Doctoral Fellowship – 1 Vacancy

Within the project – UPSEA

Project Ref.: MPr-2026-2-28712 (ALGARVE-FEDER-04084700)

Ref. ª: CCMAR/BD/18/2026

The Centre for Marine Sciences of Algarve (CCMAR) opens one (01) Doctoral Fellowship (Bolsa de Doutoramento) for applicants of any nationality, including stateless candidates, and holders of political refugee statute, in the scientific field of **Aquaculture, Biochemistry, Lab field animal and Nutritional Sciences** within the research project with reference MPr-2026-2-28712 (ALGARVE-FEDER-04084700), entitled **UPSEA:** "*Unraveling the Potential of Advanced Biorefineries for the Development and Upscaling of Algae Ingredients from Invasive Seaweed Biomass for Biotechnological Applications to Reduce EU Strategic Dependencies*", funded by AI2 – Agência para a Investigação e Inovação, under the following conditions:

1.Host and Contracting Institution: CCMAR

This fellowship is intended for R&D activities carried out by students enrolled in a doctoral programme at the beginning of the fellowship, with a view to consolidating their scientific training through the development of research work leading to the award of a doctoral degree.

2.Work Plan, Tasks to perform and objectives:

Nutritional programming and physiological resilience in marine fish larvae using novel algae derived and functional additives

1- Project Overview and Objective:

The primary objective of this research plan is to evaluate the nutritional efficacy, bioactivity, and physiological impact of incorporating sustainable functional ingredients, such as algae biomass, bio-extracts, and other novel feed additives, into microdiets for marine fish larvae (e.g., Senegalese sole). The research aims to advance sustainable aquaculture by validating ingredients that enhance zootechnical performance, redox homeostasis, and overall resilience to rearing stressors during early ontogeny.

2 - Activities (A) and Tasks:

A1: Nutritional and Functional Screening

- Task 1.1: Experimental Design & Microdiet Formulation: Collaborate in the formulation and production of experimental microdiets incorporating varying inclusion levels of selected algae fractions or alternative functional additives;
- Task 1.2: Early-Stage In Vivo Trials: Conduct initial screening trials during the first-feeding, weaning, and post-larval stages;
- Task 1.3: Performance & Health Profiling: Assess key zootechnical metrics (growth rates, survival). Perform laboratory assays to quantify redox homeostasis, baseline oxidative stress, and early immune and gut responses.

A2: In Vivo Validation under Semi-Commercial Conditions

- Task 2.1: Upscaled Formulation: Refine experimental diets using the lead candidate ingredients identified in A1 for validation at a semi-commercial scale.
- Task 2.2: Challenge & Resilience Trials: Execute in vivo trials simulating real-world aquaculture conditions, including specific stressors (e.g., temperature, handling, or transport challenges).
- Task 2.3: Advanced Physiological Profiling: Evaluate the physiological robustness and stress- resilient responses of the post-larvae, documenting impacts on intestinal integrity, barrier function, and sustained redox balance.

A3: Data Management, Dissemination & Outreach

- Task 3.1: Data Integration & Analysis: Process and analyse experimental data, ensuring all datasets are maintained according to FAIR principles.
- Task 3.2: Scientific Communication: Draft peer-reviewed scientific manuscripts and prepare abstracts for oral or poster presentations at academic conferences based on the trials' outcomes.
- Task 3.3: Industry & Public Outreach: Participate in science communication activities promoted by CCMAR and assist in the hands-on training of BSc and MSc students.

3.Scientific Supervisors:

Doctor Sofia Engrola, Project Coordinator at CCMAR, Group Leader, Principal Investigator and member of the CCMAR Board of Directors and Doctor Rita Teodósio, Junior Researcher at CCMAR.

4.Work place:

The workplace is CCMAR (Gambelas Campus of the Algarve University, Faro, Portugal) and other places necessary for the execution of the work plan.

