of “fresh country air” from a microbiological point of view
I. Laufer (Berlin/DE), H. Kühne (Radebeul/DE), S. Ratering (Gießen/DE)
U. Jäckel (Berlin/DE)

14:30–16:00 Oral Session 38 – Infection Immunology & Zoonoses

HS 9

Chairs Jonathan Jantsch (Regensburg/DE), Birgit Strommenger (Wernigerode/DE)

14:30
264-IIZV MyD88-dependent expression of IRG1 is required for efficient control of
Coxiella burnetii infection

L. Kohl, I. Hayek, C. Daniel, A. Bozec, A. Lührmann, R. Lang (Erlangen/DE)

14:41
265-IIZV The role of the complement system and diabetes in invasive candidiasis

V. Harpf, S. Kenno, C. Speth, G. Rambach, V. Fleischer, N. Parth

C. Lass-Flörl, R. Würzner (Innsbruck/AT)

- 14:52
266-IIZV *Candida albicans* induces complement receptor 3 (CD18/CD11b) dependent human monocyte TGF- β 1-transporting vesicles with immunomodulatory properties
L. D. Halder, E. A. H. Jo, M. Z. Hasan, M. Ferreira-Gomes, T. Krüger
M. Westermann, D. I. Palme (Jena/DE), G. Rambach (Innsbruck/AT)
N. Beyersdorf (Würzburg/DE), C. Speth (Innsbruck/AT), I. D. Jacobsen
O. Kniemeyer, B. Jungnickel, P. F. Zipfel, C. Skerka (Jena/DE)
- 15:03
267-IIZV Surprisingly similar humoral immune response to *Cryptococcus neoformans* in patients with cryptococcal meningitis and in healthy people with presumed environmental exposure
A. E. Greßler, B. Schulze, D. Volke, U. Müller, D. Piehler
A. Grahnert (Leipzig/DE), C. Firacative (Bogotá/CO, Leipzig/DE)
P. Escandón (Bogotá/CO), R. Hoffmann, G. Alber (Leipzig/DE)
- 15:14
268-IIZV Determination of the complement-inhibitory activity of different outer surface proteins of *Borrelia recurrentis*
F. Röttgerding, E. Gerlach (Frankfurt a. M./DE)
K. Fritz-Wolf (Heidelberg, Gießen/DE), K. Becker (Gießen/DE)
P. Krawczyk (Frankfurt a. M./DE)
- 15:25
269-IIZV Characterization of *Arcobacter* strains isolated from human stool samples – results from the prospective German prevalence study Arcopath
V. Brückner, U. Fiebigler, R. Ignatius, J. Friesen, M. Eisenblätter
M. Höck, T. Alter, S. Bereswill, M. M. Heimesaat, G. Gözl (Berlin/DE)
- 15:36
270-IIZV Efficacy of recombinant BCG vaccine candidates against *Mycobacterium bovis* infection in goats
H. Köhler, N. Wedlich, J. Figl, E. Liebler-Tenorio (Jena/DE)
K. von Pückler (Gießen/DE), S. Mamerow (Jena, Greifswald/DE)
M. Rissmann (Jena/DE), R. Ulrich, C. Schröder (Greifswald/DE)
L. Grode (Hanover/DE), S. H. E. Kaufmann (Berlin/DE), C. Menge (Jena/DE)
- 15:47
271-IIZV The role of polymorphic membrane proteins (Pmps) in *Chlamydia psittaci* strains with different infectious potential
A. Favaroni, A. Trinks, C. Schnee (Jena/DE)

14:30–16:00 Oral Session 39 – Archaea

HS 1

Chairs

Benjamin Meyer (Essen/DE), Dina Grohmann (Regensburg/DE)

14:30

272-ARV

Anaerobic enrichment cultures from the Guaymas Basin reveal an unexpected diversity of thermophilic alkane-oxidizing archaea
G. Wegener, R. Laso-Pérez, C. Hahn, D. Benito-Merino, H. Zehnle
M. Liebeke, A. Teske, K. Knittel (Bremen/DE)

- 14:41
273-ARV New mode of methanogenesis observed in the coal degrading methanogen *Methermicoccus shengliensis*
J. Kurth (Nijmegen/NL), M. Nobu, H. Tamaki (Tsukuba/JP), N. de Jonge
J. L. Nielsen (Aalborg/DK), M. S. M. Jetten (Nijmegen/NL)
Y. Kamagata (Tsukuba/JP), C. Welte (Nijmegen/NL)
- 14:52
274-ARV Dispensable methanogenic energy conservation in *Methanosarcina acetivorans*
C. Schöne (Dresden/DE), N. Jehmlich (Leipzig/DE), M. Rother (Dresden/DE)
- 15:03
275-ARV Enriching and managing a hydrogenotrophic microbiome towards selective methane production during *ex situ* biomethanation
W. Logrono, D. Popp, H. Harms, S. Kleinstüber, M. Nikolausz (Leipzig/DE)
- 15:14
276-ARV Microbial electrosynthesis of methane with different methanogens
F. Mayer, F. Enzmann, D. Holtmann (Frankfurt a. M./DE)
- 15:25
277-ARV Nanopore-based native RNA sequencing provides insights into prokaryotic transcription, operon structures, rRNA transcription, splicing, and RNA modifications
F. Grünberger, R. Knüppel, M. Jüttner, M. Fenk (Regensburg/DE)
A. Borst (Frankfurt a. M./DE), W. Hausner (Regensburg/DE)
J. Soppa (Frankfurt a. M./DE), S. Ferreira-Cerca
D. Grohmann (Regensburg/DE)
- 15:36
278-ARV The DPANN way of life – insights into the interaction of a Micrarchaeon and a novel member of the Thermoplasmatales
S. Gfrerer (Karlsruhe, Eggenstein-Leopoldshafen/DE)
S. Krause (Karlsruhe/DE), L. Villanueva (Den Burg/DE)
B. Bunk (Braunschweig/DE), U. Kuhlicke, T. R. Neu (Magdeburg/DE)
C. Reuse, K. Schmidt-Hohagen, K. Hiller (Braunschweig/DE)
J. Gescher (Karlsruhe, Eggenstein-Leopoldshafen/DE)
- 15:47
279-ARV Protein glycosylation in the thermoacidophilic crenarchaeon
S. acidocaldarius – resemblance and unique features to the eukaryal and bacterial protein glycosylation process
B. Meyer (Essen/DE, Dundee/GB, Freiburg i. Br./DE), L. Kuschmierz
S. Meckelmann, J. Wingender (Essen/DE), H. Dorfmueller (Dundee/GB)
S.-V. Albers (Freiburg i. Br./DE), B. Siebers (Essen/DE)

14:30–16:00 Oral Session 40 – Microbial Pathogenicity III

- HS 2 Regulation and Transport of Bacterial Virulence Factors
Chairs Sebastian Geibel (Würzburg/DE), Manuel Wolters (Hamburg/DE)
- 14:30 There are many routes to the Type IVB Secretion System (T4BSS)
280-MPV S. Malsheimer, P. Kircheis, I. Grin, S. Wagner (Tübingen/DE)

- 14:41
281-MPV The T4SS effector protein AnkG of *Coxiella burnetii* modulates the 7SK snRNP complex to prevent apoptosis
A. Cordsmeier, W. Schäfer, M. Kraner (Erlangen/DE)
U. Fischer (Würzburg/DE), A. Lührmann (Erlangen/DE)
- 14:52
282-MPV Through the wall. New insights into the mechanism of typhoid toxin secretion in *Salmonella* Typhi
T. Geiger (New Haven, CT/US, Munich/DE), M. Lara-Tejero, Y. Xiong
J. E. Galán (New Haven, CT/US)
- 15:03
283-MPV SPI-1 translocated effectors prolong the intracellular survival of *Salmonella typhimurium* in macrophages
A.-L. Becker, K. Ehrhardt, M. Matern, G. A. Grassl (Hanover/DE)
- 15:14
284-MPV Visualization of *Yersinia enterocolitica* type III secretion during host-cell infection
M. Wolters, M. Rudolph, A. Carsten, M. Aepfelbacher (Hamburg/DE)
- 15:25
285-MPV Functional membrane microdomains coordinate staphylococcal heme acquisition
L. Adolf, A. Jochim (Tübingen/DE), L. Kricks, D. Lopez (Madrid/DE)
S. Heilbronner (Tübingen/DE)
- 15:36
286-MPV Identification of NWMN_0364, a novel virulence regulatory protein relevant for SaeRS activation in *Staphylococcus aureus*
J. Bosselmann, M. Kucklick, S. Engelmann (Braunschweig/DE)
- 15:47
287-MPV The functional ClpXP protease of *Chlamydia trachomatis* requires distinct clpP genes from separate genetic loci
S. Pan, D. Thomy, I. Malik (Tübingen/DE), B. Henrichfreise (Bonn/DE)
H. Brötz-Oesterhelt, P. Sass (Tübingen/DE)

14:30–16:00 Oral Session 41 – Microbial Ecology and Evolution II

HS 4

Chairs Antonis Chatzinotas (Leipzig/DE), Hinrich Schulenburg (Kiel/DE)

- 14:30
288-MEEV Specific drivers of soil bacterial activity
J. Sikorski, Y. Shang (Braunschweig/DE), M. Schruppf, I. Schöning (Jena/DE)
S. Marhan, E. Kandeler, R. S. Boeddinghaus (Hohenheim/DE)
K. Birkhofer (Cottbus/DE), N. Hölzel (Münster/DE), D. Prati, M. Fischer (Bern/CH), V. H. Klaus (Zurich/CH), T. Kleinebecker (Gießen/DE)
J. Overmann (Braunschweig/DE)
- 14:41
289-MEEV Effect of the entry of antibiotic-resistant pathogens on the community composition and the spread of resistance
S. Heß, K. David (Dresden/DE), M. Virta, T. Hiltunen (Helsinki/FI)

- 14:52
290-MEEV A novel plant tumorigenic *Rhizobium* sp. associated with crown gall disease of rhododendron, as revealed through genomics
N. Kuzmanovic, E. Idczak, S. Wagner, M. Götz, C. Spröer, B. Bunk
J. Overmann, K. Smalla (Braunschweig/DE)
- 15:03
291-MEEV Hells Bells – unique calcite formations that grow through microbial nitrate-driven sulfur oxidation
K. Leberecht (Karlsruhe, Eggenstein-Leopoldshafen/DE), S. Ritter
M. Isenbeck-Schröter, L. Klose, W. Stinnesbeck (Heidelberg/DE)
J. Gescher (Karlsruhe, Eggenstein-Leopoldshafen/DE)
- 15:14
292-MEEV Metatranscriptomic insights into syntrophic propionate metabolism in anaerobic digestion
S. Dykma, C. Gallert (Emden/DE)
- 15:25
293-MEEV Complex food webs in groundwater coincide with high genetic potential for chemolithoautotrophy
M. Herrmann (Jena, Leipzig/DE), P. Geesink (Jena/DE)
L. Yan (Leipzig, Jena/DE), R. Lehmann (Jena, Leipzig/DE)
K. U. Totsche (Jena/DE), K. Küsel (Jena, Leipzig/DE)
- 15:36
294-MEEV Predatory interactions between mycophagous amoeba and fungal pathogens
S. H. Lau, S. Höfgen, S. Radosa, I. Ferling, J. Sprague, V. Valiante
F. Hillmann (Jena/DE)
- 15:47
295-MEEV Horizontal transfer of bacteriocin micrococcin P1 genes among nasal *Staphylococcus aureus* strains
S. Krauss, B. Krismer, S. Heilbronner, A. Peschel (Tübingen/DE)

14:30–16:00 Oral Session 42 – Sensing and Signalling II & Microbial Stress Response II

HS 5

Chairs Fabian Commichau (Senftenberg/DE), Kai Papenfort (Jena/DE)

14:30
296-SeSiMV c-di-AMP metabolism and functions in *Streptomyces*
N. Tschowri (Berlin/DE)

14:41
297-SeSiMV Regulation and Mechanisms – Metabolism of the Osmostress protectants Ectoine and Hydroxyectoine in *Ruegeria pomeroyi*
L. Hermann, C.-N. Mais, A. Seubert, G. Bange, E. Bremer (Marburg/DE)

14:52
298-SeSiMV Rapid adaptation of signaling networks in the fungal pathogen *Magnaporthe oryzae*
K. Bersching, S. Bohnert (Kaiserslautern/DE), C. Grünewald (Mainz/DE)
A. Yemelin (Kaiserslautern/DE), K. Andresen (Mainz/DE)
S. Jacob (Kaiserslautern/DE)

- 15:03
299-SeSiMV Spotlight on Fungal Rhodopsins – Green Light Sensors Meet Super-resolution Microscopy and Electrophysiology
S. Panzer, S. Sputh, C. Stigloher, U. Terpitz (Würzburg/DE)
- 15:14
300-SeSiMV Identification and characterization of secondary active betaine/choline/carnitine transporters in *Acinetobacter baumannii*
J. Breisch, B. Averbhoff (Frankfurt a. M./DE)
- 15:25
301-SeSiMV Phosphoglucomutase is a key regulatory point in glycogen metabolism during nitrogen-chlorosis
S. Doello, K. Forchhammer (Tübingen/DE)
- 15:36
302-SeSiMV An Hfq-binding sRNA controlling fatty acid metabolism in *Vibrio cholerae*
M. Huber, K. Fröhlich, K. Papenfort (Jena/DE)
- 15:47
303-SeSiMV The critical role of Zur and SmtB in regulating zinc homeostasis of *Mycobacterium smegmatis*
E. Goethe, K. Laarmann, J. Lühns (Hanover/DE)
M. Jarek (Braunschweig/DE), J. Meens, R. Goethe (Hanover/DE)
A. Lewin (Berlin/DE)

14:30–16:00 Oral Session 43 – Phototrophic Microorganisms

- HS 6
Chairs Wolfgang R. Hess (Freiburg i. Br./DE), Stephan Klähn (Leipzig/DE)
- 14:30
304-PMV Syntrophy and coexistence in a sulfide-oxidizing phototrophic bloom: Uncultured *Chlorobi* drive microbial community dynamics and sulfur cycling in a hypoxic habitat
S. E. Ruff (Woods Hole, MA/US), S. Bhatnagar (Calgary/CA)
E. S. Cowley (Madison, WI/US), S. H. Kopf (Boulder, CO/US)
S. Pérez Castro (Woods Hole, MA/US), S. Kearney (Cambridge, MA/US)
S. C. Dawson (Davis, CA/US), K. Hanselmann (Zurich/CH)
- 14:41
305-PMV DNA-methylation is involved in the regulation of transcription, fine-tuning of DNA replication and DNA repair in the cyanobacterium *Synechocystis* sp. PCC 6803
M. Hagemann, K. Gärtner (Rostock/DE), S. Klähn (Leipzig/DE)
I. Scholz (Freiburg i. Br./DE), S. Mikkat (Rostock/DE), W. R. Hess (Freiburg i. Br./DE)
- 14:52
306-PMV Impact of c-di-GMP on the motor ATPase PilB1 of the type IV pilus in the model cyanobacterium *Synechocystis* sp. PCC 6803
T. Wallner, H. Kuemmel, C. van der Does, A. Wilde (Freiburg i. Br./DE)
- 15:03
307-PMV The nitrogen-regulated gene *ssr0692* encodes a small protein involved in controlling arginine metabolism in cyanobacteria
P. Bolay (Leipzig/DE), S. Timm, M. Hagemann (Rostock/DE)
K. Forchhammer (Tübingen/DE), S. Klähn (Leipzig/DE)

- 15:14
308-PMV Is nitrogen fixation by *Nostoc sp.* PCC7524 increased in a simulated early earth and future atmosphere?
K. Ebel (Kaiserslautern/DE), T. Bauersachs (Kiel/DE), A. Hermann
M. M. Gehringer (Kaiserslautern/DE)
- 15:25
309-PMV Cyanobacterial whole cell biocatalysts efficiently utilize photosynthetic electrons for oxyfunctionalisation reactions
J. Toepel, S. Lupacchini, A. Hoschek, M. Grund, A. Schmid
B. Bühler (Leipzig/DE)
- 15:36
310-PMV Flavodiiron proteins as potential targets to improve photosynthetically-driven biotransformations in *Synechocystis sp.* PCC 6803
L. Assil-Companioni, H. Büchenschütz (Graz/AT)
Y. Allahverdiyeva-Rinne (Turku/FI), M. Nowaczyk (Bochum/DE)
R. Kourist (Graz/AT)
- 15:47
311-PMV Grad-Seq analysis of a photosynthetic bacterium rich in internal membrane systems
M. Riediger (Freiburg i. Br./DE), P. Spät, B. Maček (Tübingen/DE)
W. R. Hess (Freiburg i. Br./DE)

14:30–16:00 Oral Session 44 – Membranes and Transport

- HS 8
Chairs José Manuel Borrero de Acuna (Braunschweig/DE)
Gary Sawers (Halle-Wittenberg/DE)
- 14:30
312-MTV Controlling the bacterial type III secretion system through protein dynamics: Reversible dissociation of the cytosolic components of the type III secretion system at low pH prevents unregulated protein secretion during infection
A. Diepold (Marburg/DE)
- 14:41
313-MTV Structural and mechanistic insights into phospholipase A-mediated membrane phospholipid degradation related to the bacterial virulence
F. Bleffert (Jülich/DE), J. Granzin (Bonn, Jülich/DE), M. Caliskan (Jülich/DE)
M. Siebers (Bonn/DE), S. N. Schott-Verdugo (Düsseldorf/DE)
B. Thiele (Jülich/DE), L. Rahme (Boston, MA/US), P. Dörmann (Bonn/DE)
H. Gohlke (Düsseldorf/DE), R. Batra-Safferling
K.-E. Jaeger, F. Kovacic (Jülich/DE)
- 14:52
314-MTV Converting a bidirectional channel into an unidirectional channel – Studies on the translocation mechanism of *Escherichia coli* Formate Channel FocA
M. Kammel, O. Trebbin, G. Sawers (Halle a. d. S./DE)
- 15:03
315-MTV Structural analysis of two chemically driven Na⁺-translocating enzymes from anaerobic bacteria
S. Vitt (Marburg, Frankfurt a. M./DE), S. Prinz
U. Ermler (Frankfurt a. M./DE), W. Buckel (Marburg/DE)

15:14 316-MTV	MpsAB is important for <i>Staphylococcus aureus</i> virulence and growth at atmospheric CO ₂ levels <u>S.-H. Fan</u> , F. Goetz (Tübingen/DE)
15:25 317-MTV	Biopearling of interconnected outer membrane vesicle chains by a marine flavobacterium T. Fischer (Bremen/DE), M. Schorb (Heidelberg/DE) G. Reintjes (Bremen/DE), A. Kolovou, R. Santarella-Mellwig (Heidelberg/DE) S. Markert (Greifswald/DE), E. Rhiel (Oldenburg/DE) S. Littmann (Bremen/DE), D. Becher, T. Schweder (Greifswald/DE) <u>J. Harder</u> (Bremen/DE)
15:36 318-MTV	High-ordered electron transfer complex assembly during Stickland fermentation in <i>Clostridioides difficile</i> <u>K. E. Rennhack</u> , J. Wissing, M. Müsken, S. E. Will, I. Pusch, L. Jänsch M. Rohde, M. Neumann-Schaal, D. Jahn J. M. Borrero de Acuna (Braunschweig/DE)
15:47 319-MTV	High-resolution cryo-EM structures of respiratory complex I – mechanism, assembly and disease <u>K. Parey</u> (Frankfurt a. M./DE), O. Haapanen, V. Sharma (Helsinki/FI) H. Köfeler, T. Züllig (Graz/AT), D. Mills, J. Vonck, W. Kühlbrandt V. Zickermann (Frankfurt a. M./DE)
16:00	End of Conference

Poster Session 1 | Monday, 09 March | 16:00–18:00

All posters from Poster Session 1 have to be attached until 12:00 on Monday, 9 March and have to be removed until 10:00 on Tuesday, 10 March.

Please note that the posters from Poster Session 1 located in the Paulinum can only be attached from Monday morning on, due to the Welcome Reception on Sunday evening.

Room	Topics	ID
Paulinum	Hospital Infection Control, Outbreaks and MDRO	001-HYP–030-HYP
	Diagnostic and Clinical Microbiology	031-DKMP–077-DKMP
Ground Floor (Hörsaalgebäude)	Microbial Cell Biology	078-MCBP–117-MCBP
	Ecology and Physiology of Anaerobes	118-EPAP–154-EPAP
	Microbial Biotechnology	155-BTP–230-BTP
First Floor (Hörsaalgebäude)	Viruses & Phages	231-VPP–242-VPP
	Single Cell Analysis	243-SCAP–250-SCAP
	Microbial Stress Response	251-MSRP–286-MSRP
Second Floor (Hörsaalgebäude)	Zoonoses	287-ZOP–311-ZOP
	Microbiota, Symbiosis and Host	312-MSHP–341-MSHP
	Open Topics	342-OTP–352-OTP
	Gastrointestinal Infections	353-GIP–361-GIP
	Recent Challenges in Bacterial Systematics	362-RCP–364-RCP

Poster Session 2 | Tuesday, 10 March | 16:00–18:00

All posters from Session 2 have to be attached until 12:00 on Tuesday, 10 March and have to be removed until 13:00 on Wednesday, 11 March at the latest

Room	Topics	ID
Paulinum	Desinfection and Technical Hygiene	365-PRP–374-PRP
	Microbial Pathogenicity	375-MPP–442-MPP
Ground Floor (Hörsaalgebäude)	Environmental Microbiology	443-EMP–527-EMP
	Metabolic Modelling and Engineering	528-MMEP–539-MMEP
	Membranes and Transport	540-MTP–554-MTP
	Sensing and Signalling	555-SeSiP–582-SeSiP
	Archaea	583-ARP–596-ARP
First Floor (Hörsaalgebäude)	Phototrophic Microorganisms	597-PMP–615-PMP
	Synthetic Microbiology	616-SMP–632-SMP
	Microbial Ecology and Evolution	633-MEEP–657-MEEP
Second Floor (Hörsaalgebäude)	Eukaryotic Pathogens – Fighting Fungi and Parasites	658-EPP–668-EPP
	Food Microbiology and Hygiene	669-FMP–687-FMP
	Infection Immunology	688-IIP–705-IIP
	National Reference Laboratories and Consiliary Laboratories	706-NRZP–722-NRZP

Hospital Infection Control, Outbreaks and MDRO | 001-HYP-030-HYP

Paulinum

- 001-HYP Whole-genome analysis of vancomycin-resistant *Enterococcus faecium* (VREfm) causing nosocomial outbreaks suggests the occurrence of few endemic clonal lineages in Bavaria, Germany
D. Eisenberger, C. Tuschak, S. Nickel, V. Lehner-Reindl (Erlangen/DE)
C. Höller, B. Liebl (Oberschleißheim/DE), G. Valenza (Erlangen/DE)
- 002-HYP Hijacking of host cellular function in *Staphylococcus aureus* infections
V. Behrends (London/GB)
- 003-HYP* Establishing links between environmental contamination and transmission of vancomycin-resistant Enterococci in the healthcare setting – a whole genome sequencing-based approach
H. Tönnies, C. L. Correa-Martinez, N. J. Froböse, A. Mellmann
S. Kampmeier (Münster/DE)
- 004-HYP Unraveling a severe Q-fever Outbreak in Kosovo March-April 2016 – Rapid Deployment of an Outbreak Investigation Team
K. Stoecker, K. Roßmann, T. Morwinsky, I. Fengler, L. Zöller, G. Genzel (Munich/DE)
- 005-HYP Rifaximin resistance of *Clostridioides difficile* associated with *rpoB* alleles and MLST clades
J. Schwanbeck (Göttingen/DE), T. Riedel, J. Overmann (Braunschweig/DE)
U. Groß, B. Wolfgang, A. E. Zautner (Göttingen/DE)
- 006-HYP Horizontal Transfer of Carbapenemase-Encoding Plasmids from *Enterobacteriaceae* to *P. aeruginosa*
K. Kocer, S. Boutin, K. Heeg, D. Nurjadi (Heidelberg/DE)
- 007-HYP Compliance in German acute care hospitals over 4 years. A longitudinal study with data from the national surveillance system HAND-KISS
T. Kramer, K. Bunte, C. Schröder, M. Behnke, C. Reichhardt, P. Gastmeier
J. Walther (Berlin/DE)
- 008-HYP* Self Reported Compliance to the 5 Moments of Hand Hygiene Reports from Three Tertiary Care Hospitals in Germany
T. Kramer (Berlin/DE), T. Holzmann, W. Schneider, A. Ambrosch (Regensburg/DE)
H. Niesall (Hamburg/DE), P. Gastmeier (Berlin/DE), S. Diefenbacher (Ulm/DE)

- 009-HYP Global transcriptome analysis of the emerging pathogen *Stenotrophomonas maltophilia* revealed a distinct subset of genes commonly expressed in biofilm cells
M. Gudzuhn, I. Alio (Hamburg/DE), U. Mamat, U. Schaible (Borstel/DE)
J. Steinmann (Nürnberg/DE), D. Danso (Hamburg/DE)
A. Poehlein (Göttingen/DE), D. Yero (Barcelona/ES), C. Vollstedt
W. R. Streit (Hamburg/DE)
- 010-HYP Influence of porin deletions on β -lactam resistance in *Enterobacter cloacae*
J. Schauer, S. G. Gatermann, N. Pfennigwerth (Bochum/DE)
- 011-HYP Genome-based characterization of clinical *Salmonella enterica* producing extended-spectrum-beta-lactamases (ESBLs), Germany 2017–19
M. Pietsch, S. Simon, S. Banerji, E. Trost, Y. Pfeifer
A. Flieger (Wernigerode/DE)
- 012-HYP Automated Email requests for MRSA screening of long-stay patients in a maximum-care hospital with low MRSA-prevalence are effective in detecting missed nosocomial transmissions
B. Tittmann, Z. Bartha, A. Dokic, T. Juretzek, M. Meyer, M. Rabes
H. Peltroche (Cottbus/DE)
- 013-HYP Trends of antibiotic consumption in German hospitals from 2015–2018
B. Schweickert, M. Feig, S. Marc, G. Karin, M. Behnke, L. A. Pena Diaz
P. Gastmeier, M. Abu Sin, D. Richter, H.-P. Blank, H. Wehrmeyer
A. Hoffmann, T. Eckmanns (Berlin/DE)
- 014-HYP ARS Saxony – Monitoring antibiotic resistance in Saxony
K. Flohrs, E. Hennebach, S. Wiegand, W. Sydow, I. Ehrhard (Dresden/DE)
- 015-HYP Joining forces to tackle resistant bacteria – a proposal for closer collaboration between public health authorities, physician scientists, and clinicians
B. Pantenburg, A. Rother, U. Helbig, C. Riemschneider, S. Walther
I. Möller, R. Krause-Döring, N. Lahl (Leipzig/DE)
- 016-HYP Isolation and characterization of bacteriophages specific for multidrug-resistant gram-negative bacteria
J. J. Bugert, R. Wölfel (Munich/DE), M. Ben Moussa (Tunis/TN)
S. Handrick (Munich/DE), S. Michniewski (Warwick/GB),
A. Millard (Leicester/GB), C. Hinz, C. Bugert, D. Friebe
F. Schwarze (Munich/DE), S. Mzoughi (Tunis/TN), J. Kühn
S. Kreissig, M. Egold, J. Stender (Munich/DE)

- 017-HYP Motivation, capabilities and opportunities as determinants of self-reported compliance with 26 surgical site infection-preventive measures among orthopaedic physicians – results of a „small sample with high response“: Survey in a German tertiary care university hospital
I. Tomsic, E. Ebadi, F. Gossé (Hanover/DE), I. Hartlep, P. Schipper
B. Schock, I. F. Chaberny (Leipzig/DE), T. von Lengerke (Hanover/DE)
- 018-HYP Spread of OXA-244-producing *Escherichia coli* ST38 in Germany
J. B. Hans (Bochum/DE), B. Neumann, R. Kramer, K. Kremer
S. Haller (Berlin/DE), N. Pfennigwerth (Bochum/DE), A. Reuss, Y. Pfeifer
G. Werner, T. Eckmanns (Berlin/DE), S. G. Gatermann (Bochum/DE)
- 019-HYP Control and molecular epidemiology of a Carbapenem non-susceptible *Klebsiella pneumoniae* cluster in hematologic patients
C. Baier, F. Thol, C. Koenecke, F.-C. Bange, E. Ebadi (Hanover/DE)
- 020-HYP Evaluation of clean room conditions for laboratory testing of sterile products using routine data on product and laboratory environment contamination
P. Dudler (Würzburg, Munich/DE), U. Vogel
M. Hagemeister (Würzburg/DE)
- 021-HYP* Development of a Diagnostic Stewardship Assessment Framework for Antimicrobial Resistance (AMR) Surveillance in Low-Resource Settings
S. Tomczyk, O. Ayobami (Berlin/DE), A. Ekwuenu (Abuja/NG)
T. Eckmanns (Berlin/DE)
- 022-HYP Screening clinical samples for linezolid-resistant enterococci
H. Claus, C. Polzin, U. Vogel (Würzburg/DE)
- 023-HYP Epidemiological investigation of KPC-producing *Klebsiella pneumoniae* in two different hospitals by Fourier Transform Infrared Spectroscopy (FTIRS)
M. Cordovana (Bologna/IT), A. C. Veloo, J. W. Rossen (Groningen/NL)
S. Ambretti (Bologna/IT)
- 024-HYP* Process optimization and compliance with dressing change in pre-post intervention comparison after introduction of a new dressing change concept in the context of a prospective cohort study on infection prevention
R. Otchwemah, M. Neuwirth, B. Marche, R. Galante (Cologne/DE)
S. Akca (Freiburg i. Br./DE), J. Hoffmann, B. Bouillon, F. Mattner (Cologne/DE)
- 025-HYP* Negative pressure wound therapy in complicated spinal wounds: which impact do microbiological results have?
J. Kellner, S. Scheithauer, A. Dudakova, V. Rohde
C. Von der Brelie (Göttingen/DE)

- 026-HYP Analysis of screening for multidrug-resistant bacteria of participating intensive care units of the EFFECT-study
J. Herrmann, D. Hasenclever, N. Köhler, Y. Breitenstein, A. Kühn
I. F. Chaberny (Leipzig/DE)
- 027-HYP Hygiene & emotion – Enjoying work forms the basis for performance and success of hand hygiene
B. Schöck, I. Hartlep, P. Schipper, I. F. Chaberny (Leipzig/DE)
- 028-HYP Wound infections and antibiotics consumption in surgery (WACH-trial): Guideline compliance in operating theatre (OT) – what's the current state?
P. Schipper, B. Schöck, I. Hartlep (Leipzig/DE), I. Tomsic, T. von Lengerke
C. Krauth (Hanover/DE), I. F. Chaberny (Leipzig/DE)
- 029-HYP Education of infection prevention in collaboration with physicians and nursing staff – how is the demand?
I. Hartlep, I. F. Chaberny, B. Schöck (Leipzig/DE)
- 030-HYP Nasal MRSA colonization of veterinary staff in German equine clinics
C. Cuny, W. Witte (Wernigerode/DE), U. Pansegrau (Bakum/DE)
W. Scheidemann (Dülmen/DE)

Diagnostic and Clinical Microbiology | 031-DKMP–077-DKMP

Paulinum

- 031-DKMP Evaluation of Medicinal Plants Extract Against Biofilm Formation in *Pseudomonas Aeruginosa*
K. Nwanekwu (Owerri/NG)
- 032-DKMP Value of the CXCL13 ELISA and the ReaScan® Lateral Flow Immunoassay in the Diagnosis of Lyme Neuroborreliosis.
K. Ziegler (Nürnberg/DE), A. Rath, C. Schoerner, R. Meyer (Erlangen/DE)
T. Bertsch, F. Erbguth, J. Steinmann (Nürnberg/DE), J. Held (Erlangen/DE)
- 033-DKMP* Genomic diversity of *Achromobacter xylosoxidans* during the persistence in the airways of cystic fibrosis patients
S. Kampmeier, A. Mellmann, B. C. Kahl (Münster/DE)
- 034-DKMP withdrawn

- 035-DKMP withdrawn
- 036-DKMP Inhibition of Glutaminy cyclase of *Porphyromonas gingivalis* by small molecules – a promising new approach for the prevention and treatment of periodontitis
N. Taudte, J.-U. Rahfeld (Halle a. d. Saale/DE), S. Eick (Bern/CH), D. Ramsbeck, M. Linnert, S. Schilling, H.-U. Demuth
M. Buchholz (Halle a. d. Saale/DE)
- 037-DKMP Diagnosis and drug susceptibility of *Mycobacterium tuberculosis* from pulmonary specimens at Pasteur Institute of Algeria – Comparative study between classic Lowenstein-Jensen culture and BACTEC MGIT 960 system.
F. Djoudi, D. Benremila (Bejaia/DZ), D. Yala (Alger/DZ)
- 038-DKMP Proof of Concept Evaluation of a New Diagnostic Device for Culture: Independent Microbiological Diagnosis of Infective Endocarditis
M. Karrasch, W. Pfister, M. Diab, T. Doenst, B. Löffler, J. Rödel (Jena/DE)
- 039-DKMP Nosocomial parainfluenza virus type 3 infections at a large German University Hospital between 2012 and 2017
M. Hönemann, D. Martin, U. G. Liebert (Leipzig/DE)
- 041-DKMP Metabolic insights into the clinical urethral catheter isolate *Myroides spp.* A21
D. Hiller, S. Barthels, M. Jahn, D. Jahn (Braunschweig/DE)
- 042-DKMP* Five-Year Surveillance of the Prevalence of *C. trachomatis* serovars L1-L3 (Lymphogranuloma venereum) in a High-Risk Patients' Cohort
D. Schmidt, U. Scharmann, S. Esser, J. Buer, P.-M. Rath (Essen/DE)
- 043-DKMP Whole genome analysis of one XDR *Mycobacterium tuberculosis* isolate from Algeria.
D. Benremila, F. Djoudi (Bejaia/DZ), S. Battaglia, E. Borrono, A. Cabibbe D.-M. Cirillo (Milan/IT)
- 044-DKMP Multivalent neo-glycoconjugates as binders and scavengers of bacterial enterotoxins
V. Heine (Aachen/DE), R. R. Rosencrantz (Aachen, Potsdam/DE), C. Dey A. Jans, S. Boesveld, A. D. Mandić, N. Anwar (Aachen/DE), H. Pelantová V. Křen (Prague/CZ), U. Schnakenberg, M. Moeller, C. Trautwein, G. Sellge P. Strnad, A. J. C. Kuehne, L. Elling (Aachen/DE)

Joint Meeting

50th Annual Meeting of the
German Society for Immunology (DGfI)
and 48th Annual Meeting of the
**Austrian Society for Allergology and
Immunology (ÖGAI)**

Herrenhausen, Hannover



Schönbrunn, Vienna



M_HH

09.–12. September 2020

Medizinische Hochschule Hannover

Abstractdeadline 3. Mai 2020

- 045-DKMP Clinically approved drugs inhibit the *Staphylococcus aureus* multidrug NorA efflux pump and reduce biofilm formation
S. Zimmermann, M. Klinger-Strobel (Jena/DE)
J. A. Bohnert (Jena, Greifswald/DE), S. Wendler, J. Rödel, M. W. Pletz
B. Löffler, L. Tuchscher (Jena/DE)
- 046-DKMP Typing method for identifying and discriminating salivarius group streptococci using dephospho-coA kinase (*coaE*) as target gene
M. M. H. Abdelbary, G. Wilms, G. Conrads (Aachen/DE)
- 047-DKMP Identification of genetic factors increasing carbapenem resistance in *Klebsiella pneumoniae* with *bla*_{OXA-48}
M. Cremanns, S. G. Gatermann, N. Pfennigwerth (Bochum/DE)
- 048-DKMP Novel monoclonal antibodies for detection and serotyping of *Legionella* spp.
A. Helming (Erfurt/DE), E. Müller, R. Ehricht (Jena/DE)
M. Fischer (Erfurt/DE)
- 049-DKMP Direct MALDI identification from positive blood cultures – evaluation of Rapid Sepsityper with a large collection of routine samples
M. Cordovana, A. Zignoli, S. Ambretti (Bologna/IT)
- 050-DKMP Evaluation of MICRONAUT-S Anaerobes MIC broth microdilution panels for antibiotic susceptibility testing of anaerobes
M. Cordovana, S. Ambretti (Bologna/IT)
- 051-DKMP Azithromycin possesses biofilm-inhibitory activity against *Klebsiella pneumoniae* and potentiates colistin to combat klebsiella-associated infection
O. Moshynets, O. Krykunov, O. Lungin (Kiev/UA), R. Jerdan (Dundee/GB)
G. Filonenko (Kiev/UA), A. Spiers (Dundee/GB)
- 052-DKMP Identification of potential factors interfering with molecular diagnostics for bloodstream infections
S. Huber (Innsbruck/AT), J. Weinberger (Vienna/AT), M. Pilecky
A. Schildberger, V. Weber (Krems/AT), D. Orth-Höller (Innsbruck/AT)
A. E. Posch (Vienna/AT)
- 053-DKMP *Cutibacterium acnes* as cause for endocarditis – How to differentiate between contamination and infection?
L. Kursawe, J. Kikhney, A. Wießner (Berlin/DE), S. Eichinger
W. Eichinger (Munich/DE), H. Grubitzsch, A. Moter (Berlin/DE)
- 054-DKMP Water samples containing increased ferric ions significantly reduce recovery rates of coliform and *E. coli* on selective chromogenic media
R. Rösner, A. Bommer, T. Kuczius (Münster/DE)

- 055-DKMP Correlation between predicted antimicrobial resistance genes and resistance phenotype in German *Campylobacter jejuni* clinical isolates
S. Banerji, P. Auraß, A. Tille, A. Fruth, A. Flieger (Wernigerode/DE)
- 056-DKMP Detection and Quantification of a unique 16S ribosomal RNA allele variation in *B. anthracis* by combination of Fluorescence in situ hybridization, digital PCR and Nanopore Sequencing
F. Zimmermann, P. Braun, S. Mantel, M. C. Walter, K. Aistleitner, T. Sieper, I. Stürz, G. Grass, K. Stoecker (Munich/DE)
- 057-DKMP Detection and live/dead differentiation of *Legionella* species and *Pseudomonas aeruginosa* in water samples
N. Beaumart, V. Herich, B. Dobrindt, T. Kuczius (Münster/DE)
- 058-DKMP Optimization of a Disc Diffusion Method for Antimicrobial Susceptibility Testing of *Clostridioides difficile*
S. Maurischat, P. Witt, C. Maneck, M. Grobbel (Berlin/DE)
- 059-DKMP Seeing is believing – Can molecular diagnosis guide individualized therapy in endocarditis?
J. Kikhney, L. Kursawe (Berlin/DE), S. Eichinger, W. Eichinger (Munich/DE)
S. Julia, A. Wießner, A. Moter (Berlin/DE)
- 060-DKMP Multimodal analysis of *Escherichia coli* isolates from patients and carriers with EPISEQ® CS, a next-generation sequencing service for epidemiological surveillance
K. Vranckx, L. Hauben (Sint-Martens-Latem/BE), S. Guedes (Marcy/FR)
K. De Rauw, K. De Bruyne (Sint-Martens-Latem/BE)
- 061-DKMP Analysis of the transition process from an organ system-based to an alternative case-based teaching concept for medical students in the course of infection control, microbiology and virology at the Goethe University, Frankfurt am Main, Germany
J. P. W. Himmels, C. Brandt, J. Sterz, M. Ruesseler, V. A. J. Kempf (Frankfurt a. M./DE)
- 062-DKMP Synergy testing of antibiotic combinations to treat chronic *Pseudomonas aeruginosa* lung infections in cystic fibrosis patients
A. Schmidt, T. Preis, S. Schwarz (Tübingen/DE)
A. Hector (Zurich/CH, Tübingen/DE)
- 063-DKMP Colistin resistance in Gram-negative rods from urine specimens – Prevalence and importance of *mcr* isoforms
A. Hoffmann, M. Christner, M. Lütgehetmann, H. Rohde (Hamburg/DE)
- 064-DKMP Performance and clinical impact of Rapid Antimicrobial Susceptibility Testing (RAST) on management of bloodstream infections in a tertiary care hospital
B. Berinson, F. Olearo, M. Christner, H. Rohde (Hamburg/DE)

- 065-DKMP Comparison of three different methods for bacterial identification used in routine diagnostics with whole-genome based average nucleotide identity for *Roseomonas mucosa* identification
M. Trauth, R. Bigge, F. Gunzer (Dresden/DE), B. Bunk (Braunschweig/DE)
W. W. Rudolph, P. Schröttner (Dresden/DE)
- 066-DKMP The Pan-Surfome of *Aspergillus fumigatus*
L.-J. Jia, T. Krüger, O. Kniemeyer, A. Brakhage (Jena/DE)
- 067-DKMP* Effect of antibiotic exposure on the conjugative transfer of IncN *bla*VIM-1 carbapenemase plasmid in *Enterobacteriaceae*.
X. Li, K. Kocer, K. Heeg, S. Boutin, D. Nurjadi (Heidelberg/DE)
- 068-DKMP Comparison of different methods used in routine diagnostics with Average Nucleotide Identity and Digital DNA-DNA hybridization for identification of *Acinetobacter radioresistens*
R. Bigge, F. Gunzer (Dresden/DE), B. Bunk (Braunschweig/DE)
W. W. Rudolph, P. Schröttner (Dresden/DE)
- 069-DKMP Comparison of two PCR tests for the detection of *Aspergillus* spp. In bronchoalveolar lavage fluid
L. D. Frielinghaus, T. Kautz, M. Luetgehetmann, H. Rohde
M. Christner (Hamburg/DE)
- 070-DKMP* Care duties, support systems and career challenges among medical microbiologists in Germany Results of the „Family and career within microbiology“ survey conducted by the Young German Society for Hygiene and Microbiology (yDGHM)
K. Last (Homburg/DE), C. M. Koch (Marburg/DE), V. Schwierzeck (Münster/DE)
S. L. Becker (Homburg/DE), J. Forster (Würzburg/DE), C. Papan (Homburg/DE)
N. Jazmati (Cologne/DE)
- 071-DKMP Investigation of the Bovine mastitis causing bacterial strains and Confirmation of its Virulence and Zoonotic Potential
F. Adnan, A. Jalil (Islamabad/PK)
- 072-DKMP Isothermal nucleic acid amplification as a versatile tool for point-of-care hygiene monitoring
S. Kersting, E. Ehrentreich-Förster, M. von Nickisch-Rosenegk (Potsdam/DE)
- 073-DKMP Evaluation of the new Bruker MALDI Biotyper sirius MALDI-TOF MS system in comparison to microflex LT
A. Pranada (Dortmund/DE), T. Wenzel (Bremen/DE), A. Sägers
C. Rompf (Dortmund/DE), M. Kostrzewa (Bremen/DE)

