

### Organizer

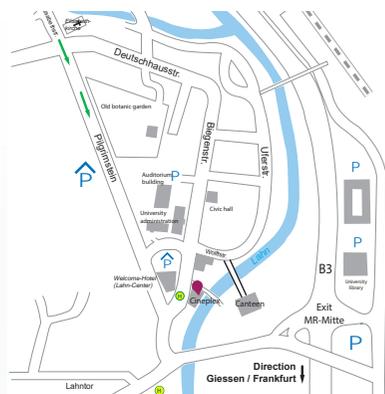
In January 2010, the Philipps-Universität Marburg and the Max Planck Institute for Terrestrial Microbiology established a Center for Synthetic Microbiology (SYNMIKRO) in Marburg, promoted by the Excellence Program of the state of Hesse (LOEWE). Today SYNMIKRO employs over 100 scientists in more than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

In close collaboration with the Hessen Trade & Invest GmbH (HTAI), SYNMIKRO organizes an annual scientific meeting focussing on the latest developments in microbiology. This symposium already has a long tradition; in 2020 will be the 10<sup>th</sup> anniversary.

Hessen Trade & Invest GmbH 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 of HTAI 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.

### 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 opposite the venue. After getting off 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).

#### Address of the nearest parking garage for navigation devices:

Pilgrimstein 17, 35037 Marburg

### Registration/Contact

Participation is free but registration is required.

Deadline for the registration is May 4<sup>th</sup>, 2020.

Please register online at:

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

#### Contact:

Philipps-Universität Marburg  
Zentrum für Synthetische Mikrobiologie (SYNMIKRO)  
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## Antibiotics, Drugs and Rock 'n' Roll: Natural Products made by Synthetic Biology



Foto: Rainer Galling

May 19<sup>th</sup>, 2020

Philipps-Universität Marburg  
Zentrum für Synthetische Mikrobiologie

Venue: Cineplex, Biegenstr. 1,  
35037 Marburg

10<sup>th</sup> Annual  
Symposium

## Antibiotics, Drugs and Rock 'n' Roll: Natural Products made by Synthetic Biology

Nature is an incredible source of biologically active molecules. More than 200,000 different natural products have been isolated from plants and microorganisms and many of them are used in modern medicine as antibiotics, anti-cancer drugs and in other applications.

However, genome sequencing has shown that we have only touched the tip of the iceberg and indicated that there is an almost infinite amount of novel compounds yet to be detected. But how can we harness this naturally existing potential? How do we find these novel compounds, and how can synthetic biology help us to produce them in a defined way and at industrial scale?

At the SYNMIKRO Symposium 2020, leading scientists from academia and industry will come together to highlight recent breakthroughs and future trends in natural product research, and discuss the potential of biologically active compounds for new therapies.

Participation in the symposium is free of charge but registration is required.

Please visit [www.synmikro.de](http://www.synmikro.de) for your online registration.

### Organizers:

Anke Becker (SYNMIKRO)  
Tobias Erb (MPI Marburg)

## Program

9:00	<b>Opening: Tobias Erb</b> (Director MPI Marburg)
9:05	<b>Welcome: Thomas Schäfer</b> (Finance Minister of Hesse)

### Session 1 Tapping into the diversity of natural products

Chair:	Tobias Erb
9:20 - 9:55	<b>Sarah E. O'Connor</b> (Max Planck Institute for Chemical Ecology, Jena) Chemistry and biology of plant natural products
9:55 - 10:30	<b>Eriko Takano</b> (Manchester Institute of Biotechnology) Harnessing synthetic biology for natural products
10:30 - 11:00	Coffee break

### Session 2 Mining microbial genomes for new compounds

Chair:	Georg Hochberg
11:00 - 11:35	<b>William W. Metcalf</b> (University of Illinois, USA) Discovery of phosphonic acid natural products by genome mining
11:35 - 12:00	<b>Nadine Ziemert</b> (Eberhard Karls University of Tübingen) Genome mining strategies in natural product research

### Session 3 Making new molecules with synthetic biology

Chair:	Hannes Link
12:00 - 12:35	<b>Yasuo Yoshikuni</b> (Joint Genome Institute, Berkeley) Multi-chassis engineering for activation of secondary metabolite biosynthetic clusters
12:35 - 13:00	<b>Martin Grininger</b> (Goethe-Universität Frankfurt) Engineering megasynthases for custom compound production
13:00 - 14:00	Lunch break
14:00 - 14:35	<b>Christian Hertweck</b> (Leibniz Institute for Natural Product Research, HKI, Jena) Unearthing the biosynthetic potential of neglected bacteria
14:35 - 15:00	<b>Hartwig Schroeder</b> (BASF Ludwigshafen) Natural product fermentation at BASF
15:00 - 15:30	Coffee break



Foto: Rainer Breittling

### Session 4 Future antibiotics: An industrial perspective

Chair:	Anke Becker
15:30 - 15:55	<b>Nick Allenby</b> (Demuris, Ltd., Newcastle, UK) Revisiting ansamycin antibiotics
15:55 - 16:20	<b>Frank Petersen</b> (Novartis, Basel, Switzerland) Natural product sciences in modern drug discovery and paths to the future
16:20 - 16:45	<b>Peter Hammann</b> (Evotec, Göttingen) Quo vadis microbial natural products in pharma industry
16:45 - 17:00	Short break

## Öffentlicher Vortrag 17:00 - 19:00 Uhr

**Grußwort von Dr. Thomas Spies**  
Oberbürgermeister der Stadt Marburg

**Tobias Erb (MPI Marburg)**  
Microbes for Future: Wie Mikroorganismen das Klima beeinflussen und uns beim Klimaschutz helfen können!



**Abschlussworte von Anke Becker (SYNMIKRO)**

**Fragerunde mit Forscherinnen und Forschern**  
Nutzen Sie die Gelegenheit mit Forscher/-innen von SYNMIKRO, Max-Planck-Institut, sowie des Vereins GASB (German Association for Synthetic Biology) ins Gespräch zu kommen. Mit freundlicher Unterstützung von GASB.