

CALL FOR A RESEARCH FELLOWSHIP  
Fellowship Reference IMM/BI/24-2023

Instituto de Medicina Molecular João Lobo Antunes (iMM) opens a call for one research fellowship under the project “LA/P/0082/2020” with the funding support from Fundação para a Ciência e a Tecnologia, IP.P. / MCTES through national funds (PIDDAC).

**Scientific Area(s):** Bioinformatics and Health Data Science.

**Fellowship recipients / Admission requirements:** Any National, foreign and stateless candidate(s) that fulfill the necessary conditions to be enrolled in a PhD course (in an area related to the work plan) can apply.

Applicants must hold the following requirements:

- MSc in Computational Sciences and Engineering, or related disciplines with proven training in big data and health data analysis.
- Knowledge in bacterial genomics and microbiome research.
- Expertise in analyzing and interpreting omics data, particularly metagenomics.
- Proficiency in programming languages like Python, Java and SQL.
- Experience in cloud computing.
- Practical experience in machine learning techniques.
- Training in scientific writing demonstrated through at least one scientific paper published as the first author.
- Strong organizational skills and attention to detail.
- Excellent written and oral communication skills in Portuguese and English.

Preferential:

- Ability to thrive in a fast-paced, highly interdisciplinary environment;
- Flexible mindset focused on solutions and innovative problem-solving skills;
- Forward-thinking, can-do, proactive attitude;
- Ability to work both independently and collaboratively.

The international experience of the candidates, although not a determining criterion for selection, will be valued.

**Work Plan and Objectives:**

As a PhD student in this role, you will be at the forefront of developing a computational platform that incorporates the use of machine learning techniques adapted to the analysis of human microbiome data for predicting patients' risk of colorectal cancer (CRC) and their response to cancer therapy. Your responsibilities will include:

- Developing and implementing computational pipelines for the automatic extraction and analysis of human microbiome data. These pipelines must consider a federated operation mode since they will deal with large volumes of data scattered across different databases;
- Conducting shotgun metagenomics analysis to extract valuable insights from microbiome data;
- Integrating microbiome data with clinical information, lifestyle factors, and blood genomic biomarkers;
- Contributing to the intellectual environment of the lab and institute by participating in scientific discussions, seminars, conferences, and peer-reviewed publications.

**Legislation and Applicable Regulation:** Estatuto do Bolseiro de Investigação approved by Law nr 40/2004, from 18<sup>th</sup> August in its current form (altered by Decree Law nr 123/2019, 28<sup>th</sup> 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 16<sup>th</sup> December).

**Predicted start date, duration and renewal conditions:** The fellowship contract is predicted to start in February 2024, for a period of 48 months on an exclusive basis, eventually renewable until the maximum stipulated in applicable regulations, not exceeding the eligibility period of the project.

**Workplace and Scientific orientation:** The research activities will be developed at the Microbiome in Health and Disease Translational Lab of IMM, under the supervision of Dr. Ana Santos de Almeida. The PhD student will also be co-supervised by Prof. Ana Teresa Freitas from INESC-ID/IST.

**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.

**International environment and experience:** Diversity is a fundamental aspect of the essence of IMM, where researchers and non-researchers of different nationalities, backgrounds and areas of study work together, promoting the exchange of experiences and interactions, contributing to the personal and professional development of each person and to the existence of an international, inclusive and stimulating environment.

**Research Fellows Support Centre:** The Research Fellows Support Centre works on Tuesdays and Thursdays from 8:30AM to 6:00PM at the Human Resources Office.

**Fellowship financial conditions:** The fellow will benefit from a monthly stipend in the amount of **1 199,64€** 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; - CV or Resume; - MSc certificate; - Contacts of 2 references. ***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:** Applications will be evaluated by Ana Santos Almeida (iMM), Ana Teresa Freitas (INESC-ID/IST) and Catarina Milho (iMM) (all PhDs).

**Selection methods:**

1<sup>st</sup> Phase: Curricular evaluation: 40% and Motivation Letter: 20%;

2<sup>nd</sup> Phase: Interview: 40%. Only candidates who score a minimum of 50% in phase 1 will be interviewed and Only the top 3 candidates will be interviewed.

**Deadlines and application process:** The call will be open from ~~20<sup>th</sup> December 2023 until 4<sup>th</sup> January 2024~~. 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 processes 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 PhD study cycle.

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, 19<sup>th</sup> December 2023

The Executive Director of iMM  
Professor Maria Manuel Dias da Mota