

EDITAL FOR THE AWARD OF A SCHOLARSHIP WITHIN THE FRAMEWORK OF PROJECTS AND R&D INSTITUTIONS

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

Applications are open for 1 Research Studentship, within the framework of project InSilico4OCReg “In silico models guiding in vitro biophysical stimulation of biomimetic hierarchical scaffolds: a computational modelling approach towards functional osteochondral regeneration”/Institute for Bioengineering and Biosciences, PTDC/EME-SIS/0838/2021, financed by national funds through FCT/MCTES (PIDDAC), under the following conditions:

Scientific Area: Mechanical Engineering and Systems Engineering

Admission Requirements: Master's in Biomedical Engineering or related fields. Experience in mesenchymal cell (MSC) culture in scaffolds for osteochondral tissue regeneration, MSC differentiation and characterization, as well as experience in 3D Printing and characterization of biomaterials, namely mechanical tests, electrical characterization and scan electron microscopy.

According to Article 6 of FCT Regulation for Research Studentships and Fellowships (Reg. nr. 950/2019), at the date that the scholarship contract is signing, the researcher should 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; and not to exceed with this contract, including the possible renovations, an accumulated period of two years in this type of studentship, continuously or with interruptions.

Workplan: The work plan aims to implement the InSilico4OCReg project. The objectives of this work plan include: (i) Culture MSC in new electrically conductive scaffolds; (ii) Characterization of scaffolds prepared by 3D printing, and (iii) Evaluation of the MSC culture behaviour under different experimental set-ups. The tasks envisaged are aligned with the studies at which the candidate is, or will be, enrolled.

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 in the Institute for Bioengineering and Biosciences of the Instituto Superior Técnico, Campus Tagus Park e Alameda, Lisboa, under the scientific supervision of de Dr João Carlos Fernandes da Silva and Prof Frederico Castelo Ferreira.

Duration: The research fellowship will have the duration of 6 months. It's expected to begin in middle of October 2024, and may be eventually renewed up to the maximum of 12 months, including the duration of the initial contract.

Monthly maintenance allowance: According to the values for Research Fellowships awarded by FCT in Portugal (https://www.fct.pt/wp-content/uploads/2024/02/Tabela-de-Valores-SMM_atualizacao-2024.pdf), the amount of the monthly maintenance allowance is €1 259.64, being the payment method an option of the Fellow by Wire Transfer/Check.

Selection methods: The selection methods will be the following: Curricular evaluation and experience within the scope of the topic of this project (35%), scientific merit and capacity for innovation expressed in the expression of



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interests presented in the application (35%). Candidates will be interviewed (to be carried out in person or over the phone or through an online video conference platform) and the professional and behavioural skills evidenced in the interview will also be the basis of the assessment in the interview (30%). Candidates will be ranked on a scale of 1 to 20 points for each selection method considered.

Composition of the selection Jury: Frederico Castelo Alves Ferreira, João Carlos Fernandes da Silva and Paola Sanjuan Alberte.

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 October 21 until November 4, 2024.

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, where applicable; iv) proof of enrolment at a course that does not award an academic degree; v) motivation letter; vi) expression of interests, and vii) declaration on honour that the applicant does not exceed with this contract an accumulated period of two years in this type of studentship, continuously or with interruptions.

Applications must be submitted to the email: frederico.ferreira@tecnico.ulisboa.pt, with carbon copy to isamar@tecnico.ulisboa.pt



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