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Atlantic Area



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# JOINT RESOURCES CATALOGUE



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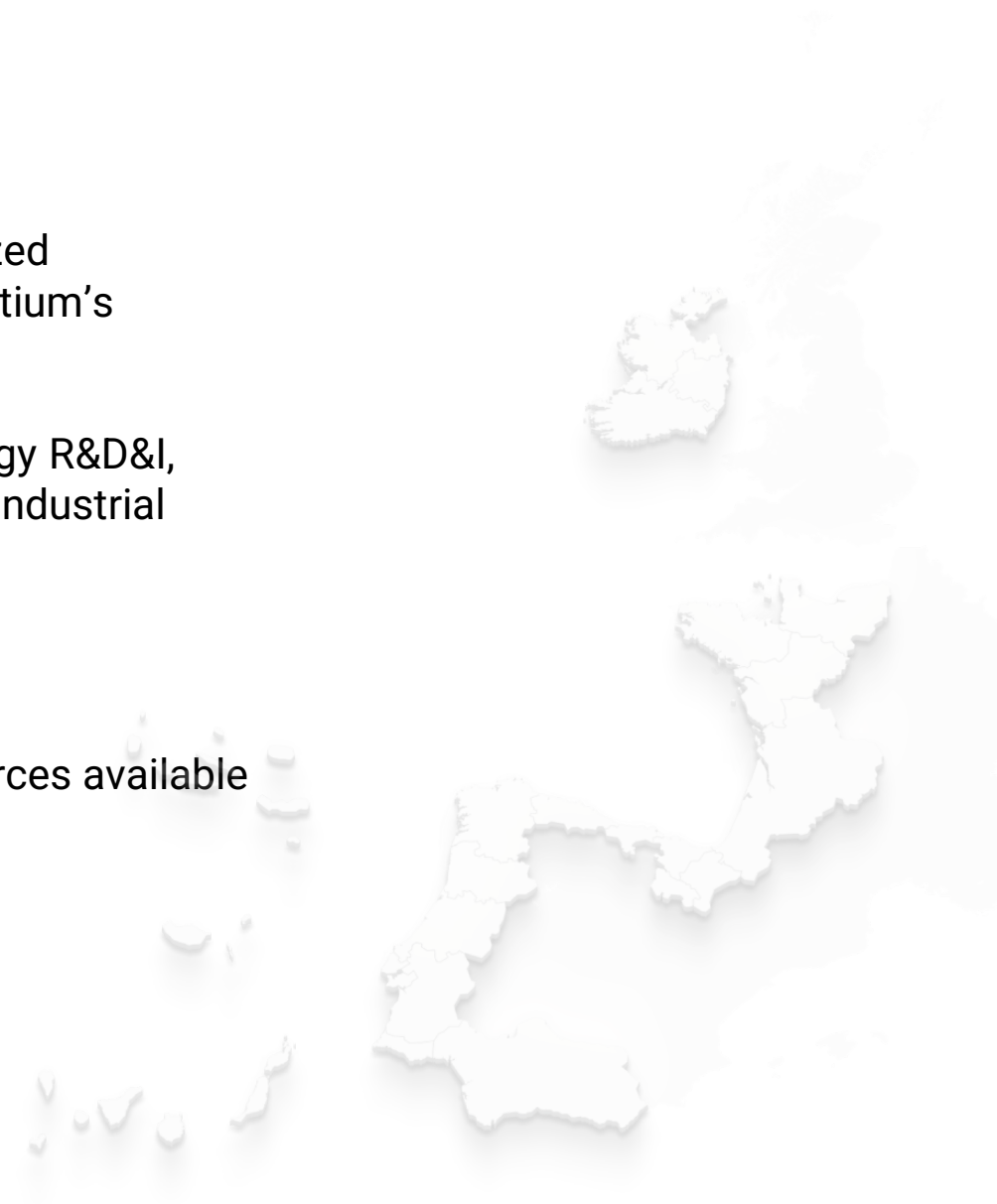
# WHAT IS A RESOURCE CATALOGUE?

