Ifremer **French Research Institute for Exploitation of the Sea**

Job Title	**Researcher in Microalgae Physiology**
Discipline	Researcher Life Sciences
Specialty areas	**Biology,** microalgae physiology, toxic algae
Contract type	**Permanent position, full-time contract**
Department/Office :	**Department ODE** **DYNECO/Laboratoire Phycotoxines (PHYC)**
Duty station :	**Atlantic Center, Nantes**
Opening date for applications: **Starting date on the job:**	
Reference (HRD):	

The Institute and the recruiting department

French Research Institute for Exploitation of the Sea, Ifremer, through its research work and expert advice, contributes to the knowledge of the oceans and their resources, the monitoring of marine and coastal environments and the sustainable development of marine activities. To these ends, Ifremer conceives and operates tools for observation, experimentation and monitoring, and manage the oceanographic databases.

Created in 1984, Ifremer is a French public institute of an industrial and commercial nature. It is supervised jointly by the Ministry of Higher Education and Research and the Ministry of the Environment, Energy and Marine Affairs.

Ifremer undertakes research missions, offers expert advice and acts as a funding agency.

Ifremer performs targeted applied research to address the questions posed by society (climate change effects, marine biodiversity, pollution prevention, seafood quality etc.). Results include scientific knowledge, technological innovations, and systems for ocean observation and exploration. Partnerships may be public, private or a combination of the two.

Ifremer works in a network with the French scientific community, also collaborating with international partner organizations, in the frame of several national and international projects, including contractual activities.

Presentation of the department/direction, research unit or laboratory/service:

The DYNECO (Dynamics of Coastal Ecosystems) research unit is one component of the « Oceanography and Ecosystems Dynamic » department and has for main objective to study how coastal ecosystems respond to anthropogenic or natural pressures. DYNECO conducts scientific and expert assessment activities in this field. The global approach relies on the analysis of physical and biogeochemical processes and is based on experimentations, in-situ observations and modelling. The main research areas concern : i) dissolved and particulate matter fluxes within marine coastal ecosystems , ii) diversity, functioning and future of communities and of their habitats, iii) perturbation at population scale.

Within the DYNECO unit, the PHYC laboratory, located in Nantes, meets the needs of research and expertise related to the proliferation of microalgae to produce their toxins and their impacts on marine food webs. The aim is to complement and advance the scientific and technical knowledge of toxin biosynthesis pathways and algal metabolites, and their transfer, fate and effects in the marine coastal ecosystem. The lab is working with

partners at the regional, national, European and international level ((http://wwz.ifremer.fr/laboratoire_phycotoxines).

Introducing the job description, indicating the work position in the organizational chart:

Under the responsibility of the head of the PHYC Laboratory, the recruited researcher will integrate and reinforce the laboratory's "ecophysiology of harmful microalgae" team.

General areas of responsibility (principal missions)

The researcher position in the physiology of toxic microalgae will focus on the scientific issues related to the mechanisms involved in toxin production and their physiological role; this production is proposed as a model of physiological response to environmental changes. These investigations concern pelagic and benthic microalgae belonging to microplankton or nanoplankton, being autotrophic or heterotrophic. The researcher recruited will develop research activities based on experimental plans in order to:

- Describe the production mechanisms and the role of toxins and other metabolites of interest in the cellular machinery of toxic microalgae, in relation to environmental changes;
- Identify and understand the interactions between toxic microalgae and other organisms in the coastal marine ecosystem.

Selected candidates for the interviews will present their research project, in relation with these aims.

Main activities

He/she will:

- ✓ Contribute to understand and describe the mechanisms of physiological acclimation and adaptation of toxic microalgae in relation to their distribution in the natural environment (pigment composition, resource allocation, photosynthesis regulation)
- ✓ develop approaches to analyze and describe biotic and abiotic interactions on the production of toxins and other metabolites of interest by toxic or harmful microalgae,
- ✓ determine the physiological role of algal toxins and other metabolites of interest. This consists in studying the physiological bases related to the role of toxins, in connection with the molecular studies (proteomics and transcriptomics studies developed at DYNECO).
- ✓ set up experimental protocols based on the laboratory's capacity to cultivate microalgae in a controlled environment (photobioreactors, chemostat, turbidostat) in support of the above research actions.
- ✓ participate in the responses to calls for tender for research programs at national, European and international level.
- ✓ participate in field studies.
- ✓ contribute to the laboratory expertise , in support of public authorities

Collaborative work environment

Internal collaborative relationship:

The work will be carried out in close relationship with the Ifremer teams involved in the theme "Toxic algae and algal toxins": DYNECO / Pelagos, Laboratories environment and resources (Concarneau, Normandy, Sète ...)

External collaborative relationship:

The researcher will conduct his research work in collaboration with our partners at the national level within the framework of the GDR-PHYCOTOX (Lemar, UBO, Roscoff Station, Marbec ...), as well as at European and international level. Possible interactions with governemental authorities.

Required knowledge, skills, and characteristics

- **Knowledge, skills, and abilities:**
- Strong knowledge of microalgae physiology
- Microalgae cultures in controlled environment
- Cell Biology and enzymology
- Proteomic and transcriptomic approaches
- Biotic and abiotic interactions between marine organisms
- Knowledge in marine science, marine environment
- Fluent english

- **Human qualities:**
- Initiative and synthesizing abilities
- Ability to manage and teamwork
- Writing quality in French and English
- Valorization of the results / Writing of publications
- Availability, dynamism and quality of listening.

Required education and experience

PhD: physiology of microalgae, biology of microorganisms
Professional Experience / Post-doc: 2 to 3 years

Specific working conditions

Full-time

Sourcing solutions

The English version of this offer may be posted in the English version of our website, in Euraxess, Research Gate, ICES website, Academic positions.eu, some social Networking sites (ex: Linkedin, twitter) and scientific mailing lists, if you need HR assistance in other kinds of sourcing solutions, please contact us.

How to apply for this position

Deadline for applications: 2017/17/04

Go to this offer in one click (HRD):

All applications are processed exclusively via our website. Informal enquiries may be made to XXX (*recruiter manager's email address)* (prenom.nom@ifremer.fr).

Interested candidates can apply by clicking the **"Apply"** button. If you are unable to apply online please contact us at *grh@ifremer.fr*

Our job offers on the website /Ifremer careers /Jobs and Internships, or Offres d'emploi/stage (French version)

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