- 074-DKMP* German physicians are largely unaware of the new EUCAST definitions of S, I and R and the consequences thereof for antibiotic prescription
N. Wantia (Munich/DE), S. G. Gatermann (Bochum/DE)
K. Rothe (Munich/DE), R. Laufenberg (Leverkusen/DE)
- 075-DKMP Population-wide antibiotic profiling of human *L. monocytogenes* isolates from Germany identifies phylogenetic clades with reduced cephalosporine resistance
M. Fischer, A. Flieger, S. Halbedel (Wernigerode/DE)
- 076-DKMP An automated system for colony counting and classifying bacteria
J. Beck-Nafz (Sigmaringen, Strassberg/DE), A. Klimovich
R. Preyer (Strassberg/DE), D. Drissner (Sigmaringen/DE)
- 077-DKMP Survey on antimicrobial resistance patterns in *Aeromonas* spp. From German patients
K. Schwartz, J. A. Hammerl, E. Strauch (Berlin/DE)

Microbial Cell Biology | 078-MCBP–117-MCBP

Ground Floor (Hörsaalgebäude)

- 078-MCBP Novel C-methyltransferase activities – Methylation and simultaneously five-ring cyclisation is a prerequisite for the biosynthesis of the sesquiterpene sodorifen of *Serratia plymuthica*
N. Magnus, M. C. Lemfack (Rostock/DE), S. von Reuß (Neuchâtel/CH)
D. Domik, M. Kai, T. Weise, P. Ruciaka, B. Piechulla (Rostock/DE)
- 079-MCBP Transcription factors and chromatin-modifiers involved in sexual development of *Sordaria macrospora*
R. Lütkenhaus, J. Breuer, M. Nowrousian (Bochum/DE)
- 080-MCBP The [N]-shuttle catalyzed by DcuA and AspA is regulated in *E. coli* by the nitrogen-regulator protein PII
C. Schubert, A. Strecker, G. Unden (Mainz/DE)
- 081-MCBP Biogenesis of Fe-S cluster proteins of *Vibrio cholerae*
J.-L. Hau, K. Goebel, C. Toulouse, J. Pfannstiel, G. Fritz, J. Steuber
S. Agarwal (Stuttgart/DE)
- 082-MCBP* Towards understanding the link between the ABC transporter EslABC and lysozyme resistance in *L. monocytogenes*
J. Rismondo (Göttingen/DE, London/GB), M. Yacoub, A. Wadhawan
M. S. Dionne, A. Gründling (London/GB)
- 083-MCBP Growth rate constraints in *Corynebacterium glutamicum*
S. Matamouros, T. Gensch, I. Abdollahzadeh, J. Hendriks, C. Sachs
N. Tenhaef (Jülich/DE), M. Graf, R. Takors (Stuttgart/DE), S. Noack
K. Nöh, M. Bott (Jülich/DE)

- 084-MCBP Loss of RNase Y provokes massive decrease in transcription
M. Benda (Göttingen/DE), L. Krásný (Prague/CZ), J. Stülke (Göttingen/DE)
- 085-MCBP Analysis of putative STRIPAK-interaction partners in *Sordaria macrospora*
A. Gibron, E. Reschka, S. Pöggeler (Göttingen/DE)
- 086-MCBP* Host cell signal triggering virulence mechanism in *Escherichia coli*
M. M. Khan (Senftenberg/DE), K. Sidorczuk (Wrocław/PL)
J. Schiebel (Senftenberg/DE), S. Guenther, K. Schaufler (Greifswald/DE)
P. Schierack (Senftenberg/DE), R. Kolenda (Senftenberg/DE, Wrocław/PL)
- 087-MCBP The functional diversity of the prokaryotic sulfur carrier protein TusA
T. S. Tanabe (Bonn/DE), S. Leimkühler (Potsdam/DE), C. Dahl (Bonn/DE)
- 088-MCBP Protein-protein interactions of the energy generation supracomplex of
Pseudomonas aeruginosa
K. Müller, J. Wissing, L. Jänsch, M. Jahn, D. Jahn (Braunschweig/DE)
- 089-MCBP Microscopy-based identification and initial characterization of novel
inhibitors of bacterial cell division
C. Matos de Opitz, P. Sass (Tübingen/DE)
- 090-MCBP* Functional impact of lipid logistics on mycobacterial infection in
Dictyostelium
C. Barisch, I. Hube, S. Deise (Osnabrück/DE)
- 091-MCBP Filling the gaps – Roles of glyceraldehyde 3-phosphate dehydrogenase
homologs in *Pseudomonas aeruginosa* metabolic fluxes
A. Klotz, U. Jenal (Basel/CH)
- 092-MCBP Discovery and verification of cellular substrates of the ClpXP protease
involved in bacteriochlorophyll *a* biosynthesis in *Dinoroseobacter shibae*
A. Rommerskirch, D. Jahn, E. Härtig (Braunschweig/DE)
- 093-MCBP PHB in cyanobacteria is not what it is meant to be
M. Koch, K. Forchhammer (Tübingen/DE)
- 094-MCBP Analysis of STRIPAK-dependent phospholipid signaling in *Sordaria*
macrospora
S. Erb, E. Reschka, S. Pöggeler (Göttingen/DE)
- 095-MCBP Transcriptional organization of magnetosome gene cluster in
Magnetospirillum gryphiswaldense
C. N. Riese, D. Schüler (Bayreuth/DE)
- 096-MCBP Optimization of polyprolines containing protein biosynthesis in *Escherichia coli*
U. Tomasiunaite, B. Pinheiro, K. Jung (Planegg-Martinsried/DE)

- 097-MCBP Surface Acclimation of the Cyanobacterium *Synechocystis* sp. PCC 6803
S. Oeser, T. Wallner, A. Wilde (Freiburg i. Br./DE)
- 098-MCBP Cold-shock proteins are key players in the physiology of *Bacillus subtilis*
P. Faßhauer, J. Stülke (Göttingen/DE)
- 099-MCBP* Targeting the cell division protein FtsZ by antibiotic action
N. Silber, S. Pan (Tübingen/DE), S. Schäkermann (Bochum/DE), C. Mayer
H. Brötz-Oesterhelt, P. Sass (Tübingen/DE)
- 100-MCBP The role of protein secretion systems in prey cell killing of the predatory soil bacterium *Myxococcus xanthus*
S. Thiery, C. Kaimer (Bochum/DE)
- 101-MCBP AmyGreen is a new amyloid-sensitive stain for biofilm research
O. Moshynets, S. Chernii, Y. Snihirova (Kiev/UA)
R. Czerwieniec (Regensburg/DE), V. Chernii, S. Yarmoluk
V. Kovalska (Kiev/UA)
- 102-MCBP Demonstration of a novel PLP-dependent decarboxylation-oxygenation of pyoverdine as catalyzed by PvdN from *Pseudomonas fluorescens*
M.-F. Sugue, A. Burdur, G. Dräger, T. Brüser (Hanover/DE)
- 103-MCBP Construction of a fluorescence-based reporter gene system for *in vivo* analysis of differential gene expression and subpopulation-analysis in *Staphylococcus aureus*
H. Wolfgramm, P. Hildebrandt, S. Michalik, U. Völker
A. Reder (Greifswald/DE)
- 104-MCBP Colonizing bacteria increase the pro-inflammatory immune response after secondary influenza virus infection
J. Wilden, E. Hrincius, S. Niemann, S. Ludwig (Münster/DE)
C. Ehrhardt (Münster, Jena/DE)
- 105-MCBP Characterization of an RNase III mutant strain of *Rhodobacter sphaeroides*
J. Börner, G. Klug (Gießen/DE)
- 106-MCBP A-to-I mRNA editing changes protein functions for distinct developmental processes
B. Blank-Landeshammer (Dortmund/DE), H. Strotmeier, R. Lütkenhaus
M. Nowrousian (Bochum/DE), A. Sickmann (Dortmund/DE), U. Kück
I. Teichert (Bochum/DE)
- 107-MCBP *Bacillus subtilis* mainly copes with the loss of the glutaminase domain PdxT of the pyridoxal synthase complex PdxST by genomic amplification of the synthase domain gene *pdxS*
B. Richts, A. Poehlein, R. Daniel, F. M. Commichau (Göttingen/DE)

- 108-MCBP* Dissecting the binding behavior of the multi-RRM protein Rrm4 during endosomal mRNA transport in *Ustilago maydis*
N. Stoffel, L. Olgeiser, M. Feldbrügge (Düsseldorf/DE)
- 109-MCBP Classification of small RNAs with unknown function in *B. subtilis*
M. Schedlowski, P. Hildebrandt, S. Michalik, U. Völker
A. Reder (Greifswald/DE)
- 110-MCBP A handy tool for *in vivo* characterization of promoter elements in *Bacillus subtilis*.
M. Harms, J.-P. Hildebrandt, S. Michalik, U. Völker, A. Reder (Greifswald/DE)
- 111-MCBP The *Legionella pneumophila* GDSL hydrolase PlaA, a highly active lysophospholipase, is processed and activated by the zinc metalloproteinase ProA
M. Hiller, C. Lang (Wernigerode/DE), J. Döllinger (Berlin/DE), M. Diwo
W. Blankenfeldt (Braunschweig/DE), A. Flieger (Wernigerode/DE)
- 112-MCBP *In vivo* characterization of the mechanisms of antibiotics on the bacterial cell envelope
A.-B. Schäfer, M. Wenzel (Gothenburg/SE)
- 113-MCBP Posttranscriptional regulation of SAM in the alpha-proteobacterium *Sinorhizobium meliloti*
R. Scheuer, H. Melior, E. Evguenieva-Hackenberg (Gießen/DE)
- 114-MCBP* ReoM and ReoY connect cell wall integrity surveillance with peptidoglycan biosynthesis via an essential protein phosphorylation event
S. Wamp (Wernigerode/DE), Z. J. Rutter
C. E. Jennings (Newcastle upon Tyne/GB), J. Rismondo (London/GB)
R. J. Lewis (Newcastle upon Tyne/GB), S. Halbedel (Wernigerode/DE)
- 115-MCBP The benzothiazinone BTZ043 blocks apical growth and affects septum formation in *Corynebacterium glutamicum*
F. Meyer (Kiel, Planegg-Martinsried/DE), K. Schubert
M. Bramkamp (Planegg-Martinsried/DE)
- 116-MCBP An archaeal/bacterial consortium from a Costa Rica petrol well – analysis by electron tomography
L. Dengler (Regensburg/DE), J. Flechsler, A. Klingl (Planegg-Martinsried/DE)
H. Huber, D. Grohmann, R. Rachel (Regensburg/DE)
- 117-MCBP Mdh (metal-dependent hydrolase) – the unknown of the methionine biosynthesis operon in *Staphylococcus aureus*
F. D. R. Wencker, Y. A. Ramirez, W. Koelmel, D. Steigerwald, E. Rogalski
M. Peindl, C. Kisker, W. Ziebuhr (Würzburg/DE)

Ecology and Physiology of Anaerobes | 118-EPAP–154-EPAP

Ground Floor (Hörsaalgebäude)

- 118-EPAP The composition and function of the electron transport chain catalyzing *Wolinella succinogenes* nitrous oxide respiration
C. Werner, S. Hein (Darmstadt/DE), S. Deusch, J. Seifert (Stuttgart/DE)
J. Simon (Darmstadt/DE)
- 119-EPAP Distinct types of menaquinone methyltransferases predict the synthesis of various microbial methylmenaquinones
D. Wilkens, S. Hein, J. Simon (Darmstadt/DE)
- 120-EPAP Function and phylogeny of DsrL, a NAD(P)H oxidoreductase involved in dissimilatory sulfur metabolism
K. Wallerang, M. Löffler, C. Dahl (Bonn/DE)
- 121-EPAP Bacterial nitrous oxide respiration – electron transport chains and copper transfer reactions
S. Hein, J. Simon (Darmstadt/DE)
- 122-EPAP Time-dependent transcriptome landscape of *Parageobacillus thermoglucosidasius* DSM 6285 hydrogenogenesis under carbon monoxide and air atmosphere
H. Aliyu, T. Mohr (Karlsruhe/DE), D. Cowan (Pretoria/ZA)
P. De Maayer (Johannesburg/ZA), A. Neumann (Karlsruhe/DE)
- 123-EPAP Regulation of hydrogen production in *Parageobacillus thermoglucosidasius* DSM 6285
R. Küchlin, H. Aliyu (Karlsruhe/DE), D. Cowan (Pretoria/ZA)
P. De Maayer (Johannesburg/ZA), A. Neumann (Karlsruhe/DE)
- 124-EPAP Is the formate dehydrogenase H of *Escherichia coli* promiscuous?
D. Lubek, C. Pinske (Halle a. d. Saale/DE)
- 125-EPAP Laboratory evolution of *Thermoanaerobacter kivui* towards reduced growth temperatures
M. Lehmann, E. Zschaubitz, M. Basen (Rostock/DE)
- 126-EPAP New insights into the substrate determinants of benzylsuccinate synthase (BSS) by analysing mutated variants
A. Alhaj Zein (Marburg/DE)
- 127-EPAP The emerging role of aldehyde – ferredoxin oxidoreductase in microbially-catalyzed alcohol production
L. Nissen (Rostock/DE), J. Moon (Frankfurt a. M./DE)
M. Basen (Rostock, Frankfurt a. M./DE)

- 128-EPAP Insights into structure and function of a benzene-mineralizing, nitrate-reducing consortium
S. Eziuzor, F. Corrêa (Leipzig/DE), S. Peng (Chongqing/CN)
J. Schultz (Rio de Janeiro/BR), S. Kleinsteinuber, U. Nunes da Rocha
L. Adrian, C. Vogt (Leipzig/DE)
- 129-EPAP Flavodoxin hydroquinone provides electrons for the ATP-dependent reactivation of protein-bound corrinoid cofactors
L. Kißling, Y. Greiser, H. Dürichen, S. Studenik (Jena/DE)
- 130-EPAP Insights into the mechanism of ketone carboxylases
A. C. Böhringer, J. Heider, K. Schühle (Marburg/DE)
- 131-EPAP Experiments on the Structure-Function Relationship of Aldehyde Oxidoreductase of *Aromatoleum aromaticum*
D. Hege, F. Arndt, J. Heider (Marburg/DE)
- 132-EPAP Lactate metabolism in the acetogenic bacterium *Moorella thermoacetica*
F. Rosenbaum, M. Schölmerich (Hamburg/DE)
- 133-EPAP Calorespirometry as Real Time Indicator in Multi-Phase Anaerobic Biofuel Productions Processes, Developed at the Example of Acetone-Buthanol-Ethanol (ABE) fermentation
S. Paufler, H. Sträuber, T. Maskow (Leipzig/DE)
- 134-EPAP Cysteine metabolism in the acetogenic bacterium *Moorella thermoacetica*
L. Göbbels, M. Schölmerich (Hamburg/DE)
- 135-EPAP Methylcitrate cycle enzymes in sulfur-reducing deltaproteobacteria *Desulfurella* spp.
E. Pettinato, L. M. Steffens, A. Mall, I. Berg (Münster/DE)
- 136-EPAP Biodiversity of denitrifying fungi revisited – new nitrous oxide producing isolates
T. Spanner (Hanover/DE), U. Behrendt, T. Timsy, A. Ulrich
S. Kolb (Muencheberg/DE), M. A. Horn (Hanover/DE)
- 137-EPAP Bacterial microcompartments in *Bilophila wadsworthia* for taurine metabolism and organosulfonate respiration
A. Burrichter, S. Dörr, S. Haiß, D. Schleheck (Konstanz/DE)
- 138-EPAP HybG-HypD scaffold complex of the [NiFe]-Hydrogenases Maturation Machinery has an ATPase activity
A. Haase, K. Nutschan, R. Golbik, G. Sawers (Halle a. d. Saale/DE)
- 139-EPAP Biochemical insights into the electron confurcating lactate dehydrogenase of *Acetobacterium woodii*
A. Katsyy, V. Müller (Frankfurt a. M./DE)

- 140-EPAP Determination of yield coefficients of electroactive microorganisms:
Example of *Geobacter sulfurreducens*
F. Scarabotti, B. Korth, M. Schmidt, L. Rago, K. Bühler
F. Harnisch (Leipzig/DE)
- 141-EPAP Degradation of the sugar alternative 5-keto-D-fructose by the human
intestinal microbiota
J. Schiessl, K. Kosciow, U. Deppenmeier (Bonn/DE)
- 142-EPAP Phthalate degradation via phthaloyl-CoA in anaerobic and aerobic bacteria
R. A. Geiger, M. Boll (Freiburg i. Br./DE)
- 143-EPAP The microbial conversion of estrogens into androgens via a SAM-, ATP- and
Co-dependent methyl transfer
J. Krull, C. Jacoby, M. Boll (Freiburg i. Br./DE)
- 144-EPAP Three enzymes involved in enzymatic hydroxylation of a primary carbon
with water during anaerobic cholesterol degradation
C. Jacoby, M. Boll (Freiburg i. Br./DE)
- 145-EPAP Contrasting Apparent Michaelis-Menten Constants of Nitrate/Nitrite
Reduction in Cell Suspensions of Denitrifiers and Nitrate Ammonifiers
D. Frohloff, M. A. Horn (Hanover/DE)
- 146-EPAP Illuminating the function of the hydrogen-dependent CO₂-reductase
H.-M. Dietrich, V. Müller (Frankfurt a. M./DE)
- 147-EPAP Antimicrobial resistance – the interplay of biocides and antibiotics affecting
resistance evolution in bacteria
F. Schreiber, S. Schmidt, N. Nordholt, F. Pietsch, G. Heidrich (Berlin/DE)
- 148-EPAP Moderated Evaluation of Anaerobic Ammonium Oxidizing (Annamox)
Bacteria Activities during Anoxic Treatment Work Flows
E. Ude, C. Ding (Leipzig/DE), L. Adrian (Berlin/DE)
- 149-EPAP Thermal Proteome Profiling – A High-Throughput Screening of the Proteome
for Interactions with Substrates
D. Türkowsky, P. Lohmann, M. Mühlenbrink (Leipzig/DE)
T. Schubert (Jena/DE), L. Adrian (Leipzig/DE), T. Goris (Jena/DE)
N. Jehmlich, M. von Bergen (Leipzig/DE)
- 150-EPAP Carbon source dependent reprogramming of anaerobic metabolism in
Staphylococcus aureus
A. Giese, K. Methling, D. Zühlke, M. Lalk (Greifswald/DE)
G. Bange (Marburg/DE), K. Riedel, J. Bernhardt
J. Pané-Farre (Greifswald/DE)

- 151-EPAP Structural Insights Into ATP-dependent Enzymatic Benzene Ring Reduction
J. Fuchs, O. Tiedt (Freiburg i. Br./DE), U. Demmer
U. Ermler (Frankfurt a. M./DE), M. Boll (Freiburg i. Br./DE)
- 152-EPAP Glutamate fermentation in Enterobacteria
J. Eggers, I. Berg (Münster/DE)
- 153-EPAP Proteogenomic analysis of the denitrifying betaproteobacterium
Aromatoleum aromaticum pCyN1
P. Becker, A. Strijkstra, L. Wöhlbrand (Oldenburg/DE)
R. Reinhardt (Cologne/DE), R. Rabus (Oldenburg/DE)
- 154-EPAP Lactate-based microbial chain elongation for *n*-caproate production:
Genomic and metabolic features of three novel *Clostridiales* isolates
B. Liu, D. Popp, H. Sträuber, H. Harms, S. Kleinsteuber (Leipzig/DE)

Microbial Biotechnology | 155-BTP–230-BTP

Ground Floor (Hörsaalgebäude)

- 155-BTP Phytochemical screening and GC-MS analyses of ethanoic leaves extracts of
Mitracarpus scaber
F. O. Ekhaïse (Benin City/NG)
- 156-BTP Electrode-driven anaerobic production of chemicals using *Pseudomonas putida*
B. Lai, A. V. Nguyen, J. Krömer (Leipzig/DE)
- 157-BTP Styrene and indole degradation pathways provide access towards
monooxygenases with reversed enantioselectivity
D. Tischler (Bochum/DE), T. Heine (Freiburg/DE)
- 158-BTP Fermentation and downstream processing in PILOT scale for the
development of novel veterinary vaccines based on *Kluyveromyces lactis* yeast
M. Suhr, N. Volk, S. Bennewitz, M.-L. Hoffmann, P. Franz, H. Hennemann
S.-E. Behrens (Halle a. d. Saale/DE)
- 159-BTP* *Gluconobacter oxydans* strains for the production of the non-nutritive
natural sweetener 5-ketofructose
K. Wohlers, A. Kranz, A. Wirtz, M. Baumgart, M. Bott (Jülich/DE)
- 160-BTP *Vibrio natriegens* as host for biotransformation with a flavin-dependent
monooxygenase
H. Fuchs, T. Heine (Freiburg/DE)
- 161-BTP Assessment of Methyl Red Degradation Activity by a Fusion Protein of
Rhodococcus opacus 1CP azoreductase and *Candida boidinii* formate
dehydrogenase
A. C. Ngo, D. Tischler, F. Schultes, C. Mügge (Bochum/DE)

- 162-BTP Heterologous production of the cholinomimetic drug physostigmine in *Myxococcus xanthus*
L. Winand, M. Nett (Dortmund/DE)
- 163-BTP Photoinduced monooxygenation involving NADPH-FAD sequential electron transfer
S. Ernst (Münster/DE), S. Rovida, A. Mattevi (Pavia/IT), S. Fetzner
S. L. Drees (Münster/DE)
- 164-BTP Elucidating Biological Networks of *Vibrio campbellii* RT-1 and *Vibrio harveyi* RT-6 strains Conferring Pan-genome and Comparative genomic analysis
T. Rajendran, I. Dhinakaran, J. C. H. P. Lingesan, S. Bhoopathy
K. Chandrasekaran, S. A. Louis (Chennai/IN)
- 165-BTP Tailoring *Corynebacterium glutamicum* for the efficient production of malonyl-CoA-dependent small molecules
J. Marienhagen, N. Kallscheuer, L. Milke (Jülich/DE)
- 166-BTP Design of O₂-tolerant hydrogenase with ferredoxin binding site for light-driven H₂-production
E. Lettau (Berlin/DE), B. Bühler (Leipzig/DE), L. Lauterbach (Berlin/DE)
- 167-BTP PEGylation increases stability and pharmacokinetic properties of arginine deiminase of *Streptococcus pyogenes*
N. Irmscher, K. Volkmar, C. Maletzki, B. Kreikemeyer, R. Schwarz
T. Fiedler (Rostock/DE)
- 168-BTP Microfluidic platform designed for cultivation and integrated characterization of biofilms under various environments
E. Klein, J. Weiler, M. Edel, H. Horn (Karlsruhe/DE)
C. M. Niemeyer (Eggenstein-Leopoldshafen/DE)
D. Rehnund (Karlsruhe/DE)
J. Gescher (Karlsruhe, Eggenstein-Leopoldshafen/DE)
- 169-BTP Immobilisation of Microbial Siderophores using Solid Phase Extraction Columns
L. Malik, M. Hofmann (Freiberg/DE), D. Tischler (Freiberg, Bochum/DE)
M. Schlömann, T. Heine (Freiberg/DE)
- 170-BTP* A highly active UDP-glucose pyrophosphorylase from *Thermocrisum agreste* DSM 44070 – TaGalU
A. Kumpf (Bochum/DE), D. Kowalczykiewicz, K. Szymanska (Gliwice/PL)
M. Mehnert (Freiberg/DE), I. Bento (Hamburg/DE)
A. Pollender (Freiberg/DE), A. Łochowicz, A. Jarzębski (Gliwice/PL)
D. Tischler (Bochum, Freiberg/DE)
- 171-BTP Generation of multifunctional magnetic nanoparticles by magnetosome display of peptides and reporter enzymes
C. Lanzloth, F. Mickoleit, D. Schüler (Bayreuth/DE)

- 172-BTP* Metabolic engineering of *Corynebacterium glutamicum* for high-level ectoine production – design, combinatorial assembly, and implementation of a transcriptionally balanced heterologous ectoine pathway
L. Jungmann, G. Gießelmann, D. Dietrich, M. Kohlstedt (Saarbrücken/DE)
E. J. Jeon, S. S. Yim (Daejeon/KR), F. Sommer, D. Zimmer, T. Mühlhaus
M. Schroda (Kaiserslautern/DE), K. J. Jeong (Daejeon/KR), J. Becker
C. Wittmann (Saarbrücken/DE)
- 173-BTP A timed off-switch for dynamic control of gene expression in *Corynebacterium glutamicum*
D. Siebert (Straubing/DE), J. Altenbuchner (Stuttgart/DE)
B. Blombach (Straubing/DE)
- 174-BTP BioTrans – Biodiversity of Iranian soil bacteria with ω -Transaminases for the production of chiral amines
N. Gord Noshari (Tehran/IR), U. Engel, J. Rudat (Karlsruhe/DE)
- 175-BTP Systems metabolic engineering of *Corynebacterium glutamicum* for the production of L-Lysine derived products
S. Pauli, C. M. Rohles, G. Gießelmann, M. Kohlstedt, J. Becker
C. Wittmann (Saarbrücken/DE)
- 176-BTP Development of an enzyme cascade process for biocatalytic production of chiral beta amino acids
U. Engel, J. Rudat (Karlsruhe/DE)
- 177-BTP Enantioselective epoxidation of poorly water-soluble substrates by flavin-dependent monooxygenases in the presence of organic solvents
D. Eggerichs, J. Mayweg, D. Tischler (Bochum/DE)
- 178-BTP Evidence for a unique PDH/ODH supercomplex in *Corynebacterium glutamicum*
L. Sundermeyer, M. Baumgart, M. Bott (Jülich/DE)
- 179-BTP Heterologous Production of the Polyphenol Pinosylin with *Pseudomonas taiwanensis* VLB120
T. Schwanemann, M. Otto, N. Wierckx (Jülich/DE)
- 180-BTP The electric-gut microbiome – selecting electroactive microorganisms from mouse feces
L. Rago, J. T. Heiker, D. Popp, F. Harnisch (Leipzig/DE)
- 181-BTP Metabolic network analysis of mannose-grown *Corynebacterium glutamicum*
P. Cao, S. Schwechheimer, J. Becker, C. Wittmann (Saarbrücken/DE)
- 182-BTP Synthesis of the alternative sweetener 5-ketofructose from sucrose by fructose dehydrogenase and invertase producing *Gluconobacter* strains
J. Hoffmann, U. Deppenmeier (Bonn/DE)

- 183-BTP Dictyostelium discoideum as a source of natural products and expression host for polyketide synthases from amoebozoia
C. Reimer, J. E. Kufs, J. Rautschek, V. Valiante, F. Hillmann (Jena/DE)
- 184-BTP Exploiting the biotechnological potential of anaerobic fungi
M. Stabel, J. Hagemeister, T. Schweitzer, M. Greif, H. Aliyu
K. Ochsenreither (Karlsruhe/DE)
- 185-BTP Milling by-products are suitable and economical substrates for clostridial ABE fermentation
N. Thieme, W. Liebl, V. Zverlov (Freising/DE)
- 186-BTP Enrichment and isolation of steroid-hormone degrading bacteria for their use in sewage treatment plants
L. Heisel, J. Holert (Münster/DE), K. Kujala (Oulu/FI)
B. Philipp (Münster/DE)
- 187-BTP Optimization of Fermentation Parameters in Ethanol Production from Cane Molasses (The case of Metahara Sugar Factory Ethanol Plant)
N. Seid, A. Neumann (Karlsruhe/DE), G. S. Shiferaw (Addis Ababa/ET)
- 188-BTP Establishment of a microfluidic platform using gelmicrodroplets to provide access to the previously unknown microbial diversity
B. Kästner, P. Neubauer, J. Bader (Berlin/DE), M. Rosenbaum (Jena/DE)
- 189-BTP Heterologous production of the aminoglycoside kasugamycin in Corynebacterium glutamicum
P. Ramp, S. Matamouros, A. Wirtz, M. Baumgart, M. Bott (Jülich/DE)
- 190-BTP Lactate utilization in different acetogenic strains
F. R. Bengelsdorf, V. Hardt, P. Dürre (Ulm/DE)
- 191-BTP A Biotechnological Approach towards Mono-functionalized Diamines as Platform Chemicals
C. Mügge, A. Gomez Baraibar, A. Maier, S. Wansel, D. Tischler (Bochum/DE)
- 192-BTP Immobilized natural compounds of entomopathogenic bacteria on different surfaces inhibit bacterial biofilm formation
A. Gazanis (Mainz/DE), S. Zollner, A. Oelbermann (Oberhausen/DE)
H. B. Bode (Frankfurt a. M./DE), R. Heermann (Mainz/DE)
- 193-BTP Construction of a signal peptide library to improve recombinant protein secretion in Bacillus megaterium
J. Mayer, T. Knuuti, L. Baumgarten, L. Bischoff
R. Biedendieck (Braunschweig/DE)
- 194-BTP Metagenomic nanopore sequencing for the characterization and abundance tracking of complex microbial communities in biogas reactors
C. Brandt (Jena/DE, Uppsala/SE), E. Bongcam-Rudloff, B. Müller (Uppsala/SE)

- 195-BTP *Cupriavidus necator* as versatile biocatalyst powered by electrochemically generated H
H. Wohlers (Frankfurt a. M./DE), D. Holtmann (Frankfurt a. M., Gießen/DE)
- 196-BTP Biofilm formation in CSTR biogas reactors at very low hydraulic retention times
D. Popp (Leipzig/DE), A. Weimer (Leipzig, Saarbrücken/DE)
T. R. Neu (Magdeburg/DE), F. Centler (Leipzig/DE)
- 197-BTP Isolation of a new *Streptomonospora*-species producing a new peptide antibiotic
S. Khodamoradi, R. Hahnke, M. Stadler, F. Surup, J. Wink, P. Schumann
M. Steinert, M. Rohde (Braunschweig/DE)
- 198-BTP Evaluation of „Impure“ Syngas derived from Biomass Gasification as Substrate in Syngas Fermentation
A. Infantes, A. Neumann (Karlsruhe/DE)
- 199-BTP A sugar-independently regulated gene expression system for *Pseudomonas fluorescens*
L. Hoffmann, T. Brüser (Hanover/DE)
- 200-BTP* A new carbonyl reductase from *Yarrowia lipolytica* stereospecifically converting α -substituted β -keto esters
C. Drewniok, C. Trapp, C. Schuster, K. Barková (Zittau/DE)
N. Jehmlich (Leipzig/DE), D. Greif, A. Fuchs, T. Wiegert
M. J. Pecyna (Zittau/DE)
- 201-BTP Robot-based automated isolation and characterization of a colicin-producing *Escherichia coli* strain with inhibitory activity against EPEC
B. Heilmann, S. Özipek, L. Stähelin, M. Machava, P. Götz, J. Bader
E. Grohmann (Berlin/DE)
- 202-BTP Proteolytic enzymes of *Aspergillus* with activity in relation to components of the hemostasis system for diagnosis of thromboembolic diseases
A. Osmolovskiy, A. Orekhova, A. Ochneva (Moscow/RU)
- 203-BTP How much can you bear? – Alcohol tolerance in microbial expression strains
F. Schultes, M. Haarmann, D. Tischler, C. Mügge (Bochum/DE)
- 204-BTP Enriching the diversity of polyethylene terephthalate (PET) degrading enzymes from metagenomes
H. Zhang, D. Danso, J. Chow (Hamburg/DE), B. Voss, J. Pleiss (Stuttgart/DE)
W. R. Streitz (Hamburg/DE)
- 205-BTP Analysis of regulatable heterologous expression systems in *Gluconobacter oxydans* 621H
P. M. Fricke, C. Davoudi, T. Link, C. Sonntag, L. Flachbart, M. Bott
T. Polen (Jülich/DE)

- 206-BTP Halophilic Bacteria for Biocatalysis
C. Ohle, G. Alfaro-Espinoza, H.-J. Kunte (Berlin/DE)
- 207-BTP Utilizing cyanobacterial photosynthesis as power supply for whole-cell-biocatalysis
A. Hochkeppel, J. Toepel, M. Uhl, A. Hoschek, B. Bühler
A. Schmid (Leipzig/DE)
- 208-BTP Electrode assisted production of platform chemicals in *R. sphaeroides*
F. Schmid, J. Gescher (Karlsruhe/DE)
- 209-BTP Real-time monitoring of fungal growth on solid substrates
H. L. Duong, T. Maskow, D. Schlosser (Leipzig/DE)
- 210-BTP Towards construction of *C. acetobutylicum* ATCC824 and *C. saccharobutylicum* NCP262 strains for efficient conversion of milling by-products in butanol
H. Edelmann, J. Müller (Freising/DE), C. Pires, N. Saunders (Uxbridge/GB)
W. Liebl, A. Ehrenreich (Freising/DE)
- 211-BTP Identification and evaluation of novel subtilases from *Bacillaceae*
F. Falkenberg, J. Rahba, P. Siegert, J. Bongaerts (Jülich/DE)
- 212-BTP Characterization of the marine bone degrading microbiome – a road map for bioinformatics driven enzyme discovery
E. Borchert (Kiel/DE), S. Sánchez-Carrillo (Madrid/ES), A. García-Moyano
G. E. K. Bjerga (Bergen/NO), M. Ferrer (Madrid/ES), U. Hentschel (Kiel/DE)
- 213-BTP Development of a purely biological, chemical-free phosphorus recovery process in a full-scale wastewater treatment plant for the production of phosphorus-rich organic fertilizer
V. Vucic, S. Günther, C. Süring, L. Feissel, F. Schattenberg, J. Lambrecht
Z. Liu, S. Müller (Leipzig/DE)
- 214-BTP Production of *N*-methylated amino acids in recombinant *Corynebacterium glutamicum*
A. Kerbs, M. Mindt, V. F. Wendisch (Bielefeld/DE)
- 215-BTP Acetic acid bacteria strain library screening for best oxidizers of different antibiotic classes
M. Bimmer, S. Gruber, W. Liebl, A. Ehrenreich (Freising/DE)
- 216-BTP Biotransformation of terpenes – seek for new sustainable materials
A.-L. Hiller, M. Böckers (Mainz/DE), L. Antelo (Kaiserslautern/DE)
S. R. Waldvogel (Mainz/DE), E. Thines (Mainz, Kaiserslautern/DE)

- 217-BTP* New metabolites from old pathways – exploring the potential of artificial biosynthetic pathways to produce novel compounds
J. E. Kufs, S. Hoefgen, J. Rautschek, V. Valiante (Jena/DE)
- 218-BTP Synthesizing diverse polyketide building blocks from carboxylic acids via a one-pot enzymatic route
A. Bennion, P. D. Gerlinger, T. J. Erb (Marburg/DE)
- 219-BTP Self-immobilizing biocatalysts for continuous stereoselective reactions in microfluidic systems
P. Bitterwolf, K. S. Rabe, C. M. Niemeyer (Karlsruhe/DE)
- 220-BTP* Identification and heterologous expression of putative NRPS-like and PKS coding genes from *Guignardia bidwellii* in *Magnaporthe oryzae*
H. Neumann, A. Borger, L. Schirling (Mainz/DE)
L. Antelo (Kaiserslautern/DE), K. Andresen (Mainz/DE)
E. Thines (Mainz, Kaiserslautern/DE)
- 221-BTP Disruption of the PEP-Pyr-OAA node as a strategy to improve ectoine production in *Halomonas elongata*
K. Hobmeier, K. Pflüger-Grau, A. Kremling, A. Marin-Sanguino (Garching/DE)
- 222-BTP Development of a two-step hydrocyclone system for continuous processing in biotechnological production
H. Al-Kaidy, J. Millauer, B.-U. Wilhelm, J. Bader (Berlin/DE)
- 223-BTP Employing microfluidic bioreactors for machine – assisted cultivation and analysis of productive biofilms
P. Lemke, K. S. Rabe, H. Horn, J. Gescher, C. M. Niemeyer (Karlsruhe/DE)
- 224-BTP Steryl esters, a new class of storage compounds in steroid-degrading bacteria
J. Holert (Münster/DE, Vancouver/CA), K. Brown
A. Hashimi (Vancouver/CA), B. Philipp (Münster/DE), L. Eltis
W. Mohn (Vancouver/CA)
- 225-BTP A NanoBIT Metabolite Sensor based on the *Synechocystis* sp. PCC6803 PII Signaling Protein with PII-interacting protein X
R. Rozbeh (Tübingen/DE), K. Forchhammer (Tübingen/DE)
- 226-BTP 3D-Printed Flow Reactor Modules for Chemoenzymatic Synthesis
M. Peng, K. S. Rabe (Eggenstein-Leopoldshafen/DE)
- 227-BTP Enrichment of microbial communities from midgut and hindgut of Sun beetle larvae (*Pachnoda marginata*)
B. Grosch Schroeder, S. Kleinsteuber, W. Logrono, M. Nikolausz (Leipzig/DE)

- 228-BTP Screening of Signal Peptides for Secretion of Heterologous Proteins in *C. glutamicum* using split GFP
C. Müller, I. Chika Linda, V. Waffenschmidt, W. Wiechert
M. Oldiges (Jülich/DE)
- 229-BTP Development of automated workflows for the accelerated production and characterization of catalytically active inclusion bodies
K. Küsters, S. Albert, W. Wiechert, M. Oldiges (Jülich/DE)
- 230-BTP Efficient in-line extraction system for selective 1-hexanol production from synthesis gas fermentation
P. Kottenhahn, G. Philipps, S. Jennewein (Aachen/DE)

Viruses & Phages | 231-VPP–242-VPP

First Floor (Hörsaalgebäude)

- 231-VPP Parallel and scalable workflow for the identification and analysis of Phages in sequencing data
M. Marquet, M. W. Pletz, O. Makarewicz (Jena/DE)
A. Viehweger (Leipzig/DE), M. Hoelzer (Hinxton/GB), C. Brandt (Jena/DE)
- 232-VPP Spatiotemporal binding dynamics of the Lsr2-type xenogeneic silencer CgpS during prophage induction in *Corynebacterium glutamicum*
M. Hünnefeld, A. Filipchuk, J. Frunzke (Jülich/DE)
- 233-VPP Investigation of Ionic Liquids for concentration of viral particles of aqueous samples
J. Sommer, B. Bromberger, T. Gundolf (Vienna/AT), R. Kalb (Grambach/AT)
P. Rossmanith, P.-J. Mester (Vienna/AT)
- 234-VPP Impacts of prophage encoded genes on host metabolic networks
N. Saadat (Düsseldorf/DE)
- 235-VPP UViGs enable the assessment of viral diversity and their importance along the Peruvian coast
C. M. Chibani, M. Fischer, A. Kupczok (Kiel/DE), G. Lavik (Bremen/DE)
R. Schmitz-Streit (Kiel/DE)
- 236-VPP Isolation and characterization of novel *Streptomyces* phages
A. Hardy, L. Kever, V. Sharma, J. Frunzke (Jülich/DE)
- 237-VPP Phage-Paper-Scissors – a new paper-based sampling method for monitoring of viruses
M. Bobal, J. Sommer, P.-J. Mester (Vienna/AT), A. K. Witte (Bamberg/DE)
D. Schoder, P. Rossmanith (Vienna/AT)

- 238-VPP Expanding viromes associated with *Brevundimonas* and *Serratia*
I. Friedrich, B. Bodenberger, A. Klassen, R. Hertel, R. Daniel (Göttingen/DE)
- 239-VPP Time series analysis of lysogeny dynamics in different environments
E. Oldenburg (Düsseldorf/DE)
- 240-VPP Bacteriophages and their secrets – discovering unknown, lytic properties of tail tubular proteins from *Y. enterocolitica* and *K. pneumoniae*-infecting viruses
N. Urbanska, E. Brzozowska, A. Pyra, K. Filik (Wrocław/PL)
- 241-VPP *In vitro* analysis of O-antigen specific bacteriophage P22 inactivation by *Salmonella* outer membrane vesicles
M. S. Stephan, N. K. Broeker (Potsdam/DE), A. Saragliadis
D. Linke (Blindern/NO), S. Barbirz (Potsdam/DE)
- 242-VPP *Pseudomonas aeruginosa* bacteriophages for possible therapeutic applications
T. Martens, G. Maschkowitz, S. Schubert, H. Fickenscher (Kiel/DE)

Single Cell Analysis | 243-SCAP–250-SCAP

First Floor (Hörsaalgebäude)

