Postdoctoral position in Lisbon

Single-cell and spatial transcriptomics to elucidate the regulation of antibody production in vaccination and autoimmunity. La Caixa funded project *GCvax*, for up to 36 months.

The Instituto de Medicina Molecular is a leading European research institution with cutting-edge facilities and a stimulating multinational environment, located in Lisbon, on the campus of the Lisbon Academic Medical Centre, which also comprises the largest hospital in the country.

The host laboratory, led by Luis Graca, has recognized expertise in studying immune regulation and the role of specialized populations of regulatory T cells (Nature Comms 2017, Science Immunol 2017). The lab focuses on investigating various regulatory mechanisms in immune biology, with particular interest in the regulation of the germinal centre (GC) responses, key for antibody production following infection, vaccination, and autoimmunity (Nature Rev Rheumat 2019; Immunol Rev 2019). The group has developed sophisticated methods and protocols that allow detailed investigation of GCs in mice and humans, while making use of single-cell -omics technologies and various statistical, machine learning, and computational methods to examine the detailed profile of GC cells and propose new models of regulation (Science Immunol 2021). Our expertise in computational and mathematical approaches has been used to address problems ranging from cell biology (bioRxiv 2022) to human populations (N Engl J Med 2022).

A postdoctoral position is open under a prestigious "la Caixa" research grant (*GCvax*). The project is directed towards the elucidation of the biology Tfh and T follicular regulatory (Tfr) subsets and their mechanism in regulating germinal centre responses following vaccination. The postdoctoral fellow will uncover the relationship between different Tfh subsets and their spatial location within the secondary lymphoid tissues for the regulation of antibody production. The research will use single-cell and spatial transcriptomics technologies to investigate lymphoid tissue obtained following vaccination. In parallel, equivalent datasets from biopsies of autoimmune patients will provide an opportunity to explore the immune dysregulation leading to autoimmunity.

Candidate profile. We are seeking highly motivated postdocs with a background in computational biology. Expertise in R/python, bash, and intermediate statistics is essential, with a preference for experience in single-cell omics data analysis. Previous knowledge of immunology will be a plus. The candidate must hold a doctoral degree. Fluency in written and spoken English is essential. Salary will be adjusted to the candidates' experience.

Application. Applications are open, and submissions until 30/11/2022 will be considered. The application should be submitted through the link: https://tinyurl.com/5n8mbjvs, including: 1. Motivation letter; 2. CV; 3. Contact details of two supervisors who can provide reference letters upon request; 4. PhD and University degrees certificates. Pre-selected candidates will be invited for an interview.

Instituto de Medicina Molecular João Lobo Antunes: https://imm.medicina.ulisboa.pt

Luis Graca Lab: https://imm.medicina.ulisboa.pt/investigation/laboratories/luis-graca-lab/#intro (with link to the job application)