

Research Studentships (for students of a course that does not award an academic degree)

Applications are open for 01 Research Studentship (of a course that does not award an academic degree), within the framework of 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 bachelor or master degree and be enrolled at a course that does not award an academic degree and it is integrated in the educational project of a higher education institution, performed in association or cooperation with one or several R&D units;

b) not to exceed with this contract, including the possible renovations, an accumulated period of one year in this type of studentship, continuously or with interruptions.

Workplan:

1. Catalogue the marine, host-associated bacterial culture collection - the MicroEcoEvoCC - for ‘The Portuguese Blue Biobank’;
2. Identify and infer the phylogeny of existing pure marine bacterial cultures obtained using 16S rRNA gene and whole genome sequencing approaches;
3. Perform biochemical (e.g., Analytical Profile Index - API) and physiological (e.g. temperature, pH and salinity growth ranges) bioassays to characterize potential novel species and/or genera;
4. Perform antimicrobial activity assays against human and/or aquaculture/environmental pathogens to assess the biotechnological potential of the marine bacteria housed by the MicroEcoEvoCC;
5. Propose and validate novel species names, in case the phylogenetic, phylogenomic, phenotypic and biochemical assessments support it, under the International Code of Nomenclature of Prokaryotes (ICNP), and participate in the preparation of manuscripts to formally describe novel bacterial species.

The objectives will be achieved within the framework of Work package 9 (“WP9 – The Portuguese Blue Biobank”) of the “Blue Bioeconomy Pact” project.

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; IST-ID Regulation for Research Studentships and Fellowships, available on <https://ist-id.pt/recursos-humanos/bolseiros/#documentos-relacionados>.

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 Dr. Tina Keller-Costa.

Duration: The research fellowship will have a duration of 07 months. It’s expected to begin in July 2025, may be eventually renewed up to the maximum of 12 months, including the duration of the initial contract.

Monthly maintenance allowance: the amount of the monthly maintenance allowance is € 1309.64, for holders of a master degree, or € 1040,98, for holders of a bachelor degree, being the payment method of the Fellow by wire transfer.

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. Familiarity with laboratory techniques and methods in classic microbiology, such as microbial cultivation of aerobic, microaerophilic and anaerobic bacteria, and preparation of culture media and chemical solutions. Previous laboratory experience in the study of marine host-associated bacteria, antimicrobial activity testing, phenotyping, and the cultivation and maintenance of microaerophilic and anaerobic bacteria is a plus (30%);
2. Familiarity with laboratory techniques and methods in molecular biology, such as e.g., DNA extraction, PCR, and agarose gel electrophoresis and genotyping methods. Acquaintance with bioinformatics tools used in the analysis of nucleic acid sequences and bacterial genomes. Notion of molecular taxonomy and phylogeny of marine bacteria is a plus (30%);
3. Familiarity with bacterial cryopreservation techniques and the organization of bacterial culture collections. Previous experience with cataloguing and biobanking of bacteria is a plus (25%);
4. Academic trajectory, with special value attributed to scientific training in microbiology and molecular biology, quality of monographs and dissertation, conference presentations and participation in research projects, internships, etc). Quality of scientific and career development statement, as manifested in the candidate's motivation letter. Demonstrated ability to conduct the research plan above (15%).

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)

Doctor Maria Teresa Ferreira Cesário Smolders (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, or an appeal to the Executive Board of IST-ID, within 15 working days counted from the respective notification.

Application deadline and formalization: The call is open from June 12 until June 27, 2025.

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)** proof of enrollment at a course that does not award an academic degree; **v)** motivation letter;

Applications must be submitted to the email: rodrigoscosta@tecnico.ulisboa.pt; tinakellercosta@tecnico.ulisboa.pt; mafalda.firmino@tecnico.ulisboa.pt