- 243-SCAP Studying bacteriophage infections using Raman microspectroscopy
I. Monsees, V. Turzynski, A. J. Probst (Essen/DE)
- 244-SCAP Neutral mechanisms and niche differentiation in steady-state insular microbial communities revealed by single cell analysis
Z. Liu, N. Cichocki, T. Hübschmann, C. Süring (Leipzig/DE)
I. D. Ofițeru (Newcastle upon Tyne/GB), W. Sloan (Glasgow/GB)
V. Grimm, S. Müller (Leipzig/DE)
- 245-SCAP Single cell mass spectrometry – Measuring productivities of microbes, one cell at a time.
M. Schirmer (Leipzig/DE)
- 246-SCAP Insights into single-cell heterogeneity of prokaryotes by single-cell RNAseq
C. Homberger, F. Imdahl, E. Vafadarnejad, A.-E. Saliba
J. Vogel (Würzburg/DE)
- 247-SCAP Comparative analyses of plasmodial network growth in three different slime molds (*Myxogastria*)
C. Westendorf (Göttingen/DE, Graz/AT), C. J. Gruber, K. Schnitzer
S. Kraker, M. Grube (Graz/AT)

- 248-SCAP Noise in virulence gene regulation in *Staphylococcus aureus*
S. George, E. Lehmann, A. Duque-Jaramillo, N. Vetter, D. Keinhörster
 G. Hermsdorf, E. Schäffer, F. Oesterhelt, C. Wolz (Tübingen/DE)
- 249-SCAP Flow Cytometric Analysis and Quantification of *Clostridioides difficile*
 and its Spores
C. Döring, J. Fischer, H. Bahl (Rostock/DE)
- 250-SCAP Quantitative assays for single cell studies of spore germination
S. Schwindt (Marburg/DE), M. Kilian, R. Koch (Heidelberg, Marburg/DE)
 B. Steinfeld (Marburg, Heidelberg/DE), E. Kaganovitch, B. Wollenhaupt
 D. Kohlheyer (Jülich/DE), I. Bischofs-Pfeifer (Heidelberg, Marburg/DE)

Microbial Stress Response | 251-MSRP–286-MSRP

First Floor (Hörsaalgebäude)

- 251-MSRP *Staphylococcus aureus* responds to allicin by global S-thioallylation – role of the
 Brx/BSH/YpdA pathway and the disulfide reductase MerA to overcome allicin stress
V. L. Vu, T. T. H. Nguyen (Berlin/DE), T. Busche (Berlin, Bielefeld/DE)
 N. T. Quach (Berlin/DE), M. C. H. Gruhlke (Aachen/DE)
 J. Kalinowski (Bielefeld/DE), J. Bernhardt (Greifswald/DE)
 A. Slusarenko (Aachen/DE), H. Antelmann (Berlin/DE)
- 252-MSRP The MhqR regulon confers resistance to quinone-like antimicrobials in
Staphylococcus aureus
V. N. Fritsch, S. Wellner, V. V. Loi (Berlin/DE)
 T. Busche (Berlin, Bielefeld/DE), A. Sommer, K. Tedin
 D. Nürnberg (Berlin/DE), J. Kalinowski (Bielefeld/DE)
 J. Bernhardt (Greifswald/DE), M. Fulde, H. Antelmann (Berlin/DE)
- 253-MSRP *Staphylococcus aureus* uses the bacilliredoxin (BrxAB)/bacillithiol disulfide
 reductase (YpdA) redox pathway to defend against oxidative stress under infections
N. Linzner, V. V. Loi, V. N. Fritsch, Q. N. Tung, S. Stenzel (Berlin/DE)
 M. Wirtz, R. Hell (Heidelberg/DE), C. J. Hamilton (Norwich/GB), K. Tedin
 M. Fulde, H. Antelmann (Berlin/DE)
- 254-MSRP The redox-sensing MarR-type repressor HypS controls hypochlorite
 resistance in *Mycobacterium smegmatis*
N. T. Quach (Berlin/DE), T. Busche (Bielefeld/DE), K. Klaper (Berlin/DE)
 S. Gola (Madrid/ES), V. L. Vu (Berlin/DE), J. Kalinowski (Bielefeld/DE)
 H. Antelmann (Berlin/DE)
- 255-MSRP The monensin persistence mechanisms of *Prevotella bryantii* B₁₄
A. Trautmann, L. Schleicher, J. Steuber, J. Seifert (Stuttgart/DE)

- 256-MSRP Comparative genomics and transcriptomics to analyze multicellular development in filamentous fungi
R. Lütkenhaus, S. Traeger, J. Breuer (Bochum/DE), L. Carreté (Barcelona/ES)
A. Kuo, A. Lipzen, J. Pangilinan, D. Dilworth
L. Sandor (Walnut Creek, CA/US), S. Pöggeler (Göttingen/DE),
T. Gabaldón (Barcelona/ES), K. Barry, I. V. Grigoriev (Walnut Creek, CA/US)
M. Nowrousian (Bochum/DE)
- 257-MSRP* Proteomic adaptation of *Streptococcus pneumoniae* to the human antimicrobial peptide LL-37
P.-A. Mücke, S. Maaß, S. Hammerschmidt, D. Becher (Greifswald/DE)
- 258-MSRP Metabolomic profiling of dormant and reactivating *Mycobacterium smegmatis* cells
V. Nikitushkin, G. Demina, M. Shleeva, A. Kaprelyants (Moscow/RU)
- 259-MSRP A novel approach towards developing an efficient and self-renewing filter system
A. Vaishampayan, R. Ahmed, O. Wagner (Berlin/DE)
A. de Jong (Groningen/DE), C. Meyer, D. Wight, R. Haag
U. Landau (Berlin/DE), J. Kok (Groningen/DE), E. Grohmann (Berlin/DE)
- 260-MSRP Adjusting ectoine biosynthesis – Crystallographic and functional analysis of the EctR regulator
L. Czech (Marburg/DE), B. Frieg (Jülich, Düsseldorf/DE), S. Kobus
A. Höppner, J. Reiners (Düsseldorf/DE), H. Gohlke (Düsseldorf, Jülich/DE)
S. Smits (Düsseldorf/DE), E. Bremer (Marburg/DE)
- 261-MSRP Cellular response to osmotic challenges of the potential industrial workhorse *Bacillus methanolicus*
C. Frank, T. Hoffmann (Marburg/DE), M.- F. Felle (Ludwigshafen/DE)
E. Bremer (Marburg/DE)
- 262-MSRP Beyond damage repair – cell envelope stress resistance in *Haemophilus influenzae* as a determinant of successful host interactions
M. Nasreen, J. Hosmer, R. Dhouib, A.-T. Essilfie, A. G. McEwan
U. Kappler (St. Lucia/AU)
- 263-MSRP Insights into the control of *nlpC*-operon expression in *C. glutamicum* by the two-component system MtrAB and a c-di-AMP responsive riboswitch
T. Lkhaasuren, S. Reich (Ulm/DE), T. Weiss, G. M. Seibold (Kgs. Lyngby/DK)
- 264-MSRP A Respiratory Supercomplex Links Oxygen and Nitrate Reduction in the Obligate Aerobic Actinobacterium *Streptomyces coelicolor* A3(2)
M. Fischer, D. Falke, A. Haase, A. Kieler, C. Ihling, A. Sinz
G. Sawers (Halle a. d. Saale/DE)

- 265-MSRP Global Analysis of Changing Transcript Stability in the Acclimation to Low Iron in a Photosynthetic Cyanobacterium
L. Youssar (Freiburg i. Br./DE), G. Kostova (Paris/FR), W. R. Hess J. Georg (Freiburg i. Br./DE)
- 266-MSRP Investigation of the plasma-induced activation of *Escherichia coli* Hsp33
T. Dirks, M. Krewing, J. Bandow (Bochum/DE)
- 267-MSRP The Cup determinant is crucial for the resistance to copper in *Cupriavidus metallidurans*
N. Hirth, M.-S. Gerlach, C. Große, D. H. Nies (Halle a. d. Saale/DE)
- 268-MSRP Work horse strain *Clostridioides difficile* 630 Δ erm is oblivious to ist anaerobic lifestyle
D. Troitzsch (Greifswald/DE), H. Zhang (Braunschweig/DE)
S. Dittmann (Greifswald/DE), D. Düsterhöft (Leipzig/DE)
J. M. Borrero de Acuna (Braunschweig/DE), S. Sievers (Greifswald/DE)
- 269-MSRP Spatiotemporal dynamics of the one-component signaling system CadC
J. Schwarz, S. Brameyer, E. Hoyer, K. Jung (Planegg-Martinsried/DE)
- 270-MSRP Inhibition of ribosome rescue mechanisms leads to changes in metal homeostasis in bacteria
M. Vázquez-Hernández, J. Bandow (Bochum/DE), J. Alumasa K. Keiler (Philadelphia, PA/US)
- 271-MSRP Reconstitution of the functional Clp protease complex of streptomycetes *in vitro*
L. Reinhardt, D. Thomy, J. Hauser (Tübingen/DE), J. Ortega (Montreal/CA)
P. Sass, H. Brötz-Oesterhelt (Tübingen/DE)
- 272-MSRP N-chloramines – reduction mechanism and labeling technique
M. Varatnitskaya, K. Xie, K. Rosowski, N. Lupilov, B. Sitek L. I. Leichert (Bochum/DE)
- 273-MSRP Analysis of TisB-dependent stress responses in *Escherichia coli*
N. E. Schmid, D. Edelmann, B. Berghoff (Gießen/DE)
- 274-MSRP High sensitivity against membrane targeting antimicrobials in polyphosphate deficient *Pseudomonas aeruginosa*
S. Brückner, W.-Y. Wholey (Ann Arbor, MI/US), M. Hall (Normal, IL/US)
U. Jakob (Ann Arbor, MI/US), J.-U. Dahl (Normal, IL/US)
- 275-MSRP Challenging antibiotic resistance – Lipopolysaccharide synthesis as a potential target for an efficient treatment of Gram-negative bacteria
A.-M. Möller, S. Schäkermann, N. Thomanek, F. Narberhaus (Bochum/DE)
- 276-MSRP CRISPR-Cas Systems in *Rhodobacter capsulatus*
J. Kretz, D. T. Spanka, G. Klug (Gießen/DE)

- 277-MSRP Cyanobacterial acclimation to carbon limitation reveals complex regulation on proteome and phosphoproteome levels.
P. Spät (Tübingen/DE), T. Barske (Rostock/DE), B. Maček (Tübingen/DE)
M. Hagemann (Rostock/DE)
- 278-MSRP Quantitative proteome profiling of *Coxiella burnetii* reveals major metabolic and stress differences under axenic and cell culture cultivation.
K. Mertens-Scholz (Jena/DE), J. Dresler, P. Pajer (Prague/CZ)
H. Neubauer (Jena/DE)
- 279-MSRP Role of the stringent response for biofilm formation in *Staphylococcus aureus*
A. Salzer, D. Keinhörster, C. Kästle, B. Kästle, C. Wolz (Tübingen/DE)
- 280-MSRP The tripartite efflux pump TtgABC confers resistance to iron chelators and other toxic compounds
N. V. Stein, T. Henriquez, T. Baldow, H. Jung (Planegg-Martinsried/DE)
- 281-MSRP The impact of a novel ClpA mutation on MazEF antitoxin-toxin system in *Escherichia coli* in the presence of antibiotic stress.
A. Schwarz, A. Heisig, P. Heisig (Hamburg/DE)
- 282-MSRP The cellular interplay of zinc homeostasis and folate metabolism in *C. metallidurans*
V. Schulz, M. Herzberg, D. H. Nies (Halle a.d. Saale/DE)
- 283-MSRP Transcriptomic and proteomic profiling of the *Aspergillus nidulans* response to low temperature stress revealed a distinct profile of secondary metabolites and the induction of sexual development
B. Hanf, T. Krüger, D. J. Mattern, M. Stroe, T. Conrad (Jena/DE)
B. Bunk (Braunschweig/DE), A. M. Köhler, A. Strohdiek
G. Braus (Göttingen/DE), J. Overmann (Braunschweig/DE)
A. A. Brakhage, O. Kniemeyer (Jena/DE)
- 284-MSRP* Regulatory Network of „Bce-like“ Modules in *Lactobacillus casei* BL23 in Response to Subtilin
Q. Zhang, A. Revilla-Guarinos (Dresden/DE), C. Alcántara (Valencia/ES)
T. Mascher (Dresden/DE), M. Zúñiga (Valencia/ES), D. Wolf (Dresden/DE)
- 285-MSRP A potential link between sporulation and degradation of the siderophore Bacillibactin
L. Ernst, I. Bischofs-Pfeifer (Heidelberg, Marburg/DE)
- 286-MSRP The impact of Surfactin on protein physiology of *B. subtilis*
L. Lilje, M. Vahidinasab, J. Pfannstiel, B. Würtz, M. Henkel
R. Hausmann (Stuttgart/DE)

Zoonoses | 287-ZOP–311-ZOP

Second Floor (Hörsaalgebäude)

- 287-ZOP Murine fecal microbiota transplantation alleviates intestinal and systemic immune responses in *Campylobacter jejuni* infected mice harboring a human gut microbiota
M. M. Heimesaat, K. Mrazek, S. Bereswill (Berlin/DE)
- 288-ZOP Prevalence and antimicrobial susceptibility of *Arcobacter* species in human stool samples – the prospective German *Arcobacter* prevalence study Arcopath
M. M. Heimesaat, V. Brückner, U. Fiebigler, R. Ignatius, J. Friesen, M. Höck M. Eisenblätter, T. Alter, S. Bereswill, G. Götz (Berlin/DE)
- 289-ZOP Vitamin D in acute campylobacteriosis – results from an intervention study applying a clinical *Campylobacter jejuni* induced enterocolitis model
S. Bereswill, S. Mousavi, F. D. Lobo de Sá, J.-D. Schulzke, R. Bückler M. M. Heimesaat (Berlin/DE)
- 290-ZOP* Pathogenicity and virulence of *S. schweitzeri* – a new member of the *S. aureus* complex
A. Großmann, N. J. Froböse (Münster/DE), A. S. Alabi (Lambaréné/GA) A. Mellmann, F. Schaumburg, S. Niemann (Münster/DE)
- 291-ZOP Single cell assay for DNA uptake in *Campylobacter jejuni* – a tool for monitoring the adaptive potential of the food-borne pathogen
J. Götz, K. Stingl (Berlin/DE)
- 292-ZOP Genetic diversity of *Mycobacterium bovis* and its zoonotic potential in Ethiopia – A systematic review
B. Tulu, G. Ameni (Bahir Dar/ET)
- 293-ZOP* Whole genome sequencing of methicillin-resistant staphylococci from German dairy farms revealed broad antimicrobial resistance profiles but a low risk of human infections
T. Lienen, A. Schnitt, S. Maurischat, B.-A. Tenhagen (Berlin/DE)
- 294-ZOP Analysis of the *Coxiella burnetii* isolate-specific pathogenic potential using proteomics
J. Andrack (Jena/DE), J. Dresler (Prague/CZ), H. Neubauer K. Mertens-Scholz (Jena/DE)
- 295-ZOP Decolonization of LA-MRSA positive fattening pigs – Effects of straw bedding on conventional husbandry
S. Linnemann, H. Müller, I. Kobusch (Soest/DE), N. Effelsberg A. Mellmann (Münster/DE), M. Boelhauve (Soest/DE)

- 296-ZOP Identification of housing condition factors influencing the occurrence of MRSA and ESBL in pigsties
I. Kobusch, S. Linnemann, H. Müller, M. Boelhaue (Soest/DE)
- 297-ZOP Analysis of *Arcobacter butzleri* from water poultry – Insights into antibiotic-resistance and virulence determinants
E. Müller, I. Hänel, H. Hotzel (Jena/DE), M. Pfeffer (Leipzig/DE)
H. Neubauer, A. Busch, H. Tomaso (Jena/DE)
- 298-ZOP Serological and molecular identification of *Brucella* spp. in pig from Cairo and Gizeh governorates, Egypt
A. U. Khan, F. Melzer, M. Elschner, H. Neubauer, H. El-Adawy (Jena/DE)
- 299-ZOP A *Mycobacterium bovis* intrabronchial infection model established in goats
N. Wedlich, J. Figl, H. Köhler, E. Liebler-Tenorio (Jena/DE)
K. von Pückler (Gießen/DE), S. Petow (Celle/DE)
S. Mamerow (Greifswald, Jena/DE), M. Rissmann (Jena/DE)
R. Ulrich (Greifswald/DE), P. Reinhold (Jena/DE)
C. Schröder (Greifswald/DE), L. Grode (Hanover/DE)
S. H. E. Kaufmann (Berlin/DE), C. Menge (Jena/DE)
- 300-ZOP Multi-drug resistant gram-negative pathogens carried by flies from a tertiary hospital in Rwanda
S. Heiden (Greifswald/DE), M. Kurz (Berlin/DE), J. Bohnert (Greifswald/DE)
C. Bayingana (Kigali/RW), J. Ndoli (Kigali, Butare/RW), A. Sendegeya
J. Gahutu (Butare, Kigali/RW), E. Eger (Greifswald/DE)
F. Mockenhaupt (Berlin/DE), K. Schaufler (Greifswald/DE)
- 301-ZOP Major *in vivo* marker of dermatophytoses demonstrated in *ex vivo* skin infection model
C. Baumbach, J. Michler (Leipzig/DE), P. Nenoff, S. Uhrlaß (Mölbis/DE)
W. Schroedl (Leipzig/DE)
- 302-ZOP Metabolic traits of bovine STEC strains with different colonization properties
S. Barth, M. Weber (Jena/DE), K. Schaufler (Greifswald, Berlin/DE)
C. Berens, L. Geue, C. Menge (Jena/DE)
- 303-ZOP Tuberculosis in small animals living in close contact to their owners
S. Barth, C. Menge (Jena/DE), F. Attig, W. Baumgärtner
A. Lehmecker (Hanover/DE), M. Kohlbach (Wennigsen/DE)
D. Hillemann (Borstel/DE), A. Lauda (Planegg-Martinsried/DE)
S. Pfleghaar (Munich/DE)
- 304-ZOP* Antimicrobial-resistant pathogens transmitted via pets
C. Hackmann, P. Gastmeier, R. Leistner (Berlin/DE)

- 305-ZOP Interaction of *Escherichia coli* Shiga toxins with glycosphingolipid receptors of porcine renal epithelial cells
J. Detzner, C. Gloerfeld, N. Legros, G. Pohlentz, H.-U. Humpf, A. Mellmann
H. Karch, J. Mühling (Münster/DE)
- 306-ZOP Tick feces as a potential infection source of Q fever examined in an *in vitro* feeding system
S. Körner (Jena, Leipzig/DE), G. R. Makert (Leipzig/DE), K. Mertens-Scholz
K. Henning (Jena/DE), M. Pfeffer, S. Ulbert (Leipzig/DE)
- 307-ZOP Project ZooM – Zoonotic importance of multidrug-resistant pathogens: FAQs at the interface veterinary/human medicine
S. Kutzora (Munich/DE)
- 308-ZOP Investigations into coinfections of the obligate intracellular ruminant pathogens *Chlamydia abortus* and *Coxiella burnetii*
B. Sara, E. Liebler-Tenorio, C. Schnee (Jena/DE)
- 309-ZOP Seroprevalence and molecular detection of brucellosis in sheep and goats at organized farms in Punjab, Pakistan
T. Jamil, U. Qudrat, F. Melzer, M. Saqib, M. Hammad Hussain, U. Tahir
H. Jamil, Z. Iqbal Qureshi, H. Neubauer, S. Schwarz (Jena/DE)
- 310-ZOP Review on selected bacterial zoonoses in Bulgarian citizens – 2004–2018
R. Nenova, I. Tomova, I. Ivanov, S. Panaïotov, V. Tolchkov (Sofia/BG)
- 311-ZOP One year follow-up of patients with acute Q fever – results from an outbreak in Southwest Germany, 2014–2015
L. Dangel, S. Fischer (Stuttgart/DE)

Microbiota, Symbiosis and Host | 312-MSHP– 341-MSHP

Second Floor (Hörsaalgebäude)

- 312-MSHP Antitumor anthraquinones from an Easter Island sea anemone – animal or bacterial *origin*?
I. Sottorff, J. Wiese (Kiel/DE), S. Künzel (Plön/DE), M. Lipfert, N. Preußke
F. D. Sönnichsen, J. F. Imhoff, U. Hentschel (Kiel/DE)
- 313-MSHP Elucidating the gut microbiome – metabolome correlations in Wistar rats
A. Murali (Ludwigshafen/DE), H. J. Cameron (North Carolina/US)
V. Giri, N. R. Habermehl (Ludwigshafen/DE), C. Behr (Cork/IE)
S. Sperber (Ludwigshafen/DE), T. Walk (Berlin/DE)
B. van Ravenzwaay (Ludwigshafen/DE)
- 314-MSHP Characterization of oral bacteriome dysbiosis in type 2 diabetes
M. K. Azim, F. Saleem, J. Kori (Karachi/PK)

- 315-MSHP Towards an Antibiotic-free Antimicrobial Therapy of Skin Disorders by Applying Probiotics
G. Khalfallah, E. Heine, R. Lütticken (Aachen/DE)
- 316-MSHP Towards the role of primary metabolites in the intestinal ecosystem under normal and inflamed conditions
A. Weiß, D. Ring, W. Eisenreich, K. Jung, B. Stecher-Letsch (Munich/DE)
- 317-MSHP Elucidation of the impact of (co)-infections on gut microbiome structure and function by metaproteomics
L. C. Gierse, A. Meene, C. Wünsche, D. Zühlke, N. Siemens, D. Becher, T. Urich, K. Riedel (Greifswald/DE)
- 318-MSHP Establishing an *in-vitro* co-cultivation system to analyze interaction of biofilms and human endothelial cells
V. I. Pauker, L. Rieckmann, T. Petscheleit, L. Maletzki, A. Strohbach, R. Busch (Greifswald/DE), S. Illner, N. Grabow (Rostock/DE), K. Riedel (Greifswald/DE)
- 319-MSHP Impact of salinity on the gastrointestinal bacterial community of the snail *Theodoxus fluviatilis*
C. Kivistik (Vehendi küla/EE), J. K.-M. Knobloch (Greifswald/DE), K. Käiro (Vehendi küla/EE), V. Kisand (Vehendi küla, Tartu/EE), H. Tammert (Vehendi küla/EE), J.-P. Hildebrandt (Greifswald/DE), D. Herlemann (Vehendi küla/EE)
- 320-MSHP Analysis of skin surface decontamination methods to assess unbiased tick-borne microbiomes
A. Hoffmann (Coburg/DE), V. Fingerle (Munich/DE), M. Noll (Coburg/DE)
- 321-MSHP Targeted design and manipulation of defined microbial consortia by bacteriophage
A. von Strempel (Munich/DE), J. Wittman (Braunschweig/DE), B. Stecher-Letsch (Munich/DE)
- 322-MSHP Influence of non-antibiotic drugs on EHEC growth and Shiga toxin production
B. von Armansperg, M. Koeppel, J. Glaser (Munich/DE), A. Typas (Heidelberg/DE), B. Stecher-Letsch (Munich/DE)
- 323-MSHP *Dyadobacter* sp. HH091 stimulates microalga growth and photosynthesis
Y. Astafyeva, D. Hanelt, W. R. Streit, I. Krohn (Hamburg/DE)
- 324-MSHP Rearing strategies in the black soldier fly influence microbial community composition and antibiotic/detergent-resistance gene abundance in the gut and feed residue
Y. A. Cifuentes Triana, S. P. Glaeser, J. Mvie, J.-O. Bartz (Gießen/DE), A. Müller, H. Gutzeit (Dresden/DE), A. Vilcinskas, P. Kämpfer (Gießen/DE)

- 325-MSHP Lactobacilli boost bioavailability of polyphenols in onion
M. Dormeyer, L. Garbe, A. Brauner (Holzminden/DE)
D. Guyonnet (Paris/FR), R. Wittlake, C. Koch (Holzminden/DE)
- 326-MSHP A multi-omics approach for fecal swine microbiomes reveals insights into structural and functional dynamics during viral infection.
A. Meene, L. C. Gierse, D. Schultz, H. Wang (Greifswald/DE), T. Schwaiger
C. Schröder (Greifswald, Insel Riems/DE), M. Lalk, K. Riedel
T. Urich (Greifswald/DE)
- 327-MSHP Microbial community composition in microalgae cultures infected with aphelid parasites
A.-L. Höger, C. Griehl (Köthen/DE), M. Noll (Coburg/DE)
- 328-MSHP The lichen microbiome and its role in adaptation to climate associated factors
M. Grimm, T. Kroniger (Greifswald/DE), U. Schiefelbein (Rostock/DE)
D. Zühlke, J. Bernhardt, K. Riedel (Greifswald/DE)
- 329-MSHP Investigating the mode of action of Bisphenols on the simplified human intestinal microbiota (SIHUMIX)
S. Riesbeck, S. S. Schäpe, J. L. Krause, R. K. Masanetz, U. Rolle-Kampczyk
C. Eberlein, H. J. Heipieper, G. Herberth, H. Petruschke, N. Jehmlich
M. von Bergen (Leipzig/DE)
- 330-MSHP Gut microbiota in Foxp3⁺ regulatory T cell depleted mice
J. Kehrmann, L. Effenberg, C. Wilk, D. Schoemer, P. Nhi Ngo Thi
A. Adamczyk, E. Pastille, R. Scholtysik, L. Klein-Hitpass (Essen/DE)
R. Klopffleisch (Berlin/DE), A. Westendorf, J. Buer (Essen/DE)
- 331-MSHP Temporal dynamics of human intestinal microbiota and its implications for 16S-rRNA based analysis
N. Hillebrandt, D. Graf, A. Dötsch (Karlsruhe/DE)
- 332-MSHP Towards high-resolution metagenomics to unravel gut microbiome functionality of solitary bees
Y. Pinheiro Alves de Souza (Oberschleißheim, Freising/DE)
A. Keller (Würzburg/DE), M. Schlöter (Oberschleißheim, Freising/DE)
B. Foessel (Oberschleißheim/DE)
- 333-MSHP Can bacteria adapted to leaf defense metabolites influence the secondary colonization of *Arabidopsis thaliana* leaves?
K. Unger, P. Baumann, T. Mayer, M. Reichelt, J. Gershenzon
M. Agler (Jena/DE)
- 334-MSHP Influence of gut commensal bacteria on intestinal barrier function
N. Mohebbali, B. Kreikemeyer, A. Breitrück (Rostock/DE)

- 335-MSHP Evaluation of the T6SS-associated activities of four VgrG proteins in *Aeromonas veronii* Hm21
J. Marden, J. Graf (Storrs, CT/US), S. Sampath (Boston, MA/US)
- 336-MSHP Investigations of the clonal relationship of Actinomyces strains in periodontal pockets at different depths using Diversilab, an automated repetitive sequenced based PCR bacterial typing system from BioMérieux
C.-S. Stingu, A. C. Rodloff, H. Jentsch, P. Vielkind, T. Borgman
L. Lehmeier (Leipzig/DE)
- 337-MSHP* Arginase 1 promotes colitis due to L-arginine deprivation and intestinal dysbiosis
J. Baier, M. Gänsbauer (Erlangen/DE), K. Dettmer (Regensburg/DE)
A. Ekici, W. Stefan, C. Bogdan, J. Mattner (Erlangen/DE)
- 338-MSHP* *Akkermansia muciniphila* reduces bacterial colonization and intestinal inflammation by inhibiting the adhesion of *Salmonella* to epithelial cells
A. Suwandi, A. Galeev, S. Sharma, K. Seeger (Hanover/DE)
J. Braun (Kiel/DE), D. Ring, B. Stecher-Letsch (Munich/DE), M. Blaut
G. Loh (Nuthetal/DE), G. A. Grassl (Hanover/DE)
- 339-MSHP Blood microbiota assessed by light and electron microscopy
S. Panaiotov, E. Nikolova, R. Kalfin (Sofia/BG)
- 340-MSHP The influence of temperature and associated microbiota on the toxicity of the dinoflagellate *Prorocentrum minimum*
S. Sanchez Garcia, J. Mansky, H. Wang, H. Sztajer
J. Tomasch (Braunschweig/DE), J. Leinberger
T. Brinkhoff (Oldenburg/DE), J. Holste, S. Schulz
I. Wagner-Döbler (Braunschweig/DE)
- 341-MSHP Membrane vesicles in an algae-bacteria co-culture
J. Mansky, S. Sanchez Garcia, H. Wang, H. Sztajer (Braunschweig/DE)
L. Wöhlbrand, R. Rabus (Oldenburg/DE), M. Neumann-Schaal, P. Henke
J. Overmann, J. Tomasch, D. Koteska, S. Schulz
I. Wagner-Döbler (Braunschweig/DE)

Open Topics | 342-OTP–352-OTP

Second Floor (Hörsaalgebäude)

- 342-OTP Maturation of lipoate-binding proteins in microbial sulfur oxidation
L. Hahn, C. Dahl (Bonn/DE)
- 343-OTP Taxonomy-free dereplication of massive genome collections using embeddings of protein content
A. Viehweger (Leipzig/DE), M. Hölzer, C. Brandt (Leipzig, Jena/DE)

- 344-OTP *BacDive* – Systematic Access to Phenotypic Data on 90% of the Bacterial Species
L. Reimer, J. Sardà, J. Overmann (Braunschweig/DE)
- 345-OTP New concepts in bacterial N-glycosylation – Substrate specificity of the EF-P arginine rhamnosyltransferase EarP
R. Krafczyk, F. Koller, L. Lindenthal, A. Sieber, K. Jung
J. Lassak (Planegg-Martinsried/DE)
- 346-OTP Microbial Sulfur Oxygenase Reductases – Structures, Identification of Reaction Intermediates and Implications for the Reaction Mechanism
A. Kletzin, P. Rühl (Darmstadt/DE), K. Parey (Frankfurt a. M./DE)
F. Folgosa, M. Teixeira (Oeiras/PT), J. Vonck (Frankfurt a. M./DE)
C. Frazão (Oeiras/PT)
- 347-OTP A network of sulfurtransferases delivering sulfur to the sulfur-oxidizing heterodisulfide reductase-like (sHdr) complex
W. Faßbender, E. Bach, S. Tanabe, M. Grosser, C. Dahl, L. Hahn (Bonn/DE)
- 348-OTP DNAzymes as catalysts for L-tyrosine and amyloid beta oxidation
T. Köhler, J. Thiele (Dresden/DE)
- 349-OTP Biosecurity Implications of Genome Editing Technologies
M. Himmel (Hamburg/DE)
- 350-OTP Microbiology literacy – Conceptions of high school students about bacteria
C. Höllmann, S. Kühn, W. Manz, J. Meier, M. Mikloweit
C. Thiel (Koblenz/DE)
- 351-OTP The verification of scientific data – does it make sense?
B. J. Tindall (Braunschweig/DE)
- 352-OTP AmpGram – a novel tool for prediction of antimicrobial peptides
M. Burdukiewicz (Warsaw/PL), J. Chilimoniuk, K. Sidorczuk
F. Pietluch (Wrocław/PL), D. Rafacz (Warsaw/PL)
S. Rödiger (Senftenberg/DE), P. Gagat (Wrocław/PL)

Gastrointestinal Infections | 353-GIP–361-GIP

Second Floor (Hörsaalgebäude)

- 353-GIP Gut Inflammation is Causing a Change in the Microbiome of *Manduca sexta*
A. G. Müller, T. Trenczek (Gießen/DE)
- 354-GIP *Escherichia coli* Nissle 1917 encodes a type VI secretion system which is active in vitro and might help fight gastrointestinal pathogens
T. Oelschlaeger, C. Niklas (Würzburg/DE)

- 355-GIP Identification and characterization of novel small molecule inhibitors targeting *Helicobacter pylori*
C. Lettl, F. Schindele (Munich/DE)
 T. Steiner (Munich/DE), U. Bilitewski (Hanover, Braunschweig/DE)
 M. Witschel (Ludwigshafen/DE), W. Eisenreich (Munich/DE)
 W. Fischer, R. Haas (Munich/DE)
- 356-GIP The role of the accessory gene *cagP* for the *Helicobacter pylori* Cag type IV secretion system
V. Beißwenger, E. Weiss, W. Fischer (Munich/DE)
- 357-GIP Exploring the structural diversity of mucin-derived O-glycans by reductive elimination and mass spectrometric analysis
G. Pohlentz, M. Mormann, S. Kruse, J. Mühling (Münster/DE)
- 358-GIP Bile acid stress response of *Clostridioides difficile* and its effects on host-pathogen interaction
 N. Metzendorf, S. Dittmann, R. Schlüter, K. Riedel
S. Sievers (Greifswald/DE)
- 359-GIP Autopenetration of Shigella effector protein IpaH7.8 and modulation of signaling responses in cellular barriers
N. Y. Ivan, S. Norkowski, M. Theresa, R. Christian (Münster/DE)
- 360-GIP Potential of cell-free supernatants from gut commensal bacteria as inhibitor of *C. difficile* toxin production
A. Breitrück, K. Krüger, B. Kreikemeyer (Rostock/DE)
- 361-GIP Development of cell-permeable antimicrobial molecules (CPAMs) to treat intracellular infections
C. Rüter, T. Martins, B. Körner, L. Greune, A. Schmidt (Münster/DE)

Recent Challenges in Bacterial Systematics | 362-RCP–364-RCP

Second Floor (Hörsaalgebäude)

- 362-RCP* Challenges in the identification of a novel *Leclercia* species are only resolved using a hybrid whole-genome sequencing approach
A. Viehweger, M. Hönemann, N. Dietze (Leipzig/DE), J. Johnke (Kiel/DE)
 B. König, A. C. Rodloff (Leipzig/DE)
- 363-RCP Polyphasic taxonomy of an antibiotic-producing *Streptomyces* sp. SHP 1–2
C. Risdian (Braunschweig/DE, Bandung/ID), T. Mozef (Serpong/ID)
 S. Ratnakomala, P. Lisdiyanti (Bogor/ID), R. L. Hahnke, M. Rohde
 J. Wink (Braunschweig/DE)
- 364-RCP The EDGAR platform
J. Blom, M. Dieckmann, J. G. Schrader, S. P. Glaeser, A. Goesmann (Gießen/DE)

Desinfection and Technical Hygiene | 365-PRP–374-PRP

Paulinum

- 365-PRP Microbiological monitoring of thermoregulatory devices used for extracorporeal membrane oxygenation (ECMO) – Is there a need for standards?
A. F. Wendel, C. Karagiannidis, F. Mattner (Cologne/DE)
- 366-PRP Eye-catching microbes – Quantification and NGS-based identification of the bacteriota on microscope oculars
B. Fritz, K. Schäfer (Villingen-Schwenningen/DE), F. Ziemssen
S. Wahl (Tübingen/DE), M. Egert (Villingen-Schwenningen/DE)
- 367-PRP Adaptation of *Listeria monocytogenes* to benzalkonium chloride induced viable but not culturable (VBNC) state
M. Noll, K. Trunzer, A. Vondran (Coburg/DE), S. Vincze, R. Dieckmann
S. Al Dahouk (Berlin/DE), C. Gold (Coburg/DE)
- 368-PRP* Efficient detection and treatment of biofilms
G. Gotzmann, D. Weile, U. König (Dresden/DE)
- 369-PRP The role of ions in photodynamic inactivation
D. B. Eckl, L. Schottenhaml, V. Mildenerberger, S. Eben, A. Eichner
R. Vashold, W. Bäuml, H. Huber (Regensburg/DE)
- 370-PRP Cold atmospheric-pressure plasma for the improvement of hygiene in medical or healthcare facilities
V. Hahn, T. von Woedtke, J. F. Kolb, K.-D. Weltmann (Greifswald/DE)
- 371-PRP Development of a flexible software solution to document and supervise flushing of drinking water pipelines in the hospital environment
T. Schultze, D. Bergmann, V. A. J. Kempf (Frankfurt a. M./DE)
- 372-PRP Microorganisms living in water over a prolonged time process a significant increase of tolerance to disinfections
M. Hummert, O. Böhler, T. Kuczius (Münster/DE)
- 373-PRP Disinfection of dry inanimate surfaces in complex room conditions using ozone whole room disinfection
B. Knobling, C. E. Belmar Campos, E.-M. Klupp, G. Franke
J. K.-M. Knobloch (Hamburg/DE)
- 374-PRP Antibacterial activity of nanostructured Zinc oxide tetrapods
A. Büter, G. Maschkowitz, M. Baum (Kiel/DE), Y. Mishra (Sønderborg/DK)
R. Adelung, H. Fickenscher (Kiel/DE)

Microbial Pathogenicity | 375-MPP–442-MPP

Paulinum

- 375-MPP Pro-thrombotic and pro-inflammatory activities of the β -hemolytic group B streptococcal pigment
H. F. Wunderink (Utrecht/NL), S. Oehmcke-Hecht (Rostock/DE)
J. Hoßmann (Braunschweig/DE), S. B. Skorka (Greifswald/DE)
R. H. T. Nijhuis (Amersfoort/NL), C. Ruppen (Bern/CH)
S. Skrede (Bergen/NO), M. Rohde (Braunschweig/DE), D. Schultz
M. Lalk (Greifswald/DE), A. Itzek, D. H. Pieper (Braunschweig/DE)
C. J. van den Bout (Utrecht/NL), E. C. J. Claas, E. J. Kuijper
R. Mauritz (Leiden/NL), P. Sendi (Bern/CH)
A. Norrby-Teglund (Bern/CH, Stockholm/SE), N. Siemens (Greifswald/DE)
- 376-MPP Extracellular Adenosine Triphosphate Neutralizes Pneumolysin-induced Neutrophil Lysis and Degranulation
F. Cuypers, B. Klabunde (Greifswald/DE), M. Rohde (Braunschweig/DE)
M. Gesell Salazar, S. Skorka, S. Surabhi, T. Thiele, U. Völker
S. Hammerschmidt, N. Siemens (Greifswald/DE)
- 377-MPP A battle for survival – the interplay between autophagy and *S. aureus* infection
A. Riebis (Braunschweig, Magdeburg/DE), Y. Neumann
S. Bruns (Magdeburg, Braunschweig/DE)
A. Kiesewetter (Braunschweig/DE)
I. Schmitz (Braunschweig, Magdeburg/DE)
- 378-MPP Impact of extracellular pneumococcal serine proteases on pneumococcal phagocytosis and virulence
M. Q. Ali, N. Mehlitz, A. Wüst, R. Bolsmann, T. P. Kohler, G. Burchhardt
S. Hammerschmidt (Greifswald/DE)
- 379-MPP Analysis of the RNA-based regulatory mechanisms controlling virulence in *Yersinia pseudotuberculosis*
I. Vollmer (Münster/DE), M. Kusmierek, A. K. Heroven (Braunschweig/DE)
P. Dersch (Münster/DE)
- 380-MPP The role of VraSR on the reduced susceptibility to vancomycin in a laboratory VISA strain
M. Hort, A. S. Schrötter (Bonn/DE), A. Berscheid (Tübingen/DE)
U. Bertsche (Stuttgart/DE), G. Bierbaum (Bonn/DE)
- 381-MPP Validation of a novel drug target in *Mycobacterium tuberculosis*
S. Krysenko, M. Oswald, A. Kulik, W. Wohlleben, A. Bera (Tübingen/DE)

- 382-MPP High nuclease activity of long persisting *Staphylococcus aureus* isolates confers protection against NET-mediated killing within the airways of CF patients
S. Herzog, F. Dach, C. Neumann, S. Niemann (Münster/DE)
D. Chaves-Moreno (Braunschweig/DE), B. C. Kahl (Münster/DE)
- 383-MPP Life After Secretion—*Yersinia enterocolitica* Rapidly Toggles Effector Secretion and Can Resume Cell Division in Response to Changing External Conditions
B. Milne-Davies, C. Helbig, S. Wimmi (Marburg/DE)
D. W. C. Cheng (Portland, OR/US), N. Paczia, A. Diepold (Marburg/DE)
- 384-MPP Unraveling the protein machinery and protein-interaction dynamics Essential for flagellar and vesicle formation of *Pseudomonas aeruginosa*
J. M. Borrero de Acuna, D. Jahn, G. Molinari, L. Jänsch, J. Wissing
M. Rohde, K. Müller (Braunschweig/DE)
- 385-MPP The non-phosphorylating glyceraldehyde 3-phosphate dehydrogenase GapN is the major source for NADPH and a potential new drug target in *Streptococcus pyogenes*
P. Eisenberg, C. Michaelis, C. Sehlke, B. Kreikemeyer, T. Fiedler (Rostock/DE)
- 386-MPP The 5'-nucleotidase S5nA is dispensable for evasion of phagocytosis and biofilm formation in *Streptococcus pyogenes*
M.-L. Dangel, E. Zitzow, J.-C. Dettmann, M. Schakat, M. Krogull
B. Kreikemeyer, T. Fiedler (Rostock/DE)
- 387-MPP The external pH regulates the activity of the *Yersinia enterocolitica* type III secretion system
S. Wimmi, A. Balinovic, H. Jeckel (Marburg/DE), D. Linke (Oslo/NO)
K. Drescher, U. Endesfelder, A. Diepold (Marburg/DE)
- 388-MPP Aggregative Adherence Fimbriae Type I Determine the Superior Adherence Phenotype of Enterohemorrhagic *Escherichia coli* O104:H4
M. Berger, U. Dobrindt, P. Berger, P. Dersch, P. Schiller
M. Knödler (Münster/DE)
- 389-MPP Characterisation of *Streptococcus suis* mutants in PCLS and ALI cultures
M. Dresen, D. Vötsch, Y. B. Weldearegay, M. Willenborg (Hanover/DE)
M. Rohde (Braunschweig/DE), J. Arenas Busto, A. de Greeff (Lelystad/NL)
A. Nerlich, P. Valentin-Weigand (Hanover/DE)
- 390-MPP An enigmatic non-coding RNA links *Staphylococcus aureus* physiology to antibiotic resistance
E. S. Ibrahim (Würzburg/DE), E. M. El-Hossary (Cairo/EG), U. Holzgrabe
K. Ohlsen (Würzburg/DE)
- 391-MPP The role of the *fdeC* gene of avian pathogenic *Escherichia coli* (APEC) strain IMT5155 in adhesion to chicken intestinal epithelial cells
A. Aleksandrowicz, R. Kolenda (Wrocław/PL)