5.Requirements for the application:

Applicants must meet all the conditions stated below:

1. Academic Degree: Master's degree in Aquaculture, Fisheries, or a closely related field;
2. Animal Welfare Certification: valid authorisation issued by DGAV (*Direção-Geral de Alimentação e Veterinária*) to work with animals for scientific purposes (including competence in carrying out procedures, providing animal care, and performing the humane killing of fish), or an equivalent internationally recognised certification (e.g., FELASA) valid in Portugal;
3. Laboratory Experience: Proven previous experience working within a scientific research laboratory environment;
4. In Vivo Trial Experience: Demonstrated capacity and hands-on experience in rearing marine fish larvae, with a strong interest in applied aquaculture research;
5. Technical Skills: Established knowledge and practical skills in molecular biology techniques for nucleic acid analysis (e.g., DNA/RNA extraction, PCR) and biochemical redox status analysis;
6. Language Proficiency: Good command of both spoken and written English;
7. Soft Skills: High level of initiative and motivation, with the proven ability to work effectively both independently and collaboratively as part of a research team.

Non-compliance justifies exclusion from the procedure.

6.Evaluation criteria:

Through the analysis of the application documents the evaluation criteria for the applications and their relative weight for ranking are as follows:

1. Proven experience in rearing marine fish larvae, with a strong interest in applied aquaculture - 30% (e.g., Detailed description of hands-on experience with specific marine species, management of rearing systems such as RAS, daily husbandry, applied feeding regimes including the transition to inert microdiets, and practical knowledge of live prey production and enrichment protocols, such as rotifers and Artemia);

2. Proven experience in biochemical analyses on animal tissue samples - 10% (e.g., Detailed description of specific laboratory protocols and assays previously performed independently, particularly those related to evaluating physiological status, digestive enzyme activities, redox homeostasis, or oxidative stress biomarkers);

3. Proven experience in molecular biology techniques for nucleic acid analysis - 10% (e.g., Detailed description of the applicant's direct involvement in RNA/DNA extraction, sample quality control, cDNA synthesis, and gene expression analysis via RT-qPCR, ideally applied to animal physiological responses);

4. Knowledge of informatics and statistical analysis - 10% (e.g., Specification of the statistical software packages mastered by the applicant, such as R, SPSS, or GraphPad Prism, and demonstrated ability to perform univariate and multivariate statistical analyses on biological datasets);

5. Animal Welfare Certification - 10% (Valid authorisation issued by DGAV (Direção-Geral de Alimentação e Veterinária) to work with animals for scientific purposes (Functions A, C, and D), or an equivalent internationally recognised certification (e.g., FELASA) valid in Portugal);

6. English proficiency and motivation – 20% (Assessed through the structure, clarity, and content of the motivation letter. The letter must be written in English and should clearly demonstrate the applicant's communication skills, critical thinking, and specific alignment with the fellowship objectives: Nutritional programming and physiological resilience in marine fish larvae using novel algae derived and functional additives;

7. Applicant's academic merit - 10% (Assessed based on the final classification/grade obtained in the Master's degree).

The selection committee reserves the right to contact and interview candidates if additional information or clarification of any curricular aspect is necessary. In case it takes place, the interview aims to evaluate in more detail the curricular items used to grade the candidate according to the list above.

In the event that no applicant has the necessary profile, the selection committee reserves the right to close the call without any recruitment. In the event that the selected person does not take up the position because of failure to comply with documentary requirements or any other reason, or later during the contract if they resign, the jury reserves the right, upon convenience and opportunity, to assign the post to the next applicant in accordance with the ranking positions based on the selectable reservation list that can be used up to 12 months of the date of the present announcement.

