

SAME15 Scientific program

Sunday 3.9.2017.

14:00 - 17:00 **Registration opens**

17:00 - 17:30 **SAME Welcome** – Sandi Orlić, representative of the University and Ministry

17:30 - 18:00 **Felix Baerlocher**: Fungi - neglected key players in aquatic ecology (IL)

18:00 - 18:30 **Tanja Woyke**: Targeting taxonomic 'blind spots' & functional traits via single-cell approaches (IL)

18:30 - 21:00 - **Welcome party**

Monday 4.9.2017.

Chair and moderator: Assaf Vardi

8:45 - 9:15 **Matthew Sullivan**: The global ocean virome: Re-imagining patterns, processes and paradigms on the high seas (IL)

Session 1: Viruses: understanding the power of the smaller

9:15 **Ian Hewson**: Come and go as you please! Widespread endemism and transiency in echinoderm-associated picornaviruses

9:30 **Rohit Ghai**: A thousand ways to kill: Genomes of freshwater phages infecting major microbial groups in freshwater habitats

9:45 **Sheila Roitman**: Cyanophage-encoding lipid desaturases: Fiddling with cyanobacterial membranes

10:00 **Sophia Zborowsky**: Resistance Strategies Differ Against Generalist and Specialist Cyanophages

10:15 **Daniela Schatz**: Communication via extracellular vesicles during host-virus interactions in the ocean

10:30 **Anna Szekely**: The effect of viruses during bacterial community coalescence: no viruses are as bad as your own and not everyone has the same immunity

10:45 - 11:15 - **Coffee break**

11:15 - 11:45 **Rudolf Amann**: Visualizing bacterioplankton succession and bacterial polysaccharide utilization in a coastal sea (IL)

Session 2: Microbial behavior in aquatic systems: from individual cells to communities

11:45 **Bennett Lambert**: Chemotaxis-driven interactions between microorganisms revealed through in situ microfluidics.

12:00 **Clara Ruiz-González**: Individual abundance distributions unveil the different lifestyles of prokaryotes inhabiting the global surface ocean

12:15 **Dina Spungin**: Programmed cell death in diazotrophs and the fate of C and N in the Southwestern Pacific Ocean

12:30 -14:00 - **Lunch break**

Chair and moderator: Gianluca Corno

14:00 – 14:30 **Thorsten Stoeck** – Environmental DNA barcoding of benthic protists is a strong tool for environmental impact assessment of salmon farming (IL)

Session 2: Microbial behavior in aquatic systems: from individual cells to communities

14:30 **Dirren Sebastian:** Grazing of *Nuclearia thermophila* and *Nuclearia delicatula* (Nucleariidae, Opisthokonta) on the toxic cyanobacterium *Planktothrix rubescens*

14:45 **Leon Dlugosch:** Roseobacters are the most active cell-proliferating bacterioplankton group during early summer in the North Sea

15:00 **Magdalena J. Mayr:** Methanotrophs in stratified Swiss lakes: First evidence of *C. Methylomirabilis oxyfera*-like bacteria and ecological differentiation of aerobic methanotrophs

15.15 **Marco Giardina:** Imaging and quantifying Nitrogen uptake by phytoplankton-associated heterotrophic bacteria

15.30 **Mireia Mestre:** Vertical connectivity in the ocean microbiome: Sinking particles as dispersal vectors

15.45 **Ramiro Logares:** Evidence of different community structuring patterns in eukaryotic vs. prokaryotic picoplankton inhabiting the sunlit global ocean

16:00 - 16:30 - **Coffee break**

Session 2: Microbial behavior in aquatic systems: from individual cells to communities

17:00 **Sophie Crevecoeur:** Bacterial community assembly across a steep environmental gradient in a small water continuum

17.15 **Trista Vick-Majors:** A functional perspective on microbial community assembly along an aquatic continuum

17:30 - 19:00 - **Poster section**

20:00 - 22:00 - **Night in the museum**

Tuesday 5.9.2017.

