

# **MARINE MICROBES: DIVERSITY AND INTERACTIONS**

3<sup>rd</sup> Gordon Research Conference on Marine Microbes

**13-18 July 2008**

**Il Ciocco, Italy,**

Chairs: Carlos Pedrós-Alió & Laure Guillou

Marine microbes are very abundant and diverse. They play significant roles in all element cycles, both quantitatively and qualitatively. However, little is known about these microbes, as illustrated by the continuous series of surprising discoveries over the last few years. This conference will focus on how these microbes interact: with other cells of their own species, with other microbes and with large living beings, from biofilms to symbionts. Another important topic will be the exploration of marine microbial diversity based on the recently developed sequencing approaches and on efforts to obtain marine organisms in pure cultures.

This conference will be the third in the Marine Microbes series. We hope it will contribute to enlarge the community of marine microbiologists and help in pointing the future directions of research even more than the two previous meetings.

## **PRELIMINARY PROGRAM**

### **SUNDAY**

#### **Microbial oceanography**

Discussion leader: David L. Kirchman, University of Delaware, DE, USA

**Paul G. Falkowski**, Rutgers University, NJ, USA

How frozen metabolic accidents constrain the core evolution of microbes

**Simonetta Gribaldo**, Institut Pasteur, Paris, France

The hidden viral reservoir

### **MONDAY**

#### **Diversity 1: diversity at large scales**

Discussion leader: TBA

**SangHoon Lee**, Korea Ocean Research and Development Institute, Korea

Frozen genes from the past in Antarctic glacier

**Mitchell L. Sogin**, Josephine Bay Paul Center, MBL, Woods Hole, MA, USA

Population structure of microbial communities in the Worlds Oceans

**Douglas B. Rusch**, J Craig Venter Institute, MD, USA

The Global Global Ocean Survey

## **Interactions at the global scale**

Discussion leader: TBA

**Matthew B. Sullivan**, Massachusetts Institute of Technology, MA, USA  
How viruses manipulate microbial biogeochemical cycles in the global oceans

**Michael Steinke**, University of Essex, United Kingdom  
Grazing-induced production of biogenic gases and their possible role in marine trophic interactions

TUESDAY

## **Interactions at the single cell level**

Discussion leader: TBA

**James G. Mitchell**, Flinders University, Adelaide, Australia  
Ambush in the ocean: the role of chemotaxis in nutrient exchange between individual plankton

**Hans-Peter Grossart**, Limnologie Geschichteter Seen, Neuglobsow Stechlin, Germany  
Bacterial interactions upon attachment to particles

**Roberto Kolter**, Harvard Medical School, MA, USA  
Chemical mediators of interspecies interactions

## **Diversity 2: populations and dynamics**

Discussion leader: TBA

**Laura A. Katz**, Smith College, USA  
Phylogeography of coastal ciliates: estimates of biodiversity and effective population sizes

**Birgitta Bergman**, University of Stockholm, Sweden  
Cellular dynamics during diazocyte development in *Trichodesmium* IMS101

WEDNESDAY

## **Antagonistic interactions**

Discussion leader: TBA

**Esther Garcés**, IRTA, Barcelona, Spain  
Parasitism and sex in dinoflagellates

**Emily C. Roberts**, Swansea University, UK  
Biochemical prey recognition by planktonic protozoa (Title to be confirmed)

**Edna Granéli**, Kalmar University, Sweden

Connection between microalgae toxicity: allelopathy and mixotrophy

**Mutualistic interactions 1: microbes with microbes**

Discussion leader: TBA

**Alban Ramette**, Max Planck Institute of Marine Microbiology, Bremen, Germany  
Ecology of microbial consortia

**Rebecca J. Gast**, Woods Hole Oceanographic Institution, Woods Hole, MA, USA  
Pathogenic and non-pathogenic endosymbionts of amoebae

THURSDAY

**Diversity 3: across species borders**

Discussion leader: TBA

**Marina Montresor**, Stazione Zoologica 'A. Dohrn', Napoli, Italy  
Diatom life cycles: insights and challenges

**Martin F. Polz**, Massachusetts Institute of Technology, MA, USA  
Microdiversity of marine bacteria (Title to be confirmed)

**Åke Hagström**, Kalmar University, Sweden  
Pathogenicity islands: a link between marine bacteria and human pathogens?

**Mutualistic interactions 2: microbes with animals**

Discussion leader: TBA

**Nicole Dubillier**, Max Planck Institute of Marine Microbiology, Bremen, Germany  
Chemosynthetic symbionts of marine invertebrates: from metagenomics to the environment

**Michael Wagner**, University of Vienna, Vienna, Austria  
Diversity and ecophysiology of microorganisms within sponges

Morning		Diversity large scales	Interactions at the single cell level	Antagonism	Around species borders
		Sogin Rusch Lee	Mitchell Grossart Kolter	Garcés Roberts Granéli	Montresor Polz Hagstrom
Evening	Microbial oceanography	Interactions and global scales	Diversity 2: population & dynamics	Mutualism 1: microbes with microbes	Mutualism 2: microbe with animals
	Falkowski Gribaldo	Steinke Sullivan	Katz Bergman	Ramette Gast	Dubillier Wagner