



INSTITUTE OF OCEANOGRAPHY (IO), NHA TRANG, VIET NAM

October
7 - 16
2013

FIRST SOUTH EAST ASIA WORKSHOP IN AQUATIC MICROBIAL ECOLOGY

Aquatic Microbial Ecology is a key discipline that has undergone tremendous evolution in the last two decades. Mastering concepts and methods, especially those based on molecular biology approaches, is critical for successful management of coastal and marine areas, particularly in fields such as red tide control, biogeochemical cycles, aquaculture, and marine biotechnology. Understanding microbial diversity, their roles, interactions and capacities for adaptation are keys to anticipating the effects of use of aquatic systems.

ASIAIME aims to bring together scientists, post-graduates, and graduate students in order to exchange the most advanced knowledge and methods in aquatic microbiology through scientific lectures and practical training.

http://www.ecosym.univ-montp2.fr/index.php?option=com_content&task=view&id=529&Itemid=261

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WHO CAN APPLY?

Graduate (Master, PhD) students, post-doctoral fellow and young post-graduate researchers from SE Asian countries with an interest in Aquatic Microbial Ecology can apply.

The total number of participants will be around 30. Each participant will be requested to give a 10 min presentation (+ 5 min discussion) about her/his current research at the beginning of the workshop. Participants will have to stay for the whole duration of the course.

HOW TO APPLY?

Notification: First week of September 2013
In order to apply please send the following material as pdf files by email to asiame2013@gmail.com

- Motivation letter detailing why you want to attend the workshop in relation with your current research and your long-term academic goals
- Detailed CV including education, research experience, internship report, papers
- At least one recommendation letter by one of your supervisor/teacher (in English)

SELECTION OF APPLICANTS

Applicants will be selected according to their academic needs and potential for achievement reflected in their application proposal. Accommodation and travel costs will be covered by ASIAME for selected applicants.

Deadline:
20th August 2013

PLANNED LECTURE

Autotrophic microbes

- General Introduction on the importance of microbial genes in the environment, eukaryotic genomics and transcriptomics (E.V. Armbrust)
- Diversity of photosynthetic eukaryotes, plankton culture (D. Vaulot)
- Carbon cycle, role of phytoplankton communities, DOC dynamics (E. Rochelle-Newall)
- The ecology and oceanography of harmful algal blooms, with a focus on dinoflagellates. (L. Nyuyen-Ngoc)
- Spatio-temporal variability of phytoplankton in aquatic systems (T. Chu Van)
- Statistical treatments of data (M. Choisy)

Heterotrophic microbes and viruses

- Bacterial ecology, diversity and ecological role (T. Bouvier)
- Viral ecology, abundance, life strategies and functional roles (Y. Bettarel)
- DNA-Microarray, its applications to microbial ecology (or microbial system) (B. Ngoc Van)
- Application of genetic metabarcoding to microbes (P. Galand)

TUTORIALS

- Sample processing
- Fluorescent in situ hybridization (FISH) - Genetic fingerprints
- Epifluorescence microscopy for viral and bacterial counts
- Inverted microscopy, phytoplankton taxonomy and counts
- Flow cytometry
- Introduction to bioinformatics sequence processing

BIBLIOGRAPHIC REVIEW

Students (by groups of 4-5) will select a special topic in aquatic microbiology of interest for SE Asia. Students will conduct a bibliographic research, and will give a 30 min oral presentation at the end of the workshop. This may be published as a review in a national or an international journal in the discipline.

WORKSHOP FORMAT

The official language will be English

It will combine 3 activities:

- Lectures
- Practical training
- Student activities (bibliographic review)

TYPICAL DAY SCHEDULE

- 9h-12h : 3 lectures x 1h (general lectures)
- 14h-18h : Tutorials (sampling, practical demonstrations, etc), participant presentation or bibliographic review.

