



JAHRESTAGUNG VIRTUELL LIVE!

18–19 MARCH 2021



Best of VAAM

THURSDAY, 18 MARCH 2021

09:00–11:00 HIGHLIGHT SESSION

Presentation: Antje Boetius (Alfred-Wegener-Institut, Bremerhaven/DE)

VAAM Research Award | VAAM Innovation Award | PhD Awards | Microbe of the Year 2021

WEBINAR 1

- 11:30–13:30** Symposium 1 – Detection of viruses in wastewater with special focus on Corona | FG Water & Sewage
- 11:30** Welcome address
- 11:35** What's happening with COVID-19? Check the sewers!
Gertjan Medema (Nieuwegein/NL)
- 12:10** Wastewater-based surveillance to monitor SARS-CoV-2 dynamics in Singapore
Mats Leifels (Singapore/SG)
- 12:35** Monitoring of SARS-CoV-2 pandemic viruses via wastewater analyses in Germany
Hans-Christoph Selinka (Berlin/DE)
- 13:00** SARS-CoV-2 in water – literature survey, study concept, and first results
Andreas Tiehm (Karlsruhe/DE)
- 13:25** Closing remarks
- 14:00–16:00** Symposium 4 – Persistence of pathogenic bacteria | FG Microbial Pathogenicity
- 14:00** *Sophie Helaine (Boston, MA/US)*
- 14:30** *Boris Maček (Tübingen/DE)*
- 15:00** *Lorena Tuchscherer de Hauschopp (Jena/DE)*
- 15:15** Short talks
- 16:30–18:30** Symposium 7 – Limitless perception: Long distance and inter-kingdom signaling in bacteria | FG Regulation & Signal Transduction in Prokaryotes
- 16:30** Geosmin and springtails
Klas Flärdh (Lund/SE)
- 17:05** Biosynthesis of the unusual microbial volatile odoriferen – a new route to terpenoid production
Nancy Magnus (Rostock/DE)
- 17:25** Learning languages – first insights into *Photorhabdus luminescens* – plant interkingdom signaling via the LuxR solo SdiA
Nazzareno Dominelli (Mainz/DE)
- 17:40** The alarmone (p)ppGpp confers tolerance to oxidative stress during the stationary phase by maintenance of redox and iron homeostasis in *Staphylococcus aureus*
Verena Nadin Fritsch (Berlin/DE)
- 17:55** The role of inorganic ions in bacterial resilience
Gürol Suel (San Diego, CA/US)
- 18:30** General discussion & Meet the speakers

WEBINAR 2

- 11:30–13:30** Symposium 2 – FG Archaea
- 11:30** The archaeal roots of the eukaryotic cell
Thijs Ettema (Wageningen/NL)
- 12:10** Archaeal viruses – the friendly side of the virosphere
Mart Krupovic (Paris/FR)
- 12:30** Source or sink? Revisiting current knowledge on Archaea in greenhouse gas production and consumption
Christa Schleper (Vienna/AT)
- 13:10** Short video presentations
- 14:00–16:00** Symposium 5 – FG Biology of Bacterial Natural Product Producers
- 14:00** The key role of GlnA3 for survival of *Streptomyces coelicolor* and *Mycobacterium tuberculosis* under polyamine excess
Sergii Krysenko (Tübingen/DE)
- 14:20** Global distribution of natural products within the bacterial kingdom
Athina Gavriilidou (Tübingen/DE)
- 14:40** Elucidation of a quorum sensing like regulatory network in *Nostoc punctiforme* PCC 73102
Julia Krumbholz (Potsdam/DE)
- 15:00** Small molecules controlling prophage induction
Magdalena Jancheva (Konstanz/DE)
- 15:20** Generation of novel pristinamycin derivatives by mutasynthesis approaches
Oliver Hennrich (Tübingen/DE)
- 15:40** SYNZIPs as a tool for the rapid construction of engineered non-ribosomal peptide synthetases
Nadya Abbood (Marburg/DE)
- 16:30–18:30** Symposium 8 – Artificial intelligence (AI) in biotechnology
FG Biotransformation
- 16:30** AI-fuelled acceleration of protein engineering
Stanislav Mazurenko (Brünn/CZ)
- 17:00** Teaching computers how to design enzymes
Ferran Sancho Jodar (Barcelona/ES)
- 17:30** Learning from evolution how to design functional protein sequences
Martin Weigt (Paris/FR)
- 18:00** Machine learning for product identification, enzyme optimization and strain optimization
Kurt Thorn (San Francisco, CA/US)

