

Organizer / Contact

Hessen Trade & Invest GmbH (HTAI) is the economic development company of the State of Hesse. Its primary function is to promote Hesse's long-term success as a business and technology region and enhance its competitiveness on the national and international level.

Hessen-Biotech is the central information, communication and cooperation platform for life science based activities in Hesse. Its principle role is to link industry expertise in order to strengthen the innovation potential and competitiveness of companies and to promote the biotechnology and medical technology industry in Hesse.

In January 2010, the Philipps-Universität Marburg and the Max Planck Institute for Terrestrial Microbiology established a Center for Synthetic Microbiology (SYNMIKRO) in Marburg, promoted by the Excellence Program of the state of Hesse (LOEWE). Today SYNMIKRO employs over 100 scientists in more than 30 groups who conduct its research in the rapidly growing field of synthetic microbiology.

Venue



Public transportation (recommended):

Step out of the main train station, cross the road to get to the bus stop. Bus line 1-5 and 7 will go to "Rudolphsplatz", which is near the venue. After getting out of the bus, cross the street at the traffic lights.

By car:

Coming from the north, exit the freeway at "Marburg Bahnhofstrasse" and turn right at the first traffic light. Follow the course of the road and always stay right, the street will separate into two lanes and join again at the Elisabeth church. Drive straight ahead until you are in a street called "Pilgrimstein", where you will find a (charged) parking deck at your right (green arrows on the map).

Coming from the south, exit the freeway at "Marburg Mitte" and turn right twice. Stay in the right lane and turn right again after passing the Lahn bridge. After passing the cinema on your right, turn left. Turn right at the end of the short street. You are now in a street called "Pilgrimstein", where you will find a (charged) parking deck at your left (yellow arrows on the map).

Address of the nearest parking garage for navigation devices:
Pilgrimstein 17, 35037 Marburg

Registration

Participation is free but registration is required.
Deadline for the registration is April 25, 2017.
Please register online at:

www.synmikro.de

Contact:

Philipps-Universität Marburg
LOEWE Center for
Synthetic Microbiology
Hans-Meerwein-Strasse

Bettina Happel
bettina.happel@synmikro.uni-marburg.de

Karin Sievers
karin.sievers@synmikro.uni-marburg.de

+49 (0) 6421 - 282 22 24



Symposium

Biofilms in Nature, Technology and Medicine

Thursday, May 4, 2017

Philipps-Universität Marburg
LOEWE Center for Synthetic Microbiology

Venue: Cineplex, Biegenstr. 1, 35037 Marburg



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Biofilms in Nature, Technology and Medicine

Many microbes grow in surface-associated, multicellular communities known as biofilms. These biofilms are the most abundant mode of microbial life outside the ocean. Biofilms are also associated with a range of diseases and hygiene problems, as bacteria that are bound in biofilms are intrinsically resistant to antibiotics and disinfectants.

In recent years, a lot of progress has been made towards understanding the necessary genes for biofilm formation and the switch from planktonic growth to sessile growth on surfaces, which constitutes the first step in biofilm growth. Yet surprisingly little is known about what determines biofilm growth beyond the initial step of surface attachment, what governs microbial community architecture and composition, and how biofilm composition can be manipulated for particular applications in industry, agriculture, and healthcare. New omics techniques, high-resolution microscopy, next-generation sequencing, and labeling techniques for multispecies biofilm communities promise to yield breakthroughs in fundamental and applied biofilm research, which will bring improvements for human health and industry.

At the SYNMIKRO Symposium "Biofilms in Nature, Technology and Medicine", leading scientists from academia and industry will come together to highlight and discuss recent breakthroughs and future trends in biofilm research, and how this research can lead to improvements in healthcare, waste water treatment, and industrial processes.

The participation in the symposium is free of charge but a registration is required. Please register online at www.synmikro.de.

Organizers:
Knut Drescher, Gert Bange, Anke Becker and Victor Sourjik

Program

09:15 - 09:30 **Welcome and opening remarks:**
Anke Becker, Managing Director of SYNMIKRO, Marburg

Session 1 Biofilms in the environment

Chair: Knut Drescher (MPI & SYNMIKRO Marburg)

09:30 - 10:00 **Wolfgang Streit**
(University of Hamburg)
Molecular keys to mono- and multi-species biofilm formation on plant and fungal surfaces

10:00 - 10:30 **Mette Burmølle**
(University of Copenhagen)
From environment to lab bench: Studies of synergistic interactions in multispecies biofilms composed of soil bacteria

10:30 - 11:00 Coffee break

Session 2 Medical biofilms

Chair: Gert Bange (SYNMIKRO Marburg)

11:00 - 11:30 **Daniel Smyth**
(Cochlear Technology Centre Belgium)
Hearing implants & biofilms; in vitro and ex vivo

11:30 - 12:00

Holger Rohde
(Universitätsklinikum Hamburg)
Insights into biofilm formation in *Staphylococcus epidermidis*, a major cause of healthcare-associated infections

12:00 - 12:30

Tim Tolker-Nielsen
(University of Copenhagen)
Regulation of biofilm formation in *Pseudomonas* and *Burkholderia* species

12:30 - 14:00

Lunch break

Session 3 Molecular biology of biofilms

Chair: Anke Becker (SYNMIKRO Marburg)

14:00 - 14:30 **Hartmut Oschkinat**
(Leibniz Institute for Molecular Pharmacology, Berlin)
Structural biology of *Bacillus subtilis* biofilm formation

14:30 - 15:00

Ute Römling
(Karolinska Institute, Stockholm)
Cellulose - an extracellular matrix component of *Salmonella Typhimurium* biofilms of many talents

15:00 - 15:30

Coffee break

Session 4 Approaches for preventing biofilms

Chair: Victor Sourjik (MPI & SYNMIKRO Marburg)

15:30 - 16:00 **Joachim Tretzel**
(Doehler Corporation Darmstadt)
Biofilms in food plants- risk mitigation and hygiene management strategies

16:00 - 16:30 **Henny van der Mei**
(University of Groningen)
Bacterial responses to their adhering state

16:30 - 17:00 **Romain Briandet**
(INRA-AgroParisTech, Paris)
Biocide action in multispecies biofilms

17:00 - 17:15 **Closing remarks:**
Victor Sourjik,
MPI & SYNMIKRO Marburg