- 392-MPP The effect of cis-2-decenoic acid on biofilm formation of *Clostridioides difficile*
J. Fischer, H. Bahl (Rostock/DE)
- 393-MPP Analysing the fibronectin binding properties of *Bartonella henselae* adhesin A
A. Thibau, D. J. Vaca (Frankfurt a. M./DE), D. Linke (Oslo/NO)
V. A. J. Kempf (Frankfurt a. M./DE)
- 394-MPP Simulation of blood flow-mediated shear stress in pneumococcal cell culture infection
H. Jagau (Braunschweig/DE, Lund/SE), K. Lahme (Braunschweig/DE)
I.-K. Behrens (Munich, Braunschweig/DE), M. Rohde, M. Steinert
S. Bergmann (Braunschweig/DE)
- 395-MPP Profiling pathogenicity mechanisms of *Bordetella pertussis* and *B. parapertussis*, the causative agents of whooping cough, a re-emerging disease, by proteomics approaches
K. Surmann (Greifswald/DE), Y. Lamberti, J. Alvarez Hayes, J. H. Cafiero
J. M. Oviedo, J. Gorgojo, H. Valdez (La Plata/AR), B. Vecerek
J. Holubova (Prague/CZ), M. Depke, V. M. Dhople, F. Schmidt (Greifswald/DE)
M. E. Rodriguez (La Plata/AR), U. Völker (Greifswald/DE)
- 396-MPP Antimicrobial efficiency of antisense PNAs in *Streptococcus pneumoniae*
C. Abt, G. Barkowsky, A.-L. Lemster, R. Pappesch, S. Krüger (Rostock/DE)
A. Jacob (Heidelberg/DE), B. Kreikemeyer, N. Patenge (Rostock/DE)
- 397-MPP *Streptococcus pneumoniae* differently affects primary microglia and bone marrow-derived macrophages
F. Jennert (Hanover/DE), J. Seele, R. Nau (Göttingen/DE), T. P. Kohler
S. Hammerschmidt (Greifswald/DE), P. Valentin-Weigand (Hanover/DE)
- 398-MPP Transcriptomic Response of Human Pharyngeal Epithelial Cells to (Co-)infection with *Streptococcus pyogenes* and Influenza A Virus
K. Strey, S. Suetto, R. Saß, S. Kurrer, N. Patenge, W. I. Barrantes Bustinza
B. Kreikemeyer (Rostock/DE)
- 399-MPP L-lactate influences toxin production of *Clostridioides difficile* via energy metabolism
J. Hofmann, A.-M. Michel, D. Jahn, D. Schomburg, R. Biedendieck
M. Neumann-Schaal (Braunschweig/DE)
- 400-MPP LITESEC-T3SS – Light-controlled protein delivery into eukaryotic cells with high spatial and temporal resolution
F. Lindner (Marburg/DE)
- 401-MPP Development of a multi-cell *in vitro* model of the meningeal blood-cerebrospinal fluid barrier to study *Neisseria meningitidis* infection
L. Endres, B. Kim (Würzburg/DE), M. Christodoulides (Southampton/GB)
A. Schubert-Unkmeir (Würzburg/DE)

- 402-MPP Augmented translocation of *S. aureus* across the N-acetylcysteine (ACC) treated lung epithelial barrier in vitro
M. Fröhlich, M. Brück, C. Musholt, B. Shuhen, B. Schulte, M. Herrmann
S. Niemann (Münster/DE)
- 403-MPP Characterization of natural products as novel inhibitors of the caseinolytic protease P
A. Illigmann, F. Wolf, L. Kaysser, H. Brötz-Oesterhelt (Tübingen/DE)
- 404-MPP Integrative action of cell-wall binding proteins of *Streptococcus pneumoniae* on the interaction with the host's immune system
C. Vilhena, S. Du (Jena/DE), S. Hammerschmidt (Greifswald/DE)
M. Rohde (Braunschweig/DE), C. Skerka, P. F. Zipfel (Jena/DE)
- 405-MPP *Staphylococcus aureus* *farR*-mutation mediates resistance to rhodomycinone (Rom) and causes hypervirulence
L. Huang, S.-H. Fan, F. Götz, M. Maier (Tübingen/DE)
- 406-MPP The role of a putative phosphoethanolamin transferase (PA_21210) in *Pseudomonas aeruginosa* PA14
J. Rehner, S. Zehner, K. Gerbracht,
N. Frankenberg-Dinkel (Kaiserslautern/DE)
- 407-MPP Human platelets transport monocytic *C. albicans*-induced vesicles
S. Babych, L. D. Halder, P. F. Zipfel, C. Skerka (Jena/DE)
- 408-MPP Investigating the effect of antimicrobial peptides on type III secretion kinetics
S. Zilkenat, S. Wagner (Tübingen/DE)
- 409-MPP* Impact of the transcription factor SpoVG on biofilm formation of *Staphylococcus epidermidis* in vitro and in vivo.
H. Benthien (Homburg/DE), B. Jonas (Hamburg/DE), L. Pätzold, M. I. Elhawry
S. Becker, M. Bischoff (Homburg/DE), J. K.-M. Knobloch (Hamburg/DE)
- 410-MPP The FlhC polyproline motif is essential for flagellar motility in *Salmonella* Typhimurium
C. Kühne (Berlin/DE), I. Spöring (Braunschweig/DE)
K. Jung (Planegg-Martinsried/DE), M. Erhardt (Berlin, Braunschweig/DE)
- 411-MPP Monoclonal antibodies against Shiga Toxin 2a uncovers different subunits by proteolytic cleavage with Furin and Trypsin
M. Grasse (Innsbruck/AT), M.-O. Skjodt (Copenhagen/DK), S. Kellnerová
D. Orth-Höller, R. Würzner (Innsbruck/AT)
- 412-MPP Pneumococcal pneumolysin modulates platelet functionality
K. Jahn, S. Handtke, R. Palankar, T. Kohler, J. Wesche (Greifswald/DE)
M. Rohde (Braunschweig/DE), A. Greinacher, S. Hammerschmidt (Greifswald/DE)

- 413-MPP Disentangling the role of *Staphylococcus aureus* in skin dysbiosis
Z. Wang (Munich/DE), C. Hülpmusch, V. Schwierzeck, M. Reiger
C. Treidl-Hoffmann (Augsburg/DE), M. Schloter (Freising/DE)
B. Foessel (Munich/DE)
- 414-MPP Characterization of an *Escherichia coli* small colony variant descended from
ABU strain 83972 during deliberate human bladder colonization
J. Putze, O. Mantel, U. Dobrindt (Münster/DE)
- 415-MPP Deciphering the role of the CRISPR/Cas system in *Neisseria meningitidis* in
host cell adhesion
D. Müller, S. Bauriedl, C. Schoen (Würzburg/DE)
- 416-MPP Role of the *comE* operon in *Staphylococcus lugdunensis* biofilm formation
T. Grebe, C. Rumpf, C. Heilmann (Münster/DE)
- 417-MPP The role of the *nmpC* and *yidR* genes in the virulence of Salmonella
Enteritidis to intestinal epithelial cells
M. Wimonć, R. Kolenda, M. Ugorski (Wrocław/PL)
- 418-MPP *Klebsiella pneumoniae* in porcine blood – bactericidal activity of adaptive
IgM and proline-rich antimicrobial peptides
A.-K. Krieger, T. Ludwig, A. Krizsan, I. Eder, S. Öhlmann, L. Mayer
G. Köller, R. Hoffmann, C. Baums, K. Rieckmann (Leipzig/DE)
- 419-MPP D-Alanylation of Lipoteichoic Acids as Putative Immune Evasion Mechanism
of *Streptococcus suis*
S. Oehlmann (Leipzig/DE), M. Meurer, N. de Buhr (Hanover/DE)
A.-K. Krieger (Leipzig/DE), N. Gisch (Borstel/DE), D. Knappe
R. Hoffmann (Leipzig/DE), M. von Köckritz-Blickwede (Hanover/DE)
C. G. Baums (Leipzig/DE)
- 420-MPP The *Acinetobacter* Trimeric Autotransporter Adhesin Ata drives the
Pathogenicity of *Acinetobacter baumannii* and modulates the Host Cell
Response
M. Tietgen, S. Wohra, M. Weidensdorfer, I. Wittig, P. Kraicz
V. A. J. Kempf, S. Göttig (Frankfurt a. M./DE)
- 421-MPP Myo-inositol as a carbon substrate in *Francisella* and insights into the
metabolism of *Francisella* sp. strain W12-1067
K. Köppen (Berlin/DE), F. Chen (Munich/DE), K. Rydzewski (Berlin/DE)
W. Eisenreich (Munich/DE), K. Heuner (Berlin/DE)
- 422-MPP* Intracellular accumulation of trehalose-6-phosphate leads to growth
inhibition in *Acinetobacter baumannii*
J. Hubloher, V. Müller (Frankfurt a. M./DE)

- 423-MPP Characterization of *Brassicaceae* smut fungal effectors responsible for plant infection
S. Gul, N. Heßler, A. Wendel, A. Kraege, V. Goehre (Düsseldorf/DE)
- 424-MPP Communication at the epithelial interface – the transcriptional response of epithelial cells to probiotic and extraintestinal pathogenic *Escherichia coli*
H. Klimek, C. Cichon, J. Putze, U. Dobrindt (Münster/DE)
- 425-MPP withdrawn
- 426-MPP The low molecular weight protein tyrosine phosphatase PtpB of *Staphylococcus aureus* affects intramacrophage survival and infectivity
M. I. Elhawy, L. Pätzold (Homburg/DE), L. Gannoun-Zaki V. Molle (Montpellier/FR), S. Becker, M. Bischoff (Homburg/DE)
- 427-MPP PlaD, a novel type IVB secreted effector protein of *Legionella pneumophila*
M. Hiller, C. Lang (Wernigerode/DE), J. Döllinger (Berlin/DE)
A. Flieger (Wernigerode/DE)
- 428-MPP Modulation of HIF1 α by the *C. burnetii* T4SS-effector protein NopA in macrophages
I. Hayek (Erlangen/DE), M. Bonazzi (Montpellier/FR)
J. Jantsch (Regensburg/DE), A. Lührmann (Erlangen/DE)
- 429-MPP A specific variant of the M-like protein SzM of *Streptococcus equi* subsp. *zooepidemicus* binds IgG, fibrinogen and collagen
R. Bergmann, W. Schrödl, C. G. Baums (Leipzig/DE)
- 430-MPP* Proteome analysis of *Streptococcus suis* under stress conditions and in host-pathogen interaction
D. Dittmar (Greifswald/DE), C. Weiße (Leipzig/DE)
B. Jakobczak (Dessau-Rosslau/DE), P. Hildebrandt, U. Mäder
M. Gesell Salazar, S. Michalik (Greifswald/DE)
V. Florian (Dessau-Rosslau/DE), C. Baums (Leipzig/DE)
U. Völker (Greifswald/DE)
- 431-MPP An ABC-transporter is necessary for *Staphylococcus epidermidis* biofilm formation in the presence of human serum
H. Büttner, H. Rohde, A.-L. Frank, J. A. Pitann, A. Both
J. Huang (Hamburg/DE)
- 432-MPP Anti-biofilm Effect of Different Titanium Alloys for Implant Materials in Orthopedy with a Focus on *Staphylococcus aureus* and *Staphylococcus epidermidis*
L. Wolrab, B. Bödendorfer (Klagenfurt/AT), B. Lohberger (Graz/AT)
A. Paulitsch-Fuchs (Klagenfurt/AT)

- 433-MPP Anti-biofilm Effects of Different Cobalt-Chrome Alloys for Implant Materials in Orthopedy with a Focus on *Staphylococcus aureus* and *Staphylococcus epidermidis*
B. Bödendorfer, L. Wolrab (Klagenfurt/AT), B. Lohberger (Graz/AT)
A. Paulitsch-Fuchs (Klagenfurt/AT)
- 434-MPP The scavenger receptor LOX-I is a novel receptor for *Staphylococcus aureus* WTA on endothelial cells
J. Schade, E. Lehmann (Tübingen/DE)
- 435-MPP Evaluation of inhibitors of *Staphylococcus aureus* virulence in cell-culture based infection models
A. Shekhar, U. Bilitewski (Braunschweig/DE)
- 436-MPP The transcriptional regulator RpiRb affects peptidoglycan recycling and cell wall thickness in *Staphylococcus aureus*
R. Gaupp, K. Nofal (Homburg/DE), M. Borisova (Tübingen/DE)
H. Peisker, M. Hannig, M. Bischoff, S. Becker (Homburg/DE)
C. Meyer (Tübingen/DE)
- 437-MPP Monoclonal antibodies uncover and inhibit the active center of the MprF lipid flippase impairing *S. aureus* virulence and resistance to host defense peptides
C. Slavetinsky, J. Hauser (Tübingen/DE), C. Ernst (Boston, MA/US)
A. Kraus (Planegg-Martinsried/DE), A. Peschel (Tübingen/DE)
- 438-MPP Unraveling the molecular mechanism determining type III secretion of transmembrane substrates
S. Pais, S. Wagner (Tübingen/DE)
- 439-MPP The use of bacterial chromosomal mutants to study the lipopolysaccharide of *Salmonella*
M. Noszka, E. Krzyżewska, J. Rybka (Wrocław/PL)
- 440-MPP Role in cell exfoliation of and genomic features associated with α -hemolysin in *Escherichia coli*
R. Kolenda (Senftenberg/DE, Wrocław/PL), U. Frommel (Senftenberg/DE)
M. Burdukiewicz (Warsaw/PL), M. Noszka (Wrocław/PL), R. Hiemann
J. Weinreich, D. Roggenbuck, P. Schierack (Senftenberg/DE)
- 441-MPP* Outer membrane protein biogenesis in *Acinetobacter baumannii*: Links to virulence and drug resistance
K. Leibiger, I. Autenrieth, M. Schütz (Tübingen/DE)
- 442-MPP Hydrolytic enzymes of *Pseudomonas aeruginosa* as potential virulence factors
N. Babic, K.-E. Jaeger, F. Kovacic (Jülich/DE)

Environmental Microbiology | 443-EMP–527-EMP

Ground Floor (Hörsaalgebäude)

- 443-EMP* Evolved *Pseudomonas* B1 strain as multi-purpose bacteria (MPB) in downstream process of PET's monomers in term of circular bio-economy
R. N. C. Utomo, S. Kobbing (Aachen/DE), T. Narancic
K. O'Connor (Dublin/IE), N. Wierckx (Jülich/DE), L. M. Blank, T. Tiso (Aachen/DE)
- 444-EMP Characterization of Antimicrobial Resistant Genes in Waterborne Bacteria Isolated from Various Water Sources in Abakaliki, Ebonyi State Nigeria.
I. Iroha, U. U. Ibiam, C. Ejikeugwu, E. Nwakaeze (Abakaliki/NG)
- 445-EMP Antibiotic resistant bacteria and their resistance genes in biofilm samples isolated from model water distribution systems of Hospitality homes in Benin City, Nigeria.
F. O. Ekhaize (Benin City/NG)
- 446-EMP Tiny microbial ecosystems isolated from oil help understanding microbial community assembly
L. Voskuhl, V. Brauer, A. Akbari, H. Müller, R. U. Meckenstock (Essen/DE)
- 447-EMP Seasonal shifts in the Fe-cycling microbial community in sediment from a seasonally hypoxic bay (Eckernförde Bay, SW Baltic Sea)
K. Laufer (Kiel/DE), C. Bryce (Tübingen/DE), F. Schlolz (Kiel/DE)
V. Nikeleit (Tübingen/DE), G. Gonnella, S. Kurtz (Hamburg/DE),
M. Perner (Kiel, Hamburg/DE)
- 448-EMP Attempts to control microbial community assembly
S. Li, Z. Liu, S. Müller (Leipzig/DE)
- 449-EMP Are bacteria key players in decay and preservation processes?
K. Janssen, B. Mähler, G. Bierbaum, J. Rust (Bonn/DE)
- 450-EMP Shifts in microbial community composition and assessment of antibiotic resistance in thermophilic compost from human faeces
K. Werner, M. Wöhrmann, K. El Said, I. Linkert (Berlin/DE)
T. Hübner (Leipzig/DE), A. Poehlein, R. Daniel (Göttingen/DE)
N. Brüggemann, K. Prost (Jülich/DE), E. Grohmann (Berlin/DE)
- 451-EMP *Polaribacter septentrionalitoris* sp. nov., isolated from the biofilm of a stone from the North Sea
S. Choo (Rostock/DE), J. Wiese, E. Borchert, U. Hentschel (Kiel/DE)
- 452-EMP Interactions of cyanobacteria with predators
A. Bauer, E. Kemen, K. Forchhammer (Tübingen/DE)

- 453-EMP The bacterial indoor surface microbiome before and after entry into service of a newly built hospital wing
M. Grohmann, A. K. Witte (Bamberg/DE)
- 454-EMP Glutathione-dependent metabolism in actinobacteria
A. C. Lienkamp (Bochum/DE), T. Heine (Freiberg/DE), D. Tischler (Bochum/DE)
- 455-EMP Daily discharges of antibiotic resistance genes and facultative pathogenic bacteria by wastewater treatment plants with different catchment areas
J. Alexander, N. Hembach, T. Schwartz (Eggenstein-Leopoldshafen/DE)
- 456-EMP withdrawn
- 457-EMP Genomic resolution of a Saccharibacteria-dominated enrichment culture amended with crude oil/gasoline mixture
P. A. Figueroa-Gonzalez (Essen/DE), F. Révész, A. Táncsics (Gödöllő/HU)
A. J. Probst (Essen/DE)
- 458-EMP Exploring activity in complex microbial communities using transcriptomic gene expression networks
D. Becker, M. Graf, F. Bonk, D. Popp, H. Harms, F. Centler (Leipzig/DE)
- 459-EMP Microbial Redox Reactions During Underground Storage of Hydrogen
A. Dohrmann, M. Krüger (Hanover/DE)
- 460-EMP Microbial hydrocarbon degradation potentials in shoreline and deep-sea sediments around Svalbard and possible ways for their stimulation
S. Bartholomaeus, M. Blumenberg, N. Straaten (Hanover/DE)
S.-C. Chen (Leipzig/DE), M. Krüger (Hanover/DE)
- 461-EMP The metabolic relationship of a novel cellulolytic consortium with high potential in lignocellulose degradation
R. Rettenmaier, Y. Liu, S. Vanderhaeghen (Freising/DE)
- 462-EMP Variation in arbuscular mycorrhizal fungal communities associated with lowland rice (*Oryza sativa*) along a gradient of soil salinity and arsenic contamination in Bangladesh
S. Parvin, M. Van Geel (Leuven/BE), T. Yeasmin (Rajshahi/BD), B. Lievens
O. Honnay (Leuven/BE)
- 463-EMP High variability of plasmid transfer rates in *Escherichia coli* isolates
K. Flade (Dresden/DE, Helsinki/FI), D. Kneis, S. Heß (Dresden/DE)
- 464-EMP Screening for alkaliphilic cyanide-producing bacteria
C. Schuster, J. Sluka, N. Fester, E. Popova, M. Amberger (Darmstadt/DE)
Y. Tiffert, E. Gabor (Zwingenberg/DE), A. Kletzin (Darmstadt/DE)

- 465-EMP* $\text{CO}_2/\text{HCO}_3^-$ accelerates the iron reduction through phenolic compounds
F. Müller (Straubing, Stuttgart/DE), J. Rapp, A.-L. Hacker, A. Feith
R. Takors (Stuttgart/DE), B. Blombach (Straubing, Stuttgart/DE)
- 466-EMP Wheat root microbiota acquisitions patterns and its function in nitrogen cycling
S. Lewin, A. Ulrich, S. Kolb (Müncheberg/DE)
- 467-EMP Hidden in soil – Omics approach for the discovery and analysis of natural products from Streptomycetes
L. Sagurna, L.-S. Kaufmann (Bochum/DE), T. Busche, C. Rückert
J. Kalinowski (Bielefeld/DE), J. Bandow (Bochum/DE)
- 468-EMP* Improved methods for differentiation of live and dead bacteria in bioaerosol analyses
A. Grünberg, D.-C. Pöther (Berlin/DE), A. Gessner, A. Gärtner (Essen/DE)
U. Jäckel (Berlin/DE)
- 469-EMP Insights into the microbial community structure and function of a unique terrestrial subsurface ecosystem located in a geologically active rift region
D. Lipus, D. Wagner, Q. Liu (Potsdam/DE), K. Tinker
D. Gulliver (Pittsburgh, PA/US), J. Kallmeyer (Potsdam/DE)
- 470-EMP Characterization of *Acinetobacter* spp. isolated from input (livestock and avians manure) and output samples of German biogas plants
D. Pulami, T. Schauss, S. Mishra (Gießen/DE), G. Wilharm
J. Bender (Wernigerode/DE), J. Blom, T. Eisenberg, A. Goesmann, P. Kämpfer
S. P. Glaeser (Gießen/DE)
- 471-EMP* Actinobacterial degradation of 2-hydroxyisobutyric acid
T. Rohwerder (Leipzig/DE), M.-T. Rohde (Halle a. d. Saale/DE)
N. Jehmlich (Leipzig/DE), J. Purswani (Granada/ES)
- 472-EMP Acetone degradation in *Desulfosarcina cetonica* – Characterization of recombinant enzymes
S. Kaßner, B. Schink, D. Schleheck, J. Frey (Konstanz/DE)
- 473-EMP Identification of novel polyester hydrolases from marine Pseudomonads
R. Molitor, A. Bollinger, L. Turkes, S. Thies, K.-E. Jaeger (Jülich/DE)
- 474-EMP Groundwater cable bacteria conserve energy by sulphur disproportionation
H. Müller, A. J. Probst, R. U. Meckenstock (Essen/DE)
- 475-EMP Dissemination of antibiotic resistances among microbial communities in wastewater and antimicrobial efficacy of low-temperature plasma
D. Zühlke (Greifswald/DE), D. Schneider (Göttingen/DE), S. Maaß
V. Hahn, J. Kolb, D. Becher (Greifswald/DE), R. Daniel (Göttingen/DE)
K. Riedel (Greifswald/DE)

- 476-EMP Growth promotion of *Salicornia bigelovii* using rhizosphere-competent polyamine-producing actinobacteria in the United Arab Emirates
K. El-Tarabily, B. Mathew, R. Aljneibi, S. AbuQamar (Al-Ain/AE)
- 477-EMP Potential to promote the growth of *Salicornia bigelovii* using rhizosphere-competent actinobacteria capable of producing plant growth regulators
K. El-Tarabily, S. AbuQamar, B. Mathew, M. Aljneibi
M. Alkhaja (Al-Ain/AE)
- 478-EMP Improving phytoremediation of nickel contaminated soil by plant growth-promoting bacteria through the production of the enzyme 1-aminocyclopropane-1-carboxylic acid deaminase in the UAE
K. El-Tarabily, S. AbuQamar, L. Alnuaimi, S. Al Zarooni, J. Haj Ali
S. Aldhaheri, A. Taj Elddin, E. Ghazal (Al-Ain/AE)
- 479-EMP Structure and Composition of Bacterial Communities in the Rhizosphere of *Hypericum* species
Z. Noviana, J. Sikorski, J. Overmann (Braunschweig/DE)
- 480-EMP Bed bioelectrochemical reactors – a mosaic of electroactivity
A. Kuchenbuch, J. Rodrigo Quejigo, B. Korth, F. Harnisch (Leipzig/DE)
- 481-EMP An in vitro characterization of biocontrol mechanism of selected endophytic bacterial strains as biocontrol agent of bacterial wilt disease on chili
T. Habazar, Y. Yanti, A. Arneti, N. Muziatul (Padang/ID)
- 482-EMP Enhancement of growth of seedlings of the mangrove *Avicennia marina* by plant growth regulators-producing actinobacteria in the United Arab Emirates
K. El-Tarabily, S. AbuQamar, K. Alblooshi, S. Mekky, A. Ali, A. AlMansoori
M. Moustafa (Al-Ain/AE)
- 483-EMP Metaproteomic Discovery and Characterization of a Novel Lipolytic Enzyme from an Indian hot spring
D. Sander, Y. Yu, P. Sukul (Bochum/DE), T. Mukherjee
S. K. Mukhopadhyay (Burdwan/IN), L. I. Leichert (Bochum/DE)
- 484-EMP Spatial-temporal dynamics of microbial communities in floodplain sediments
L. Cramaro (Neuherberg/DE)
- 485-EMP Application of Whole Cell Biosensors for Identifying *Streptomyces* spp. as Sources for Novel Polyene Antibiotics
D. Hartmann, F. Dürr, A. R. Guarinos, T. Mascher (Dresden/DE)
- 486-EMP Biotransformation of organic micropollutants di-*n*-butyl phthalate (DBP) and diethyl phthalate (DEP) by fungi of different ecophysiological groups
L. Carstens (Essen, Leipzig/DE), A. R. Cowan (Leipzig/DE, Glasgow/GB)
B. Seiwert, D. Schlosser (Leipzig/DE)

- 487-EMP* Seasonal Differences of Coliform Bacteria in Drinking Water Reservoirs
C. Reitter, A. Hesselschwerdt (Karlsruhe/DE), H. Petzoldt (Dresden/DE)
J. Gescher, M. Hügler (Karlsruhe/DE)
- 488-EMP Temporal and spatial variation of lake microbiomes in the Pyrenees
J. Laufer, R. Kallies (Leipzig/DE), D. S. Schmeller (Toulouse/FR)
A. Loyau (Stechlin/DE, Toulouse/FR), A. Chatzinotas (Leipzig/DE)
- 489-EMP withdrawn
- 490-EMP Accessing variability of DADA2 pipeline on different parameters and databases
A. Bartholomaeus, S. Liebner, D. Wagner (Potsdam/DE)
- 491-EMP Targeted cultivation of Planctomycetes
M. Salbreiter, M. Waqqas (Jena/DE), N. Kallscheuer
S. Wiegand (Nijmegen/NL), A. Heuer, C. Boedeker
P. Rast (Braunschweig/DE), R.-W. Müller, F. Brümmer (Stuttgart/DE)
M. S. M. Jetten (Nijmegen/NL), M. Rohde (Braunschweig/DE)
M. Jogler, C. Jogler (Jena/DE, Nijmegen/NL)
- 492-EMP Fragmented disturbances have an influence on bacterial recolonization processes and activity
T. Mainka, A. Worrlich, T. Banitz, L. Y. Wick (Leipzig/DE)
- 493-EMP Novel Biodiversity of Nitrate-Reducing Bacteria in Grassland Soils
T. Timsy, U. Behrendt, A. Ulrich (Müncheberg/DE), T. Spanner
M. A. Horn (Hanover/DE), S. Kolb (Müncheberg/DE)
- 494-EMP Metabolic activities as possible stability parameter in on demand biogas production
W. Getz, F. R. Bengelsdorf, K. Maurus, S. Ahmed, M. Kazda (Ulm/DE)
- 495-EMP Characterization of membrane bound metalloproteins in the anaerobic ammonium-oxidizing bacterium *Candidatus Kuenenia stuttgartiensis*
R. Budhreja, S. Karande, C. Ding, S. Wagner, M. Ullrich, T. Reemtsma
L. Adrian (Leipzig/DE)
- 496-EMP Identification of novel glyphosate-protein interactions in *Escherichia coli* revealed by thermal proteome profiling
P. Lohmann, A. S. Aldehoff, N. Jehmlich, M. von Bergen (Leipzig/DE)
- 497-EMP Isolation of antibiotic producing species from feces of animals
D. Iliasov, T. Mascher (Dresden/DE)

- 498-EMP Earthworm-induced bacterial P mobilization by copiotrophic bacteria plays a central role in P turnover in subsoil horizons
A. Chiba (Munich, Freising/DE), N. Vitow, C. Baum, A. Zacher
M. Peine (Rostock/DE), M. Schlöter (Munich/DE)
P. Leinweber (Rostock/DE), S. Schulz (Munich/DE)
- 499-EMP The fate of 2-heptyl-4-hydroxyquinoline *N*-oxide in *Pseudomonas aeruginosa* and *Mycobacteroides abscessus*
N. Ritzmann, C. Schmerling, S. L. Drees, S. Fetzner (Münster/DE)
- 500-EMP Enhanced HCH detoxification by anaerobic microbial consortia enriched from HCH-contaminated sediments
M. I. Khan (Leipzig/DE, Faisalabad/PK), C. Vogt (Leipzig/DE)
S. Bashir (Faisalabad/PK), I. Nijenhuis (Leipzig/DE)
- 501-EMP* Uncultivated Chloroflexi from fumeroles and hot springs of São Miguel (Azores) harbor unusual large genomes and secondary metabolite clusters
J. Vollmers, J. Gescher, A.-K. Kaster (Eggenstein-Leopoldshafen/DE)
- 502-EMP Accessing the uncultivated marine microbial biodiversity and its novel biomolecules for biofilm prevention and removal
M. K. Peters, W. R. Streit, I. Krohn-Molt (Hamburg/DE)
- 503-EMP Responses of the soil microbiota to pesticides and their microgel-based adjuvants
J. Zierul, R. Geer (Bonn, Jülich/DE), L. Goncharenko, A. Töpel, W. Xu
F. Jakob (Jülich, Aachen/DE), C. Knief (Bonn, Jülich/DE)
- 504-EMP Surveying extended-spectrum beta-lactamase-producing *Enterobacteriaceae* in urban wetlands in southwestern Nigeria as a step towards generating prevalence maps of antimicrobial resistance
O. O. Adelowo (Leipzig/DE, Ibadan/NG)
O. O. Ikhimikor (Ibadan/NG, Leipzig/DE), C. Knecht (Leipzig/DE)
J. Vollmers (Karlsruhe/DE), M. Bhatia (Leipzig/DE)
A.-K. Kaster (Karlsruhe/DE), J. A. Müller (Leipzig/DE)
- 505-EMP Does the maize rhizosphere microbial community show spatial variation and dependence on root carbon allocation?
S. Schultes (Bonn, Jülich/DE), R. Koller, R. Metzner, D. Pflugfelder
C. Hinz (Jülich/DE), M. Watt (Bonn, Jülich/DE), C. Knief (Bonn/DE)
- 506-EMP withdrawn
- 507-EMP Importance of redox gradients in hyporheic zones – transformation potential of the recalcitrant pharmaceutical iopromide
N. Mukherjee, B. Braun, U. Szewzyk (Berlin/DE)

- 508-EMP Crop rotation and addition of high carbon amendments differentially impact rhizosphere microbial communities
C. Kamau (Neuherberg/DE), R. van Duijnen (Lüneburg/DE), V. Radl M. Schloter (Neuherberg/DE)
- 509-EMP DNA extraction bias is more pronounced for microbial eukaryotes than for prokaryotes
A. Brauer, M. Bengtsson (Greifswald/DE)
- 510-EMP Functional characterization of the Radical SAM enzyme NirJ involved in heme d_1 biosynthesis
H. Meyer, G. Layer (Freiburg i. Br./DE)
- 511-EMP Sulfur and Nitrogen Metabolism in Aerobically Growing *Thioalkalivibrio paradoxus* – a Proteome Study
P. Rühl, S. Hein, N. Benker, A. Kletzin (Darmstadt/DE)
C. Lenz (Göttingen/DE)
- 512-EMP Spatio-temporal patterns in the root associated microbiota of apple tree
M. Becker, C. Knief (Bonn/DE)
- 513-EMP Biodegradation of Pharmaceutical Active Compounds from sewage sludge at microcosm scale.
G. Angeles De Paz, A. Ledezma-Villanueva, T. Robledo-Mahón, J. Purswani C. Pozo, C. Calvo, M. Manzanera, E. Aranda (Granada/ES)
- 514-EMP Diversity, activity and distribution of microorganisms in the ocean-atmosphere boundary layer
I. Hrabe de Angelis, H. M. Aardema, H. A. Slagter, M. L. Calleja A. Dragoneas (Mainz/DE), S. E. Ruff (Woods Hole, MA/US)
J. Fröhlich-Nowoisky, A. T. Kunert, M. Praß, T. Könemann, B. Nillius, R. Schiebel, G. H. Haug, E. Thines, U. Pöschl (Mainz/DE)
Z. G. Cardon (Woods Hole, MA/US), C. Pöhlker (Mainz/DE)
- 515-EMP Halophilic life in gas storage caverns?
L. Schwab, P. Bombach (Leipzig/DE), G. Nowack (Gommern/DE)
H.-H. Richnow, C. Vogt (Leipzig/DE)
- 516-EMP Evaluating the effect of chemical compounds on prophage induction in soil and groundwater bacteria
K. Parmar, F. Schattenberg, S. Müller, M. Schmidt, L. Y. Wick, R. Kallies A. Chatzinotas (Leipzig/DE)
- 517-EMP Anaerobic treatment of manure in biogas plants impacts the release of antimicrobial resistance (AMR) into the environment
S. P. Glaeser, E. Aigbekaen, H. M. M. Khan, D. Pulami, P. Kämpfer (Gießen/DE)

- 518-EMP Apple replant disease – Towards an inoculum with biocontrol properties
S. Benning, N. Brugnone (Neuherberg/DE)
D. Vetterlein (Halle a. d. Saale/DE), T. Winkelmann (Hanover/DE)
M. Schlöter, V. Radl (Neuherberg/DE)
- 519-EMP Cryptic sulfur cycling by cable bacteria in freshwater habitats
C. Sachs, D. Kanaparthi, K. As, T. Lüders (Bayreuth/DE)
- 520-EMP Cues for a microbial link between the cycling of methane and iodine in cave biofilms
F. Beulig (Bayreuth/DE), C. Karwautz (Vienna/AT), T. Lüders (Bayreuth/DE)
- 521-EMP Genome comparison of “*Candidatus Kuenenia stuttgartiensis*” strain WD and strain MBR1 revealed drastic structural changes
C. Ding, L. Adrian (Leipzig/DE)
- 522-EMP* Multidrug-resistant organisms in surface waters in Frankfurt a. M., Germany
R. Schmithausen, G. Bierbaum, E. Sib, G. Wilbring, A. M. Voigt, H. Färber
C. Timm, F. Pappler, S. Hack (Bonn/DE), C. Imirzalioglu
T. Chakraborty (Gießen/DE), C. Grumaz (Stuttgart/DE)
P. Stevens (Duisburg/DE), M. Parcina (Bonn/DE), C. Reinheimer
V. A. J. Kempf (Frankfurt a. M./DE), M. Exner (Bonn/DE)
U. Heudorf (Frankfurt a. M./DE)
- 523-EMP Water environment as source of non-tuberculous mycobacteria
A. Hummel, M. Koch, S. Sandner, C. Förster (Bad Elster/DE)
- 524-EMP Improvement of pepper mild mottle virus (PMMoV) analysis in environmental water samples
S. Pfeifer (Bad Elster/DE), P. Schilbach (Bad Elster, Mittweida/DE)
S. Gläsel, K. Oehm, C. Förster (Bad Elster/DE)
- 525-EMP Detection of viable and infectious human adenoviruses in environmental water samples
S. Pfeifer, S. Gläsel, K. Oehm, C. Förster (Bad Elster/DE)
- 526-EMP A closer look at the microbiome’s dynamics during the *start-up* phase of biogas fermenters
K. Willenbücher (Potsdam/DE), M. Conrady, P. Ramm (Berlin/DE)
A. Schlüter (Bielefeld/DE), D. Benndorf (Magdeburg/DE)
M. Klocke (Potsdam/DE), J. Barrero Canosa, U. Szewzyk (Berlin/DE)
- 527-EMP Antibiotic-resistant bacteria mussels harvested from the river Rhine
N. Zacharias, I. Lökener, S. M. Essert, E. Sib, G. Bierbaum, T. Kistemann
C. Schreiber (Bonn/DE)

Metabolic Modelling and Engineering | 528-MMEP–539-MMEP

Ground Floor (Hörsaalgebäude)

- 528-MMEP* Modelling of the *Serratia plymuthica* 4Rx13 FPP C-methyltransferase and evaluation of a catalytic mechanism of pre-sodorifen synthesis
M. C. Lemfack (Rostock/DE), W. Brandt (Halle a. d. Saale/DE)
B. Piechulla (Rostock/DE)
- 529-MMEP* Elucidation of Dicarboxylic Acid Degradation Including Major Differences to Fatty Acid Degradation in *Cupriavidus necator*
C. S. Strittmatter, V. Biesgen, J. Eggers (Münster/DE)
A. Steinbüchel (Münster/DE, Jeddah/SA)
- 530-MMEP From C1 to C21 – a synthetic approach using CO₂ as a carbon source for the production of complex multi carbon products
C. Diehl, S. Sundaram, P. Gerlinger, T. J. Erb (Marburg/DE)
- 531-MMEP Genetic standardization and modularization – coming to the rescue of the *in vivo* implementation of synthetic CO₂ fixation pathways.
A. Sánchez-Pascuala, T. J. Erb (Marburg/DE)
- 532-MMEP *Clostridium beijerinckii* DSM 6423 – transformation and plasmid-based overexpression of the 1,3-propanediol production gene cluster
T. Schoch, F. R. Bengelsdorf, P. Dürre (Ulm/DE)
- 533-MMEP Designing novel microbiomes to enhance biogas production with metabolic modeling techniques
R. Amarante Colpo (Leipzig/DE), B. Henrissat (Marseille/FR)
J. McDonald (Bangor/GB), F. Centler (Leipzig/DE)
- 534-MMEP Dynamic control of citrulline overproducing *Escherichia coli* by temperature-sensitive variants of argininosuccinate synthetase
T. Schramm, M. Lempp, D. Beuter, H. Link (Marburg/DE)
- 535-MMEP Standalone FMN-dependent nitroreductases from thermophilic bacteria are involved in the formation of coenzyme F₄₂₀
D. Braga, M. Hasan, G. Lackner (Jena/DE)
- 536-MMEP Biosynthesis of the redox cofactor mycofactocin in *Mycolicibacterium smegmatis*
L. A. Peña-Ortiz, A. P. Graça, H. Guo, D. Braga, T. Köllner, L. Regestein
C. Beemelmans, G. Lackner (Jena/DE)
- 537-MMEP A T7-based expression system for monitoring transcription and translation *in vivo* in Gram-negative bacteria
H. Löwe, A.-S. Ortega, K. Pflüger-Grau, A. Kremling (Garching/DE)

- 538-MMEP Integrating genome-scale metabolic networks in dynamic models of bacterial ecosystems
O. Ebenhöh, T. Nies (Düsseldorf/DE)
- 539-MMEP Systematic pathway engineering towards optimized heterologous triterpene production, guided by metabolic modeling in *Synechocystis* sp. PCC 6803
A. Germann, M. Dietsch, D. Moser, S. Triesch, I. M. Axmann (Düsseldorf/DE)

Membranes and Transport | 540-MTP–554-MTP

Ground Floor (Hörsaalgebäude)

- 540-MTP Anoxic cell rupture of *Prevotella bryantii* by high-pressure homogenization protects the Na⁺-translocating NADH – quinone oxidoreductase from oxidative damage
L. Schleicher (Stuttgart/DE), G. Fritz (Stuttgart, Freiburg i. Br./DE)
J. Seifert, J. Steuber (Stuttgart/DE)
- 541-MTP Elucidation of protein supercomplex dynamics in the versatile metabolism of *Dinoroseobacter shibae* involved in energy generation
I. Pusch, D. Jahn, J. M. Borrero de Acuna (Braunschweig/DE)
- 542-MTP please see 319-MTV
- 543-MTP K_d -value determination of DctP_{Am} – a substrate binding protein of the tripartite ATP-independent periplasmic transport system in *Advenella mimigardefordensis* DPN7
L. Schäfer, C. Meinert-Berning (Münster/DE)
A. Steinbüchel (Münster/DE, Jeddah/SA)
- 544-MTP Structure-function relationships in the transporter and sensor kinase CbrA of *Pseudomonas putida* KT2440
L. Wirtz, M. Eder, H. Jung (Planegg-Martinsried/DE)
- 545-MTP Structural and functional analysis of bacterial phospholipid biosynthesis enzymes from *Xanthomonas campestris*
G. Vasilopoulos, R. Moser, C. Simon, M. Aktas, F. Narberhaus (Bochum/DE)
- 546-MTP Biochemical characterization of phospholipid *N*-methyltransferases from the thermophilic actinobacterium *Thermobifida fusca*
J. Kleetz, A.-S. Mizza, M. Aktas, F. Narberhaus (Bochum/DE)
- 547-MTP A Na⁺ A₁A₀ ATP synthase with a V-type c subunit in a mesophilic bacterium
D. Litty, V. Müller (Frankfurt a. M./DE)

- 548-MTP Fragment-based drug discovery – a crystallographic approach for antibiotics development for gram-negative bacteria
D. Stegmann, J. Vering (Stuttgart/DE), M. Marsh (Villigen/CH), J. Steuber G. Fritz (Stuttgart/DE)
- 549-MTP *Acinetobacter baumannii* phospholipases D are involved in biosynthesis of cardiolipin and monolysocardiolipin
K. Pfefferle, B. Averhoff (Frankfurt a. M./DE)
- 550-MTP Comparing methods to study the uptake route of radiolabeled ADEP derivatives
A. Vorbach, H. Brötz-Oesterhelt (Tübingen/DE)
- 551-MTP The antibiotic negamycin permeates across the cell envelope of *E. coli* by multiple routes
D. Hörömpöli (Tübingen/DE), C. Ciglia (Düsseldorf/DE)
K.-H. Glüsenkamp, (Marl/DE), H. Falkenstein-Paul, G. Bendas (Bonn/DE)
A. Berscheid, H. Brötz-Oesterhelt (Tübingen/DE)
- 552-MTP The membrane anchor of TatB primarily interacts with TatB, not with TatC
M.-H. Werner, H. Geise, T. Brüser (Hanover/DE)
- 553-MTP The interaction of Tat signal peptides with the cytoplasmic chaperone SlyD
D. Lindemeier, T. Brüser (Hanover/DE)
- 554-MTP The Mechanism behind Bacterial Lipoprotein Release – Phenol-Soluble Modulins Mediate Toll-Like Receptor 2 Activation via Extracellular Vesicle Release from *Staphylococcus aureus*
K. Schlatterer, C. Beck, D. Kretschmer (Tübingen/DE)