WEBINAR 3

- 11:30–13:30** Symposium 3 – From fungal mycelia to research networks
FG Fungal Biology & Biotechnology
Short talks
For details please see online programme on the congress website!
- 14:00–16:00** Symposium 6 – Karrieresymposium Studium, Promotion und dann? Podiumsdiskussionen und offene Fragerunde
- 14:00** Karriere in der akademischen Forschung - Aussichten und Stolpersteine
- 15:00** Perspektiven in der Industrie
- 16:30–18:30** Symposium 9 – Enabling spaceflight: How do applied space microbiology and bio-/nanotechnology contribute?
FG Space Microbiology
- 16:30** Welcome address
- 16:35** Spaceflight microbiology – beyond the cultures
Sarah Wallace (Houston, TX/US)
- 17:00** Short talks
- 17:30** Messages from ESA or NASA scientists & programme directors
- 17:40** Short talks
- 18:20** Closing remarks & voting for the group speaker

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JAHRESTAGUNG VAAM 2021

FRIDAY, 19 MARCH 2021

WEBINAR 1

- 08:30–10:30** Symposium 10 – Karriere in der Qualitätssicherung und Behörden
FG Quality Assurance & Diagnostics
- 08:30** Kurze Anmoderation und Einleitung
- 08:35** Erfahrungen als Trainee in der Qualitätssicherung in einem pharmazeutischen Unternehmen
Sabine Roskopf (Frankfurt a. M./DE)
- 09:00** Die Qualitätskontrolle: Routine oder ständig neue Herausforderungen?
Florian Fabiani (Berlin/DE)
- 09:30** Quereinstieg in die amtliche Lebensmittelüberwachung
Mareike Wenning (Oberschleißheim/DE)
- 10:00** Aufgaben des PEIs – mehr als nur Arzneimittelzulassungen
Marcel Prax (Langen/DE)
- 10:25** Abschluss und Fazit
Steffen Prowe (Berlin/DE)
Andreas Seiffert-Störiko (Frankfurt a. M./DE)
- 11:00–13:00** Symposium 13 – The exciting cell biology of alpha-proteobacteria I FG Microbial Cell Biology
- 11:00** Lon-dependent proteolysis in *Caulobacter* cell cycle regulation and stress adaptation
Kristina Jonas (Stockholm/SE)
- 11:40** Positioning of magnetic organelles is coupled to cell shape control
Daniel Pfeiffer (Bayreuth/DE)
- 12:00** The unusual cell division of *Hyphomonas neptunium*
Muriel van Teeseling (Marburg/DE)
- 12:20** Properties and perturbations of the *Brucella abortus* envelope
Xavier De Bolle (Namur/BE)
- 13:30–15:30** Symposium 16 – Ask the expert! FG Functional Genomics and Bioinformatics
- 13:30** Nanopore sequencing as a tool in microbial genomics
Jörn Kalinowski (Bielefeld/DE)
- 13:45** Discussion
- 14:00** Novel RNA-sequencing approaches to study bacterial RNA biology
Franziska Faber (Würzburg/DE)
- 14:15** Discussion
- 14:30** Algorithms for non-targeted 13C metabolic flux profiling and their applications
Karsten Hiller (Braunschweig/DE)
- 14:45** Discussion
- 15:00** General discussion about future directions & plans for the special group

