

Student Minisymposium on
DISCOVERIES IN MICROBIAL ECOLOGY

A one-day Symposium offered by the Students of the International Course on the
 “Ecology and Diversity of marine Microorganisms (ECODIM VII)”

Saturday, January 21, 2012

Lecture Room at ECIM, Las Cruces

Guests are welcome

Symposium Program - Paper Presentations

(Copies of the papers are available in the shared course folder in OLAT)

08.30 **Introduction**

Kurt Hanselmann
 ETH Zürich

Session 1: On the Role of Viruses in the Environment - Conveners: Felipe **Docmac** and Claudia **Elizondo**

08.40	Comparative metagenomics of microbial traits within oceanic viral communities	Itai Sharon et al. 2011. The ISME Journal 5, 1178–1190	Adriana Lopes Santos Federal University of Rio de Janeiro, Brasil
09.10	Marine Viruses Exploit Their Host’s Two-Component Regulatory System in Response to Resource Limitation	Qinglu Zeng and Sallie W. Chisholm, 2012. Current Biology, 1-8, doi:10.1016/j.cub.2011.11.055	Carlos Henríquez Laboratorio de Microbiología Marina P.Universidad Católica de Chile

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| 09.40 | Viral infections stimulate the metabolism and shape prokaryotic assemblages in submarine mud volcanoes | Cinzia Corinaldesi et al. 2011. The ISME Journal 1 - 10 | Silvia Narváez
Industrial Microbiology,
Instituto de investigaciones marinas – INVEMAR Colombia |
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10.10 **Coffee Break****Session 2: Learning from „...omics“ - Conveners: Yolaine Delgado and Alvaro M Plominsky**

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| 10.30 | Genome dynamics in a natural archaeal population | Eric E. Allen et al. 2007. PNAS, 104,1883–1888 | Fernando Sorroche
Biological Sciences,
Universidad Nacional de Río Cuarto, Argentina |
| 11.00 | A Molecular and Co-Evolutionary Context for Grazer Induced Toxin Production in <i>Alexandrium tamarense</i> | Sylke Wohlrab. et al. 2009. PLoS One Volume 5-11, e15039 | Florencia Bertoglio
Aquatic Microbial Ecology, Universidad de la República, Uruguay |
| 11.30 | Genomic insights to SAR86, an abundant and uncultivated marine bacterial lineage | Chris L Dupont et al. 2011. The ISME Journal, 1–14 | Marcia Astorga
Biological Sciences,
Universidad de Concepción, Chile |
| 12.00 | Globally Distributed Uncultivated Oceanic N ₂ -Fixing Cyanobacteria Lack Oxygenic Photosystem II | Jonathan P. Zehr et al. 2008. Science 322, 1110-1112 | María Lorena González
Oceanography,
Universidad de Concepción, Chile |

12.30 **Lunch break**

Session 3: Ecological Application of Genomics - Conveners: María Lorena **González** and Marcia **Astorga**

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| 13.30 | Environmental proteomics of microbial plankton in a highly productive coastal upwelling system | Sarah M Sowell et al. 2011. The ISME Journal 5, 856–865 | Marine Blanchet
Biogeochemistry and Microbiology, Université Pierre et Marie Curie, France |
| 14.00 | Variability of natural hypoxia and methane in a coastal upwelling system: Oceanic physics or shelf biology? | P. M. S. Monteiro et al. 2006. Geophysical Research Letters, 33, L16614, doi:10.1029 | María Jesús Gálvez
Marine Biology, Universidad de Concepción, Chile |
| 14.30 | Potential for Chemolithoautotrophy Among Ubiquitous Bacteria Lineages in the Dark Ocean | Brandon K. Swan et al. 2011. Science 333, 1296-1300 | Priscila Ikeda Ushimaru
Biotechnology (Environmental Microbiology), University of São Paulo (USP), Brasil |
| 15.00 | Using the <i>Acropora digitifera</i> genome to understand coral responses to environmental change | Chuya Shinzato et al. 2011. Nature 476, 320-323 | Nathalie Delherbe
Microbial Ecology and Environmental Toxicology, P. Universidad Católica de Chile |
| 15.30 | Coffee and Cookies | | |

Session 4: Environmental Physiology - Conveners: Priscila Ikeda **Ushimaru** and Carlos **Henríquez**

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| 16.00 | Microbial degradation of dimethylsulphide and related C1-sulphur compounds: organisms and pathways controlling fluxes of sulphur in the biosphere | Hendrik Schäfer et al. 2010. Journal of Experimental Botany, 61 / 2, 315–334 | Yolaine Delgado
Microbiology, Universidad de La Habana, Cuba |
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- 16.30 **Mangrove Bacterial Diversity and the Impact of Oil Contamination Revealed by Pyrosequencing: Bacterial Proxies for Oil Pollution** Henrique Fragoso dos Santos et al. 2011. PLoS One Volume 6, 1, e16943 Claudia **Elizondo** Conservation Medicine, Universidad Andrés Bello, Chile
- 17.00 **Influences of Infaunal Burrows on the Community Structure and Activity of Ammonia-Oxidizing Bacteria in Intertidal Sediments** Hisashi Satoh et al. 2007. APPLIED AND ENVIRONMENTAL MICROBIOLOGY, 73/4, 1341–1348 Felipe **Docmac** Aquatic Systems Ecology, Universidad de Antofagasta, Chile
- 17.30 **Nitrogen fixation and transfer in open ocean diatom–cyanobacterial symbioses** Rachel A Foster et al. 2011. The ISME Journal 5, 1484–1493 Alvaro **M Plominsky** Microbial Ecology and Environmental Toxicology, P. Universidad Católica de Chile

18.00 **General discussion and evaluation of the papers presented during the minisymposium.**
Conveners: María Jesús **Gálvez** and Florencia **Bertoglio**

18.15 **Summary and Outlook**

Rodrigo De la Iglesia, Laboratorio de Microbiología Marina, Pontificia Universidad Católica de Chile, and **Nicole Trefault** Centro de Genómica y Bioinformática & Instituto de Biotecnología, Universidad Mayor

18.30 **Genomics of toxin-producing freshwater cyanobacteria**

Mónica **Vásquez** Microbial Ecology & Environmental Toxicology, Pontificia Universidad Católica de Chile

19.15 **End of Symposium**

