

Announcement of a call for research grant

Reference: 2025_048_BI_Atlantida II

A competition is open for the attribution of [1] Research Grant in the framework of the project [ATLANTIDA II Observatório Costeiro do Atlântico Norte de Portugal], with the reference [NORTE2030-FEDER-01799200], supported by [Programa Regional do Norte 2021-2027 [NORTE2030]], according to the following conditions:

1. Scientific area: [Marine Sciences]

2. Admission requirements:

[The research grants (BI) are intended for carrying out R&D activities by students enrolled in an integrated master's degree or a master's degree, aiming to consolidate their scientific training through the development of research work leading to obtaining the respective academic degree, integrated into R&D projects:

- Bachelor's degree in Marine Sciences or related fields
- Available to develop the master's thesis under the theme "**Anthropogenic Disruption of Nutrient Sensing Pathways in Corals**".

If the applicant is not yet enrolled, it must meet the requirements to register; enrolment will be mandatory and proof necessary at the moment of scholarship contracting.]

Candidates must have a background in marine sciences, and previous training and/or experience in the following topics:

- a) Experience in maintenance and handling of aquatic organisms;
- b) Experience in bioinformatics and programming;
- c) Experience in Statistical Analysis;
- d) Experience in molecular biology (e.g., DNA extraction);
- e) Experience in histological and immunological methods;
- f) Fluency (speaking and writing) in English.

3. Work plan:

[The selected candidate will work on ATLANTIDA II, within A2 - Ecossistemas e biodiversidade da costa NW Portuguesa. Autophagy, an evolutionarily conserved lysosomal

degradation pathway, orchestrates the recycling of cellular components and integrates with nutrient-sensing through the mTOR–TFEB axis. In corals, autophagy governs symbiont digestion during bleaching, modulates nutrient signaling (e.g., mTOR–TFEB axis), and cooperates with apoptosis to balance cellular survival or death under environmental stress. However, anthropogenic factors—such as nanoplastic exposure and heat stress—can destabilize these autophagy-related networks, undermining coral health and resilience.

To dissect these impacts, the candidate will be expected to carry out several tasks. First, mine available coral genomes to catalog genes involved in glucose, insulin, and lipid sensing. Next, combining lab-controlled exposures and RNA-seq analysis, evaluate how stressors (e.g., nanoparticles, heat) impact *Alcyonium digitatum* autophagy and nutrient-sensing pathways. By integrating comparative genomics with targeted transcriptomics, this study aims to reveal how anthropogenic insults disrupt autophagy and to inform conservation strategies that enhance coral adaptability under rapid environmental change.

4. Legislation and official rules:

[Law nº. 40/2004, 18th August (Research Fellowship and Studentship Regulation) in its current version; Regulations for Studentships and Fellowships of the Fundação para a Ciência e a Tecnologia, I.P. and CIIMAR Grants Regulation approved by FCT.]

5. Work place:

[The work will be carried out at CIIMAR, Edifício do Terminal de Cruzeiros do Porto de Leixões, Av. General Norton de Matos, s/n, 4450-208 Matosinhos, under the supervision of Doctor Elsa Froufe.]

6. Duration of the grant:

[Duration of 6 (six) months, with a provisional start on September 2025, under the regime of exclusive dedication.]

7. Monthly maintenance stipend:

The monthly maintenance allowance is

Master Students,integrated master students or bachelor´s and master´s students (BI) PT -1 040,98€

8. Selection methods:

The ranking of candidates will be done based on the evaluation of the Curriculum Vitae (EC) performed according to the following criteria:

$$EC = [50\% AQ + 50\% PE]$$

- AQ: Academic Qualification relevant for the scientific area.
- PE: Previous Experience relevant for the scientific area, as described in the admission requirements.

The evaluation process may include an interview of up to the three highest-scoring candidates, as long as their scores are higher than 7 out of 10. The interview is intended to clarify aspects related to their previous research, in which case the interview weighs 50% and the previous evaluation weighs 50%.

9. Composition of the jury selection:

President of the jury: Elsa Froufe

Vogal: Raquel Ruivo

Vogal: Jean-Baptiste Ledoux

10. Form of Advertising/notification of results:

The final results of the evaluation will be published through a list sorting the candidates according to their attributed mark by e-mail; in case of disagreement, the candidates have a 10-working day term in which to contest the decision, if it so wishes, as provided for in the Administrative Procedure Code in a preliminary hearing setting. The jury reserves the right to not assign the grant depending on the quality of the applications.

In case of resignation or withdrawal of the selected candidate, the next candidate with the highest evaluation score will be notified immediately.

11. Deadline for application and presentation of applications:

The competition is open from **9** until **22 july**. The applications must be formalized, compulsorily, by sending the following documents:

- Detailed Curriculum vitae, in Portuguese or in English;

- Past research activities and its relevance to the current project explained in a motivation letter written in Portuguese or English;
- Certificates (copy) of the previous academic degrees, specifying mandatorily the final classification. Only candidates who have completed the Bachelor degree by the end of the application period will be admitted. If they do not yet have the official degree certificate, a declaration of honour from the candidate stating that has completed the qualifications required by the end of the application period, will be accepted. At the time of the respective hiring the candidate must present the official degree certificate;
- Evidence of enrolment in a Master program.
- Contact e-mail address and phone number.]

The applications cannot exceed 20 MB and must be sent by e-mail to: rh@ciimar.up.pt], with the reference [2025_048_BI_AtlantidaII] in the subject line. The applications that do not include all the elements previously indicated will not be considered.

12. Non-discrimination and equal access policy:

CIIMAR actively promotes a non-discrimination and equal access policy, wherefore no candidate can be privileged, benefited, impaired or deprived of any rights whatsoever, or be exempt of any duties based on their ancestry, age, sex, sexual preference, marital status, family and economic conditions, instruction, origin or social conditions, genetic heritage, reduced work capacity, disability, chronic illness, nationality, ethnic origin or race, origin territory, language, religion, political or ideological convictions and union membership.

Pursuant to Decree-Law no. 29/2001 of 3 February, disabled candidates shall be preferred in a situation of equal classification, and said preference supersedes any legal preferences. Candidates must declare, on their honour, their respective disability degree, type of disability and communication/expression means to be used during selection period on their application form, under the regulations above.

Note: The signing of the scholarship contract is subject to the signing of the project acceptance term.