

# **BACELL Meeting 2023**

## **University of Hohenheim**

19 – 20 June 2023, Steinbeis-Haus für Management und Technologie (SHMT),  
Stuttgart-Hohenheim, Germany

Chair

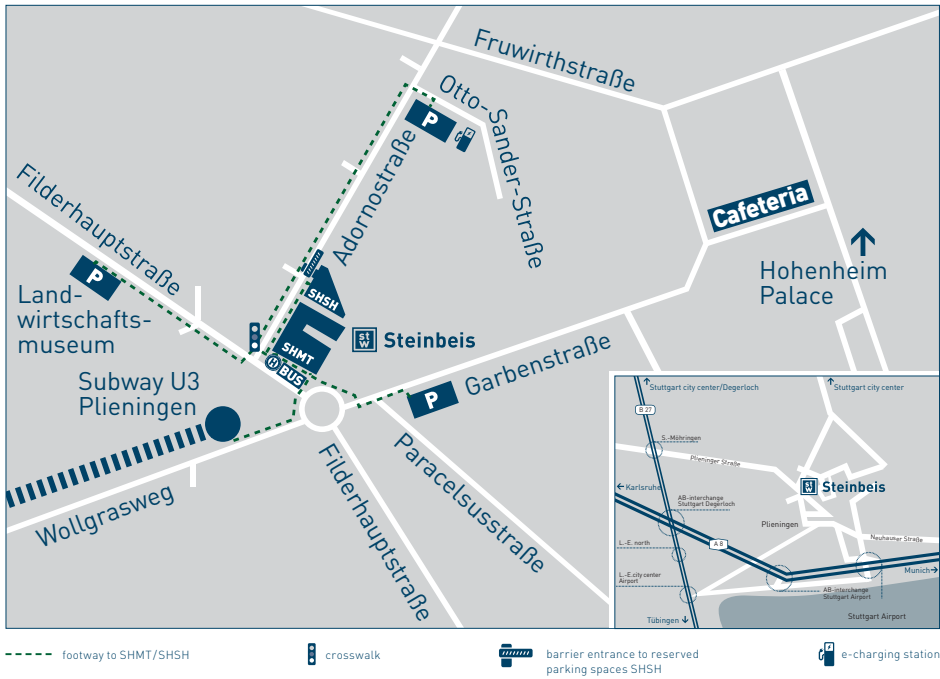
Fabian M. Commichau

Organizing Committee

Simone Müller, Katharina Kohm, Saba Mardoukhi,  
Inge Schwedt, Fabian M. Commichau



# Venue



## HOW TO REACH STEINBEIS CAMPUS STUTTART

### Public transportation

You can plan your journey by public transport on [www.vvs.de](http://www.vvs.de) with the "Verkehrs- und Tarifverbund Stuttgart". The „Plieningen Garbe“ bus stop and the „Plieningen“ subway station are located near the Steinbeis Campus.

### By car

There are parking spaces (PBW) in direct vicinity of the SHMT/SHSH available (at a charge).



parking Otto-Sander-Straße with e-charging station



parking Garbenstraße



parking Landwirtschaftsmuseum, Filderhauptstraße



Steinbeis-Haus für Management und Technologie (SHMT)  
Filderhauptstr. 142  
70599 Stuttgart



Steinbeis-Haus Stuttgart-Hohenheim (SHSH)  
Adornostr. 8  
70599 Stuttgart  
Phone: +49 711 1839-5



[www.steinbeis.de](http://www.steinbeis.de)

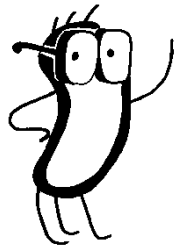


We thank the *Bacillus* Industrial Platform (BACIP) for the generous support of the BACELL 2023 Meeting at the University of Hohenheim in Stuttgart:





# Scientific Program







# BACELL Meeting 2023 Hohenheim, Program

## Monday 19<sup>th</sup> June

8:30 – 9:00 Registration

9:00 – 9:10 Opening remarks

### Session 1 – Antimicrobials, stress & genomic adaptation

Chair: Susanne Gebhard (University of Mainz, Germany)



- 9:10 – 9:25            Talk 1 – Gert Bange (University of Marburg, Germany): **Are you stressed? The mysterious diadenosine-tetraphosphate in *Bacillus subtilis***
- 9:30 – 9:45            Talk 2 – Jeanine Rismondo (University of Göttingen, Germany): **Adaptation of *Listeria monocytogenes* to quaternary ammonium compounds**
- 9:50 – 10:05          Talk 3 – Tim Engelgeh (Robert Koch Institute Wernigerode, Germany): **Perception and detoxification of the polyketide tartrolon B by *Listeria monocytogenes***
- 10:10 – 10:25        Talk 4 – Biwen Wang (University of Amsterdam, The Netherlands): **Lethal ROS production upon membrane depolarization of dormant *Bacillus subtilis* cells**
- 10:30 – 10:45        Talk 5 – Marco Harms (University of Greifswald, Germany): **Characterization of the sub-regulon structure of the general stress response of *Bacillus subtilis* – The role of MgsR**

