



The International Centre for Interdisciplinary Science and
Education

Quy Nhon, VIET NAM

June
19-29
2023

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.

ASIAME 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.

ORGANIZING COMMITTEE

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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 20. Each participant will be requested to give a 10 min presentation (+5min 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: February 2023. In order to apply please send the following material as pdf files by email to

<https://sites.google.com/view/asiam3/home>

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.

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.

Dead line
15/04/23

PLANNED LECTURE

Autotrophic microbes

- The marine C cycle (A. Lopes dos Santos)
- The marine N cycle (R. Foster)
- Evolution and Diversity of Microbial Eukaryotes (A. Lopes dos Santos)
- Global distribution of Microbial Eukaryotes (D. Vault)
- Diversity of marine plankton symbioses (R. Foster)

Heterotrophic microbes and viruses

- Microbes associated to macro-organisms (J-C. Auguet)
- An Ocean of Viruses (Y. Bettarel)
- Aquatic bacterial ecology (T. Bouvier)

Farming and microbes

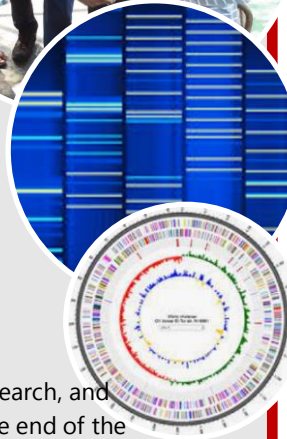
- Eutrophication, contaminants, bioremediation in fish farms (MS Santander de Leon)
- Implications of fish and lobster aquaculture for aquatic pathobiome and resistome (H.Nguyen)

TUTORIALS

- Sample processing
- Epifluorescence microscopy for viral and bact counts
- Bacterial cultures
- Introduction to R
- Bioinformatics sequence processing
- Metabarcoding data (DADA2 & Phyloseq)
- Alpha & Beta diversity
- Species boundaries in protists

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.



WORKSHOP FORMAT

The official language will be English. It will combine 3 activities:

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

TYPICAL DAY SCHEDULE

- Lectures
- Tutorials & lab works (sampling, practical demonstrations, etc)
- Participant presentation or bibliographic review