WEBINAR 2

- 08:30–10:30** Symposium 11 – The potential of cyanobacteria in photobiotechnology
FG Cyanobacteria
- 08:30** Introduction
- 08:35** Biotechnology of hydrogen production with cyanobacterial whole cell biocatalysts
Andreas Schmid (Leipzig/DE)
- 09:05** Tracing and engineering dynamic metabolism in cyanobacteria
Chen Yang (Shanghai/CN)
- 09:35** Inactivation of natural electron sinks for the acceleration of light-driven biotransformations
Leen Assil-Companiononi (Graz/AT)
- 09:50** Biotechnological production of cyanophycin by cyanobacteria as a material basis for industrial applications
Björn Watzer (Tübingen/DE)
- 10:05** Discussion & administrative issues of the special group
- 11:00–13:00** Symposium 14 – FG Food Microbiology
- 11:00** Next Generation Sequencing (NGS) basierte Typisierung von *Listeria (L.) monocytogenes* für die Analyse von Ausbruchsgeschehen
Larissa Murr (Oberschleißheim/DE)
- 11:15** Schnellnachweis von *Bacillus sporothermodurans* durch isothermale Amplifikation
Gregor Fiedler (Kiel/DE)
- 11:30** Persistence of enterohemorrhagic *E. coli* O157:H7 and O104:H4 strains in soil is influenced by temperature, soil type, and manure application
Katharina Detert (Hohenheim/DE)
- 11:45** Purification and cytotoxic activity of Stx2a subunits
Maike Krause (Hohenheim/DE)
- 12:00** Bestimmung der Gesamtkeimzahl bei Kräutertee und Grünem Tee (*Camellia sinensis*)
Eva Spindler-Raffel (Geisenheim/DE)
- 12:15** Überprüfung der Anwendbarkeit von mikrobiologischen Reinigern in Lebensmittelbetrieben
Rohtraud Pichner (Fulda/DE)
- 13:30–15:30** Symposium 17 – Stability and function of symbiotic interactions in the face of challenge I FG Symbiotic Interactions
- 13:30** Evolution and molecular basis of microbe-host interaction in amoebae
Matthias Horn (Wien/AT)
- 14:00** Leveraging natural events to understand the evolution and diversification of animal-microbial symbioses
Laetitia Wilkins (Bremen/DE)
- 14:15** Coffee break and meet the speakers
- 14:30** *C. elegans* microbiota-mediated protection from pathogen infection
Katja Dierking (Kiel/DE)
- 15:00** How herbicides affect the gut microbiota and health of honey bees
Erick V. Da Silva Motta (Austin, TX/US)
- 15:15** Coffee break and meet the speakers

WEBINAR 3

- 08:30–10:30** Symposium 12 – Molecular structures made by viruses I FG Microbial Viruses
- 08:30** Introduction
- 08:35** A jumbo plan to evade CRISPR-Cas defences
Peter Fineran (Dunedin/NZ)
- 09:05** Structure of the tail tip of siphophage T5
Cécile Breyton (Grenoble/FR)
- 09:20** Molecular determinants for O-antigen specific phages to release their DNA
Nina Bröker (Potsdam/DE)
- 09:30** Endogenous virophages populate the genomes of a marine heterotrophic flagellate
Thomas Hackl (Heidelberg/DE)
- 09:40** The surprising mechanism of a phage-derived transcription modulator
Daniela Gjorgjević (Berlin/DE)
- 09:50** Membrane containing viruses and membrane vesicles of archaeal model organisms
Tomas Alarcon Schumacher (Bremen/DE)
- 10:00** Break & change to ZOOM conference
- 10:05** Meeting of the special group
- 11:00–13:00** Symposium 15 – FG Environmental Microbiology
- 11:00** Microbial degradation of biological macromolecules – Uncultured thermophilic heterotrophs and their role in the carbon cycle of hydrothermal sediments
Emil S. Ruff (Falmouth, MA/US)
- 11:30** Highly diverse flavobacterial phages isolated from North Sea spring blooms
Nina Bartlau (Bremen/DE)
- 11:40** Interactions of archaea and their epibionts based on CRISPR-Cas interference
Sarah P. Eber (Essen/DE)
- 11:50** Prevalence of potentially human pathogenic *Vibrio spp.* during 2018 hot summer heat wave at the North- and Baltic sea coasts
Susanne Fleischmann (Berlin, Koblenz/DE)
- 12:00** Interaction mechanisms of *Stenotrophomonas bentonitica* with Eu³⁺ and its impact on the safety of future deep geological repositories of nuclear wastes
Marcos F. Martínez-Moreno (Granada/ES)
- 12:10** Diverse plant phenotypes and survival rates are linked to differences in early colonization of bacteria
Teresa Mayer (Jena/DE)
- 12:20** Beneficial shifts of bacterial community of the gut of Gilthead seabream (*Sparus aurata*) supplemented with allium-based compound
Antonio Newman-Portela (Granada/ES)
- 12:30** Biofilm formation on microplastics is decoupled from artificial surface properties
Sonja Oberbeckmann (Rostock/DE)
- 12:40** Verrucomicrobiota degrade sulfated methyl pentoses during diatom blooms
Luis H. Orellana (Bremen/DE)
- followed by: Meet the speakers

16:00 MITGLIEDERVERSAMMLUNG