MARINNONET resource catalogue is a comprehensive inventory of specialized infrastructures, key facilities, and advanced equipment critical to our consortium's research groups.

These resources are uniquely significant and integral to Marine Biotechnology R&D&I, specifically across the three thematic areas: Aquaculture, Observation, and Industrial Products.

# WHY IS IT NECESSARY?

This catalogue aims to provide a detailed overview of the exceptional resources available to support advanced research and development in Marine Biotechnology.



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# WHAT DOES THIS RESOURCE CATALOGUE INCLUDE?

## Exclusive and Advanced Facilities:

- Highlighting state-of-the-art laboratories and experimental facilities.
- Detailing specialized aquaculture and marine organism research facilities.

## Specialized Equipment:

- Focusing on unique and high-impact instruments not commonly found in everyday use.
- Emphasizing equipment essential for cutting-edge marine biotechnology research.

## Innovative Technologies:

- Employed by our research groups with a focus on their relevance to Marine Biotechnology.

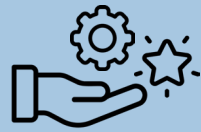


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## 3 THEMATIC PRIORITIES

Considering the characteristics of the **Blue Biotech** sector of the 8 Atlantic Area regions involved, and their respective R&D&I strengths, MARINNONET will focus on 3 Marine Biotechnology Platforms (BP) or Thematic Priorities.



1 innovations for an efficient, sustainable, and resilient aquaculture



2 omic and observation technologies for preserving marine biodiversity and restore the oceans' health



3 marine-derived products for industrial applications



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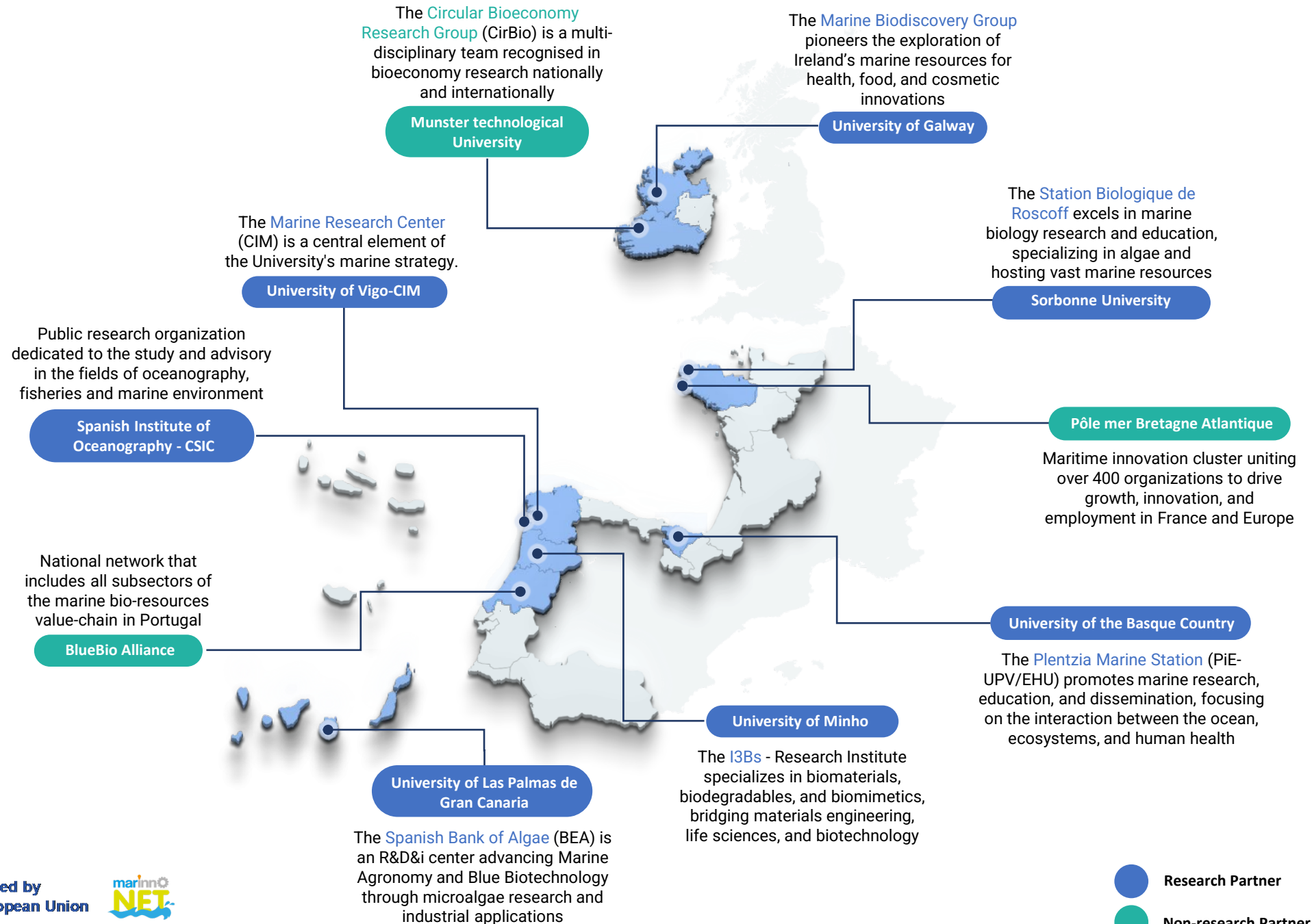
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 **10**  
PARTNERS

