

6th International School in Marine Biology

Recent Concepts In Marine Biology For Future Research Areas



Fishery and Marine Science Institute
IH.SM, University of Toliara

May 3th – May 11th, Toliara, Madagascar

Summary Program

- Regional context: Climate change and impact on coastal ecosystems, biodiversity and blue bio-economy and society in Madagascar,
- Issues in Marine Biology: Host-pathogen relationship, productivity of marine ecosystems,
- Overview of methods: Concepts in bioinformatics, genomics and post-genomics, genetic and metabolic engineering in marine organisms, molecular taxonomy,
- Case studies: Aquaculture of holothurians and algae, bacteria and microalgae, coral reefs restoration,
- Perspectives in marine biology and aquaculture.

More details and contact:

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The *Daniel Jouvance* – SU International in Marine Biology is a Summer School that is aimed at Masters and PhD students from Madagascar and neighbouring countries.

The objective of the School is to highlight recent concepts in marine biology. Lectures, selected from Madagascar and France, are international well-known researchers in Marine Sciences. The School will run seminars on the current issues in Marine Biology and Biotechnology, including Genomics, Post-genomics and Bioinformatics.

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REPUBLIKANY MADAGASIKARA
Fikaravaka - Tanindrazana - Fanindrosana
Délégation permanente
de la République
de Madagascar
auprès de l'UNESCO

Organizers

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A. Tanguy, SU (F)

P. Potin, CNRS (F)

JP. Callegari, DJ Foundation (F)

REGISTRATION

Preferred applicants

Master and PhD students from Madagascar and neighbouring countries (Mozambique, Kenya, Tanzania, Seychelles, Maurice, Maldives) with a background in Marine Biology.

To apply, send the following (in English):

- Motivation letter detailing why you want to attend the School and how it relates to your current research and/or your longer-term academic goals,
- Detailed CV including education, research experience and publications,
- At least one recommendation letter (in English), to be sent directly by one of your supervisor/lecturer.

Send these to G. TODINANAHARY, gildas.todinanahary@gmail.com, and copy to A. TANGUY, atanguy@sb-roscoff.fr and JP. CALLEGARI, jp2cal@free.fr.

Important dates:

- Application deadline: 31th March 2025,
- Acceptance confirmation: 15th April 2025.

Attendance

Costs for accommodation (except local residents) and food will be covered.

Participants will have to cover the costs of their own travel to/from Tulear, Madagascar.

Students will have to stay for the whole duration of the course.

Each student will be requested to give a 5 min. presentation (+ 5 min. discussion) about his/her current research.

Summary Program

The school will incorporate intensive lectures focused on Genomics and Post-genomics, Bio-informatics, Marine bio-resources and Blue Biotechnology. The school will also incorporate practicals in the form of field excursions as well as tutorials on bioinformatics. All lectures will be given in English

DETAILED PROGRAM

Sunday 4th May: Excursion

- 8h00 – 13h00: Ice breaking excursion at the Reniala Park and Turtle village
- 13h00 – 15h00: Lunch at restaurant Maroloko (Mangily)
- 16h00 – 18h00: Interactive students presentations session and round table of the teachers

Monday 5th May: Introduction

- 9h00 – 10h00: Opening addresses
 - Rector of the University of Toliara,
 - Director of the Halieutic Institute and Marine Sciences,
 - Dr. JP. Callegari, The Daniel Jouvance Foundation – Institute of France,
 - Dr. A. Tanguy, the Sorbonne University and CNRS,
- 10h00: Coffee break
- 10h30 – 12h30: Introductory lectures

- Oceanography (current and ecosystem) of Madagascar: Mozambican Channel and Indian Ocean: A. Le Don Nomenisoa (M)
- Biodiversity and fisheries: J. Mahafina and G. Todinanahary (M)
- 12h30: Lunch
- 14h30 – 17h30: Introductory lectures (continued)
 - Economy and Society: The importance of communities in marine activities: F. Veriza
 - Concept of “island”: J. Dina Fotomanantena (M)
 - Gestion des ressources aquatiques : E. Mara Remanevy (M)

Tuesday 6th may: Issues in marine biology:

- 8h00 – 9h45: Host/pathogen relationship in marine environment: the case of aquaculture species: A. Chambouvet (F)
- 9h45: Coffee break
- 10h15 -12h00: Corals and climate change: effect and solutions: C. Sabourault (F)
- 12h00: Lunch
- 14h00 – 15h45: Domestication and sustainable production of marine bioresources: T. Lavitra (M), I. Eeckhaut (B), I. Probert (F) and Richard (F)
- 15h45 – 17h30: Natural products chemistry and biodiscovery: A. Ritters (F)

Remark: In this issue, multiple impact on aquaculture and potential solutions (including technics, selection, restoration, artificial structure) will be considered.

Wednesday 7th May: Methods in marine biology

- 8h00 – 10h00: Use of OMICs for aquaculture improvement: A. Tanguy and A. Chambouvet (F)
- 10h00: coffee break
- 10h30 – 12h30: Metabolomics and analysis of natural substances: A. Ritters (F)
- 12h30: Lunch
- 14h30 – 16h30: Importance of microbiota in marine species: diversity and application: A. Tanguy (F)

Thursday 8th May: Case Studies (part 1)

- 8h00 – 12h30: Field and sample collection (Marine Station of Belaza).
- 12h30: Pick-nick
- 14h30 – 18h00: Case Studies, part 1: Aquaculture
 - Item 1- holothurians and seaweeds,
 - Item 2- microbiology and phytoplankton,
 - Item 3- corals: Strain isolation, holothurians fecundation, bacteria and microalgae strains isolation

Friday 9th May: Case studies (part 2)

- 8h00 – 10h00: Samples treatment and data analysis
- 10h00: Coffee break
- 10h30 – 12h30: Samples treatment and data analysis (continued)
- 12h30: Lunch

- 14h30 - 16h30: Bio-informatics analysis of genomic data
- 16h30 – 18h00: Conference: Economy and Society: The importance of communities in marine activities: F. Veriza and P. Mahatante Tsimanaoraty (Minister of Fisheries and Blue Economy)

Saturday 10th May

- 8h00 – 12h30: Case studies (continued): End of data analysis and presentation of main results by group of students.
- 12h30: Lunch
- 14h30 – 16h30: Round Table: Perspectives in marine biology and aquaculture: Companies, legal aspects, NGO, with P. Mahatante Tsimanaoraty, Minister of Fisheries and Blue Economy of Madagascar (M)
- 16h30 -18h00: General discussion: Valuation of the school and concluding remarks: G. Todinanahary (M) and A. Tanguy (F)

End of the 6th Daniel Jouvance – Sorbonne University
International School in Marine Biology

SOCIAL EVENTS:

Sunday 4th May:

- 8h00 – 15h00: Ice breaking excursion at the Reniala Park, Turtle village and Mangily: An opportunity to interact with other marine biologists' students and with teachers.

Friday 9th May:

- 18h15: Reception at the Alliance Française of Tulear: Cocktails and local music groups.