

(BL127/2023-IST-ID)

Post-Doctoral Research Fellowships

Applications are open for 01 Post-Doctoral Research Fellowship(s), within the framework of the project “**Pacto da Bioeconomia Azul**” (“Blue Bioeconomy Pact at Associação do Instituto Superior Técnico para a Investigação e Desenvolvimento (IST-ID) (Reference C632741873-00467082, investment n.º 16), financed by the European Union and national funds through the “Instituto de Apoio às Pequenas e Médias Empresas e à Inovação” (IAPMEI) and the Recovery and Resilience Plan, under the following conditions:

Scientific Area: Biological Sciences

Admission Requirements:

- a) *to hold a PhD degree obtained in the 3 years previously to the submission of the fellowship application;*
- b) *to have carried out the research work that led to the PhD degree in a different entity from the host institution of the fellowship;*
- c) *Not to exceed, with this fellowship contract, including the possible renovations, an accumulated period of 3 years in this type of fellowship, continuously or with interruptions;*
- d) *Not to have previously held a post-doctoral fellowship from IST-ID.*

Workplan and objectives:

1. Conduct advanced scientific research on the roles played by bacterial symbionts in macroalgal health in aquaculture facilities;
2. Coordinate the sampling, sample processing, (metagenomic) DNA extraction, sequencing and analyses of microbiomes in healthy and diseased states and across the life-cycle of economically relevant macroalgae (e.g., *Porphyra* spp.; *Ulva* spp.) reared in aquaculture;
3. Create innovative experimental designs leading to smart cultivation of bacterial symbionts of macroalgae; co-supervise master and PhD students in the development and implementation of such custom protocols to improve the cultivability of the algal microbiome;
4. Prepare scientific articles and dissemination essays, and help coordinate science dissemination events (e.g., workshops, colloquia) in the framework of the abovementioned project.

The activities will be carried out in the framework of work package 5 (“WP5 – Algae”) of the “Blue Bioeconomy Pact”, and foster advanced research on the biotechnological potential of algal-bacterial symbioses in disease prevention and in the development of safer and viable cultivation of macroalgae in a circular bioeconomy context. The adequate conduction of the workplan is pivotal for the career development of the successful candidate and for the adequate progress of the Blue Bioeconomy Pact project at IST-ID.

Legislation and Regulations: Statute of Scientific Research Fellow, approved by Law nr. 40/2004, of August 18, as worded by Decree-Law nr. 123/2019, of August 28; FCT Regulation for Research Studentships and Fellowships, available on <https://www.fct.pt/apoios/bolsas/docs/RegulamentoBolsasFCT2019.pdf> and <https://dre.pt/application/file/a/127230968>.

Workplace: The work will be developed at the Institute for Bioengineering and Biosciences (iBB) of Instituto Superior Técnico, Universidade de Lisboa, under the scientific supervision of Professor Rodrigo da Silva Costa and Dr. Tina Keller-Costa. The workplan requires close collaboration with partners from the aquaculture sector in work package 5 (“Algae”) of the agenda “Blue Bioeconomy Pact”.

Duration: The research fellowship(s) will have the duration of 12 months. It is expected to begin in July 2023, and may be eventually renewed up to the maximum of additional 18 months.

Monthly maintenance allowance: According to the values for Research Fellowships awarded by FCT in Portugal (<http://www.fct.pt/apoios/bolsas/valores>), the amount of the monthly maintenance allowance is €1 741,00, being the payment method an option of the Fellow by Wire Transfer/Check.

Selection methods: The selection methods will be the following: *Curriculum* evaluation, with eventual individual interview if necessary. The criteria used to evaluate the candidates' curricula will be as follows:

1. Expertise in experimental biology, especially if applied to the study of the evolution, ecology, and metabolism of symbiotic, marine bacteria (30%);
2. Expertise in bioinformatics and/or analysis of next-generation DNA sequencing data applied to the study of microbial communities. Previous experience with analyses of 16S rRNA gene sequencing data for the characterization of prokaryotic communities and of shotgun sequencing of microbial metagenomes, with emphasis on the analysis of marine microbiomes, will be considered positively (35%);
3. Familiarity with laboratory techniques and methods in basic microbiology and molecular biology, such as e.g., bacterial culturing, DNA extraction, agarose and polyacrylamide gel electrophoresis, genotyping methods, notion of molecular taxonomy, with preference for molecular taxonomy of bacteria (15%);
4. Academic and professional trajectory. Indicators of scientific production in experimental biology, aquaculture, metagenomics, blue biotechnology and related areas. Participation in externally-funded research projects, publications in international scientific journals, participation in national and international scientific conferences. Documentation of research experience in the private sector and entrepreneurship skills will be considered positively (20%).

Composition of the selection Jury: Professor Rodrigo da Silva Costa (Department of Bioengineering, Instituto Superior Técnico); Doctor Tina Keller-Costa (Department of Bioengineering, Instituto Superior Técnico); Professor Isabel Sá-Correia (Department of Bioengineering, Instituto Superior Técnico)

Announcement/ notification of the results: The final evaluation results will be communicated to all applicants by email.

Deadlines and procedures of complaint and appeal. A complaint may be lodged from the final decision within 15 working days, or an appeal to the Executive Board of IST-ID within 30 working days, both counted from the respective notification

Application deadline and formalization: The call is open from April 20 until May 12, 2023.

It is mandatory to formalize applications with the submission of the following documents: i) B1 Form – Fellowship application (<https://ist-id.pt/concursos/bolsas/>); ii) *Curriculum Vitae*; iii) academic degree certificate; iv) motivation letter; v) declaration on honour that the applicant does not exceed with this contract an accumulated period of three years in this type of fellowship, continuously or with interruptions, within the technological and scientific system, and that the research work that led to the PhD degree was carried out in a different entity from the host institution of the fellowship.

Applications must be submitted to the to the following e-mail addresses: rodrigoscosta@tecnico.ulisboa.pt; mafaldafirmino@tecnico.ulisboa.pt