 **8**  
ATLANTIC  
AREA  
REGIONS

 **5**  
UNIVERSITIES



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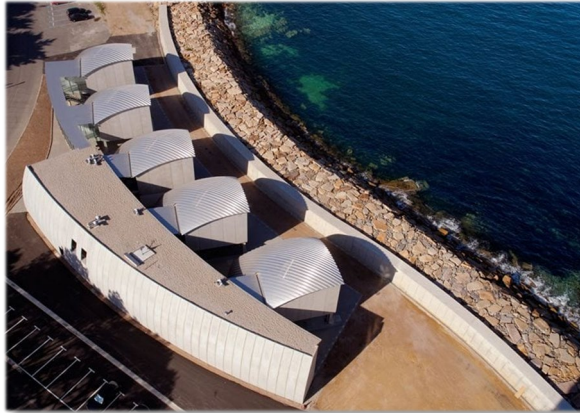


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# UNIVERSITY OF VIGO - CIM

The Marine Research Centre of the University of Vigo (CIM) has a clear mission: to advance the preservation and sustainable utilization of oceans, seas, and marine resources through the generation and dissemination of knowledge rooted in science, technology, and innovation. We foster interdisciplinary collaboration in the pursuit of marine knowledge and are comprised of more than 200 people working towards a common goal.



**COASTAL MARINE STATION**  
**Toralla Marine Sciences Station -**  
**ECIMAT**

Located on the southern shore of the Vigo Estuary, the station provides coastal research laboratories and equipment, technological platforms for marine research, supply of marine biological resources, processing and analysis of water, sediment, and marine organism samples, and access to estuarine ecosystems, along with other marine research support services



**EXPERIMENTAL**  
**AQUARIUM FACILITY**

Facility equipped with aquariums and advanced technological resources for conducting studies and experiments

CIM  
Centro de Investigación Mariña  
Universidade de Vigo



- Methodology for studying **fish feeding** regulation
- Methodology for studying **fish welfare**
- Study of biology, xenomics, population dynamics and ecology of **exploitable species**



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# UNIVERSITY OF LAS PALMAS DE GRAN CANARIA

The Spanish Bank of Algae (BEA), an infrastructure of the University of Las Palmas de Gran Canaria, focuses on the isolation, characterization, conservation, and cultivation of macroalgae, microalgae, and cyanobacteria for scientific and technological applications. With a collection of over 2000 strains, BEA offers unique genetic resources for developing biotechnologies in sectors such as energy, health, nutrition, and environment. Additionally, it provides services to companies and research institutions, supporting innovative projects in algae biotechnology.



## INTENSIVE OUTDOOR CULTURE CONDITIONS

BEA's 1800 m<sup>2</sup> facility includes algae collections and labs, storage and workshop spaces, an experimental plant for algae cultivation, and a biomass processing plant.

