iMM-Laço Hub is recruiting a Postdoctoral Researcher under an Employment Contract Reference IMM/CT/44-2022

The iMM – Instituto de Medicina Molecular João Lobo Antunes (iMM), has recently created the iMM-Laço Hub that is a structure dedicated to the study of breast cancer to uncovered novel modalities of treatments (see http://immlaco.org). The iMM-Laço Hub opens a call for the hiring of a Postdoctoral Researcher under the project "***Multi-Dimensional Cartography of the Breast Cancer Micro-Environment***". See flyer here › ref IMM/CT/44-2022.

Work Plan and Objectives: In 2020, over 600 000 women died from breast cancer worldwide. Treatment of breast cancer, in particular metastatic, raises many challenges, due to resistance to available therapies. The development of novel, or combinatorial, treatments for breast cancer is an urgent unmet clinical need. We hypothesize that an Onco-Immuno-Microbial axis plays critical roles in breast cancer progression, response to therapy and even relapse. However, much is still to be understood about this three-dimensional crosstalk that holds some therapeutic promises. Thus, our goal is to create an unprecedented map of human breast cancer that will encompass the genetic and clonal distribution of the tumour cells (whole genome/exome sequencing), the specific gene expression profile and the localisation and phenotype of immune/stromal cells (RNA-seq and multiplexed imaging), and the local microbiota (16S rRNA sequencing). This multi-omics landscape will be integrated and associated with clinical data using dimensionality reduction approaches and machine learning to unravel the major parameters and pathways that can be targeted to limit cancer progression and to determine the clinical course of the patients.

The success of this project lies on a strong multidisciplinary team. The successful candidate will be integrated in a collaborative team constituted by **immunologist** and **immuno-oncologist** (Dr. Karine Serre[1–7]) with **clinician-scientists** specialised in breast oncology (Prof. Luis Costa[8,9], Dr. Rita Teixeira Sousa[10]), as well as experts in **cancer-induced angiogenesis** (Dr. Sérgio Dias[11]), **computational biology** (Dr. Nuno Morais[8,12]), and **microbiology** (Prof. Isabel Sá-Correia[13]).

What iMM seeks: The successful candidate must be a ***highly motivated***, ***pro-active***, ***independent***, ***gregarious*** and ***versatile*** individual to join our multi-disciplinary team. He/She should be passionate about iMM-Laço-HUB's missions of bringing hope to the women who are diagnosed with breast cancer and of being an instrumental member of a multi-disciplinary team dedicated to create a cellular and molecular map of the breast cancer microenvironment for the design of novel therapies and to support clinical decisions.

The principal activities of the PostDoctoral Researcher will include:

- Manipulating biological human samples
- Preparing the samples for whole exome sequencing, 16SrRNA gene and RNA-sequencing
- Performing multiplex imaging with microscopy and the CODEX technology
- Participating in the conception of projects and in the writing of associated grant applications of the iMM-Laço Hub
- Participating in the integration and interpretation of the complex data
- Collaborating with and/or co-supervising computational biology MSc and PhD students
- Reporting results to a multidisciplinary team and jointly interpreting them
- Participating in the outreach and science communication activities of the iMM-Laço Hub

The following skills and qualifications are required:

- PhD in cancer biology, immuno-oncology, immunology will be highly valued
- Experience in whole genome/exome sequencing, 16SrRNA gene or RNA-sequencing
- Experience in microscopy, ideally in multiplex imaging
- High organization skills and strong work ethics (care, rigor, consistency, intellectual honesty)
- Aptitude to write and lead projects

- Willingness to work independently to design and perform experiments
- Proficiency in English, spoken and written, and excellent communication skills

What iMM offers: iMM will offer outstanding working conditions, including an unfixed-term full-time contract, starting predictably in July 2022, and the possibility to work in the interface between hospital and biomedical institute on clinical and basic research. iMM will also offer access to state-of-the-art infrastructures, namely Biobank and Imaging Units, and assistance from partnering computational biologists, as well as full support for individual postdoctoral and career development fellowship applications by a dedicated Pre-Award Unit.

Working Conditions: The employment contract has an estimated duration of 12 months. Gross monthly salary is **2.153,94€.** The indicated amount will be subject to the mandatory taxes accordingly to Portuguese Labour Law.

How to apply: Please submit your detailed CV, motivation letter, PhD degree certificate and contacts of 3 references, from **11th of April 2022** until **30th of May 2022** through iMM website, by clicking in the "Apply" button below the position job ad.

Non-discrimination and equal access policy: iMM promotes a non-discrimination and equal access policy, wherefore no candidate can be privileged, benefited, impaired or deprived of any rights whatsoever, or be exempt of any duties based on their ancestry, age, sex, sexual preference, marital status, family and economic conditions, instruction, origin or social conditions, genetic heritage, reduced work capacity, disability, chronic illness, nationality, ethnic origin or race, origin territory, language, religion, political or ideological convictions and union membership.

Pursuant to Decree-Law nr 29/2001 of 3rd February, disabled candidates shall be preferred in a situation of equal classification, and said preference supersedes any legal preferences. Candidates must declare, on their honour, their respective disability degree, type of disability and communication / expression means to be used during selection period on their application form, under the regulations above.

Evaluation Criteria: Applications will be evaluated by Sérgio Dias, Nuno Morais and Karine Serre (all PhD's) in accordance with the following method:

- 1st Phase: Curricular evaluation: 45% and Motivation Letter: 20%
- 2nd Phase: Interview: 35%

Results: Both admitted and excluded candidates list and final classification list shall be posted at iMM website at https://imm.medicina.ulisboa.pt/jobs/#results and all admitted candidates will be notified by email.

Preliminary Hearing and Final Decision Deadline: Pursuant to article 121 of the Administrative Procedure Code, after notified, all candidates have 10 working days to respond. Panel's final decisions are pronounced within a period of 90 days, from application deadline.

References:

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2. **Serre, K.**, E. Mohr, K. M. Toellner, A. F. Cunningham, S. Granjeaud, R. Bird, and I. C. MacLennan. 2008. Molecular differences between the divergent responses of ovalbumin-specific CD4 T cells to alum-precipitated ovalbumin compared to ovalbumin expressed by Salmonella. ***Mol Immunol*** 45: 3558–3566.

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Lisbon, 08th of April 2022