Sensing and Signalling | 555-SeSiP–582-SeSiP

Ground Floor (Hörsaalgebäude)

- 555-SeSiP A role for metabolic flux sensing in second messenger control
M. van Berkum, A. Reinders, S. Ozaki, M. Sangermani, B. Sellner U. Jenal (Basel/CH)
- 556-SeSiP Cyclic nucleotides in Archaea – Cyclic di-AMP in the archaeon *Haloferax volcanii* and its putative role
F. Braun, L. Thomalla, C. van der Does, T. E. F. Quax (Freiburg i. Br./DE)
T. Allers (Nottingham/GB), V. Kaefer (Hanover/DE)
S.-V. Albers (Freiburg i. Br./DE)
- 557-SeSiP Control of cyanobacterial day-night metabolism by the output regulator of a biological clock in *Synechocystis* sp. PCC 6803
N. Scheurer, C. Köbler, A. Wilde (Freiburg i. Br./DE)

- 558-SeSiP Mechanism and function of the non-standard circadian clock system KaiB3C3 in *Synechocystis* sp. PCC 6803
C. Köbler (Freiburg i. Br./DE), A. Wiegard, I. Axmann (Düsseldorf/DE)
A. Wilde (Freiburg i. Br./DE)
- 559-SeSiP From insects to plants – about the fact of insect pathogenic *Photorhabdus luminescens* in the rhizosphere.
A. Regaiolo, N. Dominelli (Mainz/DE), S. Eckstein (Mainz, Munich/DE)
R. Heermann (Mainz/DE)
- 560-SeSiP Reporter gene systems for the investigation of the TPP riboswitch as a novel target for antibiotic substances
A. Hübenthal, M. Mack (Mannheim/DE), M. Mayer (Heidelberg/DE)
- 561-SeSiP The role of stable and dynamic piston regions for transmembrane signaling by sensor kinase DcuS of *E. coli*
M. Stopp, P. A. Steinmetz, G. Uden (Mainz/DE)
- 562-SeSiP Regulation of the fructose lysine metabolism in *Escherichia coli*
F. Koller (Planegg-Martinsried/DE), D. Gast,
A. Hoffmann-Röder (Munich/DE), J. Lassak (Planegg-Martinsried/DE)
- 563-SeSiP The phosphoglucosamine mutase GlmM moonlights in modulating the activity of the diadenylate cyclase CdaA in *Listeria monocytogenes*
R. Bremenkamp, J. Heidemann (Göttingen/DE)
J. Gihardt (Senftenberg/DE), R. Seifert, V. Kaefer (Hanover/DE)
R. Ficner (Göttingen/DE), F. M. Commichau (Senftenberg/DE)
- 564-SeSiP PROMIS4Cyanos, a new method to predict and identify new protein-metabolite interactions in Cyanobacteria
A. Kraus (Freiburg i. Br./DE), E. Sokolowska, D. Schlossarek
A. Skirycz (Potsdam-Golm/DE), W. R. Hess (Freiburg i. Br./DE)
- 565-SeSiP Going green – Influence of plant root exudates on phenotypic traits of insect pathogenic *Photorhabdus luminescens*
N. Dominelli, A. Regaiolo, K. Andresen, R. Heermann (Mainz/DE)
- 566-SeSiP Temperature-dependent modulation of the sRNA CyaR in *Yersinia pseudotuberculosis*
S. Pienkoß, K. Urban, M. Klöhn, M. Holler, F. Narberhaus (Bochum/DE)
- 567-SeSiP Biochemical characterization and crystallization of the iron response regulator IscR of *Dinoroseobacter shibae*
L. Plötzky, H. Maaß, P. Lukat, D. Jahn, E. Härtig (Braunschweig/DE)
- 568-SeSiP PAS4-LuxR solos in *Photorhabdus luminescens* as inter-kingdom-signaling receptors
J. Brehm (Mainz/DE), L. Antelo (Kaiserslautern/DE)
E. Thines (Mainz, Kaiserslautern/DE), R. Heermann (Mainz/DE)

- 569-SeSiP Establishing and reversing cell polarity during phototactic movement of cyanobacteria
Y. Han, A. Jakob, N. Schuergers, A. Wilde (Freiburg i. Br./DE)
- 570-SeSiP Killing me slowly – Regulation of biofilm formation in *P. aeruginosa*
C. Manner, T. Jaeger, B.-J. Laventie, U. Jenal (Basel/CH)
- 571-SeSiP The PAS4-LuxR solo Plu0919 of the insect pathogen *Photorhabdus luminescens* senses a nematode-derived signal
M. T. Lechtenfeld (Mainz/DE), F. Hildebrandt (Stockholm/SE), J. Brehm R. Heermann (Mainz/DE)
- 572-SeSiP Alternative splicing as an element of signal transduction in multi-step phosphorelay systems in fungi
S. K. Bühring, A. Yemelin (Kaiserslautern/DE), K. Andresen (Mainz/DE) M. Becker, S. Jacob (Kaiserslautern/DE)
- 573-SeSiP Cascade regulation of a sulfide oxidation pathway in *Bacillus licheniformis*
J. Li, L. Xun, Y. Xia (Jinan/CN)
- 574-SeSiP Lead-seq – *in vivo* RNA structure probing on a transcriptome-wide scale
V. B. Brandenburg, C. Twittenhoff, F. Righetti (Bochum/DE)
A. M. Nuss (Braunschweig/DE), A. Mosig (Bochum/DE)
P. Dersch (Braunschweig, Münster/DE), F. Narberhaus (Bochum/DE)
- 575-SeSiP Polar localizing phosphodiesterase PdeB regulates the motile-to-sessile transition in *Shewanella putrefaciens*
V. Kreiling, T. Rick, S. Mielke, F. Rossmann, K. Thormann (Gießen/DE)
- 576-SeSiP MotL – a PilZ protein specifically regulates the activity of the lateral flagellar system
A. Pecina (Gießen/DE), V. Blagotinsek, G. Bange (Marburg/DE)
K. Thormann (Gießen/DE)
- 577-SeSiP PQS cleaving dioxygenases from *Nocardia farcinica* and *Streptomyces bingchenggensis* interfere with *Pseudomonas aeruginosa* quorum sensing
S. Fetzner, A. Arranz San Martín (Münster/DE)
- 578-SeSiP Membrane Stress induces T6SS activity in *Pseudomonas aeruginosa*
A.-S. Stolle (Münster/DE), B. Meader, J. J. Mekalanos (Boston, MA/US)
- 579-SeSiP Interconnectivity between pyruvate sensing, uptake and chemotaxis in *Vibrio campbellii*
S. Göing, A. Gasperotti, F. Fabiani, K. Jung (Planegg-Martinsried/DE)
- 580-SeSiP Quorum sensing control in structured populations
B. Steinfeld, S. Trauth, I. Bischofs-Pfeifer (Marburg, Heidelberg/DE)

- 581-SeSiP The phosphotransferase protein EIIA^{Ntr} regulates AcnB aconitase activity in a phosphorylation-independent manner in *Escherichia coli*
F. Sikora, M. Mörk-Mörkenstein, B. Görke (Vienna/AT)
- 582-SeSiP GMCSF synergizes with LPS for IL-1 β secretion through an alternative NLRP3 inflammasome pathway
S. Di Carlo, G. Häcker, I. Gentle (Freiburg i. Br./DE)

Archaea | 583-ARP–596-ARP

Ground Floor (Hörsaalgebäude)

- 583-ARP Characterizing the role of minD2 and minD4 in *Haloferax volcanii*
M. Patro, P. Nussbaum, S.-V. Albers (Freiburg i. Br./DE)
- 584-ARP Translational coupling via termination-reinitiation in *archaea* and *bacteria*
M. Huber (Frankfurt a. M./DE), G. Faure (Bethesda, MD/US)
S. Laass, G. Rizzo, E. Kolbe, C. Wehrheim, K. Seitz (Frankfurt a. M./DE)
Y. Wolf, E. Koonin (Bethesda, MD/US), J. Soppa (Frankfurt a. M./DE)
- 585-ARP Single-domain zinc finger μ -proteins in *Haloferax volcanii*
S. Zahn, C. Nagel, A. Machulla, J. Soppa (Frankfurt a. M./DE)
- 586-ARP Uptake and degradation of disaccharides in *Haloferax volcanii* and *Haloarcula hispanica*
M. Ortjohann, U. Johnsen, P. Schönheit (Kiel/DE)
- 587-ARP Metagenomic prediction of altiarchaeotal virus-host dynamics in a high-CO₂ subsurface environment
S. Eßer, T. L. V. Bornemann, J. Rahlff, A. J. Probst (Essen/DE)
- 588-ARP Viability of *Methanosaeta* and attached bacteria
A. Lonsing, G. Martens, J. Kizina, J. Harder (Bremen/DE)
- 589-ARP Interaction of Haloarchaeal Gas Vesicle Proteins Determined by Split-GFP
A. Jost, K. Völkner, J. Born, F. Pfeifer (Darmstadt/DE)
- 590-ARP Establishment of a novel haloarchaeal virus-host system
S. Schwarzer (Freiburg i. Br./DE), H. M. Oksanen (Helsinki/FI)
T. E. F. Quax (Freiburg i. Br./DE)
- 591-ARP Investigation of the catalytic mechanism of the Heme-Synthase AhbD
I. Fix, G. Layer (Freiburg i. Br./DE)
- 592-ARP Functional characterization of a cobalamin-dependent Radical SAM methyltransferase
J. Gagsteiger, G. Layer (Freiburg i. Br./DE)

- 593-ARP Characterization of a Radical SAM methyltransferase involved in the posttranslational modification of methyl-coenzyme M reductase
R. Hanna, G. Layer (Freiburg i. Br./DE)
- 594-ARP Raising a hidden treasure
R. Reichelt, R. Zimmermann, C. Hausmann, F. Grünberger, W. Hausner H. Huber, D. Grohmann (Regensburg/DE)
- 595-ARP Polyploidy in prokaryotes – Intermolecular gene conversion as a mechanism to equalize genome copies
A. Borst, K. Ludt, M. Hammelmann, J. Soppa (Frankfurt a. M./DE)
- 596-ARP Shape and structure of archaeal cells, as seen by electron tomography
R. Rachel, L. Dengler, A. Bellack, R. Reichelt, V. Heinz, D. Grohmann (Regensburg/DE)

Phototrophic Microorganisms | 597-PMP–615-PMP

First Floor (Hörsaalgebäude)

- 597-PMP Establishing a hydrogen-sensing platform organism for the directed evolution of continuous, photosynthesis-driven hydrogen production
F. Opel, A. Schmid, S. Klähn (Leipzig/DE)
- 598-PMP Elucidating the significance of Sodium for Metabolism in the Cyanobacterium *Synechocystis* sp. PCC 6803
M. Burkhardt, K. Forchhammer (Tübingen/DE)
- 599-PMP Investigation of phasins for an increased PHB yield in *Synechocystis* sp. PCC 6803
J. Alford, M. Koch, K. Forchhammer (Tübingen/DE)
- 600-PMP A new mode of B₁₂-remodeling in microalgae?
C. Baum, R. C. Menezes, A. Svatoš, T. Schubert (Jena/DE)
- 601-PMP Cyanobacteria as a new host for plant terpene biosynthesis
M. Dietsch, I. M. Axmann (Düsseldorf/DE)
- 602-PMP Metabolic regulation of isoenzymes in the triosephosphate hub of *Synechocystis* sp. PCC 6803
S. Lucius, M. Hagemann (Rostock/DE)
- 603-PMP The role of serine/threonine-kinases in the metabolic regulation of carbon metabolism in *Synechocystis* sp. PCC 6803
T. Barske, M. Hagemann (Rostock/DE)
- 604-PMP Investigation into Cyanobacterial Iron Uptake in a Simulated Archean Ocean
T. C. Enzingmüller-Bleyl, A. J. Herrmann M. M. Gehring (Kaiserslautern/DE)

- 605-PMP Regulation of glycogen metabolism in *Synechocystis* sp. PCC 6803
N. Neumann, K. Forchhammer (Tübingen/DE)
- 606-PMP Design and development of hydrogen producing cyanobacterial strains
S. Lupacchini, J. Toepel, R. Stauder (Leipzig/DE), J. Appel (Kiel/DE)
L. Lauterbach (Berlin/DE), B. Bühler, A. Schmid (Leipzig/DE)
- 607-PMP Antisense RNA asPcrL regulates expression of photosynthesis genes in *Rhodobacter sphaeroides* by promoting RNase III-dependent turn-over of *puf*-mRNA
C. M. Reuscher, G. Klug (Gießen/DE)
- 608-PMP Manipulation of *Synechocystis* sp. PCC 6803 on a whole-genome scale
A. Behle, W. Murugathas, M. Dietsch, R. Machne
I. M. Axmann (Düsseldorf/DE)
- 609-PMP Regulators of cyanobacterial gene expression
L. Berwanger, A. Klopp (Düsseldorf/DE)
- 610-PMP Vitality determination of terrestrial cyanobacteria by means of their oxygen production
M. Witthohn (Bingen am Rhein/DE), R. Ulber (Kaiserslautern/DE)
K. Muffler (Bingen am Rhein/DE)
- 611-PMP RNase E Substrate Affinity in the Cyanobacterium *Synechocystis* sp. PCC 6803
U. Hoffmann, S. Rogh, F. Heyl, C. Steglich, A. Wilde (Freiburg i. Br./DE)
- 612-PMP Mixed-trophies biofilms for high-cell-density cultivation of *Synechocystis* sp. PCC 6803 in capillary reactors
I. Heuschkel, A. Hoschek, A. Schmid, B. Bühler, R. Karande
K. Bühler (Leipzig/DE)
- 613-PMP Improving H₂ production in the cyanobacterium *Synechocystis* sp PCC 6803
S. Grimm (Leipzig/DE)
- 614-PMP A synthetic consortium containing *Tolypothrix* sp. and *Pseudomonas* sp. In a capillary biofilm reactor
M. Bozan, A. Schmid, N. Musat, M. Schmidt, K. Bühler (Leipzig/DE)
- 615-PMP Carbohydrate analysis of the cyanobacterium *Synechococcus elongatus*
N. Thumm, G. Fuentes, L.-M. Nentwig, I. M. Axmann (Düsseldorf/DE)

Synthetic Microbiology | 616-SMP–632-SMP

First Floor (Hörsaalgebäude)

- 616-SMP Electronic analogous synthetic genetic circuits in bacteria for coding, decoding and integrating chemical and microgravity signals in a human designed way
S. Bagh, K. Sarkar, D. Bonnerjee, S. Mukhopadhyay (Kolkata/IN)
- 617-SMP Light-mediated control of complex biosynthetic pathways in *Pseudomonas putida*
N. L. Bitzenhofer, F. Hilgers, A. Loeschcke, J. Ehlers, J. Gebauer
J. Pietruszka, K.-E. Jaeger, T. Drepper (Jülich/DE)
- 618-SMP Design and construction of a new yeast endosymbiont
N. T. Odermatt, P. D. Gerlinger, T. J. Erb (Marburg/DE)
- 619-SMP Development of new genetic engineering tools for *Methylobacterium extorquens*
L. Pöschel, E. Gehr, P. Jordan, M. Buchhaupt (Frankfurt a. M./DE)
- 620-SMP withdrawn
- 621-SMP Dissemination of iron-scavenging pyoverdine as a model for public good-based interspecies communication within microbial communities
L. Kruse, F. Hilgers, O. Klaus, V. Svensson, K.-E. Jaeger
T. Drepper (Jülich/DE)
- 622-SMP Towards the Reconstitution of Cryptophycin Biosynthesis
A. Tippelt, M. Nett (Dortmund/DE)
- 623-SMP Redesigning hydrogenase – A semisynthetic [Mn]-hydrogenase
G. Huang (Marburg/DE), H. Pan, M. D. Wodrich
F. F. Tirani (Lausanne/CH), K. Ataka (Berlin/DE), X. Hu (Lausanne/CH)
S. Shima (Marburg/DE)
- 624-SMP *Rhodobacter capsulatus* as a phototrophic platform organism for the synthesis of plant terpenes
O. Klaus, A. Loeschcke, F. Hilgers (Jülich/DE), J. Hage-Hülsmann
K. Troost (Jülich/DE), K.-E. Jaeger, T. Drepper (Jülich/DE)
- 625-SMP Whole-cell biosensors as effective, fast and low-cost tool in antibiotic research
D. Wolf, L. Friebe, D. Iliasov, A. Walder (Dresden/DE)

- 626-SMP Converting a non-magnetotactic species of *Magnetospirillum* into a magnetosome-producer through a single-step transfer of biosynthetic magnetosome operons
M. Dziuba (Bayreuth/DE, Moscow/RU), D. Schöler (Bayreuth/DE)
- 627-SMP* Biosynthesis of sphingofungins in human pathogenic fungus *Aspergillus fumigatus*
A. U. Bissell, J. Rautschek, J. E. Kufs, D. J. Mattern, S. Hoefgen, Y. Huang
A. A. Brakhage, V. Valiante (Jena/DE)
- 628-SMP* Targeted metabolite recovery from synthetic microbial communities resembling anaerobic digesters
C. Möslinger, J. Dolinsek (Linz/AT)
- 629-SMP *small noncoding RNAs as a tool to modulate gene expression*
P. Apura, A. Peregrina, M. Saramago, S. C. Viegas, S. M. Carvalho
L. M. Saraiva, S. M. Domingues, C. Arraiano (Oeiras/PT)
- 630-SMP Synthetic Photorespiratory in *Synechococcus elongatus* PCC 7942
P. Pfister, J. Zarzycki, T. J. Erb (Marburg/DE)
- 631-SMP Tailored engineering of fungal nonribosomal peptide synthetases to obtain artificial cyclodepsipeptides
C. Steiniger, S. Hoffmann, A. Mainz (Berlin/DE), M. Kaiser (Basel/CH)
K. Voigt (Jena/DE), V. Meyer, R. D. Süssmuth (Berlin/DE)
- 632-SMP Rapid purification and characterization of recombinant proteins and antibodies – Capturem high-capacity membranes
G. Johhadze, C. Hoppmann, M. T. Vierra, B. Levitan, M. Li
A. Farmer (Mountain View, CA/US), M. Raman (Saint-Germain-en-Laye/FR)

Microbial Ecology and Evolution | 633-MEEP–657-MEEP

First Floor (Hörsaalgebäude)

- 633-MEEP Unicellular Labyrinthulomycetes Protists are a key Component of Heterotrophic Microbes in the Coastal Oceans
N. Xie, M. Bai, L. Liu, G. Wang (Tianjin/CN)
- 634-MEEP* Fast and universal metaproteome workflow for analysis of microbial communities
R. Heyer, K. Schallert, A. Büdel, R. Zoun (Magdeburg/DE)
S. Dorl (Hagenberg/AT), A. Behne, F. Kohrs, S. Püttker, C. Siewert (Magdeburg/DE)
T. Muth (Berlin/DE), G. Saake, U. Reichl, D. Benndorf (Magdeburg/DE)
- 635-MEEP Altered nutrient levels and ratios in freshwater microcosms result in context dependent responses of microbial communities
A. Kuppardt-Kirmse, C. Karakoç, A. Chatzinotas (Leipzig/DE)

- 636-MEEP Succession or co-blooming in plankton – Correlating genetic distance and fitness difference
J. Hoffmann (Berlin/DE), K. Vergin, S. Giovannoni (Corvallis, OR/US)
F. Hellweger (Berlin/DE)
- 637-MEEP Different microbial community structures of a late decaying community change interaction patterns during decomposition of *Fagus sylvatica* under two temperature regimes
S. Muszynski, F. Maurer, M. Noll (Coburg/DE)
- 638-MEEP Monitoring seasonal changes in diversity, community structure and sedimentary deposition of cyanobacteria in Lake Tiefer See, NE Germany.
E. Nwosu, A. Brauer, D. Wagner, S. Yang, E. Dittmann-Thünemann
S. Liebner (Potsdam/DE)
- 639-MEEP Comparative genomics reveal insights into genomic plasticity and habitat adaptation of *Streptococcus parasanguinis*
M. M. H. Abdelbary, G. Wilms, G. Conrads (Aachen/DE)
- 640-MEEP The recovery of metagenome-assembled genomes is influenced by sample evenness.
J. P. Saraiva, R. Brizola Toscan, U. Nunes da Rocha (Leipzig/DE)
- 641-MEEP Coupling cell sorting and metagenomics allows the recovery of genomes from low abundance species
N. Abdulkadir, J. Pedro Saraiva, F. Schattenberg, S. Müller
U. Nunes da Rocha (Leipzig/DE)
- 642-MEEP Link between metabolically active soil microbiome and soil functions and their response to climate change in a grassland ecosystem
S. Wahdan, W. Purahong (Halle a. d. Saale/DE)
F. Buscot (Halle a. d. Saale, Leipzig/DE)
- 643-MEEP Characterization of 2-phenanthroate-CoA ligase
I. Kaplieva-Dudek, R. U. Meckenstock (Essen/DE)
- 644-MEEP Response of a methane-driven interactome to stress intensification
A. Ho (Hanover/DE), L. Mendes (São Paulo/BR), H. J. Lee (Gunsan/KR)
T. Kaupper (Hanover/DE), Z. Jia (Nanjing City/CN)
M. A. Horn (Hanover/DE)
- 645-MEEP* Response of an active methane-oxidizing community to desiccation-rewetting
T. Kaupper, M. A. Horn, A. Ho (Hanover/DE)

- 646-MEEP PredicTF – a tool to predict bacterial transcription factors in complex microbial communities
L. M. Oliveira Monteiro (Leipzig/DE, Ribeirão Preto/BR), J. P. Saraiva R. Brizola Toscan (Leipzig/DE), M. Gomes (Braga/PT), Z. Human P. Baldrian (Prague/CZ), R. Silva-Rocha (Ribeirão Preto/BR)
U. Nunes da Rocha (Leipzig/DE)
- 647-MEEP* Dynamics of cell wall modifying phages in *Staphylococcus aureus*
D. Gerlach, A. Peschel (Tübingen/DE), J. Larsen (Copenhagen/DK)
- 648-MEEP Phytoplankton traits shift along gradients in species-specific ways
P. Hofmann, A. Chatzinotas (Leipzig/DE)
S. W. Harpole (Halle a. d. Saale, Leipzig/DE), S. Dunker (Leipzig/DE)
- 649-MEEP Diversity of anaerobic methanotrophic communities in deep sediments of Lake Baikal
A. Lomakina, T. Pogodaeva, O. Shubenkova, V. Ivanov, I. Khal'zov
T. Zemskaya (Irkutsk/RU)
- 650-MEEP Context-dependency of trait and selective effects of antibiotic resistance mechanisms
A. Worrich (Leipzig/DE)
- 651-MEEP A systematic analysis of genomic diversity of *Pseudomonas* species in the human microbiome
B. Yi, A. Dalpke (Dresden/DE)
- 652-MEEP Linking the leaf microbiome to leaf metabolite landscape
M. Murillo-Roos, H. S. M. Abdullah, N. Ueberschaar, M. Agler (Jena/DE)
- 653-MEEP* Red Queens in and below the Goldilocks zone
R. Jerdan, A. Spiers (Dundee/GB)
- 654-MEEP Microbial colonization of plants at different developmental stages leads to diverse plant phenotypes and survival rates.
T. Mayer, P. Baumann, M. Reichelt, J. Gershenzon, M. Agler (Jena/DE)
- 655-MEEP Cross feeding among plant endophytic bacteria and its role in plant resilience to pathogens
A. T. Odejide, H. S. M. Abdullah, M. Murillo-Roos, N. Ueberschaar
M. Agler (Jena/DE)
- 656-MEEP Diversity of chemosynthetic organisms at hydrothermal vent systems on the Arctic Mid-Ocean Ridge
A. Mall, R. Stokke, H. Dahle, E. Reeves (Bergen/NO), Ö. Coşkun
W. Orsi (Munich/DE), I. H. Steen (Bergen/NO)

- 657-MEEP Evolution and transmission analysis of a MDR *M. tuberculosis* endemic genotype in Bulgaria by whole genome sequencing
S. Panaiotov, V. Tolchkov, Y. Atanasova, A. Baykova, S. Yordanova
 E. Bachiyska (Sofia/BG)

Eukaryotic Pathogens – Fighting Fungi and Parasites | 658-EPP–668-EPP

Second Floor (Hörsaalgebäude)

- 658-EPP VSG length dependent growth rate in *Trypanosoma brucei*
V. Scheidt, D. Horn (Dundee/GB)
- 659-EPP Comparative genomics of *Aspergillus fumigatus* and the influence of agriculture on ecology and azole resistance
A. E. Barber (Jena, Würzburg/DE), J. Born (Halle a. d. Saale/DE)
 T. Sae-Ong, G. Walther, G. Panagiotou (Jena/DE)
 H. B. Deising (Halle a. d. Saale/DE), O. Kurzai (Würzburg, Jena/DE)
- 660-EPP Is Miconazole and Ciclopirox olamine an alternative treatment for Terbinafine-resistant *Trichophyton mentagrophytes* ITS genotype VIII?
F. Wittig, S. Uhrlaß (Rötha/Mölbis/DE), M. Monod (Lausanne/CH)
 H. Järv, T. Simkin (Tallinn/EE), S. B. Verma (Vadodara/IN)
 S. Mey (Phnom Penh/KH), C. Sitaru (Freiburg i. Br./DE)
 Z. Almustafa (Berlin/DE), A. Alhilaifawi (Schongau/DE)
 H. Grob (Reinach/CH), M. Gebhardt (Zwickau/DE), U. Krusche (Leipzig/DE)
 W. Hofmann (Frankfurt a. M./DE), C. Krüger, P. Nenoff (Rötha/Mölbis/DE)
- 661-EPP* Using *in vitro* and *ex vivo* models to unravel *Candida auris* infection strategies
S. Allert, D. Schulz, P. Kämmer, P. Großmann, T. Wolf, S. Brunke
 B. Hube (Jena/DE)
- 662-EPP* Gut microbiota-mediated colonization resistance against *Candida albicans*
W. Krüger, S. Vielreicher, R. Santhanam, M. Stock, M. J. Niemiec
 I. D. Jacobsen (Jena/DE)
- 663-EPP The peroxiredoxin Asp f3 is crucial for redox balance, sensing of reactive oxygen species and virulence in *Aspergillus fumigatus*
J. M. Boysen, N. Saeed, E. Shekhova, T. Wolf, G. Panagiotou
 O. Knimeyer, F. Hillmann (Jena/DE)
- 664-EPP* Living inside the host for years – the novel smut fungus *Thecaphora thlaspeos* as a model pathogen in model plants
 L. Plücker, S. Gul, M. Feldbrügge, V. Göhre (Düsseldorf/DE)
- 665-EPP* Functional Analysis of the *Candida albicans* *ECE1* promoter
R. Martin, O. Kurzai (Würzburg, Jena/DE)

- 666-EPP Analysis of the intestinal mycobiome composition in a non-alcoholic fatty liver disease patient cohort
N. Thielemann, M. Rau (Würzburg/DE), S. Leal Siliceo (Jena/DE), M. Herz H. Hermanns (Würzburg/DE), R. Martin (Jena, Würzburg/DE)
 G. Panagiotou (Jena/DE), A. Geier (Würzburg/DE), O. Kurzai (Würzburg, Jena/DE)
- 667-EPP Cross-resistance between fluconazole and macrophages mediated by mitochondria function in *C. glabrata*
 S. Siscar-Lewin (Jena/DE), T. Gabaldón (Barcelona/ES), B. Hube
S. Brunke (Jena/DE)
- 668-EPP The castrating fungus *Microbotryum* – a parasitic genus to understand the evolution of host-specific parasitism
S. Klenner, L. Engelhardt, N. Hassel, I. Teichert, D. Begerow (Bochum/DE)

Food Microbiology and Hygiene | 669-FMP–687-FMP

Second Floor (Hörsaalgebäude)

- 669-FMP withdrawn
- 670-FMP Effect of pulsed light treatment on *Salmonella* Typhimurium and *Yersinia enterocolitica* reduction on pork skin and loin and influence on sensory properties
C. Wiacek, F. Koch, P. G. Braun (Leipzig/DE)
- 671-FMP Plasma treated water generated by microwave-induced plasma (MidiPLeXc) leads to antimicrobial effects on *Listeria monocytogenes* biofilms
O. Handorf (Greifswald/DE), U. Schnabel (Greifswald/DE, Dublin/IE)
 V. I. Pauker, T. Weihe, C. Weit, K. Riedel, J. Ehlbeck (Greifswald/DE)
- 672-FMP Change of usability of a commercial selective agar for isolation of carbapenemase-producing Enterobacteriaceae from samples of animal origin
N. Pauly, J. A. Hammerl, S. Schmoger, M. Grobbel, J. Fischer (Berlin/DE)
 A. Käsbohrer (Berlin/DE, Vienna/AT), A. Irrgang (Berlin/DE)
- 673-FMP Detection and characterization of the mobile colistin resistance gene *mcr-4.3* in *Acinetobacter baumannii* recovered from wastewater treatment plants in Germany
 M. Savin, M. Parcina, J. Kreyenschmidt (Bonn/DE)
 A. Käsbohrer (Berlin/DE, Vienna/AT), J. A. Hammerl (Berlin/DE)
- 674-FMP Evaluation of the toxicity of pyrithione based Ionic Liquids
 B. Bromberger, J. Sommer, C. Robben, C. Trautner (Vienna/AT)
 R. Kalb (Grambach/AT), P. Rossmannith, P.-J. Mester (Vienna/AT)

- 675-FMP Microbial reduction in domestic dishwashers
B. Brands (Kleve/DE), S. Schulze Struchtrup, R. Stamminger (Bonn/DE)
D. Bockmühl (Kleve/DE)
- 676-FMP Antimicrobial effect of cold atmospheric plasma on stainless steel cutting
tool surfaces
T. Albert, A. J. Dittrich, A. Lehmann, T. Arnold, P. G. Braun (Leipzig/DE)
- 677-FMP Addition of essential oil components in food to reduce food spoilage
moulds and yeasts
L. Nißl, F. Westhäuser, M. Noll (Coburg/DE)
- 678-FMP Usage of UV-C treatment for bacterial decontamination on eggshells via
mercury vapor lamp and LED technology
S. Fleischmann, S. Opherden, T. Alter, K. Rosen, M. Bielicke, I. Szabo
S. Hadziabdic (Berlin/DE), A. Gensch (Ahrensdorf/DE), P. Rotsch
G. Wiese, U. Roesler (Berlin/DE)
- 679-FMP Impact of cold atmospheric plasma on inactivation of norovirus surrogate
on stainless steel
T. Albert, M. Reinhardt, U. Truyen, P. G. Braun (Leipzig/DE)
- 680-FMP Comparison of RAPD-PCR and MALDI-TOF MS for typing and identification
of coliform bacteria
C. Reitter, F. Schwab, A. Tiehm, J. Gescher, M. Hügler (Karlsruhe/DE)
- 681-FMP Inhibition of menaquinone synthesis decreases resistance against
freeze-thaw stress and growth rate in refrigerated milk of *Listeria*
monocytogenes
A. Flegler, V. Kombeitz, A. Lipski (Bonn/DE)
- 682-FMP* Disinfection against ESBL producing *E. coli* on hatching broiler
eggs – *in vitro* efficacy test and *in vivo* trials
G. Motola (Berlin/DE), W. Tebrün, M. Pees (Leipzig/DE)
J. Bachmeier (Regenstauf/DE), H. M. Hafez
S. Brüggemann-Schwarze (Berlin/DE)
- 683-FMP Developments in the Biopesticide Industry and Implications for
Food Safety Testing
D. Zommick (Libertyville, IL/US)
- 684-FMP Quantification of *Pseudomonas* in raw milk and correlation with
farm-specific influencing factors
K. Hofmann, A. Siebert (Freising/DE), M. Wenning (Oberschleißheim/DE)
S. Scherer (Freising/DE)

- 685-FMP Comprehensive analysis of raw milk microbiota from farms throughout Germany
A. Siebert, K. Hofmann (Freising/DE), M. Wenning (Oberschleißheim/DE)
S. Scherer (Freising/DE)
- 686-FMP Investigations on the occurrence of *Cryptosporidium* spp. in game and raw consumed food in Germany – Is there a potential human health relevance?
C. Jäckel, K. Nöckler, M. Richter, J. A. Hammerl, A. Mayer-Scholl (Berlin/DE)
- 687-FMP Antibiotic resistance in *Escherichia coli* from broilers after amoxicillin treatment
E. Burow, M. Grobbel, B.-A. Tenhagen, S. Banneke, A. Käsbohrer (Berlin/DE)

Infection Immunology | 688-IIP–705-IIP

Second Floor (Hörsaalgebäude)

- 688-IIP The Cyclophilin PpiB Connects Cysteine Metabolism with Regulation of Toxin Production in *Clostridium difficile*
M. S. Karagöz (Braunschweig/DE)
C. M. Ünal (Braunschweig/DE, Istanbul/TR), M. Berges, C. Priebe
J. M. Borrero de Acuna, J. Wissing, L. Jänsch, D. Jahn
M. Steinert (Braunschweig/DE)
- 689-IIP Deciphering the cross-talk between host and pathogen during intracellular persistence of *Staphylococcus aureus* within mast cells
T. Sauerwein (Cologne/DE), O. Goldmann, E. Medina (Braunschweig/DE)
K. Förstner (Cologne/DE)
- 690-IIP withdrawn
- 691-IIP Epigenetic mechanisms regulate host inna
K. Mukherjee, U. Dobrindt (Münster/DE)
- 692-IIP Host Innate Immune Reaction to Erythrocytes Lysed by the Malaria Parasite *Plasmodium Falciparum*
A. González Delgado, S. Irmscher (Jena/DE), T. Reiß, G. Pradel (Aachen/DE)
C. Skerka (Jena/DE)
- 693-IIP Domain composition and variations of immune evasion protein C (PspC) among *Streptococcus pneumoniae* strains.
S. Du, C. Vilhena (Jena/DE), S. King (Columbus, Ohio/DE)
M. Rohde (Braunschweig/DE), C. Skerka (Jena/DE)
S. Hammerschmidt (Greifswald/DE), P. F. Zipfel (Jena/DE)

- 694-IIP Effects of stress on 2"-O methylation and immune stimulation of tRNA in *E. coli*
A. Grober (Dresden/DE), I. Freund (Heidelberg/DE), A. Galvanin
 V. Marchand, Y. Motorin (Vandoeuvre-les-Nancy/FR)
 A. Dalpke (Dresden/DE)
- 695-IIP Impact of H1N1 virus and *Streptococcus pyogenes* coinfection on
 coagulation and microbiome in mice
 J. Köhler, B. Kreikemeyer, S. Oehmcke-Hecht (Rostock/DE)
- 696-IIP withdrawn
- 697-IIP Immunization with TLR2-triggering lipidated pneumococcal antigens
 enhances and skews antibody responses and leads to reduced colonization
F. Voß (Greifswald/DE), L. F. van Beek (Nijmegen/NL)
 D. Schwudke (Borstel/DE), T. H. A. Ederveen (Nijmegen/NL)
 F. J. van Opzeeland (Nijmegen/NL), D. Thalheim, S. Werner (Greifswald/DE)
 M. I. de Jonge (Nijmegen/NL), S. Hammerschmidt (Greifswald/DE)
- 698-IIP Commensal *Streptococcus* spp. may possess protective effects against
Pseudomonas aeruginosa in airway epithelial cells in the context of cystic fibrosis
A. Tony-Odigie (Dresden/DE), S. Boutin (Dresden, Heidelberg/DE)
 A. Dalpke (Dresden/DE)
- 699-IIP Applying bacteria-derived nucleotides as adjuvant in primary human cells
L.-S. Chen, A. Grober, S. Leccese, A. Dalpke (Dresden/DE)
- 700-IIP Shiga Toxin 2a Binds to Complement Components C3 and C5 and
 Upregulates their Gene Expression in Human Cell Lines
S. Kellnerová, S. Chatterjee, R. Würzner, D. Orth-Höller (Innsbruck/AT)
- 701-IIP Intracellular *Staphylococcus aureus* induced cell death and cytokine release
 in human macrophages
J. Bayer, L. Bleul, A. Weber, C. Wolz (Tübingen/DE)
- 702-IIP Identification of specific anti-TPI H8 antibody-epitopes as putative active
 vaccine against *Staphylococcus aureus*
L. Rummler, S. Mertins, M. Krönke, A. Klimka (Cologne, Bonn/DE)
- 703-IIP Analysing pathogen-host interaction- Dual RNA sequencing of *Francisella*
tularensis infected macrophages
M. J. Alber, M. Antwerpen, M. C. Walter, H. von Buttlar (Munich/DE)
- 704-IIP Innate Lymphoid Cells in the female genital tract and their role in
 chlamydial infection
S. Barth, S. Kirschnek, G. Häcker (Freiburg i. Br./DE)

- 705-IIP *Chlamydia trachomatis* reinfection with different serovars provides serovar-independent protection and faster recovery in a mouse lung infection model.
C. Lanfermann, M. Kohn, R. Laudeley, C. Rheinheimer, S. Glage
A. Klos (Hanover/DE)

National Reference Laboratories and Consiliary Laboratories | 706-NRZP–722-NRZP

Second Floor (Hörsaalgebäude)

- 706-NRZP Susceptibility of invasive *Neisseria meningitidis* strains isolated in Germany towards azithromycin, an alternative agent for post-exposure prophylaxis
M. Krone, T.-T. Lâm, U. Vogel, H. Claus (Würzburg/DE)
- 707-NRZP* Poliovirus containment in Germany – what labs should know
S. Diedrich, K. Keeren, S. Böttcher (Berlin/DE), F. Feil
K. Beyrer (Hanover/DE), S. Reiter (Berlin/DE)
- 708-NRZP Population Structure of the Genus *Brucella* as Determined by Core-Genome-Based Multi-Locus-Sequence-Typing (cgMLST)
H. C. Scholz (Munich/DE)
- 709-NRZP Development of a *Yersinia pestis* cgMLST-Assay for Molecular Outbreak and Forensic Trace-Back Analysis
H. C. Scholz, M. C. Walter, M. Antwerpen (Munich/DE)
- 710-NRZP Report of the National Reference Centre for Multidrug-Resistant Gram-negative Bacteria on Carbapenemases in Germany in 2019
N. Pfennigwerth, J. Schauer, L. Marlinghaus, A. Anders, M. Cremanns
S. G. Gatermann (Bochum/DE)
- 711-NRZP *Microbiological Diagnosis of CF lung infection (the new CF MIQ24 2019)*
M. Hogardt (Frankfurt a. M./DE), B. C. Kahl (Münster/DE)
S. Besier (Frankfurt a. M./DE), J. Steinmann (Nürnberg/DE)
M. Abele-Horn (Munich/DE), E. Richter (Heidelberg/DE)
G. Jäger (Planegg-Martinsried/DE), C. Smaczny (Frankfurt a. M./DE)
L. Sedlacek (Hanover/DE)
- 712-NRZP Efficacy of inhalative antibiotic therapy against *P. aeruginosa* in patients with Cystic Fibrosis
T. Burbach, A. Schröder, C. Smaczny, O. Eickmeier, V. Ilievski, S. Besier
M. Hogardt (Frankfurt a. M./DE)
- 713-NRZP Evaluation of *in silico* tools for sequence-based serovar prediction of *Salmonella* spp. at the German National Reference Center
S. Banerji, S. Simon, A. Tille, A. Fruth, A. Flieger (Wernigerode/DE)

- 714-NRZP NGS-based molecular surveillance of infections with *Shigella sonnei*, cgMLST analysis and identified clusters 2018–2019 in Germany
A. Fruth, C. Lang, R. Selb, A. Flieger (Wernigerode/DE)
- 715-NRZP NGS-based surveillance of *Salmonella enterica* ssp. *enterica* serovar Enteritidis
S. Simon, E. Trost, M. Pietsch, A. Flieger (Wernigerode/DE)
- 716-NRZP Identification of novel pathogenicity factors in *Bartonella bacilliformis*
A. Dichter, S. Garcia Torres, M. Garcia-Quintanilla
S. Becker (Frankfurt a. M./DE), J. Berger (Tübingen/DE), W. Ballhorn,
V. A. J. Kempf (Frankfurt a. M./DE)
- 717-NRZP* Comparative genomics of *Borrelia* species
S. Hepner (Oberschleißheim/DE), J. Hübner, A. Wieser (Munich/DE)
S. K. Sheppard, E. Mourkas, S. Bayliss, J. Calland, B. Pasoe
E. Rudolph (Bath/GB), R. E. Rollins (Munich/DE), D. Marosevic
V. Fingerle, G. Margos, A. Sing (Oberschleißheim/DE)
- 718-NRZP Ten years of laboratory surveillance of the National Reference Laboratory for meningococci an *H. influenzae* (NRZMHi) – Invasive *H. influenzae* disease in Germany 2009–2018
T.-T. Lâm, H. Claus, M. Krone, U. Vogel (Würzburg/DE)
- 719-NRZP Discriminative potential of VITEK® MS regarding the genus *Haemophilus*
S. Nürnberg, H. Claus, M. Krone, U. Vogel, T.-T. Lâm (Würzburg/DE)
- 720-NRZP Use of whole genome sequencing to analyse of a cluster of invasive meningococcal disease caused by serogroup C in the counties of Ebersberg and Munich (2019)
H. Claus, T.-T. Lâm, M. Krone, U. Vogel (Würzburg/DE)
- 721-NRZP Results of intensified source finding efforts among community-acquired cases of Legionnaires’ disease – first results of the German LeTriWa study; Berlin, 2016–2019
C. Lück (Dresden/DE), U. Buchholz, H. J. Jahn, F. Reber, A.-S. Lehfeld
B. Brodhun, W. Haas (Berlin/DE), C. Förster, B. Schaefer, F. Stemmler
J. Bochmann, Y. Schreiner (Bad Elster/DE), C. Gagell
E. Harbich (Dresden/DE)
- 722-NRZP First case of a non-toxicogenic *tox* gene-bearing *C. ulcerans* blood stream infection in an immunocompromised patient
A. Berger (Oberschleißheim/DE), J. P. Borde (Oberkirch/DE), A. Dangel
A. Sing (Oberschleißheim/DE)

Molecular Infection Epidemiology | 723-MIEP–729-MIEP

Second Floor (Hörsaalgebäude)

- 723-MIEP Detection of CTX-M-15 and AMP-C- beta-lactamases in *Escherichia coli* and *Pseudomonas* species isolates from abattoir and poultry anal and cloacal swab samples in Abakaliki, Ebonyi State Nigeria.
I. Iroha, O. Nnaji, B. Oke, P. Ikemsie (Abakaliki/NG)
- 724-MIEP Multilocus genotyping of *Giardia duodenalis* in Southwestern Iran – a community survey
M. Beiromvand, R. Baghlaninezhad, A. Rafiei (Andimeshk/IR), D. Carmena P. C. Köster, B. Bailo, M. Hernández de Mingo (Madrid/ES)
- 725-MIEP Phylogenetically defined isoforms of *Listeria monocytogenes* InlB differently bind receptor gC1qR
E. Kalinin (Moscow/RU), Y. Chalenko (Moscow, Nizhny Novgorod/RU)
E. Sysolyatina, K. Sobyenin (Moscow/RU)
S. Ermolaeva (Moscow, Nizhny Novgorod/RU)
- 726-MIEP Analysis of antimicrobial resistance and virulence in *Staphylococcus aureus* isolates from a community sample
I. Kiemann, H. Bednarz, K. Niehaus (Bielefeld/DE)
- 727-MIEP Genomic analysis reveals varying degrees of host restriction in *Escherichia coli*
S. K. Tiwari (Berlin/DE), B. Van der Putten (Amsterdam/NL)
T. N. Vinh (Hanoi/VN), M. Bootsma (Utrecht/NL), R. La Ragione (Surrey/GB)
S. Matamoros (Amsterdam/NL), N. T. Hoa (Hanoi/VN, Oxford/GB)
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I. Stamm (Ludwigsburg/DE), L. H. Wieler (Berlin/DE), C. Ewers (Gießen/DE)
A. Fivian-Hughes (Surrey/GB), C. Menge (Jena/DE), C. Schultz (Amsterdam/NL)
T. Semmler (Berlin/DE)
- 728-MIEP Molecular and clinical characterization of methicillin-resistant *Staphylococcus aureus* (MRSA) isolates carrying Panton-Valentine leucocidin in Northern Bavaria, Germany, 2009–2016
T. Szumlanski (Nürnberg/DE), A. Simbeck (Regensburg/DE)
R. Ziegler (Nürnberg/DE), T. Holzmann (Regensburg/DE), S. Monecke
R. Ehricht (Jena/DE), R. Bertram (Nürnberg/DE)
W. Schneider-Brachert (Regensburg/DE), J. Steinmann (Nürnberg/DE)
- 729-MIEP Characterisation of a poorly known *S. aureus*/MRSA lineage from the Middle East
E. Mueller, S. Monecke, S. Braun (Jena/DE), M. Armengol-Porta (Dresden/DE)
M. Bes (Lyon/FR), S. Boswihi (Jabriya/KW), M. El-Ashker (Mansoura/EG)
I. Engelmann (Jena/DE), D. Gawlik (Bönen/DE), H. Hotzel (Jena/DE)
R. Nassar (Dubai/AE), A. Reissig (Jena/DE), A. Ruppelt-Lorz (Dresden/DE)
A. Senok (Dubai/AE), A. M. Somily (Riyadh/DE), E. Udo (Jabriya/KW)
R. Ehricht (Jena/DE)

SOCIAL PROGRAMME

Sunday, 8 March 2020 | 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 19:30

Venue Industrial Exhibition in the
Augusteum & Paulinum
Augustusplatz 10 | 04109 Leipzig

Fees included in conference registration
25 EUR for accompanying persons and
those with a day ticket



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Lutz Zimmermann.

