

# Microbiology of Biopolymer Formation and Degradation

## Scientific Colloquium

Dieter Jendrossek, Institute of Microbiology  
University Stuttgart, May 1999 – April 2024

Eulenhof, Stuttgart-Vaihingen, Robert-Leicht-Str. 161, April, 29.-30. 2024

### April, 29. 2024

13.00 Registration Chair  
14.00 **Opening/Welcome** D. Jendrossek/B. Christen

### Session 1: Bacterial Polyhydroxyalkanoates

D. Jendrossek

14.15 – 14.45 **Auxiliadora Prieto**, CSIC, Madrid: Whether Outside or Inside the Cell, the Bacterial Capacity to Degrade PHA

14.50 – 15.10 **Rene Handrick**, HBC Biberach: From the Mystery of PhaZ7 to the Optimization of Biopharmaceutical Production - a Journey Through the World of Applied (Life) Sciences"

15.15 – 15.35 **Stephanie Schulze**, Lab Automation Network, Tübingen: PHA Depolymerases and Carbonosomes in *R. eutropha*

15.40 – 16.00 **Manfred Zinn**, Hes.so, Sion, CH: Sustainable Production S. Obruca of PHA from CO<sub>2</sub> with *Ralstonia eutropha*

16.05 – 16.20 **Leticia Labriola**, Fibers365: PHB from Agricultural Side Streams

### 16.20 – 17.00 Coffee break

17.00 – 17.30 **Karl Forchhammer**, University Tübingen: PHB in Cyanobacteria D. Jendrossek

17.35 – 17.55 **Stanislav Obruca**, Brno University, CZE: Novel Functions of PHB in Bacteria

18.00 – 18.25 **Janina Berg**, Orgentec Diagnostika GmbH, Heidelberg ppGpp and its Connection with PHB Metabolism in *R. eutropha*

18.30 – 18.55 **Andreas Schirmer**, Genomatica, San Diego, USA: A German Microbiologist's 25-Year Journey Inside the US Biotech Industry

### 19.00 Dinner

### April 30. 2024

Session 1: Bacterial Polyhydroxyalkanoates, M. Zinn  
continued

09.00 – 9.30 **Bernd Rehm**, (online), Griffith Institute, Brisbane, Australia, From PHA Synthase to Biomedical Products

09.35 – 10.05 **George Chen**, (online), Tsinghua University, Beijing, China: Next Generation Industrial Biotechnology

### Session 2: Bacterial Organelles and Prokaryotic cell biology

A. Prieto

10.10 – 10.40 **Dirk Schüler**, University Bayreuth: How Microbes Make Organelles: What We Have Learned about Magnetosome Biosynthesis in Magnetotactic Bacteria

### 10.45 – 11.30 Coffee break

11.30– 11.55 **Daniel Pfeiffer**, University Bayreuth: Magnetic Navigation in Bacteria: Microbial cell Biology of *M. gryphiswaldense*

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April, 30., continued:

chair

**Session 3: Sustainable Products, isoprenoids and novel enzymes from bacteria**

G. Sprenger

12.00 – 12.30 **Bernhard Hauer**, Stuttgart: Versatility of Squalene Hopene Cyclases

12.35 – 13.05 **Georg Schmitt**, AGC-Biologics, Heidelberg: What EPR and UVvis Analysis Tells Us about the Function of RoxA, an Extracellular Dihaem-Dioxygenase

**13.10 – 14.30 Lunch and group photo**

**Session 3: Sustainable Products, isoprenoids and novel enzymes from bacteria**

continued

S. Nussberger

14.30 – 14.55 **Jakob Birke**, ecoSPECS GmbH, Biberach: Rubber Oxygenase RoxB *versus* Latex Clearing Protein

15.00 – 15.25 **Rodrigo Andler**, UCM Maule, Chile, Formation of functionalized oligo-isoprenoids by LcpK30.

15.30 – 15.50 **Marius Bürger**, University Stuttgart, How Polyisoprenoids Bind to the Active Site in Rubber Oxygenases.

**15.50 – 16.30 Coffee**

**Session 4: Polyphosphate in bacteria**

K. Forchhammer

16.30 – 17.00 **Lisa Racki**, (online), Scripps Research Institute, USA:

Polyphosphate Condensates as Drivers and Passengers in Bacterial Chromatin Dynamics

17.05 – 17.35 **Jennie Hildenbrand**, University Stuttgart, Unexpected Properties of PolyP Kinases in *R. eutropha* and *A. tumefaciens*

**Session 5: USTUTT-IMB: Past and Future Contributions to Teaching and Research in Basic and Applied Microbiology**

B. Christen/G. Sprenger

17.40 – 18.00 **Reinhard Braaz**, Roche, Penzberg/**Khaled Abu-Aisha**, GUC, Cairo  
University Stuttgart and German University at Cairo

18.05 – 18.25 **Georg Sprenger**, University Stuttgart: Institute of Microbiology 2002-2022

18.30 – 18.50 **Beat Christen**, University Stuttgart: The Future of the Institute of Microbiology

19.00 **Dieter Jendrossek**, Closing

20.00 Dinner in the Pullmann Hotel, Vollmüllerstr. 5, Stuttgart Vaihingen

The program can be followed online via Webex using the following link:

April, 29.: <https://unistuttgart.webex.com/unistuttgart/j.php?MTID=m327f6e0174762a05653561370ba407e4>

April, 30.: <https://unistuttgart.webex.com/unistuttgart/j.php?MTID=m6649fc2eaa28e7d768c8c012d850c9c7>



April, 29



April, 30.

A few on-site places are available upon request: In case of interest, please contact Dieter Jendrossek ([dieter.jendrossek@imb.uni-stuttgart.de](mailto:dieter.jendrossek@imb.uni-stuttgart.de)) before April, 19. 2024.