Chair and moderator: Stefan Bertilsson

9:00 - 9:30 - **Emilio Casamayor: Microbial ecology in alpine lakes (IL)**

Session 8: Making a living of what is available: Microbial chemoautotrophic metabolisms in aquatic environments

9:30 **Alfredier Albin:** Pathways of carbon dioxide fixation used by nitrifiers in lakes

9:45 **Barbara Bayer:** Comparative proteomics of three *Nitrosopumilus* species and their interaction with a heterotrophic Alphaproteobacterium

- 10:00 **Massimiliano Molari:** Expanding the ecological niche of the genus *Sulfurimonas*
- 10:15 **Petra Pjevac:** Discriminating and quantifying inorganic carbon fixation by green and purple sulfur bacteria in a stratified seawater lake

10:30 - 11:00 - **Coffee break**

11:00 - 11:30 **Victoria Orphan:** Specific partnerships and syntrophic mechanisms between methane oxidizing archaea and sulfate-reducing bacteria (IL)

Session 4: Microbial metabolic networks in biogeochemical cycles: Who does what? Strategies/success stories in linking (microbial) diversity to function"

11:30 **Alexander Bochdansky:** Shift of community composition towards eukaryotic microbes on deep-sea marine snow

11:45 **Christin Koch:** Searching the ecological niche of electroactive microorganisms

12:00 **Clara Martinez Perez:** A new player in the Marine N cycle? Genome and physiology of a new diazotroph isolate from the Peruvian oxygen minimum zone

12:15 - 14:00 - **Lunch break**

Chair and moderator: Gian Marco Luna

14:00 - 14:30 **Thomas Mock:** The Evolution and Significance of Diverged Alleles in Diatoms (IL)

Session 4: Microbial metabolic networks in biogeochemical cycles: Who does what? Strategies/success stories in linking (microbial) diversity to function"

14:30 **Clemens Krawautz:** In or out - Structure and function of submersed methylotrophic biofilms vs. subaerial snottites in a iodine-rich mineral spring cave

14:45 **Eva Ortega Retuerta:** A snapshot of prokaryote community structure in the Mediterranean Sea reveals high spatial structuring by depth and basin

15:00 **Kang Soo Lee:** Raman-activated sorting of isotopically labeled microbial cells in a microfluidic device

15:15 **Laura Gomez Consarnau:** Mosaic patterns of B-vitamin metabolism in a natural marine microbial community

15:30 **Laura Zeugner:** Visualization of two glycoside hydrolase genes of family 92 in Formosa strain B with direct geneFISH and super-resolution microscopy

15:45 **Luca Zoccarato:** Whole genome comparative analyses uncover gene modules and functional traits potentially involved in host-bacteria interactions

16:00 - 16:30 - **Coffee break**

16:30 **Maliheh Mehrshad:** The enigmatic SAR202 cluster up close: shedding light on a globally distributed dark ocean lineage involved in sulfur cycling

16:45 **Stefan Bertilsson:** Nature and control of biological mercury methylation in lakes

17:00 - 19:00 - **Poster section**

Wednesday 6.9.2017.

Chair and moderator: Meinhard Simon

8:30 - 9:00 **Christa Schlepper:** Ecological patterns and functional diversity of marine thaumarchaeota (IL)

Session 5: Microbes in future aquatic environments (Response of aquatic microbial communities to environmental changes)

9:00 **Eva Teira:** Size-fractionated microbial plankton B1 and B12 vitamin uptake and kinetic parameters in a coastal upwelling system

9:15 **Eyal Rahav:** Sewage outburst triggers Trichodesmium bloom in the coastal southeastern Mediterranean Sea

9:30 **Gianluca Corno:** Modulate response of the microbiome and resistome of natural bacterial communities exposed to treated wastewater effluents

9:45 **Giulia Gionchetta:** Storms and hyporheic humidity as key factors for resistance of streambed microbial heterotrophs to drought

10:00 **Kasia Piwosz:** Throughout insight into bacterial growth rates: getting high resolution data

10:15 **Malin Olofsson:** Has Skeletonema marinoi adapted to increased eutrophication during the last century?

10:30 - 11:00 - **Coffee break**

11:00 - 21:00 - **Free program**

Thursday 7.9.2017.

