



**Sam Nujoma Campus , University of Namibia**  
**Henties Bay, Namibia – January 26<sup>th</sup> - February 1<sup>st</sup>, 2020**



The **DANIEL JOUVANCE FOUNDATION** ([www.danieljouvance-fondation.org](http://www.danieljouvance-fondation.org)) will organize the *4th International School in Marine Biology* at the Sam Nujoma Campus, University of Namibia, Henties Bay, Namibia from January 26th to February 1st, 2020.

This *4th International School in Marine Biology* will be a collaboration between the Daniel Jouvance Foundation, the Sorbonne University Foundation and the University of Namibia (UNAM).

The Daniel Jouvance - SU International School in Marine Biology is a Summer School that is aimed at Masters and PhD students from the Southern African region. The primary objective of the School is to highlight the latest advances in Marine Biology.

Lecturers, selected from Namibia, France, Togo, Madagascar and other countries of the Southern African Development Community, are international well-known researchers in Marine Sciences. The School will run seminars on the current issues in marine biology, including Marine Biotechnology and novel approaches such as Genomics, Post-genomics and Bio-informatics. To illustrate the power of these techniques, seaweeds, marine invertebrates and

fisheries will be discussed as case studies. The School will also incorporate lectures focused on the current situation of marine biology in Namibia and the Southern African Development Community (SADC) countries.

Attendance: 30 graduate students from the Southern African region with interests in Marine Biology. Costs for accommodation and food will be covered by the Daniel Jouvance Foundation. Participants will have to stay for the whole duration of the course.

See more details: [www.unam.edu.na](http://www.unam.edu.na) and [www.danieljouvance-fondation.org](http://www.danieljouvance-fondation.org)

### ➤ IMPORTANT DATES:

Application deadline: 15<sup>th</sup> November 2019,

Acceptance confirmation: 1<sup>st</sup> December 2019.

### ➤ ORGANIZING COMMITTEE:

L. KANDJENGO (UNAM, Henties Bay, Namibia),  
S. MAFWILA (UNAM, Henties Bay, Namibia),  
H. NDJAULA (UNAM, Henties Bay, Namibia),  
P. POTIN (Sorbonne University, France),  
B. KLOAREG (Foundation Daniel Jouvance - Institut de France, F)  
JP. CALLEGARI (Foundation Daniel Jouvance - Institut de France, F)

#### Contact:

L. KANDJENGO, [lkandjengo@unam.na](mailto:lkandjengo@unam.na) and P. POTIN, [philippe.potin@sb-roscoff.fr](mailto:philippe.potin@sb-roscoff.fr).

### ➤ REGISTRATION:

Preferred applicants: Master and PhD students from the Southern African region interested 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: L. KANDJENGO, [lkandjengo@unam.na](mailto:lkandjengo@unam.na), and copy to P. POTIN, [philippe.potin@sb-roscoff.fr](mailto:philippe.potin@sb-roscoff.fr) and JP. CALLEGARI, [jp.callegari@free.fr](mailto:jp.callegari@free.fr).

## Attendance:

Cost for accommodation and food will be covered but participants will have to make own travel to/from Henties Bay. Participants 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.

## ➤ 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 algal cultivation and bioinformatics. All lectures will be given in English

Key words: marine biodiversity, algae, aquaculture, bio-economy of the maritime countries of the Southern African Development Community (Tanzania, Mozambique, Madagascar, South Africa, Namibia, Angola).

## SUMMARY PROGRAM

Regional context: Marine biodiversity and blue bio-economy in Namibia and in the SADC countries.

Module 1 - Issues in Marine Biology: Marine bio-resources and blue biotechnology, climate change and impact on coastal ecosystems.

Module 2 - Overview of methods: Basic concepts and approaches in bio-informatics, genomics and post-genomics, genetic and metabolic engineering in marine organisms,

Module 3 - Case studies: Cultivation of seaweeds and seaweed industry, aquaculture of marine invertebrates, Integrated farming.

## DETAILED PROGRAM

### Ice breaking excursion to Cape Cross

#### Opening addresses

- The Daniel Jouvance Foundation (FDJ), Jean-Pierre Callegari
- The Embassy of France
- SADC, Motseki Hlatshwayo
- University of Namibia (UNAM), Hilikka Ndjaula
- CNRS Bureau for Austral Africa, Jean-Pascal Torretton
- Sorbonne University (SU), Bernard Kloareg

### Contextualisation

- Ecosystems of the Benguela current: Samuel Mafwila
- What is out there at sea? Results from the Regional Graduate Network of Oceanography at Henties Bay: Chibo Chilikwililwa
- Marine biodiversity in SADC countries: John Bolton
- The history of Namibia and the importance of ocean: Martin Tjipute
- The blue bio-economy in Namibia: Hilikka Ndjaula

### Issues in marine biology

- Climate change and impact on coastal ecosystems:
- Sustainable production of marine bioresources: Philippe Potin
- Natural product chemistry and biodiscovery:

### Methods in marine biology

- Molecular taxonomy and systematics: Maggie Reddy
- Methods in plankton biology: Ian Probert
- Microbiology and biotechnology: Vernon Coyne
- Metabolomics and metabolomics profiling:
- Quantitative genetics and selective breeding: Komlan Avia

### Practicals:

- Bioinformatics: Komlan Avia
- Algal cultivation: Ian Probert, Philippe Potin, John Bolton, Lineekela Kadjengo

### Case studies

- Tanzania - Cultivation of tropical red seaweeds: Keto Mshigeni
- Mozambique - TBC
- Madagascar - Aquaculture of echinoderms and other marine invertebrates: Bruno Lavitra
- South Africa - Integrated farming of abalone: John Bolton
- Namibia - The seaweed industry in the SADC regions: Lineekela Kadjengo
- Fisheries in Namibia: Ministry of Fisheries and Marine Resources
- France - The seaweed industry in France: Philippe Potin
- The organization of infrastructures for marine biology and ecology in Europe: Bernard Kloareg (EMBRC-France)

### Round table

The future of marine bioresources in SADC countries: Moderators, Hilikka Ndjaula and Bernard Kloareg

### Evaluation of the school and concluding remarks

Lineekela Kadjengo and Philippe Potin