

Nucleotide Second Messenger Signaling in Bacteria

SPP 1879 Kick-off Meeting

Friday Morning (September 16th 9:00 – 13:00)

08:30 – 09:00 Registration / Poster set-up / Get together

09:00 – 09:10 Regine Hengge: Welcome and Introduction

Session 1. ppGpp

Discussion Leader: **Susanne Häussler** (Helmholtz Centre for Infection Research, Braunschweig)

09:10 – 09:35 **Daniel Wilson** (LMU München):

The stringent factor RelA adopts an open conformation on the ribosome to stimulate ppGpp synthesis

09:35 – 10:00 **Franz Narberhaus** (Ruhr-Universität Bochum):

The role of (p)ppGpp in conditional proteolysis in *Escherichia coli*

10:00 – 10:25 **Kürşad Turgay** (Leibniz Universität Hannover):

Curbing protein synthesis is important for the concerted heat shock response of *Bacillus subtilis*

10:25 – 10:50 **Gert Bange** (Philipps-Universität Marburg):

Towards a complete biochemical and structural understanding of the alarmone metabolism of *Bacillus subtilis*

11:00 – 11:30 Coffee Break

Session 2. Molecules & methods

Discussion Leader: **Gert Bange** (Philipps-Universität Marburg)

11:30 – 11:55 **Harald Schwalbe** (Goethe-Universität Frankfurt):

NMR-spectroscopic investigation of the conformational mechanisms of secondary messenger-sensing riboswitches

11:55 – 12:20 **Volkhard Kaever** (Medizinische Hochschule Hannover):

Appropriate sample preparation is indispensable for accurate quantitation of bacterial signaling molecules by mass spectrometry

Session 3. cAMP & cGMP

Discussion Leader: **Gert Bange** (Philipps-Universität Marburg)

12:20 – 12:45 **Elizaveta Krol** (Philipps-Universität-Marburg):

Cyclic mononucleotide signaling in the symbiotic alpha-proteobacterium *Sinorhizobium meliloti*

13:00 – 14:00 Lunch

14:00 – 16:00 Poster Session

15:30 – 16:30 Coffee

Session 3. cAMP & cGMP (continued)

Discussion Leader: **Franz Narberhaus** (Ruhr-Universität Bochum)

16:30 – 16:55 **Victor Sourjik** (Max Planck Institute for Terrestrial Microbiology, Marburg):

Intracellular potassium controls CRP response in *Escherichia coli*

Session 4. c-di-AMP

Discussion Leader: **Franz Narberhaus** (Ruhr-Universität Bochum)

16:55 – 17:20 **Jörg Stülke** (Georg-August-Universität Göttingen):

Cyclic-di-AMP: an essential second messenger that reports potassium availability and controls potassium homeostasis in *Bacillus subtilis*

- 17:20 – 17:45 **Fabian Commichau** (Georg-August-Universität Göttingen):
Role of the essential signalling molecule cyclic di-AMP in maintaining the protective cell envelope in *Listeria monocytogenes*
- 17:45 – 18:10 **Gert Seibold** (Universität Ulm):
The second messenger c-di-AMP controls potassium uptake in *Corynebacterium glutamicum* by binding to the channel CglK
- 18:10 – 18:35 **Natalia Tschowri** (Humboldt-Universität zu Berlin):
Cyclic dinucleotide signalling in *Streptomyces* differentiation and stress survival
- 19:00 Dinner / Get together

Saturday Morning (September 17th 9:00 – 13:00)

Session 5. c-di-GMP

Discussion Leader: **Jörg Stülke** (Georg-August-Universität Göttingen)

- 09:00 – 09:25 **Urs Jenal** (Biocentre Basel):
Surface-mediated activation of *Pseudomonas aeruginosa* type IV pili through a novel c-di-GMP effector protein
- 09:25 – 09:50 **Nicole Frankenberg-Dinkel** (Universität Kaiserslautern):
Mechanism of NO-induced biofilm dispersal in *Pseudomonas aeruginosa*
- 09:50 – 10:15 **Susanne Häussler** (Helmholtz Centre for Infection Research, Braunschweig):
Transcriptional profiling of c-di-GMP signalling in *Pseudomonas aeruginosa*
- 10:15 – 10:40 **Sandra Schwarz** (Universität Tübingen):
Oxygen-dependent regulation of a diguanylate cyclase lacking canonical sensory and regulatory domains in *Pseudomonas aeruginosa*

10:45 – 11:15 Coffee break

Discussion Leader: **Urs Jenal** (Biocentre Basel)

- 11:15 – 11:40 **Regine Hengge** (Humboldt-Universität zu Berlin):
Local c-di-GMP signaling in the control of cellulose biosynthesis in *Escherichia coli*
- 11:40 – 12:05 **Kai Thormann** (Justus-Liebig-Universität Gießen):
Role of the phosphodiesterase PdeB in localized c-di-GMP regulation
- 12:05 – 12:30 **Dorota Skotnicka** (Max Planck Institute for Terrestrial Microbiology, Marburg):
Regulation of development in *Myxococcus xanthus* by the second messenger c-di-GMP
- 12:30 – 12:55 **Annegret Wilde** (Albert-Ludwigs-Universität Freiburg):
A light-triggered behavioural switch in cyanobacterial motility
- 12:55 – 13:00 Farewell and end of the Meeting