Chair and moderator: Matthew Sullivan

8:45 - 9:15 **Tom Battin:** Biofilm ecology in stream ecosystems (IL)

Session 7: Handling the flow: from small scale turbulence to stream and river microbiology – Stream microbiology

9:15 **David Scheidweiler:** Unveiling biofilm structure and function in porous environments mimicking the hyporheic zone

9:30 **Robert Niederdorfer:** Ecological strategies and metabolic trade-offs of complex environmental biofilms

Session 2: Microbial behavior in aquatic systems: from individual cells to communities

9:45 **Vojtech Kasalicky:** Environmental factors influencing the freshwater aerobic anoxygenic photoheterotrophs

10:00 **Weizhou Zhao:** A tale of two ends: Dispersal of horizontally acquired genes in fresh and saltwater *Actinobacteria* into the brackish waters of the Baltic Sea

10:15 **Matthias Hoetzing:** Microevolution of a pelagic Polynucleobacter species

10:30 - 11:00 - **Coffee break**

Session 5: Microbes in future aquatic environments (Response of aquatic microbial communities to environmental changes)

- 11:00 **Allison R Rober**: Ecological consequences of warming on the toxicity of cyanobacteria blooms
- 11:15 **María Arias-Andrés**: Microplastics particles increase antibiotic resistance transfer in aquatic ecosystems
- 11:30 **Sergi Compte**: Assessing the impact of metal contamination over sediment-dwelling Archaea from pristine high-mountain lakes
- 11:45 **Raven Bier**: Effects of environmental fluctuations on the temporal dynamics of community assembly mechanisms
- 12:00 **Cecilia Alonso**: Bacterioplankton community composition as environmental indicator
- 12:15 **Angel Franco**: Microplastics act as new surfaces for the development of non-native bacterial communities in marine systems.

12:30 - 14:00 - **Lunch break**

Chair and moderator: Michaela Salcher

14:00 - 14:30 **Jillian Petersen**: Marine symbioses: How animals gain new functions by cooperation with microbes (IL)

Session 6: Symbiotic interactions in the aquatic environment

- 14:30 **Ramsy Agha**: Chytrid parasitism facilitates trophic transfer between bloom-forming cyanobacteria and zooplankton
- 14:45 **Oliver Jäckle**: Physiological showcasing of an alphaproteobacterial SOX symbiont – *Ca.Riegeria* sp. ‘standrea’
- 15:00 **Gianna Pitsch**: The green *Tetrahymena utriculariae* n. sp. (Ciliophora, Oligohymenophorea) with its endosymbiotic algae (*Micractinium* sp.), living in traps of a carnivorous aquatic plant
- 15:15 **Desponia Sousoni**: One-to- one interactions in marine microbes: Phototroph vs. Heterotroph

15:30 - 16:00 - **Coffee break**

16:00 - 16:30 **Assaf Vardi**: Mapping the virus-induced metabolic seascape during algal blooms in the ocean (IL)

16:30 - 18:30 – **Poster section**

20:00 - 04:00 - **Gala Dinner**

Friday 8.9.2017.

Chair and moderator: Cecilia Alonso

9:00 - 9:30 **Gurvan Michel:** Habitat and taxon as driving forces of carbohydrate catabolism in marine heterotrophic bacteria: a focus on the model algae-associated bacterium *Zobellia galactanivorans* DsijT (IL)

Session 3: Model organisms in aquatic microbiology

9:30 **Veronika Will:** Proteomics analysis of *Marinobacter adhaerens* during its interaction with diatoms

9:45 **Michaela Salcher:** 'Ca. *Methylopusillus planktonicus*': highly abundant freshwater methylophs as models for genome-streamlining in planktonic microbes

10:00 **Matthias Wietz:** Succession of proteomic, transcriptomic and exometabolomic signatures in *Alteromonas macleodii* degrading a mix of macroalgal polysaccharides

10:15 **Lea Weinisch:** *Schmidingerothrix salinarum* - an ideal model organism to investigate haloadaptations in heterotrophic protists

10:30 **Danny Ionescu:** Community-like genome in single cells of *Achromatium* sp.

10:45-11:15 - **Coffee break**

11:15 - 11:45 **Annette Engel:** Microbial roles in aquatic karst ecosystems (IL)

11:45 - 12:00 - **Final remarks**

12:00 - **Closing of the congress**