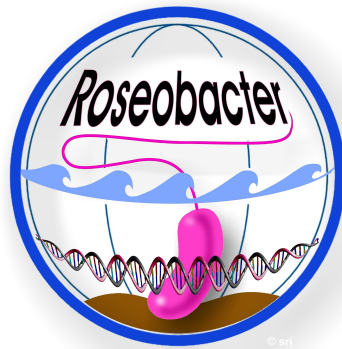


**Transregional Collaborative Research Center (TRR 51)**

**Ecology, Physiology and Molecular Biology of  
the *Roseobacter* clade:  
Towards a Systems Biology Understanding of a  
Globally Important Clade of Marine Bacteria**



Kick-off Symposium 13 – 15 June 2010

Hanse Wissenschaftskolleg, Delmenhorst, Germany



Hanse-Wissenschaftskolleg  
Institute for Advanced Study

Funded by



## Program

### Sunday, 13 June

18:00 hours Informal get together of the participants

### Monday, 14 June

09:00-09:25 Welcome and Introduction

Jürgen Rullkoetter, Director of ICBM

Meinhard Simon:

Short overview of TRR 51

**Session 1: Ecology and Biogeography** (chair: Meinhard Simon)

09:25-10:10 Jed Fuhrman, Joshua Steele:

Roseobacters in the context of the broader microbial community

10:10-10:55 Alison Buchan:

*Roseobacter* biogeography: Using Q-PCR to examine distributions of phylotypes poorly represented in culture

10:55 11:25 Coffee break

11:25-11:30 Reto Weiler, rector of HWK: Welcome address

11:30-12:00 Matthias Labrenz:

Diversity and distribution of *Roseobacter* clade bacteria in the Baltic Sea and East Atlantic Ocean

12:00-12:20 Sarah Hahnke, Helge-Ansgar Giebel, Martin Sperling, Helena Osterholz, Meinhard Simon, Thorsten Brinkhoff:

Physiology and biogeography of phytoplankton-associated roseobacters

12:20-12:40 Helge-Ansgar Giebel, Daniela Kalhoefer, Sonja Voget, Thorsten Brinkhoff, Meinhard Simon:

The *Roseobacter* RCA cluster – its occurrence, diversity and potential significance

12:40-13:00 Judith Lucas, Heribert Cypionka, Bert Engelen:

Exploring the *Roseobacter* clade in marine sediments

13:00-14:20 Lunch break

## Session 2 **Photoheterotrophy and stress response**

(chair: Heribert Cypionka)

14:20-15:05 Michal Koblížek, Vladimíra Moulisová, Ekaterina Boldareva, Miroslav Oborník  
Paul G. Falkowski:

Regressive evolution of photosynthesis in marine roseobacters

15:05-15:35 Gabriele Klug:

The role of small non-coding RNAs in the oxidative stress response of anaerobic photosynthetic bacteria

15:35-16:05 Erhard Bremer:

Ectoines: effective microbial stress protectants and useful nutrients

16:05-16:30 Coffee break

16:30-16:50 Isam Haddad, Dieter Jahn, Richard Münch:

Dynamic chlorophyll measurement in *Dinoroseobacter shibae*

16:50-17:10 Jürgen Tomasch, Regina Gohl, Boyke Bunk, Richard Münch,  
Irene Wagner-Döbler:

Transcriptional response of the photoheterotrophic marine bacterium *Dinoroseobacter shibae* to light exposure

17:10-17:30 Ekaterina Boldareva, Michal Koblížek:

How did photosynthetic bacteria of Rhodobacterales adapt to the aerobic environment?

## Session 3 **Proteomics, Metabolomics and Fluxomics with Model Organisms**

(chair: Dieter Jahn)

17:30-17:50 Hajo Zech, Lars Wöhlbrand, Sebastian Thole, Kerstin Schreiber, Stefan Schulz,  
Dietmar Schomburg, Ralf Rabus:

Towards systems biology with *Phaeobacter gallaeciensis*, a member of the *Roseobacter*-clade

17:50-18:10 Kerstin Schreiber, René Rex, Dietmar Schomburg:

Metabolome analysis and modelling of the metabolism of *Dinoroseobacter shibae* and *Phaeobacter gallaeciensis*

18:10-18:30 Christoph Bolten, Ann-Kathrin Bartsch, Judith Becker, Christoph Wittmann:

Metabolic network analysis of the *Roseobacter* clade: Pathways and pathway fluxes in *Dinoroseobacter shibae* and *Phaeobacter gallaeciensis*

19:00 Symposium Banquet

## Tuesday, 15 June

### **Session 4 Interactions of roseobacters with other organisms** (chair: Irene Wagner-Döbler)

09:00-09:45 Torsten Thomas

Climate change, marine diseases and Roseobacters - the bleaching disease of the marine macro-alga *Delisea pulchra*

09:45-10:30 Feng Cheng:

Phage and phage like structures associated with roseobacters: case studies based on four marine roseobacters

10:30-10:50 Ina Buchholz, Regina Gohl, Irene Wagner-Döbler:

The production of autoinducer signals of *D. shibae* DFL-12<sup>T</sup> during cocultivation with its algal host

10:50-11:20 Coffee break

### **Session 5 Phylogenomics** (chair: Jed Fuhrman)

11:20-11:40 Carmen Scheuner, Markus Göker, Hans-Peter Klenk:

En route to a genome-based phylogeny of the *Roseobacter* clade?

