2 PhD positions

within the EU Marie Curie Innovative Training Network (ITN) QuanTII on Quantitative T-cell Immunology

We are looking for two PhD students in experimental immunology, who are interested in interdisciplinary immunological research on the quantification of lymphocyte turnover and diversity. This project is part of an EU Marie-Curie Innovative Training Network (ITN), which brings together 15 international experimental and theoretical partners from private and academic institutions to work on the quantification of T-cell Immunology. Our main goal is to determine how long-term T-cell memory is maintained, by which subsets of memory T cells, in which sites of the body, how long these cells live, and where most of them are produced. We will use state-of-the-art techniques including stable isotope labelling to study the *in vivo* kinetics of lymphocytes, and barcoded T-cell receptor (TCR) sequencing to study the repertoire composition of the memory T-cell pool.

You will undertake the experimental work of the project and will be trained in quantitative analysis. Since answering the above questions requires modeling and bioinformatic analyses, the project will be carried out in close collaboration with fellow PhD students in the Theoretical Biology group at Utrecht University, and the Theoretical Immunology group at Imperial College London, which form the mathematical counterparts of this project, and with which regular interaction will be maintained. At Utrecht University we have a long-standing collaboration between experimental immunologists, modelers, and bioinformaticians, which is formalized in the Utrecht Center for Quantitative Immunology (UCQI). This is an inspiring environment where immunologists and theoreticians have learned to speak each other's language and collaborate intensively.

Department information

You will work in the Leukocyte Dynamics Group run by José Borghans and Kiki Tesselaar, which is part of the Laboratory of Translational Immunology at the University Medical Center Utrecht, the Netherlands. The group performs research at the interface between experimental and computational biology.

(https://www.umcutrecht.nl/en/Research/Research-programs/Infection-Immunity/Research-Groups/Group-Borghans)

Eligibility

To be eligible for this EU Early Stage Researcher (PhD) position you must have an MSc degree in an appropriate discipline (such as Biology, Medical Biology or Medicine) or a related science, which you obtained no more than 4 years ago. You should not have been resident or have carried out your main activity (work, studies, etc.) in the Netherlands for more than 12 months in the past 3 years. These eligibility requirements are stipulated by the funder and are non-negotiable. Please do not apply if you do not meet them. Experience in experimental immunology and with animal experiments is desirable.

The position

- The post is full-time and fixed term for three years (start date negotiable).
- This is a *salaried* position. Additional allowances to cover living costs and travel, including a contribution to some family-related expenses and the cost of annual travel back to your home country will be available.

How to apply

Please send your CV, along with a motivation letter outlining your specific qualifications and motivation for this position, and including contact information for at least one reference to Dr. José Borghans (j.borghans@umcutrecht.nl) preferably no later than January 13, 2019.