

**iMM is recruiting an Early Stage Researcher (PhD student) under an
Employment Contract within ENLIGHT-TEN+ - MSCA-ITN-2020-955321
- H2020 - European Network linking informatics and genomics of helper T
cells in tissues - Reference IMM/CT/10-2021**

The Instituto de Medicina Molecular João Lobo Antunes in Lisbon (iMM) is a leading European research institute with cutting edge facilities and a stimulating multinational environment.

A joint PhD position is open at Luis Graca and Marc Veldhoen Laboratories as part of the *European Network Linking Informatics and Genomics of Helper T cells in tissues* (ENLIGHT-TEN+) consortium, which is a Marie Skłodowska-Curie Innovative Training Network (ITN-ETN) funded in the framework of the HORIZON 2020 program.

The mission of ENLIGHT-TEN+ is to provide cross-disciplinary training in T cell immunology and big data analysis in order to train a new generation of researchers to exploit the power of emerging technological platforms.

The common objective of this joint PhD position is to use bioinformatics to study the biology of lymphocyte populations within specific tissues.

The Graca Lab has been interested in the study of specialized Foxp3+CD4+ regulatory T cells (Tregs) and other populations of regulatory lymphocytes, in the prevention of autoimmunity, transplant rejection and allergy. In the scope of this call, the work will be devoted to the characterization of T follicular helper (Tfh) and T follicular regulatory (Tfr) cells that regulate antibody production in secondary lymphoid tissues, in the scope of autoimmunity, allergy and protective immune responses elicited by vaccination (*Nature Commun.* 8:15067; *Science Immunol.* 2: eaan1487; *Immunol Rev* 288:112).

The Veldhoen Lab is interested in the development and function of tissue resident T cells, including innate-like natural intestinal epithelial cells (IELs) as well as tissue resident memory T cells (Trm) in different tissues, which are part of a cellular network of immune surveillance. In the scope of this call, we will focus on development of Trm cells and functional characteristics of IELs upon infection and re-infection and different microbiota compositions (*Science Immunol.* 3: eaan2543; *Nature Immunol.* 21: 766; *Frontiers Immunol.* 10: 1683).

ENLIGHT-TEN+ has developed a cross-disciplinary, high-quality educational program to provide all its PhD students with specialist high-level research training, a broad scientific skill set and experience in both academic and industrial working environments. In addition to excellent research skills, our training program will also offer training in team-leading abilities, project management and entrepreneurship to supplement and complement the university-based PhD education.

ENLIGHT-TEN+ consists of 15 beneficiaries from 10 European countries, bringing a balanced portfolio of expertise bridging in-depth knowledge of T cell differentiation and pathophysiology of autoimmune and allergic diseases, through to bioinformatic analysis of large data sets. This strong network of academic and industrial partners ensures that ENLIGHT-TEN+'s early stage researchers (ESR) will be extremely well placed to successfully compete for academic or industrial life science-related positions, and to drive research and innovation within the European Research Area.

More information is available at the network website at <http://www.enlight-ten.eu>

✓ **Work Plan**

The PhD student will perform his/her main research activity at the iMM Lisboa at Luis Graca and Marc Veldhoen Laboratories. ~~At the~~ At the same time, he/she will be highly connected with the ENLIGHT-TEN+ consortium. As part of the program, the students will attend summer schools on relevant topics and annual scientific meetings of the consortium. The PhD student will also spend some months in 3 other labs of the consortium to learn new technologies, leading to a strong background in bioinformatics and immunology.

The successful PhD candidate will use bioinformatics to study the biology of tissue lymphocytes in the course of inflammatory and adaptive immune responses, and their role in immune-pathology. The proposal will use mouse models of disease as well as primary tissue from human patients. A significant part of the project will consist in the generation and analysis of big data (including bulk and single-cell transcriptomics) obtained from defined lymphocyte populations. The ultimate objective consists on the identification

of unique characteristics of lymphocyte function related to different types of inflammatory and adaptive immune response that may lead to the development of novel diagnostic or therapeutic strategies.

✓ **Eligibility Criteria**

1. The candidate should hold a Master degree in Immunology, Bioinformatics or related disciplines prior to the appointment date;
2. The candidate should have relevant experience in bioinformatics;
3. Not have resided in Portugal for more than 12 months in the 3 years prior to the appointment date and not have carried out their main activity (work, studies, etc.) in Portugal;
4. Be an 'early stage researcher' (i.e. in the first four years of his/her research career and not have a doctoral degree)
5. iMM welcomes candidates of any nationality, irrespective of gender, age, race or ethnic background.

✓ **Monthly Salary and Legislation:** The successful candidate will be employed **for a maximum of 36 months** (full time) and will receive an annual salary package according to the allowance amounts defined in the rules for Early Stage Researchers (ESRs) EU Marie Skłodowska-Curie Actions Innovative Training Networks (ITN) (https://ec.europa.eu/research/participants/data/ref/h2020/wp/2018-2020/main/h2020-wp1820-msca_en.pdf)

- Living allowance – 33.040, 08€
- Mobility allowance – 7.200€
- Family allowance – 3.000€ (if applicable)

IMPORTANT NOTE: *The annual amounts above include all charges with gross salary and other allowances under the contract, work accident insurance and all taxes due according to Portuguese Labor Law.*

✓ **Application and Selection process:** The call for applications is NOW OPEN: deadline **March 12, 2021**

Applications documents (- Motivation letter; - Detailed Curriculum Vitae; - Contact details of two referees; MSc degree certificate) should be sent to Human Resources through <https://hzi.cloud.opencampus.net/>, indicating the reference ***“ENLIGHT-TEN+ iMM project”*** as subject.

Notification of Results: The results will be published in iMM website <https://imm.medicina.ulisboa.pt/jobs/#results>.

Lisbon, 12th February 2021