11:40-12:00 Sonja Voget, John Vollmers, Thorsten Brinkhoff, Meinhard Simon, Rolf Daniel:

Poles apart: genome characteristics of *Octadecabacter arcticus* and *antarcticus* and first insights to Candidatus *Planktomarina temperata*

12:00-12:20 Jörn Petersen, Silke Pradella:

The intriguing abundance of plasmids in the *Roseobacter* clade - A novel approach for their classification

12:20-14:00 Lunch break

### **Session 6 Genetics and physiology of organic sulfur compounds** (chair Stefan Schulz)

14:00-14:45 Andrew Johnston:

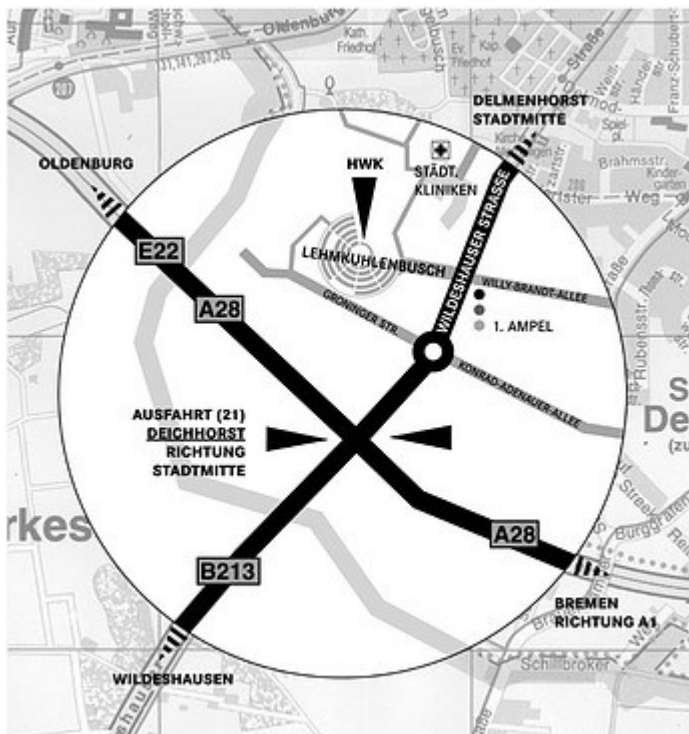
How marine bacteria make dimethyl sulfide – a lesson in genetic, biochemical and functional diversity

- 14:45-15:05 Nelson L Brock, Jeroen S Dickschat:  
Pathways and substrate specificity of DMSP catabolism in marine bacteria of the *Roseobacter* clade
- 15:05-15:25 Martine Berger, Heiko Liesegang, Meinhard Simon, Thorsten Brinkhoff:  
Enzyme with homology to archaeal indolepyruvate oxidoreductase (IOR) is involved in tropodithietic acid (TDA) production and phenylalanine metabolism of *Phaeobacter gallaeciensis*
- 15:25-16:00 Coffee break
- 16:00-17:00 Final Discussion and Conclusion
- 17:00 End of the Symposium

# Travel Directions to the Hanse Wissenschaftskolleg in Delmenhorst

## By Car

Take the **A 28** from Bremen or Oldenburg to Delmenhorst, exit **Delmenhorst-Deichhorst**, then take the **B 213** towards **Stadtmitte**; 200 meters after the roundabout and just before the first (pedestrian) traffic light turn left into “Lehmkuhlenbusch”.



General map of the Oldenburg – Delmenhorst – Bremen region

## [Google Maps](#)

## By Train

From Bremen Central Station take the train to Oldenburg / Emden. Delmenhorst is the first station of the Inter City and Regional Express trains. From the Delmenhorst railway station the HWK can be reached easily by taxi in seven to ten minutes. Trains between Delmenhorst and Bremen take ten to fifteen minutes and between Oldenburg and Delmenhorst twenty to thirty minutes.

<http://www.bahn.de>

## **By Bus**

It takes about fifteen minutes from Delmenhorst railway station to the “Hanse-Wissenschaftskolleg” bus stop which is served by bus routes **201** or **206**. In the evenings, on Sundays and holidays, this route is operated by route number **216**.

<http://www.delbus.de>

## **By Air**

The closest airport is in Bremen. From there, depending on traffic, the HWK can be reached by taxi in twenty to thirty minutes.

<http://www.airport-bremen.de>

There is also a convenient connection by street car (No 6, 15 min) to Bremen Central Station and further by train to Delmenhorst (15 min., direction Oldenburg / Emden).