
Job Advertisement Title: Postdoctoral position in human autoantigen-specific T cell immunology in T1D

Location: Imperial College London, Faculty of Medicine, Department of Infectious Diseases, St. Mary's campus. London, UK.

Job Summary

The purpose of the post is to recruit a passionate, self-motivated and dynamic postdoctoral research associate with expertise in *in vitro* and *ex vivo* models to study autoantigen-specific T cell biology in type 1 diabetes using tetramers, to join Dr. Dominguez-Villar's laboratory at Imperial College London, funded by the Leona M. and Harry B. Helmsley Charitable Trust. The research programme led by Dr. Dominguez-Villar focuses on understanding the molecular mechanisms that maintain human regulatory T cell identity and plasticity and the regulation of CD4⁺ T cell responses in autoimmune and infectious disease settings.

The objective of the project is to determine the HLA-associated immunological mechanisms that drive natural protection in individuals with the DR15-DQ6 haplotype in the presence and absence of HLA-associated risk alleles, and it is based on the hypothesis that CD4⁺ T cells that recognize self peptides presented by protective alleles display an anti-inflammatory/regulatory phenotype. We will be harnessing the ADDRESS2 cohort of T1D and unaffected siblings to answer these questions.

Duties and responsibilities

You will be responsible for designing, performing and analysing experiments, and share findings with colleagues.

You will help supervise students as needed.

You will be responsible for identifying and optimizing new techniques for the collection and analysis of data.

You will write reports for submission to funding agencies, and manuscripts for submission to peer-review journals.

Essential requirements

- PhD in molecular or cellular immunology.
- Expertise in tetramer-based identification and characterization of T cells.
- In vitro single- T cell clone generation and characterization.
- High parameter flow cytometry experimental setup and analysis
- Statistical analysis of data.
- Willingness to work as part of a team, to collaborate and help other colleagues when necessary.
- Excellent verbal and written communication skills.

Further Information

Starting date: July 2023 or as soon as possible thereafter.

Duration of contract: fixed term, 3 years.

Interested candidates, please contact Dr. Margarita Dominguez-Villar (m.dominguez-villar@imperial.ac.uk).