

	CENTRO DE CIÊNCIAS DO MAR DO ALGARVE	IP.CCM.008
	Anúncio de Bolsa	REV.: 02
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Research Fellowship – 08 vacancies

Within the project - Verão com Ciência 2022 - FCT

Ref. ^a: CCMAR/BIC/23/2022

The Centre for Marine Sciences (CCMAR) opens eight (08) Scientific Initiation Fellowship (BIC), for applicants of any nationality, including stateless candidates, and holders of political refugee statute, in the scientific field of **biological sciences or related fields, and in the area of communication** within the research project: “*Verão com Ciência 2022* within the *Apoio especial para atividades de investigação científica e tecnológica em unidades de I&D com vista à valorização da capacidade científica e tecnológica e a sua relação com o ensino superior e a sociedade*” funded by the Fundação para a Ciência e Tecnologia, I.P. under the following conditions:

Host and Contracting Institution: CCMAR

This fellowship is intended for initiation in R&D activities of students enrolled in a Bachelor degree, an Integrated Master degree or in a Master degree in Biological Sciences or related fields at the start of the BIC, aiming at the initiation or reinforcement of their scientific training.

Work Plan, Tasks to perform and objectives:

The “Verão com Ciência 2022 - Escola de Verão: Conservação e exploração sustentável de recursos Aquáticos” project will be developed in 6 main topics:

Topic 1 (Two fellowships) – Discover novel anti-inflammatory agents and diet supplements to prevent and treat inflammation associated with chronic diseases and aging.

The project will use in vitro cell models with human cells to test the therapeutic potential of marine compounds extracted from invasive macroalgae (Fellowship 1) and extracellular vesicles that include proteins known as inhibitors of pathological calcification and with anti-inflammatory potential. (Fellowship 2).

The work plan for the two fellowships include: Bibliographic research and experimental design; Cytotoxicity and anti-inflammatory activity assays on THP-1 cells; Quantification of inflammatory cytokines (ELISA and RT-PCR); Treatment and interpretation of results.

Topic 2 (one fellowship) - We are what we eat! Preservation of dehydrated fruit with natural extracts of salt-tolerant plants

The project aims to use natural extracts from salt-tolerant plants as innovative food additives to preserve dehydrated fruits. The work plan involves extracting natural products from selected species of salt-tolerant plants, evaluating their antioxidant properties, and using these products to preserve dehydrated apple and pear slices. The influence of such additives on the organoleptic and functional properties of the products obtained will also be determined.

Topic 3 (one fellowship) – Application of marine materials with antiviral properties for the preparation of inhalable medicines

The project will explore the potential of polysaccharides extracted from seaweed for application in the production of inhalable pharmaceutical products with antiviral activity. The work plan involves the optimization of the inhalable microparticles production process by a spray drying technique. Microparticles will be produced only with polysaccharides and also with the association of a model antiviral drug. The fellow's activity includes the production/optimization of microparticles and their characterization (morphology and size by microscopy, aerodynamic properties by cascade impaction).

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Topic 4 (one fellowship) - Optimization of Senegalese sole larval cultivation

The project aims to describe the best light spectrum for Senegalese sole larvae production, and also to study how different wavelengths can affect the development of this species' retina. The work plan involves exposing sole larvae to different light spectra, regularly taking samples for histology, qPCR and in situ hybridization, in order to study the development of the retina in each light condition. Periodic measurements of total length of larvae will also be carried out, metamorphosis will be monitored, and signs of malformations in the different treatments will be identified. Tasks in the work plan include the zootechnic routines associated with larval culture, the production of live food, the collection of samples and the monitoring of larval growth under the different treatments.

Topic 5 (one fellowship) - Metabolic rates as indicators of thermal tolerance and competitive advantage in native and invasive fish

The project aims to carry out a comparison of standard (SMR) and maximum metabolic rates (MMR), and the derived aerobic scope (AS), at different temperatures, between two sympatric species, one native and one exotic, using intermittent and swimming tunnel respirometry techniques, to assess their physiological ability to compete in current and future climatic conditions. Activities to be carried out include electric fishing in the field, keeping fish in captivity, determination of oxygen consumption, thermal tolerance, and critical swimming speed and estimation and statistical evaluation of SMR/MMR/AS profiles.

Topic 6 (two fellowships) - Seaweed on the Beach: a citizen science initiative to monitor seaweed accumulations on the Portuguese coast

Through the "Algas na Praia" platform, citizens are asked to send information about algae found along the Portuguese coast, enabling a large-scale monitoring of these accumulations. The project aims to promote this citizen science initiative during (July/August– grantee 1) and at the end (September – grantee 2) of the bathing season. Tasks include: developing a social media campaign, creating communication materials, developing social media pages associated with the platform, creating a database to systematize the information received, analysing the information received and communicating it to the public through different channels, prepare an exhibition about the initiative.