Tuesday, 10 March | Mixer in the Moritzbastei

We invite you to join a memorable evening at the Mixer in the famous Moritzbastei in Leipzig. Enjoy a familiar evening with colleagues and friends, have casual conversations and get to know each other even better – socialise and extend your network!

The former fortification Moritzbastei is the only remaining part of the medieval city fortification of Leipzig. Built between 1551 and 1553, it can look back on an eventful history and has been used as a cultural centre since 1982. In the heart of the city, right next to the Neues Gewandhaus and the University, historical architecture and modern cultural life combine here in all their diversity, making the Moritzbastei a special place for our Mixer.

Time from 20:00

Venue Moritzbastei | Kurt-Masur-Platz 1 | 04109 Leipzig

Fees included
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Monday, 09 March

12:15–13:15 Industrial Symposium | Takara Bio Europe

- HS 4 Next-Gen technologies to accelerate protein studies:
Work smarter, not harder!
Malathi Raman (Saint-Germain-en-Laye/FR)



12:15–13:15 Industrial Symposium | Bruker Daltonik

- HS 5 Expanding the Scope of Biotyper
- 12:15 Salmonella typing using the IR Biotyper
Miriam Cordovana (Bologna/IT)
- 12:45 MALDI-TOF MS beyond identification – rapid AST and more
Evgeny A. Idevich (Münster/DE)



Tuesday, 10 March

12:15–12:45 Industrial Symposium | HiSS Diagnostics GmbH

- HS 4 ELITE InGenius® the flexible sample to result solution
that meets laboratory needs
Emanuele Cesale Ros (Torino/IT)



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Oral Session 6 – Food Microbiology and Hygiene I (FG Food Microbiology and Hygiene)

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Oral Session 16 – Eukaryotic Pathogens – Fighting Back (FG Eukaryotic Pathogens

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Oral Session 19 – Microbiota, Symbiosis and Host I (FG Microbiota, Symbiosis and Host FG Symbiotic Interactions)

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Oral Session 32 – Microbiota, Symbiosis and Host II (FG Microbiota, Symbiosis and Host FG Symbiotic Interactions)

Brian Weiss (New Haven, CT/US)

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Symposium 6 – Recent Challenges in Microbial Systematics (FG Identification and Systematics | FG Microbial Systematics and Epidemiology)

Daniel R. Brown (Gainesville, FL/US)

INDEX OF SPEAKERS, AUTHORS AND CHAIRS

A

Aardema, H. M.	151	Aldehoff, A. S.	149	Armengol-Porta, M.	172	Ballhorn, W.	171
Abdel-Glil, M.	87	Aldejohnn, A.-M.	65	Arndt, F.	114	Bals, R.	71
Abdelbary, M. M. H.	106	AlDhaheri, S.	148	Arneti, A.	148	Bandow, J.	82, 127, 147
	163	Aleksandrowicz, A.	139	Arnold, T.	167	Banerji, S.	101, 107, 170
Abdollahzadeh, I.	109	Alexander, J.	146	Arraiano, C.	162	Bang, C.	68, 102
Abdulkadir, N.	163	Alfaro-Espinoza, G.	121	Arranz San Martín, A.	157	Bange, F.-C.	102
Abdullah, H. S. M.	164	Alford, J.	159	Artelt, T.	51	Bange, G.	60, 95, 115, 157
Abdullah, M. R.	65, 80	Alhaj Zein, A.	113	As, K.	152	Banitz, T.	149
Abel, F.	78	Alhilaifawi, A.	165	Aschenbrenner, A. C.	79	Banneke, S.	168
Abele-Horn, M.	170	Ali, A.	148	Aslam, S.	62	Bär, A.-L.	79
Abonyi, A.	69	Ali, M. Q.	138	Assil-Companionij, L.	97	Barber, A. E.	165
Abt, C.	140	Alio, I.	101	Astafyeva, Y.	132	Barbirz, S.	50, 124
Abu Sin, M.	63, 101	Aliyu, H.	113, 119	Ataka, K.	161	Barisch, C.	110
AbuQamar, S.	148	AlJneibi, M.	148	Atanasova, Y.	165	Barková, K.	120
Achtman, M.	81	Aljneibi, R.	148	Attig, F.	130	Barkowsky, G.	71, 140
Adam, N.	57	Alkhaja, M.	148	Auge, I.	86	Barrantes Bustinza, W. I.	140
Adam, P.	56	Allahverdiyeva-Rinne, Y.	97	Auraß, P.	107	Barrero Canosa, J.	152
Adamczyk, A.	133	Allers, T.	155	Austermeier, S.	86	Barry, K.	126
Adelowo, O. O.	150	Allert, S.	65, 165	Autenrieth, I.	65, 144	Barske, T.	128, 159
Adelung, R.	137	AlMansoori, A.	148	Averhoff, B.	33, 96, 155	Barth, S.	130
Adnan, F.	108	Almustafa, Z.	165	Awal, R. P.	67	Barth, S.	169
Adolf, L.	94	Alnuaimi, M.	148	Axer, H.	74	Bartha, Z.	101
Adrian, L.	52, 62, 114, 115	Alqudrah, L.	71	Axmann, I.	59, 156	Barthel, G.	91
	149, 152	Altangerel, E.	66	Axmann, I. M.	68, 59, 154	Barthels, S.	104
Aebischer, A.	86	Altenbuchner, J.	118		159, 160	Bartholomaeus, A.	149
Aebischer, T.	78	Alter, T.	51, 92, 129, 167	Ayobami, O.	63, 102	Bartholomaeus, S.	146
Aepfelbacher, M.	34, 72, 73	Alumasa, J.	127	Azemsop, G.	82	Bartling, P.	82
	78, 94	Álvarez, J.	172	Azim, M. K.	131	Bartz, J.-O.	132
Afrizal, A.	68	Alvarez Hayes, J.	140			Basen, M.	113
Agarwal, S.	109	Amarante Colpo, R.	153	B		Bashir, S.	150
Aghdassi, S.	23, 90	Amberger, M.	146	Babic, N.	144	Bator, I.	48
Agler, M.	133, 164	Ambretti, S.	87, 102, 106	Babych, S.	141	Batra-Safferling, R.	97
Ahmed, R.	126	Ambrosch, A.	51, 100	Bach, E.	135, 165	Battaglia, S.	104
Ahmed, S.	149	Ameni, G.	129	Bachiyksa, E.	165	Bauer, A.	145
Aigbekaen, E.	46, 151	Anders, A.	170	Bachmann, J.	57	Bauer, W.	67
Aigbekaen, O. E.	46	Anderson, G.	59	Bachmeier, J.	167	Bauersachs, T.	97
Ailloud, F.	78	Andrack, J.	129	Bachstein, L.	66	Baum, C.	150
Aistleitner, K.	107	Andresen, K.	66, 95, 122	Backofen, R.	53	Baum, C.	159
Akbari, A.	145		156, 157	Bader, B.	88	Baum, M.	116, 118, 119
Akka, S.	76, 102	Angeles De Paz, G.	151	Bader, J.	119, 120, 122		137
Akenten, C. W.	77	Angelov, A.	65	Bagh, S.	161	Baumann, P.	133, 164
Aktas, M.	154	Angstwurf, K.	74	Baghlaninezhad, R.	172	Baumbach, C.	130
Akwetey, S.	80	Anna, D.	60	Bahl, H.	33, 38, 125, 140	Baumgart, M.	116, 118, 119
Al Dahouk, S.	80, 83, 137	Antelmann, H.	59, 125	Bähre, H.	86	Baumgarten, L.	119
Al Zarooni, S.	148	Antelo, L.	66, 121, 122, 156	Bai, M.	74, 162	Baumgärtner, W.	76, 130
Al-Kaidy, H.	122	Antranikian, G.	62, 64	Baier, C.	102	Bäumler, W.	137
Al-Shameri, A.	48	Antwerpen, M.	169, 170	Baier, J.	134	Baums, C.	142, 143
Alabi, A. S.	129	Antwerpen, M. H.	74	Baier, M.	74	Baums, C. G.	142, 143
Alber, G.	92	Anwar, N.	104	Baillet, A.	88	Bauriedl, S.	142
Alber, M. J.	169	Appel, J.	160	Baillo, B.	172	Bauwens, A.	46
Albers, S.-V.	93, 155, 158	Appert, O.	68	Bajerski, F.	91	Bayer, J.	169
Albert, S.	123	Apura, P.	162	Bakken, L.	52	Bayer, M.	60
Albert, T.	167	Aranda, E.	151	Bakker, H.	77	Bayingana, C.	130
Alblooshi, K.	148	Arbizu, P. M.	46	Baldow, T.	128	Baykova, A.	165
Albrecht, M.	90	Arenas Busto, J.	139	Baldrian, P.	164	Bayliss, S.	171
Alcántara, C.	128	Arend, K.	82	Balinovic, A.	139	Beaumart, N.	107

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Bechelany, M.	57	Berens, C.	130, 172	Bissell, A. U.	162	Borgman, T.	134
Becher, D.	76, 98, 126, 132, 147	Bereswill, S.	79, 80, 88, 92, 129	Bitter, W.	67	Borim Corrêa, F.	52
Beck, C.	78, 155	Berg, I.	52, 114, 116	Bitterwolf, P.	122	Borisova, M.	144
Beck-Nafz, J.	109	Berger, A.	80, 171	Bitzenhofer, N.	85	Bork, P.	90
Becker, A.	71	Berger, J.	171	Bitzenhofer, N. L.	161	Borlinghaus, N.	48
Becker, A.	90	Berger, M.	79, 139	Bjerga, G. E. K.	121	Born, J.	165
Becker, A.-L.	94	Berger, P.	79, 139	Blagotinsek, V.	60, 157	Born, J.	165
Becker, D.	146	Berges, M.	168	Blank, H.-P.	63, 101	Bornemann, T. L. V.	56, 158
Becker, J.	48, 118	Berghoff, B.	59, 127	Blank, L. M.	48, 145	Börner, J.	111
Becker, K.	24, 46, 47, 53, 66, 73	Bergmann, D.	137	Blank-Landeshammer, B.	111	Borowiak, M.	49, 79, 80
Becker, K.	92	Bergmann, R.	143	Blankenfeldt, W.	76, 112	Borrero de Acuna, J. M.	97
Becker, M.	151	Bergmann, S.	140	Blaschitz, M.	81	Borrónio, E.	104
Becker, M.	157	Berinson, B.	107	Blaut, M.	134	Borst, A.	93, 159
Becker, P.	116	Bernhard, S.	68	Bleffert, F.	97	Bosselmann, J.	94
Becker, S.	171	Bernhardt, J.	115, 125, 133	Bleul, L.	169	Boswih, S.	172
Becker, S.	71, 141, 143, 144	Berscheid, A.	138, 155	Blom, J.	136, 147	Both, A.	64, 71, 76, 143
Becker, S. L.	108	Bersching, K.	95	Blombach, B.	118, 147	Bott, M.	109, 116, 118, 119
Beckmann, J.	74	Bersuch, E.	68	Blumenberg, M.	146		120
Bednarz, H.	172	Bertram, R.	172	Boahen, K. G.	77	Böttcher, S.	170
Beemelmans, C.	84, 153	Bertsch, T.	103	Bobal, M.	123	Bouillon, B.	102
Beer, M.	74	Bertsche, U.	138	Bochmann, J.	171	Bourke, P.	87
Begerow, D.	166	Bertz, H.	47	Böckers, M.	121	Boutin, S.	100, 108, 169
Behle, A.	160	Berwanger, L.	160	Bockmühl, D.	167	Bowers, R. M.	91
Behne, A.	162	Bes, M.	47, 172	Bode, H. B.	119, 124	Boysen, J. M.	165
Behnke, M.	51, 100, 101	Besharova, O.	60	Bodenberger, B.	124	Bozan, M.	160
Behr, C.	131	Besier, S.	88, 170	Böndorfer, B.	143, 144	Bozec, A.	91
Behrends, V.	77, 100	Bestehorn-Willmann, M.	47	Boeddinghaus, R. S.	94	Braetz, S.	59
Behrendt, U.	114, 149	Bethe, A.	172	Boedeker, C.	67, 82, 149	Braga, D.	153
Behrens, I.-K.	77, 140	Beulig, F.	152	Boelhauve, M.	129, 130	Brakhage, A.	108, 128, 162
Behrens, S.-E.	116	Beuter, D.	153	Boesveld, S.	104	Brakhage, A. A.	128, 162
Beiromvand, M.	172	Beyersdorf, N.	92	Bogdan, C.	81, 134	Brameyer, S.	127
Beißwenger, V.	136	Beyrer, K.	170	Böhler, O.	137	Bramkamp, M.	112
Bekere, I.	78	Bhatia, M.	150	Bohn, E.	65	Brandenburg, F.	64
Bellack, A.	159	Bhatnagar, S.	96	Bohne, W.	68	Brandenburg, V. B.	157
Belmar Campos, C. E.	71	Bhoopathy, S.	117	Bohnert, J.	130	Brands, B.	167
	74, 137	Biedendieck, R.	119, 140	Bohnert, J. A.	106	Brandt, C.	53, 89, 119
Ben Moussa, M.	101	Bielicke, M.	167	Bohnert, S.	95		123, 134
Benda, M.	110	Bierbaum, G.	138, 145, 152	Böhringer, A. C.	114	Brandt, C.	107
Bendas, G.	155	Bierwirth, E.	57	Bolay, P.	96	Brandt, W.	153
Bender, J.	83, 147	Biesgen, V.	153	Boll, M.	115, 116	Brass, H. U. C.	85
Bendinger, B.	61	Bigge, R.	108	Bollinger, A.	147	Brauer, A.	163
Bengelsdorf, F. R.	84, 119	Bilici, K.	85	Bolsmann, R.	138	Brauer, A.	151
	149, 153	Bilitewski, U.	136, 144	Bolten, C. J.	64	Brauer, M.	77
Bengtsson, M.	69, 82, 151	Bimmer, M.	57, 121	Bombach, P.	151	Brauer, V.	56, 145
Benito-Merino, D.	92	Bin Hudari, M. S.	62	Bommer, A.	106	Braun, B.	150
Benker, N.	151	Binder, D.	85	Bonazzi, M.	143	Braun, F.	155
Benndorf, D.	152, 162	Binger, K. J.	79	Bongaerts, J.	121	Braun, J.	134
Bennewitz, S.	116	Birgand, G.	22, 70, 182	Bongcam-Rudloff, E.	119	Braun, P. G.	166, 167
Benning, S.	152	Birkhofer, K.	94	Bonk, F.	146	Braun, P.	66, 107
Bennion, A.	122	Birmes, L.	69	Bonnerjee, D.	161	Braun, S.	59, 172
BENREMILA, D.	104	Bischoff, L.	119	Bootsma, M.	172	Brauner, A.	133
Benthien, H.	141	Bischoff, M.	141, 143, 144	Borchert, E.	121, 145	Brauns, M.	60
Bento, I.	117	Bischoff, P.	23, 89, 182	Borde, J.	47	Braus, G.	128
Bera, A.	138	Bischofs-Pfeifer, I.	125, 128	Borde, J. P.	171	Brehm, J.	156, 157
			157	Borger, A.	122	Breisch, J.	96

Breitenstein, Y.	103	Burbach, T.	170	Chatzinotas, A.	46, 49, 94	Cuny, C.	103
Breitrück, A.	133, 136	Burchhardt, G.	138		149, 151, 162, 164	Cutler, S.	61
Bremenkamp, R.	156	Burckhardt, I.	47	Chaves-Moreno, D.	139	Cuyppers, F.	138
Bremer, E.	95, 126	Burdukiewicz, M.	135, 144	Chen, F.	142	Czech, L.	54, 126
Brendebach, H.	83	Burdur, A.	111	Chen, L.-S.	169	Czerwieńiec, R.	111
Breuer, J.	109, 126	Bürger, A.	91	Chen, S.-C.	60, 62, 146		
Brinkhoff, T.	134	Burggraaf, M. J.	67	Cheng, D. W. C.	139	D	
Brizola Toscan, R.	163, 164	Burkhardt, C.	64	Cherkouk, A.	62	Dach, F.	139
Brodhun, B.	171	Burkhardt, M.	159	Chernii, S.	111	Dachwitz, S.	48
Broeker, N. K.	124	Burmeister, A.	85	Chernii, V.	111	Dagan, T.	84
Brokatzy, D.	79	Burow, E.	168	Chhatwal, P.	67	Dahl, C.	110, 113, 134, 135
Bröker, B.	78	Burr, D.	58	Chiantia, S.	50	Dahl, J.-U.	59, 127
Bromberger, B.	51, 123, 166	Burrichter, A.	114	Chiba, A.	150	Dahle, H.	164
Brötz-Oesterhelt, H.	94	Bürsgens, F.	66	Chibani, C. M.	123	Dally, L.	65
	111, 127, 141, 155	Büsch, A.	83, 87, 130	Chika Linda, I.	123	Dalpe, A.	164, 169
Brouwer, R. M. H. J.	76	Busch, B.	77	Chilimoniuk, J.	135	Dandekar, T.	88
Brown, D. R.	61, 182	Busch, D.	71	Chiriac, M. T.	77	Dangel, A.	80, 171
Brown, K.	122	Busch, P.	62, 64	Choo, S.	145	Dangel, L.	131, 139
Brück, M.	141	Busch, R.	132	Chow, J.	120	Dangel, M.-L.	139
Brückner, S.	127	Busche, T.	125, 147	Christian, G.	49	Daniel, B.	85
Brückner, V.	92, 129	Buscot, F.	69, 163	Christian, R.	136	Daniel, C.	91
Bruder, D.	78	Büssow, K.	76	Christner, M.	107, 108	Daniel, R.	50, 111, 124, 145
Brüggemann, N.	145	Büter, A.	137	Christodoulides, M.	140		147
Brüggemann-Schwarze, S.		Büttner, H.	64, 76, 143	Chrubasik, M.	69	Danso, D.	101, 120
	167	Buzzola, F. R.	64	Cichocki, N.	57, 124	Daßen, S.	66
Brüggemann, M.	86	Byrne, J.	52	Cichon, C.	84, 143	David, K.	94
Brugnone, N.	152			Cifuentes Triana, Y. A.	132	David, S.	51
Brümmer, F.	149	C		Ciglia, C.	155	Davoudi, C.	120
Brun, Y. V.	89	CABIBBE, A.	104	Cimdins-Ahne, A. M.	86	Dawson, S. C.	96
Brunke, S.	86, 165, 166	Cafiero, J. H.	140	CIRILLO, D.-M.	104	De Bruyne, K.	107
Bruns, S.	138	Calabrese, F.	60, 62	Claas, E. C. J.	138	de Buhr, N.	142
Brüser, T.	111, 120, 155	Caliskan, M.	97	Claus, H.	83, 102, 170, 171	De Coninck, D.	66
Bryce, C.	145	Calland, J.	171	Clavel, T.	68, 90	de Greeff, A.	139
Brzozowska, E.	124	Calleja, M. L.	151	Clement, J. H.	64	de Jong, A.	126
Buchacher, T.	51	Calvo, C.	151	Commichau, F. M.	111, 156	de Jonge, M. I.	169
Buchhaupt, M.	57, 161	Cameron, H. J.	131	Conrad, T.	128	de Jonge, N.	93
Buchholz, M.	104	Cantón, R.	23, 81	Conrads, G.	106, 163	de Lorenzo, V.	55
Buchholz, U.	171	Cao, P.	118	Conrady, M.	152	De Maayer, P.	113
Büchsenhüt, H.	97	Cardon, Z. G.	151	Cordovana, M.	87, 102, 106		66, 107
Buckel, W.	54, 72, 97	Carle, R.	87		174	de Tomassi, A.	78
Bücker, R.	129	Carmena, D.	172	Cordsmeier, A.	94	Deinhardt-Emmer, S.	65
Büdel, A.	162	Carreté, L.	126	Corrêa, F.	114	Deise, S.	110
Budhraj, R.	62, 149	Carsten, A.	94	Correa-Martinez, C. L.	71	Deising, H. B.	165
Buegger, F.	52	Carstens, L.	148		81, 100	Dekker, D.	77
Buer, J.	24, 34, 71, 89, 104	Carvalho, S. M.	162	Cortese, M.	58, 66	Dekker, M. P.	67
	133	Castaño, L.	69	Coşkun, Ö.	164	del Campo, R.	81
Buettner, C.	62	Centler, F.	84, 120, 146, 153	Cossart, P.	44	Dellmann, A.	76
Bugert, C.	101	Cesale Ros, E.	174	Coulthurst, S.	81	Dellwig, O.	90
Bugert, J. J.	101	Chaberny, I. F.	32, 44, 51	Cowan, A. R.	148	Demina, G.	126
Bühler, B.	48, 57, 97, 117		63, 102, 103	Cowan, D.	113	Demmer, U.	116
	121, 160	Chakraborty, T.	80, 152	Cowley, E. S.	96	Demuth, H.-U.	104
Bühler, K.	62, 72, 115, 160	Chalenko, Y.	172	Cramaro, L.	148	Deneke, C.	79
Bühning, S. K.	66, 157	Chan, C.	77	Cravo, A.	46	Dengler, L.	112, 159
Bunk, B.	78, 81, 90, 93, 95	Chandrasekaran, K.	117	Cremanns, M.	106, 170	Denig, L.	85
	108, 128	Chatterjee, S.	169	Crosby, J. R.	78	Denkel, L.	70
Bunte, K.	100			Cseresnyés, Z.	169	Depke, M.	140

INDEX OF SPEAKERS, AUTHORS AND CHAIRS

Deppenmeier, U.	52, 115	Domik, D.	109	Eckstein, S.	156	Engelhardt, L.	45, 166
	118	Dominelli, N.	156	Edel, M.	117	Engelmann, I.	172
Dersch, P.	24, 49, 71, 84	Domingues, S. M.	162	Edelmann, D.	59, 127	Engelmann, S.	94
	138, 139, 157	Domínguez, L.	172	Edelmann, H.	121	Engesser, K.-H.	62
Desiderato, C.	48	Domröse, A.	85	Eder, I.	142	Englert, T.	85
Dettmann, J.-C.	139	Dörflinger, B.	79	Eder, M.	154	Ensser, A.	81
Dettmer, K.	134	Dorfmueller, H.	93	Ederveen, T. H. A.	169	Enzimgmüller-Bleyl, T. C.	159
Detzner, J.	131	Döring, C.	125	Effelsberg, N.	129	Enzmann, F.	93
Deusch, S.	113	Dorl, S.	162	Effenberg, L.	133	Epping, L.	79, 80
Devlitsarov, D.	86	Dörmann, P.	97	Effner, R.	78	Erb, S.	110
Dey, C.	104	Dormeyer, M.	69, 133	Eger, E.	130	Erb, T.	47
Dhinakaranamy, I.	117	Dörr, S.	114	Egert, M.	87, 137	Erb, T. J.	122, 153, 161, 162
Dhople, V. M.	140	Dötsch, A.	133	Eggerichs, D.	118	Erbguth, F.	103
Dhouib, R.	126	Dräger, G.	111	Eggers, J.	116, 153	Erdmann, M. B.	80
Di Carlo, S.	158	Dragoneas, A.	151	Eggers, M.	22, 53, 182	Erhardt, M.	141
Diab, M.	104	Drees, S. L.	117, 150	Egold, M.	101	Ermiler, U.	97, 116
Diaz-Pascual, F.	60	Dreesman, J.	88	Egwuenu, A.	102	Ermolaeva, S.	172
Dichter, A.	171	Drepper, T.	48, 85, 161	Ehlbeck, J.	87, 166	Ernst, C.	144
Dichtl, K.	47	Drescher, K.	60, 139	Ehlers, J.	161	Ernst, L.	128
Dick, J.	47	Dresen, M.	139	Ehling-Schulz, M.	51, 64	Ernst, S.	117
Dieckmann, M.	136	Dresler, J.	128, 129	Ehrenreich, A.	57, 121	Escandón, P.	92
Dieckmann, R.	137	Dressler, M.	62	Ehrentreich-Förster, E.	108	Escher, U.	80
Diedrich, S.	170	Drewniok, C.	120	Ehrhard, I.	63, 101	Eßer, S.	158
Diefenbach, A.	86	Drews, O.	46	Ehrhardt, C.	65, 111	Esken, J.	85
Diefenbacher, S.	100	Drissner, D.	109	Ehrhardt, K.	94	Esser, S.	104
Diehl, C.	153	Du, S.	35, 59, 141, 164	Ehrlich, R.	106, 172	Essert, S. M.	152
Diepold, A.	76, 97, 139		168	Eichhorn, I.	51	Essilfie, A.-T.	126
Dietrich, D.	63, 118	Duan, G.-L.	62	Eichinger, S.	106, 107	Estibarez, I.	78
Dietrich, H.-M.	115	Dudakova, A.	102	Eichinger, W.	106, 107	Estrada-Peña, A.	61
Dietrich, R.	51	Dudler, P.	102	Eichner, A.	137	Etschmann, M. M. W.	57
Dietsch, M.	154, 159, 160	Duncan, K.	69	Eick, S.	104	Evguenieva-Hackenberg, E.	112
Dietrich, J. H.	64	Dunker, S.	164	Eickmeier, O.	170		
Dietze, N.	71, 136	Dunn, J. D.	86	Eikmanns, B.	48	Ewers, C.	172
Dilworth, D.	126	Dunsing, V.	50	Eisenberg, P.	139	Exner, M.	46, 51, 74, 152
Ding, C.	115, 149, 152	Duong, H. L.	121	Eisenberg, T.	147	Eziuzor, S.	52, 114
Dinter, S.	78	Duque-Jaramillo, A.	125	Eisenberger, D.	100		
Dionne, M. S.	109	Durai Raj, A. C.		Eisenblätter, M.	92, 129	F	
Dirks, T.	127	Dürichen, H.	114	Eisenreich, W.	132, 136, 142	Faber, F.	49, 59
Dittmann, S.	127, 136	Dürr, F.	148	Eisheuer, S.	67	Faber, M.	86
Dittmann-Thünemann, E.		Dürre, P.	84, 119, 153	Ejikeugwu, C.	145	Fabiani, F.	157
	163	Dusny, C.	82	Ekhaize, F. O.	116, 145	Fahlbusch, F.	81
Dittmar, D.	65, 143	Düsterhöft, D.	127	Ekici, A.	134	Falgenhauer, L.	80
Dittrich, A. J.	167	Dwai, Y.	78	El Said, K.	145	Falke, D.	126
Diwo, M.	112	Dyksma, S.	95	El-Adawy, H.	130	Falkenberg, F.	121
DJOUDI, F.	104	Dziuba, M.	162	El-Ashker, M.	172	Falkenstein-Paul, H.	155
Djordjevic, L.	66			El-Hossary, E. M.	139	Fan, S.-H.	98, 141
Dobler, G.	47, 83	E		El-Tarabily, K.	148	Färber, H.	46, 74, 152
Dobrindt, B.	107	Ebadi, E.	102	Elhawy, M. I.	141, 143	Farmer, A.	162
Dobrindt, U.	65, 84, 86, 139	Ebel, K.	97	Elling, L.	104	Faßbender, W.	135
	142, 143, 168	Eben, S.	137	Elschner, M.	130	Fasemore, M.	88
Doello, S.	96	Ebenhöh, O.	154	Eltis, L.	122	Faßhauer, P.	111
Doenst, T.	104	Eberlein, C.	60, 133	Endesfelder, U.	139	Faure, G.	158
Dohrmann, A.	146	Ebner, S.	79	Endredi, A.	69	Favaroni, A.	92
Dokic, A.	101	Eckl, D. B.	137	Endres, L.	140	Fehling, P.	51
Dolinsek, J.	162	Eckmanns, T.	22, 23, 55, 63	Engel, U.	118	Feig, M.	63, 101
Döllinger, J.	112, 143		90, 101, 102	Engelhardt, H.	45, 67	Feil, F.	170

Feissel, L.	121	Flegler, A.	167	Froböse, N. J.	100, 129	Gatermann, S. G.	63, 72, 73
Feith, A.	147	Feige, C.	83	Fröhlich, K.	59, 96	88, 101, 102, 106, 109, 170	
Feldbrügge, M.	86, 112	Fleischer, V.	91	Fröhlich, M.	76, 141	Gätgens, F.	85
	165	Fleischmann, S.	51, 167	Fröhlich-Nowoisky, J.	151	Gaupp, R.	144
Felder, C.	46, 74	Flieger, A.	77, 83, 101, 107	Frohloff, D.	115	Gauttam, R.	48
Felle, M.- F.	126		109, 112, 143, 170, 171	Frommel, U.	144	Gawlik, D.	172
Feller, F. M.	62	Flohrs, K.	101	Frostegård, Å.	52	Gazanis, A.	119
Fengler, I.	100	Florian, V.	143	Frühauf, A.	88	Gebauer, J.	85, 161
Fenk, M.	93	Foesel, B.	133, 142	Frunzke, J.	49, 85, 89, 123	Gebel, J.	22, 53, 182
Fenz, D.	51	Folgosa, F.	135		180	Gebhardt, M.	165
Ferling, A.	86	Fong, J. C. N.	60	Fruth, A.	77, 80, 107, 170	Geer, R.	150
Ferling, I.	86, 95	Forchhammer, K.	55, 60		171, 172	Geesink, P.	95
Fernández, Ó. J.	91		96, 110, 122, 145, 159, 160	Fuchs, A.	120	Gehr, E.	161
Ferrandis-Vila, M.	172	Forler, B.	87	Fuchs, B. M.	91	Gehring, M. M.	97, 159
Ferreira-Cerca, S.	93	Förster, C.	152, 171	Fuchs, H.	116	Geibel, S.	93
Ferreira-Gomes, M.	92	Förster, C.	61	Fuchs, J.	116	Geier, A.	166
Ferrer, M.	121	Forster, J.	47, 108	Fuchs, M.	49, 77, 91	Geiger, R. A.	115
Ferstl, R.	68	Forstner, C.	65	Fuchs, S.	65, 77, 80, 88	Geiger, T.	94
Fertey, J.	74	Förstner, K.	88, 90, 168	Fuchs, T. M.	49, 77	Geimer, S.	64
Feßler, A.	80	Frangoulidis, D.	88	Fuentes, G.	160	Geisberger, S.	79
Fester, N.	146	Frank, A.-L.	143	Fulde, M.	59, 125	Geise, H.	155
Fetzner, S.	117, 150, 157	Frank, C.	126			Geisel, J.	71
Feuerbaum, S.	79	Frank, D.	88	G		Gemperl, K.	63
Feurstein, C.	66	Frank, M.	78	Gabaldón, T.	126, 166	Gensch, A.	167
Fickenscher, H.	34, 49, 55	Franke, A.	68	Gabor, E.	146	Gensch, T.	109
	124, 137	Franke, G.	74, 137	Gagat, P.	135	Genzel, G.	100
Ficner, R.	156	Frankenberg-Dinkel, N.	85	Gagell, C.	171	Georg, J.	59, 127
Fiebigler, U.	92, 129		141	Gagsteiger, J.	158	George, S.	125
Fiebrandt, M.	66	Franz, C. M. A. P.	50, 61	Gahutu, J.	130	Georgi, E.	74
Fiedler, T.	117, 139	Franz, P.	50, 61, 116	Gaibler, J.	84	Geraci, J.	65
Figge, M. T.	169	Frazão, C.	135	Galán, J. E.	94	Gerbracht, K.	141
Figl, J.	92, 130	Freese, H.	69	Galante, R.	102	Gerlach, D.	164
Figuerola-Gonzalez, P. A.	146	Frei, R.	34, 64, 68	Galeev, A.	77, 134	Gerlach, E.	92
Filik, K.	124	Freitag, R.	64	Gallert, C.	95	Gerlach, M.-S.	127
Filipchuk, A.	123	Frentrup, M.	81	Galtung, N.	67	Gerlach, R.	65
Filonenko, G.	106	Frerichs, H.	62	Galvanin, A.	169	Gerlinger, P.	153
Fingerle, V.	61, 132, 171	Freund, I.	39, 169	Gálvez, A.	50, 182	Gerlinger, P. D.	122, 161
Fink, J.	60	Frey, J.	147	Gámez, G.	80	Germann, A.	154
Firacative, C.	92	Frick, J.-S.	86	Gannoun-Zaki, L.	143	Gershon, J.	133, 164
Fischer, J.	166	Fricke, C.	87	Gänsbauer, M.	134	Gescher, J.	93, 95, 117, 121
Fischer, J.	125, 140	Fricke, P. M.	120	Garbe, L.	133	122, 149, 150, 167	
Fischer, M.	126	Frickmann, H.	66	Garcia Torres, S.	171	Gesell Salazar, M.	138, 143
Fischer, M.	94	Friebel, L.	161	García-Fernández, S.	81	Gessner, A.	147
Fischer, M.	83, 109, 123	Friedrich, A.	22, 55	García-Moreno, M.	65	Getz, W.	149
Fischer, M.	106	Friedrich, I.	124	García-Moyano, A.	121	Geue, L.	130
Fischer, S.	131	Frieg, B.	126	García-Quintanilla, M.	171	Gfrerer, S.	93
Fischer, T.	98	Frielinghaus, L. D.	108	Garg, R.	59, 60	Ghazal, E.	148
Fischer, U.	94	Friese, D.	101	Garschagen, L.	52	Gibhardt, J.	156
Fischer, W.	136	Friesen, J.	92, 129	Gärtner, A.	147	Gibron, A.	110
Fivian-Hughes, A.	172	Frindte, K.	46	Gärtner, K.	96	Gierse, L. C.	132, 133
Fix, I.	158	Fritsch, V. N.	125	Gasparoni, G.	84	Giese, A.	115
Flachbart, L.	120	Fritz, B.	137	Gasperotti, A.	157	Gießelmann, G.	118
Flade, K.	146	Fritz, G.	85	Gast, D.	156	Giovannoni, S.	163
Flaiz, M.	84	Fritz, G.	109, 154, 155	Gastmeier, P.	51, 70, 89	Giri, V.	131
Flechsler, J.	112	Fritz-Wolf, K.	92		100, 101, 130	Girl, P.	47
		Fritzenwanker, M.	80			Gisch, N.	142

INDEX OF SPEAKERS, AUTHORS AND CHAIRS

Giske, C. G.	23, 73, 180	Graf, J.	134	Grunert, T.	64	Hahnke, R.	120
Glaser, S. P.	46, 132, 136	Graf, M.	146	Grünewald, C.	95	Hahnke, R. L.	136
	147, 151	Graf, M.	109	Grunwald, T.	74	Haimovici, A.	79
Glage, S.	170	Grafmüller, A.	50	Grützner, J.	68	Hain, T.	80
Gläsel, S.	152	Grahner, A.	92	Guarinos, A. R.	148	Haib, S.	114
Glaser, J.	132	Grankin, A.	57	Gudzuhn, M.	101	Haj Ali, J.	148
Gläser, L.	48	Granzin, J.	97	Guedes, S.	66, 107	Halbedel, S.	83, 109, 112
Glasmacher, B.	91	Grass, G.	66, 107	Guenther, S.	110	Halder, L. D.	92, 141
Glatter, T.	60	Grasse, M.	141	Gul, S.	143, 165	Hall, M.	59, 127
Gloerfeld, C.	131	Grassl, G. A.	77, 94, 134	Güllert, S.	82	Haller, S.	63, 102
Glüsenkamp, K.-H.	155	Gratani, F.	85	Gulliver, D.	147	Hallin, S.	70
Göbbels, L.	114	Gray-Owen, S.	77	Gundolf, T.	123	Hamid, H.	46
Goebel, K.	109	Grebe, T.	142	Günther, C.	77	Hamilton, C. J.	125
Goehre, V.	143	Greif, D.	120	Günther, S.	64, 121	Hammad Hussain, M.	131
Goesmann, A.	80, 90, 136	Greif, M.	119	Gunzer, F.	108	Hammelmann, M.	159
	147	Greinacher, A.	141	Guo, H.	84, 153	Hammer, K.	79
Goethe, E.	96	Greiser, Y.	114	Gutzeit, H.	132	Hammerl, J. A.	49, 83
Goethe, R.	96	Greßler, A. E.	92	Guyonnet, D.	133		109, 166, 168
Goetz, F.	98	Gresnigt, M.	86			Hammerschmidt, S.	34, 53
Gofton, A.	61	Greune, L.	136	H			65, 80, 126, 138, 140, 141
Göhler, A.	87	Grieb, A.	91	H, J. C.	117		168, 169
Gohlke, H.	97, 126	Griehl, C.	133	H. Ahrens, C.	68	Hammes, F.	61
Göhre, V.	165	Grigoriev, I. V.	126	H. Wieler, L.	80, 172	Hamoen, L. W.	67
Göing, S.	157	Grigoriev, M. N.	46	Haag, R.	126	Han, Y.	85, 157
Göker, M.	81	Grimm, M.	133	Haag-Richter, S.	24, 54	Han, Y.	57
Gola, S.	125	Grimm, S.	160	Haapanen, O.	98	Handorf, O.	166
Golbik, R.	114	Grimm, V.	124	Haarmann, M.	120	Handrick, S.	101
Gold, C.	137	Grin, I.	93	Haarmann, N.	79	Handtke, S.	141
Gold, N.	47	Grob, H.	165	Haas, R.	77, 136	Hänel, I.	130
Goldmann, K.	69	Grobbe, M.	83, 107, 166	Haas, W.	171	Hanelt, D.	132
Goldmann, O.	168		168	Haase, A.	114, 126	Hanf, B.	128
Gölz, G.	92, 129	Grober, A.	169	Habazar, T.	148	Hanna, R.	159
Golz, J.	79, 129	Grode, L.	92, 130	Habermehl, N. R.	131	Hannig, M.	144
Golze, C.	60	Grohmann, D.	92, 93, 112	Habiyaemye, J. d. D.	69	Hans, J. B.	63, 102
Gomes, M.	164		159	Hack, S.	152	Hanselmann, K.	96
Gomez Baraibar, A.	119	Grohmann, E.	120, 126, 145	Hackbart, A.	87	Hansen, J. L.	71
Goncharenko, L.	150	Grohmann, M.	146	Hackel, M.	88	Happonen, L.	77
Gonnella, G.	145	Groß, U.	68, 81, 100	Hackel, T.	63	Harbich, E.	171
Gonzalez, J.	84	Grosch Schroeder, B.	122	Hacker, A.-L.	147	Harder, J.	98, 158
González Delgado, A.	168	Gröschner, K.	63	Häcker, G.	34, 39, 44, 70, 79	Hardt, V.	119
Gord Noshari, N.	118	Große, C.	127		158, 169	Hardy, A.	123
Gorgojo, J.	140	Großmann, A.	129	Hackmann, C.	130	Harms, H.	32, 44, 49, 57, 70
Goris, T.	115	Großmann, P.	165	Hadziabdic, S.	167		87, 90, 93, 116, 146
Görke, B.	59, 60, 158, 182	Grosser, K.	84	Haeger, G.	57	Harms, M.	112
Gorki, F.	86	Grosser, M.	135	Haferburg, G.	91	Harnisch, F.	52, 115, 118
Görlich, D.	65	Grube, M.	124	Hafez, H. M.	167		148
Gossé, F.	102	Gruber, C. J.	124	Hage-Hülsmann, J.	161	Harpf, V.	91
Göttig, S.	88, 142	Gruber, S.	121	Hagel, B.	78	Harpole, S. W.	164
Götz, F.	141	Grubitzsch, H.	106	Hägele, F.	87	Härtig, E.	110, 156
Götz, M.	95	Gruhlke, M. C. H.	125	Hagemann, M.	55, 96, 128	Hartkopf, F.	79
Götz, P.	120	Grumaz, C.	152		159	Hartlep, I.	102, 103
Gotzmann, G.	137	Grünberg, A.	60, 85, 147	Hagemeister, J.	119	Hartmann, D.	148
Goudeau, D.	91	Grünberger, A.	60, 63, 85	Hagemeister, M.	102	Hartmann, R.	60
Grabow, N.	132	Grünberger, F.	93, 159	Hahn, C.	92	Hartung, A.	47
Graça, A. P.	153	Grund, M.	97	Hahn, L.	134, 135, 136	Hartung, S.	169
Graf, D.	133	Gründling, A.	109	Hahn, V.	137, 147	Hasan, M.	153