The 300 m<sup>2</sup> pilot-scale experimental plant features raceways, tanks, and photobioreactors, with continuous water flow, CO<sub>2</sub> control, and UV treatment. The greenhouse area has a biomass processing room with a centrifuge, spray dryer, and freezers.



## COLECCIÓN DE CEPAS

>2000 unialgal clonal strains

- Isolation, characterization, conservation, supply, and development of cultivation techniques and applications for **algae (macroalgae, microalgae, and cyanobacteria)**
- **Biodiversity** of microalgae and cyanobacteria
- Polyphasic **identification** of isolated strains
- Characterization, biotechnological and biochemical valorization of **biomass**, and production of **extracts** from the strains



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# UNIVERSITY OF BASQUE COUNTRY

PiE-UPV/EHU is small but wide-scoped, well-defined but flexible, ad hoc designed for its purposes but modular, dynamic but long-lasting, with strict controls necessary for excellence. The centre is devoted to scientific and technological research; to teaching activities of specialised and to science dissemination.



## PLENTZIA MARINE RESEARCH STATION

Research Centre for Experimental Marine Biology & Biotechnology



## EXPERIMENTAL AQUARIUM FACILITY

Ecotoxicological research and associated research platforms in histology, microscopy, cell biology, metabolomics and analytical chemistry.



## COASTAL ECOSYSTEM ACCESS

Rocky shores, sandy beaches, muddy flats in estuaries, anthropogenised ecosystems

- **One-Health marine observatory** of the Plentzia Bay and associated database
- Platform for the **molecular analysis of fish reproduction** and fish sex differentiation
- Biscay Bay **Environmental Biospecimen Bank**
- Basque **Microalgae Culture Collection**
- High throughput and resolution histological slide scanning for clinical studies
- **Ecotoxicity assays**



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# SPANISH INSTITUTE OF OCEANOGRAPHY - CSIC

The Spanish Institute of Oceanography (IEO) is a National Center of the Spanish National Research Council (CSIC), under the Ministry of Science, Innovation and Universities. It is dedicated to marine science research, focusing on advancing scientific knowledge of the oceans, sustainability of fisheries resources, and marine environment conservation.



## OCEANOGRAPHIC CENTER IN VIGO

The Oceanographic Center of Vigo is one of the nine Oceanographic Centers of the IEO. It is located in the Cabo Estai-Canido area of Vigo.



## PHYTOPLANKTON CULTURE AND MAINTENANCE

CCVIEO culture collection, housed in 4 incubation chambers with controlled temperature and light cycle conditions.

- **Morphological and genetic identification** of microalgae cultures in the laboratory.
- **Ecophysiological** study of microalgae species in the laboratory.
- Laboratory **isolation** of microalgae cells from field samples.
- **Plankton nets** of different types (mouth diameter and mesh size) for phytoplankton and zooplankton sampling.
- Field sampling (trawls, hydrographic bottles).
- Extraction and analysis of marine **biotoxins**.



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# UNIVERSITY OF GALWAY

"A National Marine Biodiscovery Laboratory in Ireland" (NMBLI) was funded by the Marine Institute-Ireland to develop Irish capacities in this field and become a research leading centre at an international level. This project intends to bring new opportunities to national but also international researchers from both HEA and industry seeking to explore, understand and sustainably utilize Irish marine bioresources



## CARNA MARINE RESEARCH STATION RYAN INSTITUTE

University of Galway's Carna Research Station (CRS) is Ireland's leading facility for aquaculture research and development on a **diverse range of marine finfish, shellfish and seaweed species**. Based in south-west Connemara, CRS is the Ryan Institute's off-campus marine laboratory and specialises in large scale, exploratory aquatic investigations.

Recirculating Aquaculture systems (RAS), aquaria of different sizes, flow through systems (fish, invertebrates, seaweeds)



## MARINE BIODISCOVERY ANALYTICAL FACILITY

Located in the Marine Institute (Oranmore) and is today fully equipped for the different steps of a Marine Biodiscovery process ranging from field trip collections, taxonomy of all types of marine organisms, chemical analyses and biological assays.



