



PhD Position- Genetic/Immunology (m/f/d)

Biology, M. Sc. or equivalent

Hannover Deutschland

Department of Immunology und Rheumatology MHH

In the scope of the DZIF project (Deutsches Zentrum für Infektionsforschung), we are looking for a graduate student (Doktorandenstelle) to work in the group of Prof. R. E. Schmidt, clinic of immunology and Rheumatology, Hannover Medical School, focusing on genetic and immunological characterization of patients with primary and secondary antibody deficiency. Expertise in molecular biology techniques, bioinformatic and statistical methods would be particularly welcome. This is a temporary position with 50% TV-L 13 salary until 31 December 2020 and planned extension (total duration 3 years).

Project description:

The diagnosis common variable immunodeficiency (CVID) is a large diverse collection of immunocompromised patients. Within this project we will identify biomarkers better discriminating between the "infection-only" type of CVID and the CVID patients at risk to develop "complex-immundysregulation". The classification into these different groups of CVID is very important from a patient management aspect, as "infection-only" patients may be sufficiently treated with immunoglobulin replacement and antibiotics, whereas the others may need immunomodulation or even immunosuppression to prevent autoimmunity/auto-inflammation. In this project we will transfer insights from PID research and the understanding of the underlying signaling mechanisms to uncover mechanisms of secondary immunodeficiencies (SID). We are pursuing two goals: a) we plan to qualitatively determine all specific markers/pathways identified in PID patients in defined cohorts of patients with severe infections due to SID (next generation sequencing, immunophenotype, transcriptome studies); b) we will make an effort to quantify signal strengths in critical pathways (NFAT, NF- κ B, inflammasome etc.) in cells from patients with PID and SID (using cutting-edge flow-based and proteomic studies). Next generation sequencing will be performed on cohorts of CVID and SID patients. We will combine immunophenotypic analysis and NGS data to provide mechanistic insights using *in vitro* and *in vivo* systems.

The project will be carried out in collaboration with DZIF collaborators (CCI Freiburg, LMU).

Qualification profile:

Master equivalent, molecular experimental research experience

Please send your application documents to:

Immunologie@mh-hannover.de

I am available for any questions

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