Hasan, M. Z.	92	Helming, A.	106	Higgins, P. G.	88	Höfgen, S.	95
Hasenclever, D.	103	Hembach, N.	146	Hild, K.	49	Hofmann, A.	63
Hashimi, A.	122	Hendriks, J.	109	Hildebrandt, A.	49	Hofmann, J.	140
Hassel, N.	166	Hengoju, S.	64	Hildebrandt, F.	157	Hofmann, K.	167, 168
Hau, J.-L.	109	Henke, P.	134	Hildebrandt, J.-P.	112, 132	Hofmann, M.	64, 117
Hauben, L.	66, 107	Henkel, J.	90	Hildebrandt, P.	65, 111, 112	Hofmann, P.	164
Haug, G. H.	151	Henkel, M.	128		132, 143	Hofmann, W.	165
Haupt, K. F.	65	Hennebach, E.	63, 101	Hilgarth, H.	71	Hofreuter, D.	80
Hausner, J.	127, 144	Hennemann, H.	116	Hilgers, F.	85, 161	Hogardt, M.	88, 170
Häußler, S.	60	Henning, K.	131	Hill, P.	60	Hogenkamp, F.	85
Hausmann, C.	159	Henrichfreise, B.	94	Hillebrandt, N.	133	Höger, A.-L.	133
Hausmann, R.	128	Henriquez, T.	128	Hillemann, D.	130	Holert, J.	119, 122
Hausner, W.	93, 159	Henrissat, B.	153	Hiller, A.-L.	121	Höller, C.	100
Hayek, I.	91, 143	Henschel, J.	79	Hiller, D.	104	Holler, M.	156
Heck, L.	66	Hensel, M.	77	Hiller, K.	93	Höllmann, C.	135
Hector, A.	107	Hensel, T.	85	Hiller, M.	112, 143	Holowachuk, S.	66
Heeg, K.	100, 108	Hentschel, U.	121, 131, 145	Hillmann, F.	46, 86, 95, 119	Holste, J.	134
Heermann, R.	119, 156, 157	Hentscher, C.	65		165	Holtfreter, M.	86
Hege, D.	114	Hepner, S.	171	Hiltunen, T.	94	Holtmann, D.	93, 120
Heidemann, J.	156	Herberth, G.	133	Himmel, M.	135	Holubova, J.	140
Heiden, S.	130	Herbrandt, S.	76	Himmels, J. P. W.	107	Hölzel, N.	94
Heider, J.	114	Herich, V.	107	Hinrichs, K.-U.	56	Holzer, A.	83
Heidrich, G.	115	Herrmann, D.	90, 132	Hinz, C.	150	Hölzer, M.	134
Heiker, J. T.	118	Hermann, A.	97	Hinz, C.	101	Holzgrabe, U.	139
Heilbronner, S.	94, 95	Hermann, L.	95	Hirth, N.	127	Holzmann, T.	100, 172
Heilmann, B.	120	Hermann, S.	76	Hitch, T.	68	Homann, A.	79
Heilmann, C.	142	Herrmanns, H.	166	Ho, A.	44, 49, 52, 63	Homburger, C.	124
Heimesaat, M. M.	80, 88	Hermisdorf, G.	125		79, 80, 83, 88, 97, 101, 107	Homeier-Bachmann, T.	87
	92, 129	Hernández de Mingo, M.			114, 115, 116, 121, 132	Hönemann, M.	104, 136
Hein, S.	54, 113, 151		172		148, 149, 156, 160, 163	Honnay, O.	146
Heine, E.	132	Herold, A.	72	Hoang, T. N. M.	169	Hopman, J.	89
Heine, T.	64, 116, 117, 146	Heroven, A. K.	138	Hobmeier, K.	57, 122	Hoppmann, C.	162
Heine, V.	104	Herp, S.	45	Hochkeppel, A.	121	Höppner, A.	126
Heinemann, U.	50	Herrmann, A. J.	159	Höck, M.	92, 129	Hörmansdorfer, S.	80
Heinisch, L.	79	Herrmann, J.	103	Hoefgen, S.	122, 162	Horn, D.	165
Heinrich, L.	65	Herrmann, J.	77	Hoek, A.	80	Horn, F.	46
Heinrich, M.	70	Herrmann, M.	46, 69, 95	Hoelzer, M.	123	Horn, H.	47, 117, 122
Heinz, V.	159	Herrmann, M.	76, 141	Hoff, J.	63, 69, 76, 85, 102	Horn, M. A.	52, 114, 115
Heipieper, H. J.	60, 133	Herrmann, S.	69		118, 163		149, 163
Heise, J.	50	Hertel, R.	124	Hoffmann, A.	63, 101	Horn, S.	78
Heisel, L.	119	Herz, M.	128, 166	Hoffmann, A.	132	Hornef, M.	49
Heisig, A.	128	Herzberg, C.	86	Hoffmann, A.	107	Hornei, B.	51
Heisig, P.	128	Herzberg, M.	128	Hoffmann, J.	76, 102	Horns, H.	47
Helaine, S.	60	Herzog, S.	139	Hoffmann, J.	63	Hörönpöli, D.	155
Helbich, A.	88	Heß, S.	94, 146	Hoffmann, J.	118	Hort, M.	138
Helbich, S.	62	Heßler, N.	143	Hoffmann, J.	69, 163	Hoschek, A.	97, 121, 160
Helbig, C.	139	Hess, W. R.	53, 59, 96, 97	Hoffmann, K. P.	59	Hosmann, J.	76, 138
Helbig, U.	101		127, 156	Hoffmann, L.	116, 120	Hosmer, J.	126
Held, J.	47, 70, 78, 103	Hesselschwerdt, A.	149	Hoffmann, M.-L.	116	Hotzel, H.	83, 87, 130, 172
Held, T.	47	Heudorf, U.	152	Hoffmann, M.	71	Houhou, R.	82
		Heuer, A.	67, 149	Hoffmann, R.	92, 142	Hov, J. R.	68
Hell, R.	125	Heuner, K.	142	Hoffmann, R.	78	Hoyer, E.	127
Hellweg, C. E.	66	Heuschkel, I.	160	Hoffmann, S.	162	Hrabe de Angelis, I.	151
Hellweger, F.	69, 163	Heyer, R.	162	Hoffmann, T.	126	Hrincius, E.	111
Hellwig, M.	59	Heyl, F.	160	Hoffmann, U.	160	Hu, X.	161
Helman, J.	58, 182	Hiemann, R.	144	Hoffmann-Röder, A.	156	Huang, G.	161

INDEX OF SPEAKERS, AUTHORS AND CHAIRS

Huang, J.	64, 78, 143	Irmscher, N.	117	Jennewein, S.	123	Kaiser, M.	162
Huang, L.	141	Irmscher, S.	168	Jennings, C. E.	112	Kalb, R.	123, 166
Huang, Y.	162	Irmscher, T.	50	Jentsch, H.	134	Kalfin, R.	134
Hube, B.	65, 86, 165, 166	Iroha, I.	145, 172	Jentzsch, B.	70	Kalinin, E.	172
Hube, I.	110	Irrgang, A.	166	Jeon, E. J.	118	Kalinowski, J.	48, 125, 147
Hübenthal, A.	156	Isenbeck-Schröter, M.	95	Jeong, K. J.	118	Kallies, R.	46, 49, 50, 149
Huber, C.	80, 172	Itzek, A.	138	Jerdan, R.	106, 164		151
Huber, C.	85	Ivan, N. Y.	136	Jérôme, V.	64	Kallmeyer, J.	46, 147
Huber, H.	112, 137, 159	Ivanov, I.	131	Jeßberger, N.	51	Kallscheuer, N.	67, 82, 117
Huber, M.	158	Ivanov, V.	164	Jeske, O.	67, 82		149
Huber, M.	96			Jetten, M. S. M.	67, 93, 149	Kaltenpoth, M.	84
Huber, S.	106	J		Jia, L.-J.	108	Kamagata, Y.	93
Huber, T.	66	Jacinto, A. C.	66	Jia, Z.	163	Kamau, C.	151
Hubloher, J.	142	Jäckel, C.	49, 168	Jiang, F.-L.	50	Kammel, M.	97
Hübner, J.	78, 171	Jäckel, U.	91, 147	Jiang, M.	64	Kämmer, P.	165
Hübner, T.	145	Jacksch, S.	87	Jo, E. A. H.	92	Kämpfer, P.	46, 132, 147
Hübner, U.	71	Jacob, A.	71, 140	Joazeiro, C.	59		151
Hübschmann, T.	124	Jacob, S.	95, 157	Jochim, A.	94	Kampmeier, S.	71, 81, 100
Hughes, E.	49	Jacobsen, I. D.	86, 92, 165	Jogler, C.	60, 67, 82, 149		103
Hügler, M.	91, 149, 167	Jacoby, C.	115	Jogler, M.	67, 82, 149	Kanaparthi, D.	152
Huhulescu, S.	83	Jaeger, K.-E.	48, 85, 97, 144	Johanns, V.	172	Kandeler, E.	94
Hülpüsch, C.	142		147, 161	Johnke, J.	84, 136	Kaplieva-Dudek, I.	163
Hülter, N.	84	Jaeger, T.	157	Johnsen, U.	158	Kappler, K.	52
Human, Z.	164	Jaén-Luchoro, D.	67	Johnson, Z.	70	Kappler, U.	126
Hummel, A.	152	Jagau, H.	140	Johnston, B.	69	Kappert, K.	67
Hummert, M.	74, 137	Jäger, G.	170	Jokhadze, G.	162	Kaprelyants, A.	126
Humpf, H.-U.	131	Jahn, D.	98, 104, 110, 139,	Jolivet, C.	172	Karagiannidis, C.	137
Humphreys, M. P.	46	140, 154, 156, 168		Jonas, B.	141	Karagöz, M. S.	168
Hünnefeld, M.	123	Jahn, H. J.	171	Jordan, P.	161	Karakoç, C.	162
Huprich, E.	65	Jahn, K.	141	Jörke, C.	64	Karande, R.	48, 160
Hussnaetter, K.	86	Jahn, M.	104, 110	Joß, N.	47	Karande, S.	149
Huth, M.	91	Jakob, A.	85, 157	Josenhans, C.	77, 78	Karch, H.	79, 131
Huynh, N. D.	91	Jakob, F.	150	Jost, A.	158	Karin, G.	101
		Jakob, U.	127	Jovanovic, S.	63	Karlsson, R.	67
I		Jakobczak, B.	143	Julia, S.	107	Karrasch, M.	74, 104
Ibiam, u. u.	145	Jalil, A.	108	Jung, H.	59, 65, 128, 154	Karsten, U.	90
Ibrahim, E. S.	139	Jamil, H.	131	Jung, K.	110, 127, 132, 135	Karwautz, C.	56, 152
Ibrahim, S.	85, 139	Jamil, T.	131		141, 157	Käsbohrer, A.	49, 83, 166
Idczak, E.	95	Jans, A.	104	Jung, S.	65, 66		168
Idelevich, E. A.	46, 47, 174	Jänsch, L.	98, 110, 139, 168	Jungmann, L.	118	Kaschabek, S.	91
Ignatius, R.	86, 92, 129	Janssen, K.	145	Jungnickel, B.	92	Kaßner, S.	147
Ihling, C.	126	Jantsch, J.	74, 79, 91, 143	Juraschek, K.	83	Kasper, L.	65
Ikemsie, P.	172	Jarek, M.	96	Juretzek, T.	101	Kaster, A.-K.	67, 150
Ikhimiukor, O. O.	150	Järvi, H.	165	Jurke, A.	81	Kästle, B.	128
Iliasov, D.	149, 161	Jarzębski, A.	117	Jüttner, M.	93	Kästle, C.	128
Ilievski, V.	170	Jaschkowitz, G.	80			Kästner, B.	119
Illigmann, A.	141	Jassoy, C.	78	K		Katsy, A.	114
Illner, S.	132	Jasuja, J. K.	47	Kaasch, A.	24, 56	Kaufmann, L.-S.	147
Imdahl, F.	124	Javed, M.	70	Kaase, M.	51, 88	Kaufmann, S. H. E.	92, 130
Imhoff, J. F.	131	Jazmati, N.	24, 54, 108	Kaever, V.	86, 155, 156	Kaune, A.-K.	86
Imirzalioglu, C.	152	Jeckel, L.	60, 139	Kaganovitch, E.	125	Kaupfer, T.	163
Imminger, S.	82	Jehmlich, N.	62, 68, 82, 93	Kahl, B. C.	65, 103, 139, 170	Kautz, T.	108
Inckemann, R.	85	115, 120, 133, 147, 149		Kai, M.	109, 162	Kaysser, L.	141
Indra, A.	81	Jelli, E.	60	Kaimer, C.	111	Kazda, M.	149
Infantes, A.	120	Jenal, U.	110, 155, 157	Käiro, K.	132	Kearney, S.	96
Iqbal Qureshi, Z.	131	Jennert, F.	140	Kaiser, L.	60	Keeren, K.	170

Kehl, A.	79	Klein, E.	117	Koch, S. M.	66	Kostova, G.	59, 127
Kehrenberg, C.	80	Klein, K.	65	Koczan, D.	78	Kostrzewa, M.	46, 47, 87
Kehrmann, J.	133	Klein, R.	85	Koelme, W.	112		108
Keiler, K.	127	Klein-Hitpass, L.	133	Koenecke, C.	102	Koteska, D.	134
Keinhörster, D.	125, 128	Kleinebecker, T.	94	Koeppel, M.	49, 132	Kottenhahn, P.	123
Keller, A.	133	Kleinstaub, S.	52, 57, 93	Köfeler, H.	98	Kotter, E.	47
Keller, E. R. J.	91		114, 116, 122	Kofler, F.	85	Kourist, R.	97
Kellner, J.	102	Klenner, S.	166	Kohl, L.	91	Kouzel, I. U.	79
Kellnerová, S.	141, 169	Kleta, S.	83	Kohl, T. A.	81	Kovacic, F.	97, 144
Kemen, E.	145	Kletzin, A.	135, 146, 151	Kohlbach, M.	130	Kovalska, V.	111
Kempf, V. A. J.	45, 77, 83	Klier, C.	88	Köhler, A. M.	128	Kowalczykiewicz, D.	117
	107, 137, 140, 142, 152, 171	Klimek, H.	143	Köhler, H.	92, 130	Kozlov, R.	53, 182
Kenno, S.	91	Klimka, A.	169	Köhler, J.	78, 169	Kraege, A.	143
Kerbs, A.	121	Klimovich, A.	109	Köhler, N.	103	Kraczyk, R.	135
Kersting, S.	108	Klinger-Strobel, M.	106	Köhler, T.	141	Kraicz, P.	92, 142
Kesy, K.	67	Klingl, A.	112	Kohler, T. P.	138, 140	Kraker, S.	124
Kever, L.	123	Klocke, M.	152	Köhler, T.	135	Kramer, R.	63, 102
Khal'zov, I.	164	Klöhn, M.	156	Kohlhey, D.	125	Kramer, T.	51, 100
Khaledi, A.	60	Klopfleisch, R.	133	Kohlstedt, M.	48, 63, 84	Kraner, M.	94
Khalfallah, G.	132	Klopp, A.	160		118	Kranz, A.	116
Khan, A. U.	130	Klos, A.	170	Kohn, M.	170	Kranzler, M.	51
Khan, H. M. M.	46, 151	Klose, L.	95	Kohn, T.	67	Krásný, L.	110
Khan, M. I.	150	Klotz, A.	86, 110	Kohrs, F.	162	Kraus, A.	156
Khan, M. M.	46, 110, 151	Klotz, C.	86	Kok, J.	126	Kraus, A.	144
Khodami, S.	46	Klug, G.	68, 111, 127, 160	Kola, A.	70	Krause, J. L.	133
Khodamoradi, S.	120	Kluge, S.	62	Kolanus, W.	79	Krause, M.	79
Kiel, M.	86	Kluj, R.	65	Kolb, J.	147	Krause, R.	51, 101
Kieler, A.	126	Klupp, E.-M.	71, 74, 137	Kolb, J. F.		Krause, S.	93
Kiemann, I.	172	Knaack, D.	24, 73	Kolb, S.	114, 147, 149	Krause-Döring, R.	101
Kieninger, A.-K.	60, 80	Knappe, D.	142	Kolbe, E.	158	Krauss, S.	95
Kiesel, B.	50	Knecht, C.	150	Kolenda, R.	110, 139, 142	Krauth, C.	103
Kiesewetter, A.	138	Kneis, D.	146		144	Kreikemeyer, B.	71, 117
Kikhney, J.	24, 66, 73, 83	Knief, C.	46, 150, 151	Koller, F.	135, 156		133, 136, 139, 140, 169
	106, 107	Kniemeyer, O.	92, 108, 128	Köllner, G.	142	Kreiling, V.	157
Kilian, M.	125		165	Koller, R.	150	Kreissig, S.	101
Kim, B.	140	Knittel, K.	92	Köllner, T.	153	Kremer, K.	63, 102
King, S.	168	Knobling, B.	137	Kollotzek, A.	74	Kremling, A.	57, 122, 153
Kirchels, P.	93	Knobloch, J.	132	Kolovou, A.	98	Křen, V.	104
Kirschnek, S.	79, 169	Knobloch, J. K.-M.	74, 137	Kombeitz, V.	167	Kresken, M.	63
Kisand, V.	132		141	Könemann, T.	151	Kretschmer, D.	78, 155
Kisker, C.	112	Knödler, M.	139	König, A.	65	Kretz, J.	127
Kißling, L.	114	Knüppel, R.	93	König, B.	136	Kretzschmar, A.-K.	85
Kistemann, T.	152	Knuuti, T.	119	König, U.	137	Krewing, M.	127
Kittler, S.	80, 88	Knüver, M.-T.	79, 80	Könneke, M.	91	Kreyenschmidt, J.	49, 166
Kivistik, C.	132	Kobbing, S.	145	Konrad, R.	80	Kricks, L.	94
Kizina, J.	158	Köbler, C.	155, 156	Koonin, E.	158	Krieger, A.-K.	142
Klabunde, B.	138	Kobus, S.	126	Kopf, S. H.	96	Krismer, B.	95
Klähn, S.	64, 96, 159	Kobusch, I.	129, 130	Köpke, B.	63	Krizsan, A.	142
Klaper, K.	65, 125	Kocács, Á. T.	60	Köppen, K.	142	Krogull, M.	139
Klare, I.	83	Kocer, K.	100, 108	Kori, J.	131	Krohn, I.	132, 150
Klassen, A.	124	Koch, C.	82, 133	Körner, B.	136	Krohn-Molt, I.	150
Klaus, O.	161	Koch, C. M.	108	Körner, S.	131	Krömer, J.	55, 57, 64, 84
Klaus, V. H.	94	Koch, F.	166	Korth, B.	52, 115, 148		116
Klawonn, F.	51, 81	Koch, M.	152	Kosciow, K.	115	Krone, M.	83, 170, 171
Kleetz, J.	154	Koch, M.	110, 159	Köster, C.	64	Kroniger, T.	133
Klein, A. S.	85	Koch, R.	125, 180	Köster, P. C.	172	Krönke, M.	169

INDEX OF SPEAKERS, AUTHORS AND CHAIRS

Krüger, A.	58	Kurth, J.	93	Lavik, G.	123	Liebeke, M.	92
Krüger, C.	165	Kurts, C.	79	Lawley, T. D.	81	Liebert, U. G.	104
Krüger, K.	136	Kurtz, S.	145	Layer, G.	151, 158, 159	Liebl, B.	100
Krüger, L.	86	Kurz, M.	130	Leal Siliceo, S.	166	Liebl, W.	57, 119, 121
Krüger, M.	69	Kurzai, O.	45, 65, 83, 165	Leberecht, K.	95	Liebler-Tenorio, E.	92, 130
Krüger, M.	146		166	Leccese, S.	169		131
Krüger, S.	71, 140	Kuscmierz, L.	93	Lechtenfeld, M. T.	157	Liebner, S.	46, 149, 163
Krüger, T.	92, 108, 128	Küsel, K.	69, 82, 95	Ledezma-Villanueva, A.	151	Lienen, T.	129
Krüger, W.	165	Kusmirek, M.	138	Ledoux, K.	59	Lienkamp, A. C.	146
Krull, J.	115	Küstters, K.	123	Lee, H. J.	163	Liese, J.	88
Krusche, U.	165	Kutzora, S.	131	Lee, J.	91, 163	Liesenfeld, O.	24, 54, 67
Kruse, L.	161	Kuzmanovic, N.	95	Lee, J. Y. H.	64	Lievens, B.	146
Kruse, S.	77, 136			Lee, J.-H.	48	Ligges, U.	76
Krykunov, O.	106	L		Leenders, P. H. M.	74	Lilge, L.	128
Krysenko, S.	138	La Ragione, R.	172	Legros, N.	131	Lindemeier, D.	155
Krzyżewska, E.	144	Laarmann, K.	96	Lehfeld, A.-S.	171	Linden, S.	48
Kubicki, S.	48, 85	Laass, S.	158	Lehmann, A.	167	Lindenstrauß, U.	52
Kublik, S.	90	Labrenz, M.	67	Lehmann, E.	125, 144	Lindenthal, L.	135
Kuchenbuch, A.	148	Lachmann, R.	83	Lehmann, M.	113	Lindner, F.	140
Küchlin, R.	113	Lackner, G.	153	Lehmann, R.	95	Lindstaedt, K.	82
Kück, U.	111	Lacroix, C.	68	Lehmbecker, A.	130	Lingesan, P.	117
Kucklick, M.	94	Lahl, N.	101	Lehmeyer, L.	134	Link, H.	48, 109, 153
Kuczius, T.	74, 106, 107, 137	Lahme, K.	140	Lehner-Reindl, V.	100	Link, T.	120
Kuehne, A. J. C.	104	Lai, B.	57, 116	Leibiger, K.	144	Linke, D.	124, 139, 140
Kuettel, H.	96	Lalk, M.	115, 133, 138	Leichert, L. I.	127, 148	Linkert, I.	145
Kufs, J. E.	119, 122, 162	Lâm, T.-T.	83, 170, 171	Leidenfrost, R.	83	Linnemann, S.	129, 130
Kugler, C.	76	Lamberti, Y.	140	Leimkühler, S.	110	Linnert, M.	104
Kuhl, M.	48, 76	Lambrech, J.	57, 121	Leinberger, J.	134	Linz, P.	79
Kühlbrandt, W.	98	Lamm, V.	49	Leinweber, P.	150	Linzner, N.	125
Kuhlicke, U.	93	Landau, U.	126	Leipe, T.	90	Lipfert, M.	131
Kuhlmann, M.	76	Landoïn, L.	51	Leisegang, M. S.	77	Lippmann, N.	71
Kühn, A.	63, 103	Lanfermann, C.	170	Leistner, R.	22, 23, 55, 63	Lipski, A.	61, 87, 167
Kühn, D.	71	Lang, C.	112, 143, 171		70, 90, 130	Lipus, D.	147
Kühn, J.	101	Lang, C.	33, 44	Lemfack, M. C.	82, 109, 153	Lipzen, A.	126
Kühn, M.	72	Lang, R.	81, 91	Lemke, P.	122	Lisdiyanti, P.	136
Kuhn, M.	62	Lange, J.	65	Lempp, M.	153	Littmann, S.	98
Kühn, S.	135	Langer, B.	51	Lemster, A.-L.	71, 140	Litty, D.	154
Kühne, C.	141	Lanzloth, C.	117	Leng, J.	172	Liu, B.	116
Kühne, H.	91	Lara-Tejero, M.	94	Lenk, J.	74	Liu, L.	162
Kuijper, E. J.	138	Larsen, J.	164	Lenz, C.	151	Liu, Q.	147
Kujala, K.	119	Laso-Pérez, R.	92	Lenz-Plet, F.	46, 74	Liu, Y.	146
Kulik, A.	138	Lass-Flörl, C.	54, 91, 182	Lepper, P.	71	Liu, Y.	50
Kumar, N.	81	Lassak, J.	58	Lettau, E.	117	Liu, Z.	121, 124, 145
Kummen, M.	68	Lassak, J.	58, 135, 156	Lettl, C.	136	Liowski, T.	68
Kumpf, A.	117	Last, K.	108	Leung, N.	77	Lkhaasuren, T.	126
Kunert, A. T.	151	Lau, S. H.	95	Levitán, B.	162	Lobo de Sá, F. D.	129
Kunte, H.-J.	121	Lauda, A.	130	Lewin, A.	96	Łochowicz, A.	117
Kunz, B.	81	Laudeley, R.	170	Lewin, S.	147	Łockener, I.	152
Künzel, S.	131	Lauener, R.	68	Lewis, R. J.	112	Loderstädt, U.	66
Kunzelmann, K.	79	Laufenberg, R.	109	Li, J.	88, 157	Loeliger, S.	68
Kuo, A.	126	Laufer, I.	91	Li, M.	56, 92, 104, 131, 137	Loeschke, A.	48, 85, 161
Kupczok, A.	123	Laufer, J.	149		162	Löffler, B.	65, 104, 106
Kuppardt-Kirmse, A.	46, 162	Laufer, K.	145	Li, S.	46, 48, 98, 129, 130	Löffler, J.	46
Kurrer, S.	140	Lausmann, C.	64		145, 149, 163, 172	Löffler, K.	88
Kursawe, L.	106, 107	Lauterbach, L.	48, 117, 160	Li, X.	108	Löffler, M.	113
Kurth, J.	90	Laventie, B.-J.	157	Lieb, W.	57, 68, 119, 121	Logrono, W.	93, 122

Loh, G.	134	Mainz, A.	162	Maschkowitz, G.	49, 124	Menge, C.	92, 130, 172
Lohberger, B.	143, 144	Mais, C.-N.	95		137	Mertens-Scholz, K.	128, 129
Lohmann, P.	115, 149	Makalowski, W.	79	Maskow, T.	50, 87, 114, 121		131
Loi, V. V.	125	Makarewicz, O.	47, 123	Matamoros, S.	172	Mertins, S.	169
Lomakina, A.	164	Makert, G. R.	131	Matamouros, S.	109, 119	Messelhäußer, U.	80
Lonsing, A.	158	Maldener, I.	59, 60, 67	Matern, M.	94	Mester, P.-J.	51, 123, 166
Lopez, D.	94	Maletski, C.	78, 117	Mathew, B.	148	Mete, V.	86
Lorke, S.	85	Maletski, L.	132	Matos de Opitz, C.	110	Methling, K.	115
Louis, S. A.	117	Malik, I.	94	Matschiavelli, N.	62	Metz, A.	79
Löwe, H.	57, 153	Malik, L.	64, 117	Mattern, D. J.	128, 162	Metz, C.	71
Loyau, A.	46, 149	Mall, A.	52, 114, 164	Mattevi, A.	117	Metzendorf, N.	136
Lubek, D.	113	Malmsheimer, S.	93	Mattner, F.	34, 51, 53, 55	Metzger, N.	51
Luber, D.	51	Malmström, J.	53, 77		76, 102, 137	Metzner, R.	150
Lucaßen, K.	88	Malmstrom, R. R.	91	Mattner, J.	134	Meurer, M.	142
Lucius, S.	159	Malorny, B.	79, 80	Mauder, N.	87	Mey, S.	165
Lück, C. 23, 51, 89, 171, 182		Mamat, U.	101	Mauer, F.	71	Meyer, B.	92, 93
Lück, K.	51	Mamerow, S.	92, 130	Maurer, F.	163	Meyer, C.	126
Lüders, T.	91, 152	Mandić, A. D.	104	Maurischat, S.	50, 107, 129	Meyer, C.	144
Ludt, K.	159	Maneck, C.	50, 107	Mauritz, R.	138	Meyer, F.	78, 112
Ludwig, S.	111	Manert, W.	74	Maurus, K.	149	Meyer, H.	151
Ludwig, T.	142	Mania, D.	52	May, J.	77, 118, 119	Meyer, M.	101
Luetgehetmann, M.	108	Manner, C.	157	Mayer, C.	65, 111	Meyer, R.	47, 103
Luft, D.	88	Mansky, J.	134	Mayer, C.	65, 111	Meyer, T. F.	78
Lührmann, A.	76, 91, 94	Mantel, O.	142	Mayer, F.	93	Meyer, V.	58, 66, 162
	143	Mantel, S.	74, 107	Mayer, J.	119	Meyer-Schlinkmann, K.	88
Lühns, J.	96	Manz, W.	135	Mayer, K.	64	Michael, P.	70
Lukat, P.	156	Manzanera, M.	151	Mayer, L.	142	Michaelis, C.	139
Lungin, O.	106	Marbach, H.	64	Mayer, M.	156	Michalik, S.	65, 111, 112
Lupacchini, S.	97, 160	Marc, S.	101	Mayer, T.	133, 164		143
Lupilov, N.	127	Marchand, V.	169	Mayer-Scholl, A.	168	Michel, A.-M.	140
Lütgehetmann, M.	107	Marche, B.	102	Mayweg, J.	118	Michler, J.	130
Lüth, S.	83	Marden, J.	134	McDonald, J.	153	Michniewski, S.	101
Lütkenhaus, R.	109, 111	Margos, G.	61, 171	McEwan, A. G.	126	Mickoleit, F.	64, 117
	126	Marhan, S.	94	McHardy, A.	53, 90	Mielke, S.	157
Lütticken, R.	132	Marienhausen, J.	84, 117	Meader, B.	157	Mijić, V.	52
Luu, M.	45	Marin-Sanguino, A.	122	Meckelmann, S.	93	Mikkat, S.	78, 96
Luzhetskyy, A.	48	Marincola, G.	80	Meckenstock, R. U.	69, 145	Mikloweit, M.	135
		Markert, S.	98		147, 163	Mildenberger, V.	137
M		Markwart, R.	63	Medema, M.	82	Milke, L.	117
Maaß, H.	156	Marlinghaus, L.	170	Medina, E.	168	Millard, A.	101
Maaß, S.	126, 147	Marosevic, D.	171	Meene, A.	132, 133	Millauer, J.	122
Maček, B.	85, 97, 128	Marquet, M.	123	Meens, J.	96	Mills, D.	98
Machava, M.	120	Marschal, M.	47	Mehlitz, N.	138	Mills, R. O.	80
Machne, R.	68, 160	Marsh, M.	155	Mehnert, M.	117	Milne-Davies, B.	139
Machulla, A.	158	Martens, G.	158	Meier, D.	82	Mindt, M.	121
Mack, M.	57, 156	Martens, T.	124	Meier, J.	81, 135	Mironova, K.	69
MacLeod, A. R. M.	78	Martin, D.	104	Meier-Kolthoff, J.	81	Mishra, P.	69
Mäder, U.	50, 143, 182	Martin, K.	64	Meinert-Berning, C.	154	Mishra, S.	147
Madi, A.	49	Martin, M.	88	Mekalanos, J. J.	157	Mishra, Y.	137
Maechler, F.	70	Martin, R.	34, 65, 165, 166	Mekky, S.	148	Missiakas, D.	76
Magnus, N.	82, 109	Martins, T.	136	Melior, H.	112	Mitscherling, J.	46
Mähler, B.	145	Märtlbauer, E.	51	Mellmann, A.	71, 78, 79, 81	Mizza, A.-S.	154
Mahler, L.	64	Marz, M.	90		100, 103, 129, 131	Mockenhaupt, F.	130
Maier, A.	119	Masanetz, R. K.	133	Melzer, F.	130, 131	Moeller, M.	104
Maier, M.	141	Mascher, T.	128, 148, 149	Mendes, L.	163	Moeller, R.	91
Mainka, T.	149			Menezes, R. C.	159	Mogavero, S.	65, 86

Moheballi, N.	133	Müller, D.	66	Nentwig, L.-M.	160	Noll, M.	62, 132, 133, 137
Mohn, W.	122	Müller, D.	142	Nerlich, A.	139		163, 167
Mohr, T.	113	Müller, D. N.	79	Nestl, B.	48	Nolte, A.	88
Molinari, G.	139	Müller, E.	106, 130	Nett, M.	64, 117, 161	Nordholt, N.	115
Molitor, R.	147	Müller, E.	106, 130	Neu, T. R.	93, 120	Nordzieke, S.	82
Molle, V.	143	Müller, F.	147	Neubauer, H.	83, 128, 129	Norkowski, S.	136
Möller, A.-M.	127	Müller, H.	129, 130		130, 131	Norrby-Teglund, A.	138
Möller, I.	101	Müller, H.	145, 147	Neubauer, P.	119	Noszka, M.	144
Möller, R.	57, 58, 66	Müller, J. A.	150	Neubert, K.	83	Nöth, U.	51
Monazahian, M.	88	Müller, J.	121	Neubert, P.	79	Notheis, G.	78
Monecke, S.	172	Müller, K.	91	Neubert, T.	62	Noviana, Z.	148
Monk, I.	64	Müller, K.	66	Neumann, A.	113, 119, 120	Nowack, G.	151
Monod, M.	165	Müller, K.	110, 139	Neumann, B.	63, 83, 102	Nowaczyk, M.	97
Monsees, I.	124	Müller, R.-W.	149	Neumann, C.	139	Nowak, K.	62
Moon, J.	113	Müller, R.	65	Neumann, H.	122	Nowrousian, M.	109, 111
Moore, E. R. B.	67	Müller, R.	63, 77, 84	Neumann, N.	160		126
Moos, V.	83	Müller, S.	57, 64, 89, 121	Neumann, Y.	138	Nübel, U.	61, 81
Moraru, C.	50		124, 145, 151, 163	Neumann-Schaal, M.	98	Nübling, S.	87
Mörk-Mörkenstein, M.	158	Müller, T.	91		134, 140	Nunes da Rocha, U.	52, 69
Mormann, M.	77, 136	Müller, U.	92	Neurath, M. F.	77		90, 114, 163, 164
Morwinsky, T.	100	Müller, V.	114, 115, 142, 154	Neuwirth, M.	51, 76, 102	Nurjadi, D.	100, 108
Moser, D.	154	Mungo, E.	88	Ngo, A. C.	116	Nürnberg, D.	125
Moser, R.	154	Muñoz, J. A. B.	80	Nguyen, A. V.	116	Nürnberg, S.	171
Moshynets, O.	106, 111	Murali, A.	131	Nguyen, T. T. H.	125	Nürnberg, M.	74
Mosig, A.	169	Murillo-Roos, M.	164	Nhi Ngo Thi, P.	133	Nuss, A. M.	157
Mosig, A.	157	Murray, D.	69	Nickel, R.	24, 71	Nussbaum, P.	158
Möslinger, C.	162	Murray, D. B.	68	Nickel, S.	100	Nutschan, K.	114
Moter, A. 24, 54, 66, 83	106,	Murugathas, W.	160	Niehaus, K.	172	Nwakaeze, E.	145
	107	Musat, F.	60, 62	Nielsen, J. L.	93	Nwanekwu, K.	103
Motola, G.	167	Musat, N.	60, 62, 160	Niemann, S.	76, 111, 129	Nwosu, E.	163
Motorin, Y.	169	Musholt, C.	141		139, 141		
Mourkas, E.	171	Müsken, M.	98	Niemann, S.	80, 81	O	
Mousavi, S.	80, 88, 129	Muszynski, S.	163	Niemeyer, C. M.	117, 122	O'Connor, K.	145
Moustafa, M.	148	Muth, T.	162	Niemiec, M. J.	86, 165	Oberbeckmann, S.	67
Mozef, T.	136	Müthing, J. 77, 79, 131, 136		Nies, D. H.	127, 128	Oberhettinger, P.	24, 73
Mrazek, K.	129	Mutters, N.	23, 51, 87, 90	Nies, T.	154	Ochneva, A.	120
Mrusek, D.	60	Muziatul, N.	148	Niesall, H.	100	Ochsenreither, K.	64, 119
Mücke, P.-A.	126	Mvie, J.	132	Nijenhuis, I.	150	Odejide, A. T.	164
Mueller, E.	172	Mylius, M.	88	Nijhuis, R. H. T.	138	Odermatt, N. T.	161
Muffler, K.	160	Mzoughi, S.	101	Nikeleit, V.	145	Oehlmann, S.	142
Mügge, C.	116, 119, 120			Nikitushkin, V.	126	Oehm, K.	152
Mühdorfer, K.	91	N		Niklas, C.	135	Oehmcke-Hecht, S.	78
Mühlen, S.	49	N. Vinh, T.	172	Nikolausz, M.	93, 122		138, 169
Mühlenbrink, M.	115	Nadell, C.	60	Nikolova, E.	134	Oehming, I.	68
Mühlhaus, T.	118	Nagel, C.	158	Niller, H. H.	74	Oelbermann, A.	119
Mukherjee, K.	168	Nagel, M.	91	Nilius, B.	151	Oelschlaeger, T.	135
Mukherjee, N.	150	Narancic, T.	145	NiBl, L.	167	Oeser, S.	111
Mukherjee, T.	148	Narberhaus, F.	24, 33, 71	Nissen, L.	113	Oesterheldt, F.	125
Mukhopadhyay, S. K.	148		127, 154, 156, 157	Nix, I. D.	46, 47	Ofiteru, I. D.	124
Mukhopadhyay, S.	161	Nasreen, M.	126	Nnaji, O.	172	Oggerin, M.	91
Müller, A. G.	135	Nassar, R.	172	Noack, S.	109	Ohle, C.	121
Müller, A.	132, 150	Nau, R.	140	Nobu, M.	93	Ohlmann, S.	142
Müller, B.	119	Ndoli, J.	130	Nöckler, K.	168	Ohlsen, K.	139
Müller, C.	88	Neher, R.	70	Nofal, K.	144	Ohm, R.	50, 182
Müller, C.	123	Nenoff, P.	130, 165	Nöh, K.	109	Oke, B.	172
Müller, C.	65	Nenova, R.	131	Noll, I.	63	Oksanen, H. M.	158



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INDEX OF SPEAKERS, AUTHORS AND CHAIRS