OLLSCOIL NA GAILLIMHE  
UNIVERSITY OF GALWAY



- **Taxonomy** of marine species and their biomolecules
- Access to **cold room** for controlled experiment in aquaria in **closed systems (seaweeds)**, under the authority of the School of Biological & Chemical Sciences



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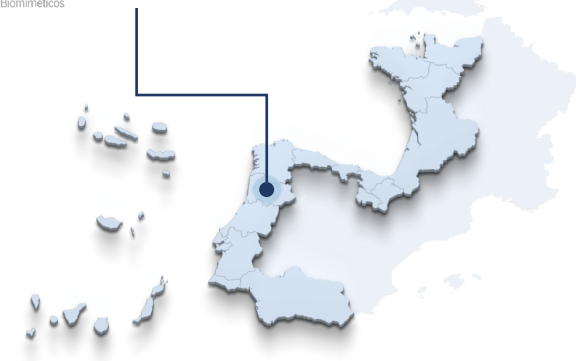


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# UNIVERSITY OF MINHO

The 3B's Research Group (Biomaterials, Biodegradables and Biomimetics) supports a multidisciplinary and highly skilled team that works at the interface of biotechnology, biology, biomedical engineering and materials science. The major research areas at our group include development of new biomaterials, drug delivery, tissue engineering, regenerative medicine, nanomedicine, in-vitro disease models and stem cell isolation and differentiation..



## EXPERTISSUES EEIG

The 3B's Research Group leads the European Institute of Excellence on Tissue Engineering and Regenerative Medicine, resulting from a network of some of the main research groups in these topics, based in different countries across Europe.



## TERM Research Hub

The 3B's Research Group runs research facilities with about 6000 m<sup>2</sup>, fully equipped for the development of R&D&i on tissue engineering and regenerative medicine (TERM), from materials isolation and processing to *in vitro* and *in vivo* biological assessment, being integrated in the National Roadmap of Strategic R&D Infrastructures as "TERM Res Hub".

- **Isolation and characterization** of materials from biomass;
- **Processing of materials** (as hydrogels, scaffolds, membranes, particles) for biomedical applications or other areas;
- **Biological assessment** (in vitro cellular tests) of compounds/extracts and materials.



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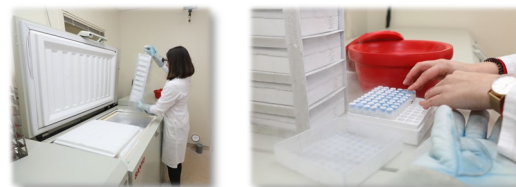
# STATION BIOLOGIQUE DE ROSCOFF - SU

The research teams of the Roscoff Biological Station are dedicated to the study of the biology of marine organisms, in particular to better understand the evolution of life and the functioning of marine ecosystems, the adaptation of marine organisms in the face of global change. The main experimental models include bacteria, algae (microalgae, red, brown and green seaweed), invertebrates (ascidians, bivalves, sea urchins, etc.), vertebrates (dogfish)...



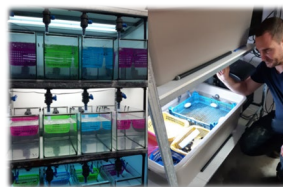
## LIVE STARTER CULTURE: MICROALGAE

The Roscoff Culture Collection (RCC) maintains and distributes approximately 8500 strains of marine microalgae, macroalgae, protists, bacteria and viruses.



## CRYOPRESERVATION FACILITY

The RCC cryopreservation service involves application of our standard protocol to strains sent to us by users, testing of post-thaw viability and (if required) long-term maintenance



## EXPERIMENTAL AQUARIUM FACILITIES

The Roscoff Aquarium Services (RAS) team manages the service of supplying marine macroorganisms and the provision of aquarium spaces and equipment.

- **Access to biological resources:**
  - Live starter culture (more than 9000 strains of microalgae, bacteria, viruses, macroalgae: [RCC](#))
  - Macro-organisms collected in the local environment or cultivated (More than 250: [RAS](#))
- Access to sea resources
- Access to host laboratory and technical platform



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