

CALL FOR ONE RESEARCH FELLOWSHIP
Fellowship Reference IMM/BI/7-2022

Instituto de Medicina Molecular João Lobo Antunes (iMM) opens a call for one research fellowship under the project *PTDC/BTM-MAT/2472/2021 - Towards the development of a nanoparticle for early diagnosis of Alzheimer's Disease, based on the reversible translocation of the blood brain barrier* with the funding support from Fundação para a Ciência e a Tecnologia, IP.P. / MCTES through national funds (PIDDAC).

Scientific Areas: Biochemistry/ Medical Biotechnology/ Biomaterials

Fellowship recipients / Admission requirements: Any National, foreign and stateless candidate(s) that fulfill the necessary conditions to be enrolled in a non-academic degree course in a rea related to the work plan can apply. Are considered "Non-academic degree courses" the ones referred in [paragraph e\) of number 3 of article 4 of Decree-Law nr 74/2006, from 24th March](#), in its current version, as long as they are developed in association and cooperation between a higher education institution and at least one R&D Unit in accordance with the provisions of paragraph e) of Article 3 of FCT Fellowship Regulation.

Applicants must hold the following requirements:

- MSc degree holder in the field of nanotechnology, biochemistry or related areas;
- Expertise in nanoparticle formulation and functionalization with biomolecules, such as peptides, proteins, or probes;
- Expertise in cells culture, such as toxicity assays;
- Knowledge in biophysical techniques, such as dynamic light scattering, fluorescent spectroscopy;
- Knowledge in microscopy;
- Knowledge of English written and spoken.

NOTE: *In the event the MSc degree was awarded by a foreigner higher institution, the degree must comply with the provisions of Decree-Law nr 66/2018, 18th August, and all formalities established there must be fulfilled by applications deadline.* For further information about the procedure, please check [here](#).

Work Plan and Objectives: Alzheimer's disease (AD) is a fatal neurodegenerative disease and one of the biggest healthcare challenges of the 21st century. One of the greatest challenges is the early diagnosis of the disease, to prevent cognitive decline. The main objectives of this work is to develop a nanoparticle (NP) capable of detecting AD in early stages of the disease. NP will be functionalized with a peptide that allows translocation of the blood-brain barrier (BBB), and an antibody fragment that targets beta amyloid aggregates, associated to AD. The first step of the project consists of synthesis and functionalization of NP and biophysical characterization. In the next step, activity assays will be carried out, such as serum stability, cell viability and BBB translocation assays.

Legislation and Applicable Regulation: Estatuto do Bolseiro de Investigação approved by Law nr 40/2004, from 18th August in its current form (altered by Decree Law nr 123/2019, 28th August) and current Regulation of Fellowships of Fundação para a Ciência e a Tecnologia <https://www.fct.pt/apoios/bolsas/regulamento.phtml.pt> (approved by Regulation nr 950/2019, from 16th December).

Predicted start date, duration and renewal conditions: The fellowship contract is predicted to start in April 2022, for a period of 6 (six) months on an exclusive basis, eventually renewable until the maximum stipulated in applicable regulations, not exceeding the eligibility period of the project.

Work place and Scientific orientation: The research activities will be developed at Physical Biochemistry of Drugs & Targets Lab, lead by Professor Miguel Castanho at IMM, under the supervision of Doctor Vera Neves.

Non-discrimination and equal access policy: IMM undertakes to ensure compliance with the principles of non-discrimination and equality and to that extent, provides that no candidate can be privileged, benefited, harmed or deprived of any right or exempted from any duty due in particular ancestry, age, gender, sexual orientation, marital status, family status, economic status, education, social origin or condition, genetic heritage, reduced working capacity, disability, chronic disease, nationality, ethnic origin or race, place of origin, language, religion, political or ideological convictions and trade union membership.

Research Fellows Support Centre: The Research Fellows Support Centre works on Tuesdays and Thursdays from 9:00AM to 6:30PM at Human Resources Office.

Fellowship financial conditions: The fellow will benefit from a monthly stipend in the amount of **1144,64€** in accordance with the defined in FCT table <https://www.fct.pt/apoios/bolsas/valores.phtml.pt>. The amount will be paid by wire transfer at the end of each month. The fellow will also benefit from a personal accident insurance to execute the proposed research activities as well as the right to Social Security through Voluntary Social Insurance regimen, if wanted, under the terms of Código dos Regimes Contributivos do Sistema Previdencial de Segurança Social, and the contributions costs will be supported by the research project.

Application documents: - Motivation Letter; - Detailed CV; - MSc certificate (please check the “NOTE” in *Fellowship recipients*); - Contacts of 2 references; - Candidate’s declaration of honor indicating previous fellowships, if any, its typology and duration. ***The non-compliance with these requirements determines the immediate rejection of the application.***

In case the applicant does not have yet the required degree certificate, a declaration of honor stating the conclusion of the necessary qualifications for the purposes of this process will be accepted and must be sent by the end date of the call.

Jury evaluation and selection: Vera Neves (IMM), Miguel Castanho (FMUL, IMM) e Ana Salomé Veiga (FMUL, IMM).

Selection methods: Curriculum analysis (70%), taking into consideration the following criteria: 1) Expertise in the field of nanotechnology/biochemistry, nanoparticle formulation essential (35%); 2) expertise cells culture (20%); knowledge in biophysical techniques (15%). Motivation letter (30%).

Deadlines and application process: The call will be open from **15th of March until 28th of March 2022**. Applications should be submitted through IMM website, by clicking in the “Apply” button below the position job ad. ***The non-compliance with these requirements determines the immediate rejection of the application.***

Notification of results: The evaluation results will be announced within 90 days after the termination of the applications submission deadline, by writing and publishing a jury meeting minute at IMM website at <https://imm.medicina.ulisboa.pt/jobs/#results> with all process of recruitment, evaluation and selection

including a list of all excluded and admitted candidates and for these last ones, their classification. All admitted candidates will be notified by email.

Preliminary Hearing and Final Decision Deadline: After notification, all candidates have 10 working days to respond. Panel's final decisions are pronounced within a period of 90 days, from application deadline.

Selection reserve list: Not Applicable.

Fellowship contracting: The Fellowship is granted through the signature of a [contract](#) between IMM and the selected fellow and after the fellow send the following mandatory documents: copy of identification document (in case of non-European citizens is mandatory the work visa / valid resident permit), document proving the required academic degree and the document proving the enrollment in a non-academic degree course. Applicants with academic degrees obtained abroad will be required to present a certificate of recognition in accordance with the applicable regulation. This document is mandatory only in the contracting phase. For each Fellowship period an [Activity Report](#) must be prepared by the fellow as well as the [Report](#) by the supervisor.

Lisbon, 14th of March 2022

The Executive Director of IMM
Professor Maria Manuel Dias da Mota