7.Fellowship conditions: The fellowship will have a duration of 12 months, eventually renewed for additional periods up to the end of the research project and never exceeding a maximum of 48 months. The expected start date is **February 2027.** The fellowship must be carried out full-time (exclusive regime),

according to the FCT Fellowship Rules (RBI) and the CCMAR fellowship rules (see here), which are based on the Portuguese law 40/2004, of 18 of August (Scientific Research Fellowship holder statutes) amended by the Decree-Law 123/2019 of 28 of August. A maintenance allowance of 1359.64€ will be paid monthly, through bank transfer, and will be updated as stipulated by the Foundation for Science and Technology (see here).

8.Application period: from 20th of November 2026 to 14th of December 2026 at 23:59 (Lisbon time, Portugal).

9.Application process and mandatory documents:

Complete applications must be submitted online at https://ccmar.ualg.pt/en/career-opportunities and must include:

1. A motivation letter (in English);
2. A detailed Curriculum vitae (in English);
3. A copy of the Animal Welfare Certification;
4. A copy of the Master Certificate;
5. The email contact of up to 2 referees.

Non-compliance with this documents/information determines the immediate rejection of the application.

10.Results and Preliminary Hearing: The admission and evaluation results will be communicated by email within 90 working days after the application deadline. After notification, candidates have 10 working days to contest the preliminary decision.

11.Selection Committee: Doctor Sofia Engrola, Project Coordinator at CCMAR, Team Leader, Principal Investigator, and member of the CCMAR Board of Directors (president); Doctor Rita Teodósio, Junior Researcher at CCMAR (member); Doctor Vincent Laizé, Assistant Researcher at CCMAR (member); Doctor Cláudia Aragão, Assistant Researcher (substitute member); Professor Elsa Cabrita, Associate Professor at University of Algarve, Team Leader at CCMAR (substitute member).

12.Notes:

Hiring Documents:

After the candidate is selected and for the hiring purpose the following documentation/information will be requested:

- Proof of the enrolment (Certidão de inscrição/matricula) from the Academic Services in a doctoral degree;
- Copy of the certificate of the Master's degree;
- Declaration of commitment stating the exclusivity regime;
- Declaration of commitment on honour;
- Civil, fiscal and social security Identification (if applicable);
- Account Number – IBAN;
- Ciência ID: https://www.ciencia-id.pt/CienciaID/HomePage.aspx

13.Fellowship Agreement model:

After the candidate selection and all information is received, it will be signed a fellowship agreement in accordance with the model here

14.Fellowship holder Assessment:

At the end of each period of duration of the fellowship contract, the activity developed by the fellowship holder will be evaluated by the supervisor, by applying the following criteria, in accordance with the model below:

Criteria 1. Execution of the approved Work Plan and achievement of the established milestones (e.g., performance in *in vivo* trials, biochemical analyses, and data processing) (50%);
Criteria 2. Scientific production and communication (e.g., preparation of manuscripts, presentation of results at scientific meetings, and outreach activities) (30%);
Criteria 3. Autonomy, initiative, and integration within the research team (e.g., problem-solving capacity, independent work, and collaborative attitude) (20%).

15.Supervisor report mode: here

16.Fellowship holder report:

By the end of each fellowship period the fellowship holder must present a report. You can find the fellowship holder final report model here

17. Notes:

17.1 The board of Directors reserves the right, due to a change in circumstances at the date of the present announcement, to cancel the present call without any recruitment.

17.2 Disabled candidates shall be preferred in a situation of equal ranking, 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.

17.3 CCMAR encourages applications from individuals with disabilities, including those with a disability degree of ≥ 60%.

17.4 CCMAR subscribes to the European Charter for Researchers and the Code of Conduct for the Recruitment of Researchers (Charter and Code).

17.5 CCMAR's non-discrimination and equal access opportunities policy – No candidate can be privileged, benefited, jeopardised or be deprived of any right or exempt of any claim in regards to descendent, age, gender, sexual orientation, marital status, economic situation, origin, social economy, genetic heritage, disability, chronic disease, nationality, ethnicity, territory of origin, language, religion, politics, ideology or union membership.

Faro, November the 16th, 2026