Specifically, the fellowship holders will be expected to perform the tasks described in each topic, acquiring specific skills related to the areas of work in which they will be inserted, also acquiring transversal skills, such as the ability to work in groups and communication in science, which will be materialized by the final presentation of a report of activities and/or communication to the group where the research activity will be carried out.

Scientific Supervisor:

Topic 1 – Dina Simes e Carla Viegas

Topic 2 – Luísa Custódio e Catarina Pereira

Topic 3 – Ana Grenha

Topic 4 – Catarina Oliveira

Topic 5 – Pedro Guerreiro

Topic 6 – Rita Costa Abecasis, Rui Santos e Dina Simes

Work place:

The workplace is CCMAR (Gambelas Campus of the Algarve University, Faro, Portugal) and other places necessary to perform the workplan.

Application process and mandatory documents:

Complete applications must be submitted online at <https://www.ccmarmar.algarve.pt/list/job> and must include:

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1. a motivation letter (in English or Portuguese) mentioning by descending order the three topics the applicant would like to work in;
2. a detailed Curriculum Vitae (in English or Portuguese).

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

Requirements for the application:

Applicants must meet all the conditions stated below:

1. To be enrolled in a Bachelor degree, an Integrated Master degree or a Master degree in Biological Sciences or related field at the start of the fellowship;
2. Have immediate availability;
3. Not having benefited, under any circumstances, from any grant awarded under the terms of the Fellowship Holder By-Laws (Estatuto do Bolseiro de Investigação, FCT, Portugal), to be confirmed in the candidate's CV.

Non-compliance with the requirements justifies exclusion from the procedure.

Evaluation criteria:

The relative weight for ranking of the criteria to be applied for analysis of applications are as follows:

1. Capacities relevant to the field of the working plan – 60%
2. Motivation to conduct the fellowship working plan – 40%

The selection committee reserves the right to contact and interview candidates if additional information or clarification of any curricular aspect is necessary. If an interview takes place, the interview will be used to evaluate in more detail the curricular items used to rank the candidate as indicated 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 2 months of the date of the present announcement.

Fellowship conditions: The fellowship will have a duration of 01 month with no renewal periods. The selected applicants will be expected to start from July 2022. The fellowship must be carried out under an exclusivity regimen, according to the FCT Fellowship Regulation (RBI) and of the CCMAR fellowship regulations (see [here](#)) based on the Portuguese law 40/2004, of 18 of August (Fellowship Holder By-Laws/Estatuto do Bolseiro de Investigação) amended by the Decree-Law 123/2019 of 28 of August. A maintenance allowance of 486.12€ will be paid monthly, through bank transfer, and will be updated as stipulated by the Foundation for Science and Technology (see [here](https://bit.ly/2ZcxUGJ) <https://bit.ly/2ZcxUGJ>).

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Application period: from 14 July to 21 July 2022 at 23:59 (Lisbon time, Portugal).

Results and Hearing: The admission and evaluation results will be communicated by email as soon as possible and no later than 15 days after the applications period terminate. Due to the emergency related with the funding conditions there will be just a final communication and no preliminary decision and hearing, according to Article 124 (1, a)) of the Administrative Procedure Code.

Selection Committee:

Professor Ana Grenha, Professor at Algarve University and researcher at CCMAR (President of the jury); Professor Dina Simes, Professor at Algarve University and researcher at CCMAR (member); Doctor Catarina Oliveira, researcher at UALG and CCMAR (member); Doctor Luisa Custódio, researcher at CCMAR (member) and Doctor Rita Costa Abecasis, researcher and coordinator of the communication department at CCMAR (member), Doctor Pedro Guerreiro, researcher at CCMAR (substitute member).

Notes:

Hiring Documents

After the candidates are selected and for the hiring purpose the following documentation/information will be requested:

- proof of the enrolment (Comprovativo de inscrição/matricula) from the Academic Services in a Bachelor degree and Integrated Master degree or a in Master degree.
- Declaration of commitment stating the exclusivity regime.
- Civil, fiscal and social security Identification (if applicable).
- Account Number – IBAN.
- Ciência ID: <https://www.ciencia-id.pt/CiencialD/HomePage.aspx>
- Proof of country of residence, residence authorization, or other document legally equivalent, if applicable, in force at the time of fellowship start date.

Fellowship Agreement model

After the candidates selection and all information is received, it will be signed a fellowship agreement in accordance with the model [here](#)

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 - Compliance with the plan of activities (25%)

Criteria 2 – Technical and scientific performance (25%)

Criteria 3 – Development of scientific activity report (25%)

Criteria 4 – Development of interpersonal skills, responsibility and assiduity (25%)

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Supervisor report model [here](#)

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](#)

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.

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.

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, July 11th, 2022