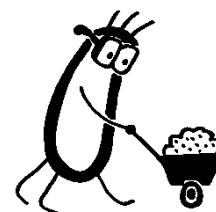
10:50 – 11:20        Tea and Coffee break

### Session 2 – Sporulation, development & cell envelope

Chair: Ilka Bischofs (University of Heidelberg, Germany)



- 11:20 – 11:35        Talk 6 – Imrich Barák (Slovak Academy of Sciences, Slovakia): **Spatio-temporal control of the asymmetric septum positioning during sporulation of *Bacillus subtilis***
- 11:40 – 11:55        Talk 7 – Sarah Baur (University of Kiel, Germany): **Influence of an SPFH protein on developmental programs in *Bacillus subtilis***
- 12:00 – 12:15        Talk 8 – Sigal Ben-Yehuda (The Hebrew University of Jerusalem, Israel): **Dormant bacterial spores encrypt a long-lasting transcriptional program to be executed during revival**
- 12:20 – 12:35        Talk 9 – Elena Bidnenko (Université Paris-Saclay, France): **Complex spatiotemporal expression of termination factor Rho highlights its involvement in spore morphogenesis and revival in *Bacillus subtilis***
- 12:40 – 12:55        Talk 10 – Richard Daniel (Newcastle University, UK): **The structure of the Gram-positive cell wall: Modulation of essential processes by the composition of the cell envelope**
- 13:00 – 14:00        Lunch Break

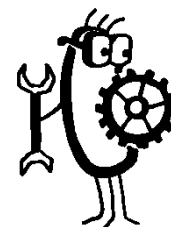


### Session 3 – Regulation, transport & metabolism

Chair: **Laura Czech** (University of Marburg, Germany)

- 14:00 – 14:15      Talk 11 – Ákos Kovács (Technical University of Denmark, Denmark):  
**The circadian clock in *Bacillus subtilis***
- 14:20 – 14:35      Talk 12 – Tomislav Volosen (University of Dresden, Germany): **A comprehensive study of quorum-sensing-dependent transcriptional factor ComA in *Bacillus subtilis***
- 14:40 – 14:55      Talk 13 – Robert Warneke (University of Göttingen, Germany): **Sleeping beauty awakens: The role of AexA and AexR in overcoming  $\beta$ -alanine toxicity in *Bacillus subtilis***
- 15:00 – 15:15      Talk 14 – Tatiana B. Cereija (Universidade do Porto, Portugal): **Direct impact of c-di-AMP on the activity of  $K^+$  transporters**
- 15:20 – 15:35      Talk 15 – Inge Schwedt (University of Hohenheim, Germany): **The evolution of glyphosate resistance in model bacteria uncovers essential genes and metabolic bypasses**

15:40 – 16:10      **Tea and Coffee Break**



### Session 4 – Biotechnology I

Chair: **Sven Halbedel** (Robert Koch Institute Wernigerode, Germany)

- 16:10 – 16:25      Talk 16 – Tobias Schilling (University of Groningen, The Netherlands): **How to make antibodies and other disulfide-bonded protein in *mid*Bacillus**
- 16:30 – 16:45      Talk 17 – Maliheh Vahidinasab (University of Hohenheim, Germany): **Genetic modification and bioprocess engineering for lipopeptide biosynthesis by *Bacillus* species**
- 16:50 – 17:05      Talk 18 – Susanne Gebhard (University of Mainz, Germany): **Understanding microbially induced calcite formation by Bacilli for application in bio-based, green construction materials**
- 17:10 – 17:25      Talk 19 – Alexis Hoste (University of Liège, Belgium): **The effect of *Bacillus* sp. secondary metabolites on SARS-CoV-2 (COVID-19) *in vitro***
- 17:30 – 17:40      Talk 20 – Jan Maarten van Dijl (University of Groningen, The Netherlands): **Greener, more sustainable platforms for high-valuable recombinant protein production**
- 17:45 – 20:30      **Poster Session, Swabian beer, wine, and finger food**

