

Student Minisymposium on
RECENT DISCOVERIES IN MICROBIAL ECOLOGY

**A one-day Symposium offered by the International Course on the
"Ecology and Diversity of marine Microorganisms (ECODIM VI)"
and the 10th Austral Summer Institute of the
Departamento de Oceanografía, Universidad de Concepción**

Friday, January 22, 2010

**Ignacio Molina Lecture Room
at the Estación de Biología Marina, Dichato
Guests are welcome**

Symposium Program - Paper Presentations

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

Pre-session Convener: Benjamín Srain Chávez

Thur. Stratified communities of active Archaea in deep
21. marine subsurface sediments
14.00

Sorensen, K and Teske, A., 2006. Applied and
environmental microbiology 72 / 7, 4596-4603

Diego Castillo Franco
Laboratorio de Ecología
de Microorganismos. IO-
USP, Brasil

Friday, January 22

08.30 **Introduction**

Kurt Hanselmann
ETH Zürich

Session 1: Growth and Symbiosis - Convener: Magali Marcos

- 08.40 First successful culture of the marine dinoflagellate *Dinophysis acuminata* Myung Gil Park, Sunju Kim, Hyung Seop Kim, Geumog Myung, Yi Gu Kang, Wonho Yih, 2006. *Aquatic Microbial Ecology*; 45, 101–106 **Blanca Pérez**
Lab. Ecología Microbiana y Toxicología Ambiental, PUC, Chile.
- 09.05 “*Candidatus Endobugula sertula*”, the real producer of bryostatins in *Bugula neritina* (Bryozoa) Koty Sharp, Seana K. Davidson and Margo Haygood. 2007. *The ISME Journal* 1, 693 – 702. **Juan José Aponte U.**
Lab. Ecología Microbiana, UNMSM, Perú
- 09.30 Molecular characterization of a deep-sea methanotrophic mussel symbiont that carries a RuBisCO gene Hosam Easa Elsaied, Ryo Kaneko and Takeshi Naganuma. 2006. *Marine Biotechnology* 8, 511 - 518 **Débora do Carmo Linhares**
Laboratório de Ecologia Microbiana, Instituto Oceanográfico, Universidade de Sao Paulo, Brasil.
- 09.55 **Coffee Break**

Session 2: Photosynthesis - Convener: Juan José Aponte U.

- 10.25 Globally distributed uncultivated oceanic N₂-Fixing Cyanobacteria lack oxygenic Photosystem II Jonathan P. Zehr, Shellie R. Bench, Brandon J. Carter, Ian Hewson, Faheem Niazi, Tuo Shi, H. James Tripp, Jason P. Affourtit, 2008. *Science* 322, 1110 - 1112 **Montserrat Aldunate**
PROFC, Universidad de Concepción, Chile.
- 10.50 Arsenic (III) fuels anoxygenic photosynthesis in hot spring biofilms from Mono Lake, California T. R. Kulp, S. E. Hoefft, M. Asao, M. T. Madigan, J. T. Hollibaugh, J. C. Fisher, J. F. Stolz, C. W. Culbertson, L. G. Miller, R. S. Oremland, 2008. *Science* 321, 967 - 970 **Cristian Valenzuela Valenzuela**
Centro I-Mar, Universidad de los Lagos, Puerto Montt, Chile.

- 11.15 Bacteriophytochromes in anoxygenic photosynthetic bacteria Eric Giraud and André Verméglio, 2008. *Photosynth. Res.* 97:141–153 **Maria Luiza S. Fontes**
Programa de pos-graduação em Ecologia
Universidade Federal de Santa Catarina, Brasil
- 11.40 Molecular and morphological characterization of cyanobacterial diversity in the stromatolites of Highborne Cay, Bahamas Foster, J. et al. 2009. *The ISME Journal* 3, 573 - 587 **Flavia Boidi**
Laboratorio de Análisis de Cuencas
CICTERRA- UNC, Argentina
- 12.05 **Lunch break**

Session 3: Special processes - Convener: Maria Luiza S. Fontes

- 13.00 Detoxification of sulphidic African shelf waters by blooming chemolithotrophs Gaute Lavik, Torben Stührmann, Volker Brüchert, Anja Van der Plas, Volker Mohrholz, Phyllis Lam, Marc Mußmann, Bernhard M. Fuchs, Rudolf Amann, Ulrich Lass & Marcel M. M. Kuypers. 2008. *Nature* 457, 581 - 584 **Benjamín Srain Chávez**
Laboratorio de Geoquímica Orgánica Marina. Universidad de Concepción, Chile.
- 13.25 Bacterial carbon processing by generalist species in the coastal ocean Xiaozhen Mou, Shulei Sun, Robert A. Edwards, Robert E. Hodson & Mary Ann Moran 2008. *Nature*, 451, 708-713 **Héctor Levipan**
Universidad de Concepción, Chile.
- 13.50 Viruses manipulate the marine environment. Rohwer F., Vega Thurber, R. 2009. *Nature* 459, 207-212. **Dinka Mandakovic**
Lab. Ecología Microbiana y Toxicología Ambiental, PUC, Chile.
- 14.15 **Coffee and Cookies**

Session 4: Engineering and Diversity - Convener: Flavia Boidi

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| 14.30 | Auxotrophy in natural isolate: minimal requirements for growth of the Antarctic psychrotrophic bacterium <i>Pseudomonas syringae</i> Lz4W | Bhubanananda Sahu and Malay K. Ray, 2008. Journal of Basic Microbiology, 48, 38-47 | Jorge Bresciano Kauffman
Universidad de la Republica, Facultad de Ciencias Uruguay |
| 14.55 | Microbial Ecology of ocean biochemistry: a community perspective | Suzanne L. Strom, 2008. Science 320, 1043-1045 | Paulina Aguayo
EULA center |
| 15.20 | Engineering direct conversion of CO ₂ to biofuel. | John Sheenan,, 2009. Nature, Vol. 27, 1128-1129 | Carla Gimpel M
Laboratorio de Biorrecursos Antárticos. INACH. |
| 15.45 | Microbial Diversity in the deep sea and the underexplored "rare biosphere" | Sogin, M., Morrison, H., Hubr, J., Welch, D., Huse, S., Neal, P., Arrieta, J., Herndl, G. 2008. PNAS 103 / 32, 12115-12120 | Magali Marcos
Lab. Microbiología Ambiental, CENPAT, Argentina |

16.10 General discussion and evaluation of the papers presented during the minisymposium

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| 16.20 | Summary and Outlook | <i>Rodrigo De la Iglesia, Laboratorio de Microbiología Marina, Pontifical Universidad Católica de Chile, and Veronica Molina Departamento de Oceanografía, Universidad de Concepción</i> |
| 16.30 | End of Symposium | |