Oktiviyari, A.	77	Pasoe, B.	171	Pflugfelder, D.	150	Pranada, A.	108
Oldenburg, E.	124	Pastille, E.	133	Philipp, B.	62, 119, 122	Praß, M.	151
Oldiges, M.	123	Patenge, N.	71, 140	Philipps, G.	123	Prati, D.	94
Oleairo, F.	71, 107	Patro, M.	158	Piechulla, B.	82, 109, 153	Preis, T.	107
Olgeiser, L.	112	Pätzold, L.	141, 143	Piehler, D.	92	Preußke, N.	131
Oliveira Monteiro, L. M.	164	Paufler, S.	114	Pielage, J.	85	Preyer, R.	109
Opel, F.	159	Pauker, V. I.	77, 132, 166	Pienkoß, S.	156	Priebe, C.	168
Opherdien, S.	167	Pauli, S.	118	Pieper, D. H.	62, 68, 138	Princk, C.	88
Opitz, B.	78	Paulitsch-Fuchs, A.	143, 144	Pietluch, F.	135	Prinz, S.	97
Orekhova, A.	120	Pauly, N.	166	Pietruszka, J.	85, 161	Probst, A. J.	44, 50, 91
Ormanns, S.	47	Pecina, A.	157	Pietsch, F.	115		124, 146, 147, 158
Orsi, W.	164	Pecyna, M. J.	120	Pietsch, M.	88, 101, 171	Prost, K.	145
Ortega, A.-S.	153	Pedro Saraiva, J.	163, 164	Pietzka, A.	83	Ptacnik, R.	69
Ortega, J.	127	Pees, M.	167	Pilecky, M.	106	Pühler, A.	90
Ortega Arbulu, A. S.	57	Peeters, S. H.	67	Pilhofer, M.	60	Pulami, D.	147, 151
Orth-Höller, D.	106, 141	Peindl, M.	112	Pils, M.	49	Purahong, W.	163
	169	Peine, M.	150	Pinheiro, B.	110	Purswani, J.	147, 151
Ortjohann, M.	158	Peisker, H.	144	Pinheiro Alves de Souza, Y.	133	Pusch, I.	98, 154
Osmolovskiy, A.	120	Pekmezovic, M.	86		133	Püttker, S.	162
Oswald, M.	138	Pelantová, H.	104	Pinske, C.	52, 113	Putze, J.	142, 143
Otchwemah, R.	51, 102	Peltroche, H.	101	Pires, C.	121	Pyra, A.	124
Otto, M.	48, 118	Pelzer, S.	24, 54	Piro, R. M.	80		
Overduin, P. P.	46	Pena Diaz, L. A.	101	Pirritano, M.	84	Q	
Overmann, J.	77, 78	Peña-Ortiz, L. A.	153	Pitann, J. A.	143	Qian, X.	64
	81, 90, 91, 94, 95, 100, 128	Peng, M.	122	Pitten, F.	23, 89, 182	Quach, N. T.	125
	134, 135, 148	Peng, S.	52, 114	Pittet, D.	22, 55	Quast, T.	79
Oviedo, J. M.	140	Peregrina, A.	162	Pleischl, S.	51	Quax, T. E. F.	155, 158
Ozaki, S.	155	Pérez Castro, S.	96	Pleiss, J.	120	Qudrat, U.	131
Özipek, S.	120	Perner, M.	57, 82, 145	Pletz, M. W.	47, 65, 106, 123		
		Peschel, A.	78, 95, 144, 164	Plickert, R.	51	R	
P		Pester, M.	52	Plötzky, L.	156	Rabe, K. S.	122
Paczia, N.	139	Peter, S.	47, 60, 88	Plücker, L.	165	Rabes, M.	101
Pais, S.	144	Peters, M. K.	150	Poehelein, A.	101, 111, 145	Rabus, R.	62, 116, 134
Pajer, P.	128	Peters, S.	60	Pöggeler, S.	110, 126	Rachel, R.	112, 159
Palamides, P.	77	Petersen, J.	69, 82	Pogodaeva, T.	164	Rademacher, C.	51
Palankar, R.	141	Petow, S.	130	Pohlentz, G.	77, 79, 131	Radl, V.	151, 152
Palme, D. I.	92	Petruschke, H.	68, 133		136	Radoš, D.	48
Pan, H.	108, 161	Petscheleit, T.	132	Pöhlker, C.	151	Radosa, S.	95
Pan, S.	94, 96, 111, 131	Pettinato, E.	52, 114	Polen, T.	120	Rafacz, D.	135
	134, 165	Petzoldt, H.	149	Pollehne, F.	90	Rafiei, A.	172
Panagiotou, G.	165, 166	Pfannstiel, J.	109, 128	Pollender, A.	117	Rago, L.	115, 118
Panaiotov, S.	131, 134, 165	Pfeffer, K.	45, 155	Polzin, C.	102	Rahba, J.	121
Pangilinan, J.	126	Pfeffer, M.	130, 131	Ponath, F.	59	Rahfeld, J.-U.	104
Pansegrau, U.	103	Pfefferle, K.	155	Pongolini, S.	87	Rahlff, J.	46, 50, 58, 158
Pané-Farre, J.	115	Pfeifer, E.	85	Popa, O.	50	Rahme, L.	97
Pantenburg, B.	101	Pfeifer, F.	158	Popova, E.	146	Rajendran, T.	117
Panzer, S.	96	Pfeifer, S.	152	Popp, D.	84, 93, 116, 118	Rakowska, P.	69
Papan, C.	108	Pfeifer, Y.	65, 70, 88, 101		120, 146	Raman, M.	162, 174
Papenfort, K.	60, 86, 95, 96		102	Popp, J.	82	Rambach, G.	91, 92
Pappesch, R.	71, 140	Pfeiffer, Y.	63	Portillo, J.	74	Ramirez, Y. A.	112
Pappler, F.	152	Pfennigwerth, N.	47, 63, 88,	Posch, A. E.	106	Ramirez Garcia, A.	68
Parcina, M.	152, 166		101, 102, 106, 170	Pöschel, L.	161	Ramm, P.	152
Parey, K.	98, 135	Pfister, P.	162	Pöschl, U.	151	Ramming, I.	49
Parmar, K.	151	Pfister, W.	104	Pöther, D.-C.	147	Ramp, P.	119
Parth, N.	91	Pfleghaar, S.	130	Pozo, C.	151	Ramsbeck, D.	104
Parvin, S.	146	Pflüger-Grau, K.	57, 122, 153	Pradel, G.	168	Rapp, J.	147

				S			
Rast, P.	149	Rhein, M.	47	Rohde, V.	102	Saadat, N.	123
Ratering, S.	91	Rheinheimer, C.	170	Rohles, C. M.	118	Saake, G.	162
Rath, A.	103	Rhiel, E.	98	Rohwerder, T.	147	Sachs, C.	109
Rath, P.-M.	104	Ribas-Ribas, M.	46	Rolle-Kampczyk, U.	133	Sachs, C.	152
Rath, S.	68	Richardson, J. R.	45	Rollins, R. E.	171	Sae-Ong, T.	165
Ratnakomala, S.	136	Richnow, H.-H.	60, 62, 151	Rommerskirch, A.	110	Saeed, N.	165
Rau, M.	166	Richter, D.	101	Rompf, C.	108	Sägers, A.	108
Rautschek, J.	119, 122, 162	Richter, E.	170	Rösch, P.	82	Sagurna, L.	147
Ray, A.	49	Richter, M.	168	Rosen, K.	167	Saile, N.	79
Reber, F.	171	Richts, B.	111	Rosenbaum, F.	114	Salbreiter, M.	149
Rebets, Y.	48	Rick, T.	157	Rosenbaum, M.	64, 119	Saleem, F.	131
Reder, A.	111, 112	Rickerts, V.	86, 182	Rosencrantz, R. R.	104	Saliba, A.-E.	60, 124
Reemtsma, T.	149	Riebisch, A.	138	Rosenshine, I.	49, 182	Salvà-Serra, F.	67
Reeves, E.	164	Rieckmann, K.	142	Roske, Y.	50	Salzer, A.	128
Regaiolo, A.	156	Rieckmann, L.	132	Rößler, S.	74	Sampath, S.	134
Regestein, L.	153	Riedel, K.	50, 77, 115, 132	Roßmann, K.	100	Sanchez Garcia, S.	134
Regier, Y.	45		133, 136, 147, 166	Rösner, R.	106	Sánchez-Carrillo, S.	121
Regnath, T.	86	Riedel, T.	77, 81, 100	Rosowski, K.	127	Sánchez-Pascuala, A.	153
Rehner, J.	141	Riediger, M.	97	Rossen, J. W.	102	Sandargo, B.	82
Rehnlund, D.	117	Riemschneider, C.	101	Rosshart, S. P.	68, 182	Sander, D.	148
Reich, S.	78, 126	Riesbeck, S.	133	Rossmann, F.	51, 123, 166	Sandner, S.	152
Reiche, S.	78	Riese, C. N.	110	Rossmann, F.	157	Sandor, L.	126
Reichelt, M.	133, 164	Righetti, F.	157	Roth, M.	64, 93	Sangermani, M.	155
Reichelt, R.	159	Ring, D.	132, 134	Rothe, K.	71, 109	Santarella-Mellwig, R.	98
Reichhardt, C.	100	Rischer, M.	84	Rother, A.	101	Santhanam, R.	165
Reichl, U.	162	Risdian, C.	136	Rother, M.	93	Sappor, D.	80
Reiger, M.	78, 142	Rismondo, J.	109, 112	Rotsch, P.	167	Saqib, M.	131
Reimer, C.	119	Risse, J. M.	48	Röttgerding, F.	92	Sara, B.	131
Reimer, L.	90, 135	Rissmann, M.	92, 130	Routier, F.	77	Saragliadis, A.	124
Reinders, A.	155	Ritchie, J.	172	Rovida, S.	117	Saraiva, J. P.	163, 164
Reindl, M.	86	Ritter, S.	95	Rozbeh, R.	122	Saraiva, L. M.	162
Reiners, J.	126	Rittmeier, S.	51	Rubbenstroith, D.	74	Saramago, M.	162
Reinert, K.	83	Ritzmann, N.	150	Ruciaka, P.	109	Sardà, J.	135
Reinhardt, L.	127	Rizzo, G.	158	Ruciaka, p. K.	82	Sarkar, K.	161
Reinhardt, M.	167	Robben, C.	51, 166	Rückert, C.	48, 147	Saß, R.	140
Reinhardt, R.	116	Robledo-Mahón, T.	151	Rudat, J.	58, 118	Sass, K.	82
Reinheimer, C.	152	Rödel, J.	104, 106	Rüdel, H.	91	Sass, P.	94, 110, 111, 127
Reinhold, P.	130	Rödiger, S.	135	Rudolph, E.	171	Sauer, M.	60
Reintjes, G.	98	Rodloff, A. C.	32, 44, 53	Rudolph, M.	94	Sauerwein, T.	168
Reiß, T.	168		71, 134, 136	Rudolph, W. W.	108	Saunders, N.	121
Reißhauer, S.	74	Rodrigo Quejigo, J.	148	Ruesseler, M.	107	Savin, M.	49, 166
Reissig, A.	172	Rodriguez, M. E.	140	Ruff, S. E.	96, 151	Sawers, G.	97, 114, 126
Reiter, S.	170	Roduit, C.	68	Rühl, P.	135, 151	Scarabotti, F.	115
Reitter, C.	149, 167	Roemhild, R.	69	Rühlemann, M. C.	68	Schade, J.	144
Reitz, T.	69	Roemmler-Dreher, F.	74	Rummeler, L.	169	Schaefer, B.	171
Renner, E. D.	78	Roesler, U.	167	Rumpf, C.	142	Schäfer, A.-B.	112
Rennhack, K. E.	98	Rogalski, E.	112	Rüppel, N.	52	Schäfer, K.	52
Reschka, E.	110	Roggenbuck, D.	144	Ruppelt-Lorz, A.	172	Schäfer, K.	137
Rettenbacher-Riefler, S.	88	Rogh, S.	160	Ruppen, C.	138	Schäfer, L.	48
Rettenmaier, R.	146	Rögner, F.-H.	74	Rust, J.	145	Schäfer, L.	154
Reuscher, C. M.	160	Rohde, H.	64, 71, 76, 83	Rüter, C.	136	Schäfer, W.	94
Reuse, C.	93		107, 108, 143	Rutter, Z. J.	112	Schäffer, E.	125
Reuss, A.	63, 102	Rohde, M.	67, 82, 98	Rybka, J.	144	Schaible, U.	101
Revenko, A. S.	78		120, 136, 138, 139, 140	Rydzewski, K.	142	Schakat, M.	139
Révész, F.	146		141, 149, 168			Schäfermann, S.	111, 127
Revilla-Guarinos, A.	128	Rohde, M.-T.	147			Schallert, K.	162

Schäpe, S. S.	133	Schlüter, A.	152	Schöne, C.	93	Schulze Struchtrup, S.	167
Scharmann, U.	104	Schlüter, D.	67, 68	Schönheit, P.	158	Schulzke, J.-D.	129
Schattenberg, F.	57, 121	Schlüter, R.	136	Schöning, I.	94	Schumann, P.	120
	151, 163	Schmaus, G.	82	Schoppmeier, U.	47	Schünke, H.	46
Schatz, V.	79	Schmeller, D. S.	46, 149	Schorb, M.	98	Schuster, C.	146
Schauer, J.	101, 170	Schmelz, S.	76	Schori, C.	68	Schuster, C.	120
Schaufler, K.	26, 89, 110	Schmerling, C.	150	Schott-Verdugo, S. N.	97	Schütz, M.	65, 144
	130	Schmid, A.	32, 44, 48	Schottenhaml, L.	137	Schwab, C.	68
Schaumburg, F.	129		60, 64, 72, 89, 97, 107	Schrader, J. G.	136	Schwab, F.	167
Schauss, T.	147		121, 136, 159, 160	Schrader, J.	57	Schwab, F.	70
Schedlowski, M.	112	Schmid, F.	121, 140	Schrallhammer, M.	84	Schwab, L.	151
Scheidemann, W.	103	Schmid, N. E.	59, 127	Schramm, C.	68	Schwaiger, T.	133
Scheidt, V.	165	Schmidt, A.	136	Schramm, T.	153	Schwan, M.	60
Scheithauer, L.	76	Schmidt, A.-M.	80	Schreiber, C.	152	Schwanbeck, J.	68, 100
Scheithauer, S.	51, 70, 74	Schmidt, A.	107	Schreiber, F.	115	Schwanemann, T.	118
	102	Schmidt, B.	74	Schreiner, Y.	171	Schwartz, K.	109
Schelhaas, S.	76	Schmidt, B.	51, 74	Schroda, M.	118	Schwartz, T.	146
Scheller, E.-E.	51	Schmidt, D.	104	Schröder, A.	79	Schwarz, A.	54, 128, 182
Scheller, P.	48	Schmidt, F.	140	Schröder, A.	170	Schwarz, J.	127
Schempp, F. M.	57	Schmidt, H.	49, 79, 87	Schröder, C.	62	Schwarz, R.	117
Schenkel, J.	91	Schmidt, M.	80, 115, 151	Schröder, C.	92, 130, 133	Schwarz, S.	23, 73, 107, 158
Scherer, S.	167, 168		160	Schröder, C.	51, 100	Schwarz, S.	54, 80, 131
Scheuer, R.	112	Schmidt, S.	115	Schrödl, W.	143		158, 172, 182
Scheurer, N.	155	Schmidt-Hohagen, K.	93	Schroedl, W.	130	Schwarze, F.	101
Schewe, J.	76	Schmithausen, R.	22, 46	Schrötter, A. S.	138	Schwarzer, S.	158
Schiebel, J.	110		55, 74, 152	Schröttner, P.	108	Schwebke, I.	22, 53, 182
Schiebel, R.	151	Schmitz, I.	138	Schrumpf, M.	94	Schwechheimer, S.	118
Schiefelbein, U.	133	Schmitz, J.	81	Schubert, C.	109	Schweder, T.	98
Schierack, P.	110, 144	Schmitz, S.	88	Schubert, K.	112	Schweickert, B.	63, 101
Schierz, A.	62	Schmitz-Streit, R.	33, 123	Schubert, S.	49, 124	Schweiggert, R. M.	87
Schiessl, J.	115	Schmoger, S.	49, 166	Schubert, T.	85, 115, 159	Schweitzer, T.	119
Schilbach, P.	152	Schnabel, U.	87, 166	Schubert-Unkmeir, A.	60	Schwengers, O.	80
Schildberger, A.	106	Schnakenberg, U.	104		140	Schwentner, A.	48
Schilder, A.	60	Schnapp, M.	78	Schücking, B. A.	44	Schwerk, P.	59
Schille, T. B.	51	Schnee, C.	92, 131	Schueggers, N.	85, 157	Schwerthöffer, S.	46
Schiller, P.	139	Schneewind, O.	76	Schuh, E.	87	Schwientek, M.	91
Schilling, S.	104	Schnehle, S.	49	Schühle, K.	114	Schwierzeck, V.	78, 108, 142
Schindele, F.	136	Schneider, C.	57	Schuhmann, P.	67	Schwindt, S.	125
Schink, B.	52, 147	Schneider, D.	147	Schulenburg, H.	69, 84, 94	Schwudke, D.	169
Schintlmeister, A.	82	Schneider, H.	57	Schüler, D.	64, 67, 110, 117	Sczyrba, A.	90
Schipper, K.	86	Schneider, M. J.	63		162	Sedlacek, L.	170
Schipper, P.	63, 102, 103	Schneider, W.	63, 100, 172	Schulte, B.	141	Seeger, K.	134
Schirling, L.	122	Schneider-Brachert, W.	172	Schulte-Schrepping, J.	79	Seele, J.	140
Schirmer, M.	124	Schnitt, A.	129	Schultes, F.	116, 120	Sehlke, C.	139
Schlatterer, K.	78, 155	Schnitzer, K.	124	Schultes, S.	150	Seibel, J.	60
Schlattmann, A.	47	Schoch, T.	153	Schultsz, C.	172	Seibold, G. M.	48, 126
Schlegel, J.	60	Schock, B.	63, 102, 103	Schultz, D.	133, 138	Seid, N.	119
Schleheck, D.	114, 147	Schoder, D.	51, 123	Schultz, J.	52, 114	Seifert, H.	88
Schleicher, L.	125, 154	Schoemer, D.	133	Schultze, J. L.	79	Seifert, J.	113, 125, 154
Schlicht, S.	57	Schoen, C.	142, 143	Schultze, T.	137	Seifert, R.	156
Scholz, F.	145	Schoerner, C.	103	Schulz, D.	129, 165	Seiffert-Störko, A.	66
Schlömann, M.	91, 117	Schölmerich, M.	114	Schulz, S.	134	Seitz, K.	158
Schlossarek, D.	156	Scholtysik, R.	133	Schulz, S.	90, 150	Seiwert, B.	148
Schlosser, D.	82, 121, 148	Scholz, H. C.	74, 170	Schulz, V.	128	Selb, R.	171
Schlöter, M.	90, 133, 142	Scholz, I.	96	Schulz-Vogt, H.	90	Sellge, G.	104
	150, 151, 152	Schomburg, D.	140	Schulze, B.	92	Sellner, B.	155

Semanjski, M.	85	Sinz, A.	126	Spröer, C.	78, 81, 95	Stingl, K.	79, 80, 87, 129
Semenza, J.	22, 70, 182	Siscar-Lewin, S.	166	Sputh, S.	96	Stingu, C.-S.	134
Semmler, T.	79, 80, 172	Sitaru, C.	165	Stabel, M.	119	Stinnesbeck, W.	95
Sendegeya, A.	130	Sitek, B.	127	Stachon, F.	49	Stock, J.	86
Sendi, P.	138	Skerka, C.	92, 141, 168	Stachowiak, J.	87	Stock, M.	165
Senges, C.	82	Skirydz, A.	156	Stadler, M.	120	Stoecker, K.	66, 100, 107
Senok, A.	172	Skjodt, M.-O.	141	Stadler, P. F.	68	Stoffel, N.	112
Seubert, A.	95	Skorka, S.	138	Stähelin, L.	120	Stokke, R.	164
Sewald, N.	48	Skorka, S. B.	138	Stahl, A.	62	Stolle, A.-S.	157
Seybold, U.	47	Skrede, S.	138	Stahlmann, J.	63	Stolle, C.	46
Seyboldt, C.	81	Skutlarek, D.	46, 74	Stamm, I.	172	Stolzer, I.	77
Shang, Y.	94	Slagter, H. A.	151	Stamminger, R.	167	Stopp, M.	156
Sharma, S.	134	Slavetinsky, C.	144	Standfest, B.	74	Stoye, J.	90
Sharma, V.	123	Sloan, W.	124	Stanners, C.	77	Straaten, N.	146
Sharma, V.	98	Sluka, J.	146	Stark, K.	83, 86	Sträuber, H.	57, 114, 116
Shekhar, A.	144	Slusarenko, A.	125	Starke, S.	60	Strauch, E.	51, 109
Shekhova, E.	165	Smaczny, C.	170	Stauder, R.	160	Strauss, M.	67
Sheppard, S. K.	171	Smalla, K.	95	Stecher-Letsch, B.	49, 132	Strecker, A.	109
Shiferaw, G. S.	119	Smith, D. J.	58, 182	Steen, I. H.	134	Streit, W. R.	82, 101, 120
Shima, S.	161	Smits, S.	126	Stefan, W.	164		132, 150
Shively, J. E.	77	Snihirova, Y.	111	Stefan, W.	134	Strey, K.	140
Shleeva, M.	126	Sobottka, I.	86	Steffens, L. M.	52, 114	Srijkstra, A.	116
Shubenkova, O.	164	Sobyanin, K.	172	Steglich, C.	160	Strittmatter, C. S.	153
Shuhen, B.	141	Sohn, K.	62	Steglich, M.	81	Strnad, P.	104
Shumba, P.	76	Sokolowska, E.	156	Stegmann, D.	155	Strobel, I.	57
Shvydkiv, O.	64	Soldati, T.	86	Stegmüller, J.	48	Stroe, M.	128
Sib, E.	46, 74, 152	Soliani, L.	87	Stehr, J.	66	Strothbach, A.	132
Sickmann, A.	111	Soluch, R.	84	Steigerwald, D.	112	Strohdiek, A.	128
Sidorczuk, K.	110, 135	Somasundaram, R.	67	Steil, D.	79	Strommenger, B.	80, 87, 91
Sieber, A.	135, 167, 168	Somily, A. M.	172	Steimle, A.	86	Strotmeier, H.	111
Siebers, B.	93	Sommer, A.	80	Stein, N. V.	128	Strowig, T.	68
Siebers, M.	97	Sommer, A.	125	Steinbüchel, A.	153, 154	Stryhanyuk, H.	60, 62
Siebert, A.	167, 168	Sommer, F.	118	Steiner, T.	136	Studenik, S.	114
Siebert, D.	118	Sommer, J.	123, 166	Steinert, M.	76, 120, 140	Stukenberg, D.	85
Siegert, P.	121	Sommer, J.	26, 88		168	Stülke, J.	44, 85, 86, 110
Siemens, N.	76, 132, 138	Sommer, L.	63	Steinfeldt, T.	79		111
Siems, K.	57, 58	Sonnabend, M.	65	Steinfeld, B.	125, 157	Stürz, I.	107
Sieper, T.	107	Sönnichsen, F. D.	131	Steinhoff, H.	60	Suckow, A.	51
Sievers, S.	77, 127, 136	Sonntag, C.	120	Steiniger, C.	162	Suerbaum, S.	78
Siewert, C.	162	Soppa, J.	93, 158, 159	Steinmann, J.	101, 103, 170	Sueto, S.	140
Sikora, F.	158	Sordelli, D. O.	64		172	Sugue, M.-F.	111
Sikorski, J.	94, 148	Sottorff, I.	131	Steinmetz, P. A.	156	Suhr, M.	116
Silber, N.	111	Sourjik, V.	60	Stella, R.	85	Sukul, P.	148
Silva-Rocha, R.	164	Sousa, D.	52, 55	Stemmler, F.	171	Suleiman, M.	62
Simbeck, A.	172	Spanka, D. T.	127	Stender, J.	101	Sultana, S.	59
Simkin, T.	165	Spanner, T.	114, 149	Stentzel, S.	78	Sundaram, S.	153
Simon, A.	62	Sparbier, K.	46, 47	Stenzel, S.	125	Sundermeyer, L.	118
Simon, C.	154	Spät, P.	97, 128	Stephan, A.	80	Sura, T.	76
Simon, J.	52, 113	Sperber, S.	131	Stephan, M. S.	124	Surabhi, S.	138
Simon, K.	26	Speth, C.	91, 92	Sterz, J.	107	Süring, C.	64, 121, 124
Simon, M.	84	Spiers, A.	106, 164	Steuber, J.	109, 125, 154	Surmann, K.	140
Simon, S.	77, 101, 170, 171	Spiga, L.	49		155	Surup, F.	82, 120
Simon, V.	78	Spindler, N.	66	Steuer, R.	84	Süssmuth, R. D.	162
Sing, A.	50, 61, 71, 80, 171	Spinner, C.	71	Stevens, P.	152	Suwandi, A.	77, 134
Singh, P. K.	60	Spöring, I.	141	Stevenson, B.	61	Suzuki, Y.	79
Singhal, A.	50	Sprague, J.	95	Stigloher, C.	60, 96	Svatoš, A.	159

INDEX OF SPEAKERS, AUTHORS AND CHAIRS

Svensson, V.	161	Thines, E.	66, 121, 122, 151	Trebbin, O.	97	Valentin-Weigand, P.	76
Sydow, W.	63, 101	Thol, F.	156	Treidl-Hoffmann, C.	142		139, 140
Sysolyatina, E.	172	Thoma, M.	102	Trenczek, T.	135	Valenza, G.	81, 100
Szabo, I.	167	Thomalla, L.	74	Trepesch, C.	78	Valiante, V.	95, 119, 122, 162
Szewczyk, U.	61, 150, 152	Thomane, N.	155	Triesch, S.	154	van Beek, L. F.	169
Sztajer, H.	134	Thompson, A.	127	Trinks, A.	92	van Berkum, M.	155
Szumliński, T.	172	Thomy, D.	59	Troitzsch, D.	127	Van de Vyver, H.	76
Szymanska, K.	117	Thormann, K.	94, 127	Troost, K.	161	van den Bout, C. J.	138
		Thota, J.	60, 157	Trost, E.	77, 101, 171	van der Does, C.	96, 155
T		Thumm, N.	87	Trunzer, K.	137	van der Kooi, T.	22, 70, 182
T. Hoa, N.	172	Thunhorst, E.	160	Truyen, U.	167	van der Linden, M. P. G.	80
Tahir, U.	131	Thürmer, A.	80, 88	Tschörtlner, J.	57	Van der Putten, B.	172
Taj Elddin, A.	148	Tiedt, O.	80	Tschowri, N.	95	van Duijn, R.	151
Takors, R.	109, 147	Tiehm, A.	116	Tuchscher, L.	106	Van Geel, M.	146
Tamaki, H.	93	Tietgen, M.	167	Tulu, B.	129	van Leeuwen, P.	86
Tammert, H.	132	Tiffert, Y.	142	Tung, Q. N.	125	van Ooij, P.	74
Tanabe, S.	110, 135	Tille, A.	146	Turkes, L.	147	van Opzeeland, F. J.	169
Tanabe, T. S.	110	Timm, C.	107, 170	Türkowsky, D.	115	van Ravenzwaay, B.	131
Táncics, A.	146	Timm, S.	152	Turzynski, V.	50, 124	Van Rossum, T.	90
Tannich, E.	66	Timsy, T.	96	Tuschak, C.	100	van Teeseling, M.	67
Tauber, R.	67	Tindall, B. J.	114, 149	Twittenhoff, C.	157	van Weering, J. R. T.	67
Täuber, S.	60	Tinker, K.	61, 67, 135	Typas, A.	132	Vandendorpe, J.	90
Taubert, M.	82, 90	Tippelt, A.	147			Vanderhaeghen, S.	146
Taudte, N.	104	Tirani, F. F.	161	U		Varatnitskaya, M.	127
Tebir, W.	167	Tischler, D.	161	Ude, E.	115	Vashold, R.	137
Tedin, K.	59, 125	Tiso, T.	57, 64, 116	Udo, E.	172	Vasilopoulos, G.	154
Tegelkamp, K.	65	Tittmann, B.	117, 118, 119, 120, 146	Uebe, R.	67	Vázquez-Hernández, M.	127
Teichert, I.	111, 166	Titze, J.	48, 145	Ueberschaar, N.	164	Vecerek, B.	140
Teixeira, M.	135	Tiwari, S. K.	101	Ueltzhoeffer, V.	70	Veelken, R.	79
Tenhaef, N.	109	Tocantins Santos, C.	79	Ugarte-Ruiz, M.	172	Veldmann, K. H.	48
Tenhagen, B.-A.	83, 129	Toepel, J.	172	Ugorski, M.	142	Veloo, A. C.	102
		Tolchkov, V.	66	Uhl, M.	121	Vergin, K.	163
Terpitz, U.	96	Tomasch, J.	63, 97, 121, 160	Uhrlaß, S.	130, 165	Vering, J.	155
Teske, A.	56, 92, 182	Tomasiaunaite, U.	131, 165	Ulber, R.	160	Verma, S. B.	165
Thalheim, D.	169	Tomaso, H.	134	Ulbert, S.	74, 131	Vetter, N.	125
Thalmann, I.	51	Tomczyk, S.	110	Ullerich, L.	66	Vetterlein, D.	152
Thamdrup, B.	69	Tomova, I.	83, 87, 130	Ullrich, M.	149	Vidakovic, L.	60
Thanbichler, M.	67	Tomsic, I.	102	Ulrich, A.	114, 147, 149	Viegas, S. C.	162
Theodosiou, E.	64	Tönnies, H.	131	Ulrich, R.	92, 130	Viehof, A.	68
Theresa, M.	136	Tony-Odigie, A.	102, 103	Únal, C.	76	Viehweiger, A.	123, 134, 136
Thevissen, K.	65, 182	Töpel, A.	71, 100	Únal, C. M.	168	Vielkind, P.	134
Thibau, A.	77, 140	Totsche, K. U.	169	Uden, G.	85, 109, 156	Vielreicher, S.	165
Thieck, M.	87	Toulouse, C.	150	Unger, K.	133	Vier, J.	79
Thiel, C.	135	Toussaint, C.	69, 95	Urban, K.	156	Vierra, M. T.	162
Thiel, J.	52, 135	Tovar, M.	109	Urbanska, N.	124	Vilcinskis, A.	132
Thiele, B.	97	Traeger, S.	60	Urich, T.	132, 133	Vilhena, C.	141, 168
Thiele, J.	135	Traidl-Hoffmann, C.	64	Utomo, R. N. C.	145	Villanueva, L.	93
Thiele, S.	24, 54	Trapp, C.	91			Vincze, S.	137
Thiele, T.	138	Trauth, M.	126	V		Virta, M.	94
Thielemann, N.	166	Trauth, S.	78	Vaca, D. J.	77, 140	Vital, M.	67, 68
Thiem, S.	76	Trautmann, A.	120	Vad, C.	69	Vitow, N.	150
Thieme, L.	47	Trautner, C.	108	Vafadarnejad, E.	124	Vitt, S.	97
Thieme, N.	119	Trautwein, C.	157	Vahidinasab, M.	128	Vogel, J.	59, 78, 124
Thiery, S.	111		125	Vaidya, S.	60	Vogel, U.	70, 74, 83, 102
Thies, S.	48, 85, 147		166	Vaishampayan, A.	126		170, 171
			104	Valdez, H.	140	Vogl, C.	64

Vogt, C.	52, 62, 114, 150	Wagner, S.	49, 93, 141, 144	Weinmann, L.	48	Wießner, A.	66, 83, 106, 107
	151	Wagner, S.	79, 95	Weinreich, J.	144	Wight, D.	126
Vogt, S.	88	Wagner, S.	77, 149	Weiß, A.	50, 87	Wilbring, G.	152
Voigt, A. M.	46, 74, 152	Wagner, S.	149	Weiß, A.	132	Wilde, A.	85, 96, 111, 155
Voigt, K.	162	Wagner-Döbler, I.	134	Weiß, E.	78		156, 157, 160
Volk, N.	116	Wahdan, S.	163	Weiß, C.	143	Wilden, J.	111
Volke, D.	92	Wahl, S.	137	Weise, T.	109	Wilhelm, G.	147
Völker, U.	65, 111, 112, 138	Walder, A.	161	Weißelberg, S.	64, 76	Wilhelm, B.-U.	122
	140, 143	Waldvogel, S. R.	121	Weiss, B.	84, 182	Wilk, C.	133
Volkmar, K.	117	Walk, T.	131	Weiss, E.	136	Wilkens, D.	113
Völkner, K.	158	Wallenstein, A.	65	Weiss, G.	60	Wilking, H.	83
Vollmer, I.	138	Wallerang, K.	113	Weiss, T.	126	Will, S. E.	98
Vollmers, J.	150	Wallner, T.	96, 111	Weit, C.	166	Wille, J.	88
Vollstedt, C.	101	Walter, E.	65	Weldearegay, Y. B.	139	Willenborg, M.	76, 139
von Armansperg, B.	132	Walter, M. C.	74, 88, 107	Wellner, S.	125	Willenbücher, K.	152
von Bergen, M.	62, 68		169, 170	Welte, C.	93	Willmann, M.	26, 70, 89
	82, 115, 133, 149	Walther, G.	83, 165	Welte, T.	67	Willrich, N.	63
von Buenau, R.	65, 84	Walther, J.	100	Weltmann, K.-D.	137	Wilms, G.	106, 163
von Buttler, H.	47, 169	Walther, S.	101	Wencker, F. D. R.	112	Wimmi, S.	139
Von der Brelie, C.	102	Wami, H.	65	Wendel, A. F.	137	Wimoné, M.	142
von Köckritz-Blickwede, M.		Wamp, S.	112	Wendel, A.	143	Winand, L.	117
	142	Wandhoff, B.	51	Wendelborn, D.	79	Wingender, J.	93
von Lengerke, T.	55, 76, 102	Wang, B.	67	Wendisch, V. F.	48, 121	Wink, J.	120, 136
	103	Wang, G.	162	Wendler, S.	106	Winkel, M.	46
von Lilienfeld-Toal, M.	169	Wang, H.	133	Wenning, M.	87, 167, 168	Winkelmann, T.	152
von Loewenich, F. D.	47	Wang, H.	134	Wenzel, M.	67, 112	Winstel, V.	76
von Mering, C.	50, 182	Wang, Z.	91	Wenzel, S.	63	Winter, M.	49
von Müller, L.	81	Wang, Z.	142	Wenzel, T.	108	Winter, S.	49, 70, 181
von Nickisch-Rosenegk, M.		Wanner, G.	57	Werner, C.	113	Wirtz, A.	116, 119
	108	Wansel, S.	119	Werner, G.	63, 65, 70, 80	Wirtz, L.	154
von Pückler, K.	92, 130	Wantia, N.	71, 74, 109		83, 88, 102	Wirtz, M.	125
von Reuß, S.	109	Waqgas, M.	149	Werner, K.	145	Wischer, D.	58
von Stempel, A.	132	Warnita, w.	46	Werner, M.	81	Wissing, J.	98, 110, 139
von Woedtk, T.	137	Waschulzik, B.	71	Werner, M.-H.	155		168
Vonck, J.	98, 135	Watt, M.	150	Werner, S.	169	Witschel, M.	136
Vondran, A.	137	Weber, A.	169	Wesche, J.	141	Witt, P.	50, 72, 107
Vorbach, A.	155	Weber, A.	70	Westendorf, A.	133	Witte, A. K.	123, 146
Voß, F.	169	Weber, A.	79	Westendorf, C.	124	Witte, O. W.	74
Voskuhl, L.	46, 56, 145	Weber, M.	87	Westermann, M.	84, 92	Witte, W.	74, 103
Voss, B.	120	Weber, M.	130	Westhäuser, F.	167	Witthohn, M.	160
Vötsch, D.	76, 139	Weber, R.	83, 88	Wholey, W.-Y.	127	Wittig, F.	165
Vranckx, K.	107	Weber, V.	106	Wiacek, C.	166	Wittig, I.	142
Vu, V. L.	125	Wedlich, N.	92, 130	Wichelhaus, T. A.	72, 88	Wittlake, R.	133
Vucic, V.	121	Wegener, G.	92	Wick, L. Y.	49, 62, 82, 149	Wittman, J.	132
		Wehrfritz, H.	71		151	Wittmann, C.	48, 63, 72, 84
W		Wehrheim, C.	158	Wiechert, W.	123		118
Wacker, J.	67	Wehrmeyer, H.	101	Wiegand, S.	67, 82, 149	Wodrich, M. D.	161
Wadhawan, A.	109	Weichselbaum, A.	79	Wiegand, S.	101	Woecken, D.	82
Waesche, R. M.	51	Weidendorfer, M.	142	Wiegand, A.	156	Wöhlbrand, L.	62, 116, 134
Waffenschmidt, V.	123	Weihe, T.	166	Wiegert, T.	120	Wohlers, H.	120
Wagener, J.	47, 65	Weihmann, R.	48, 85	Wieler, L. H.	80, 172	Wohlers, K.	116
Wagner, D.	46, 147, 149	Weile, D.	137	Wienemann, T.	26, 88	Wohlleben, W.	138
	163	Weiler, J.	117	Wierckx, N.	48, 118, 145	Wohra, S.	142
Wagner, M.	44	Weimer, A.	120	Wiese, G.	167	Wöhrmann, M.	145
Wagner, M.	57	Wein, T.	72	Wiese, J.	131, 145	Wolf, D.	128, 161
Wagner, O.	126	Weinberger, J.	106	Wieser, A.	171	Wolf, F.	141

Wolf, S.	86	Xiong, Y.	94	Zahn, S.	158	Zimmermann, S.	106
Wolf, T.	165	Xu, J.	50	Zange, S.	47, 74	Zimmermann, S.	47, 70, 74
Wolf, Y.	158	Xu, W.	150	Zantop Linares, S.	52	Zipfel, P. F.	92, 141, 168
Wölfel, R.	101	Xun, L.	157	Zarzycki, J.	162	Zitzow, E.	139
Wolfgang, B.	100			Zautner, A. E.	51, 68, 77	Zöller, L.	100
Wolfgramm, H.	111	Y			100	Zollner, S.	119
Wollenhaupt, B.	125	Yacoub, M.	109	Zehner, S.	141	Zommick, D.	167
Wolrab, L.	143, 144	YALA, D.	104	Zehnle, H.	92	Zoun, R.	162
Woltemate, S.	67, 78	Yan, L.	95	Zelder, O.	72	Zschaubitz, E.	113
Wolters, M.	83, 93, 94	Yang, S.	163	Zemskaya, T.	164	Zuchantke, E.	83
Wolz, C.	64, 125, 128, 169	Yanti, Y.	46, 148	Zenouzi, R.	68	Zühlke, D.	77, 115, 132
Worrich, A.	82, 149, 164	Yarmoluk, S.	111	Zhang, H.	127		133, 147
Woschke, A.	86	Yeasmin, T.	146	Zhang, H.	120	Züllig, T.	98
Woyke, T.	91	Yemelin, A.	95, 157	Zhang, Q.	128	Zúñiga, M.	128
Wuertz, S.	61, 182	Yero, D.	101	Zhou, Z.	81	Zverlov, V.	119
Wulsten, I. F.	87	Yi, B.	164	Zhu, Y.-G.	62		
Wunderink, H. F.	138	Yildirim, D.	65	Zickermann, V.	98		
Wünsche, C.	132	Yildiz, F. H.	60	Ziebuhr, W.	80, 112		
Wünschiers, R.	83	Yilmaz, I.	77	Ziegler, K.	103		
Würtz, B.	128	Yim, S. S.	118	Ziegler, R.	172		
Würzner, R.	91, 141, 169	Yordanova, S.	165	Ziemssen, F.	137		
Wüst, A.	138	You, X.	49	Zierul, J.	150		
Wynands, B.	48	Youssar, L.	59, 127	Ziesing, S.	67		
		Yu, Y.	148	Zignoli, A.	106		
X				Zilkenat, S.	141		
Xanthopoulou, K.	88	Z		Zimmer, D.	118		
Xia, Y.	157	Zaburannyi, N.	84	Zimmer, J.	67		
Xie, K.	127	Zacharias, N.	152	Zimmermann, F.	107		
Xie, N.	162	Zacher, A.	150	Zimmermann, O.	81		
Xiong, B.-J.	82	Zacher, B.	63	Zimmermann, R.	159		



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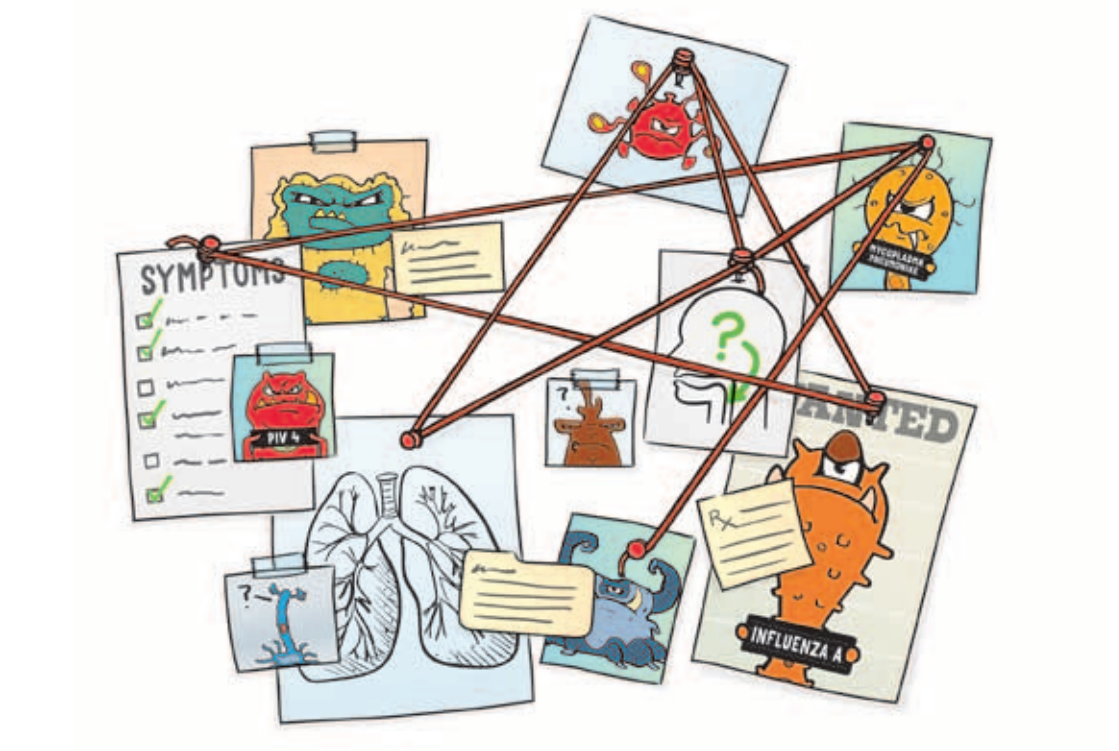
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