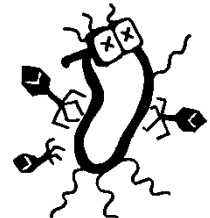
Tuesday 20<sup>th</sup> June



**Session 5 – Transcription, RNA turnover & processing**

**Chair: Imrich Barak** (Slovak Academy of Sciences, Slovak Republic)

- 9:00 – 9:15            Talk 21 – Dennis Wicke (University of Göttingen, Germany): **RnpM – A novel interaction partner for RNase P**
- 9:20 – 9:35            Talk 22 – Petra Sudzinová (Czech Academy of Sciences, Czech Republic): **Rifampicin, an inhibitor of RNA polymerase, can stimulate transcription**
- 9:40 – 9:55            Talk 23 – Alexandre D’Halluin (Université de Paris-Cité, France): **A specific 3’ exonuclease KapD is involved in the spore crust and outer coat formation in *B. subtilis***
- 10:00 – 10:15        Talk 24 – Helge Paternoga (University of Hamburg, Germany): **Structural basis of ribosomal 30S subunit degradation by RNase R**
- 10:20 – 10:35        Talk 25 – Roland Hartmann (University of Marburg, Germany): **6S RNAs in *Bacillus subtilis* – more than simple transcription inhibitors**
- 10:40 – 11:15        Tea and Coffee Break**



**Session 6 – Phages, genomic structure & translation**

**Chair: Katharina Höfer** (MPI for Terrestrial Microbiology, Marburg)

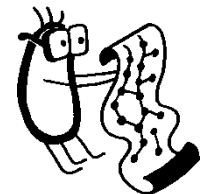
- 11:15 – 11:30        Talk 26 – Virginie Grosboillot (University of Ljubljana, Slovenia): **Alteration of *Bacillus subtilis* behaviour by SP $\beta$ -like prophages**
- 11:35 – 11:50        Talk 27 – Katharina Kohm (University of Hohenheim, Germany): **Proposed 25 years ago, now confirmed: MrpR acts as a master repressor of the *Bacillus subtilis* prophage SP $\beta$  by binding to SPBR elements**
- 11:55 – 12:10        Talk 28 – Laura Czech (University of Marburg, Germany): **Structural and biochemical dissection of the SP $\beta$  prophage master repressor MrpR**
- 12:15 – 12:30        Talk 29 – Leendert Hamoen (University of Amsterdam, The Netherlands): **Identifying (unexpected) higher order genomic structures using Next Generation Sequencing**
- 12:35 – 12:50        Talk 30 – Melissa Vázquez-Hernández (Ruhr University Bochum, Germany): **Physiology of trans-translation deficiency in *Bacillus subtilis***
- 12:55 – 14:30        Lunch break**



## Session 7 – Microbial interactions

Chair: **Ákos Kovács** (Technical University of Denmark, Denmark)

- 14:30 – 14:45      Talk 31 – Berenike Maier (University of Cologne, Germany): **Fitness effects of horizontal gene transfer between *Bacillus* species**
- 14:50 - 15:05      Talk 32 – Mark Lyng (Technical University of Denmark, Denmark):  
**Bacillibactin mediates antagonism between *Bacillus subtilis* and fluorescent *Pseudomonas***
- 15:10 – 15:25      Talk 33 – Eli Podnar (University of Ljubljana, Slovenia): **Nutrient-dependent interactions between *Salmonella enterica* serovar Typhimurium and *Bacillus subtilis* in biofilms**
- 15:30 – 15:45      Talk 34 – Mojca Krajnc (University of Ljubljana, Slovenia): ***Bacillus subtilis* kin discrimination on macroscale and single-cell level**
- 15:50 – 16:05      Talk 35 – Polonca Stefanic (University of Ljubljana, Slovenia): **Kin discrimination stabilizes cooperative behaviour during bacterial swarming and biofilm formation**
- 16:10 – 16:40      **Tea and Coffee Break**



## Session 8 – Biotechnology II

Chair: **Rudolf Hausmann** (University of Hohenheim, Germany)

- 16:40 – 16:55      Talk 36 – Ayşegül Öktem (University of Groningen, The Netherlands): **Enhancing bacterial fitness and recombinant enzyme yield by engineering the quality control protease HtrA of *Bacillus subtilis***
- 17:00 – 17:15      Talk 37 – Tamara Schmidt (University of Heidelberg, Germany): **Phenotypic heterogeneity in natural product formation of *Bacillus subtilis***
- 17:20 – 17:35      Talk 38 – Saba Mardoukhi (University of Hohenheim, Germany): **Metabolic rewiring compensates for the loss of aspartate and glutamate biosynthesis in *Bacillus subtilis***
- 17:40 – 17:55      Talk 39 – Dicky Pranoto (University of Groningen, The Netherlands): **Rational engineering of *Bacillus subtilis* signal peptides by amino acid removal**
- 18:00 – 18:15      Talk 40 – Student project (University of Göttingen, Germany): **Under control – Combat *Listeria monocytogenes* infections**
- 18:15 – 18:20      **Closing remarks**
- 19:30 – 2:00      **Conference dinner at the Wirtshaus Garbe**



## Poster Session

Monday 19<sup>th</sup> June, 17:45 – 20:30