

## Microbial Interactions in Marine Systems (MIMAS)

6 – 8 July 2011, Alfred-Krupp-Wissenschaftskolleg, Greifswald, Germany

This conference, which was attended by Dr. Johanna Wesnigk from EMPA, one of the partners in the [MG4U](#) consortium, **focussed on the integration of marine microbial diversity research with state-of-the-art functional genomics**. Guest lecturers from the UK, from France and from the United States of America complemented the large group of German participants from major universities and research institutes.

Objectives of the conference were:

1. Determination of the ecophysiological potential of marine microorganisms in specific marine habitats through environmental genomics
2. Physiological analysis of complex marine microbial assemblages through metatranscriptome and metaproteome analyses
3. Analysis of microbially-mediated ecosystem functions and specific adaptation strategies of marine model organisms
4. Exploration of new natural compounds from marine microorganisms

The results of applying advanced molecular biological methods to further the detailed elucidation of important ecosystem functions mediated by microorganisms were presented and discussed.

One session focussed on **applied marine genomics** & natural products and on metabolomics & natural products. There were also sessions on environmental genomics, including half a day on the MIMAS project results. In addition symbioses and genomics of marine model microorganisms were covered in depth, and a final session highlighted metaproteomics.

A core part consisted of presentations of the results of a three-year project called [MIMAS](#), funded by the German Ministry for Research and Education (BMBF) to determine the theoretical (meta)genomic potential and the identification of metatranscriptomes and metaproteomes of marine microbial assemblages as expressed *in situ*. Two SMEs are partners within MIMAS, [Ribocon](#) and [Decodon GmbH](#).

The newly generated knowledge has enormous biotechnological potential. On the basis of detailed functional genome analyses of cultivable model bacteria, new environmentally relevant metabolic pathways and adaptation strategies were presented. Some are of high biotechnological interest, especially for the discovery of new natural compounds from marine microorganisms.

The MG4U representative established good contacts with the top-league researchers and with several industry representatives. A regional network on marine biotechnology for the Baltic Sea regional states is forming (based on the running Interreg project [Submariner](#)), in which Dr. Wesnigk was invited to represent MG4U as well as regional interests of the German North-West region. There was also interest to establish links with two emerging initiatives:

- Marine Biotech Era-Net via its German member organisation [Norgenta](#); and
- an integrated project called [MicroB3](#) in which CNRS Roscoff, University College Cork and EMPA are partners, and of which Jacobs University Bremen is the coordinator.

Done by Dr. Johanna Wesnigk, 1 August 2011

Revised on 18 September