PhD Thesis in Immunology/Dermatology

Prof. Dr. Manfred Lutz and PD Dr. Andreas Kerstan offer a doctoral thesis project entitled:

Induction of memory regulatory T cells during immunotherapy of allergic diseases

Allergen immunotherapy (AIT, desensitization) is the only causal therapy of IgE-mediated allergies. Here, the AIT with wasp venom with an effectiveness of over 95% is a unique selling point. Despite this impressive tolerance induction in humans, it has not yet been possible to decipher the exact immunological processes for the clinical usefulness of insufficiently effective AITs. In the project, the immunological switching points of the transition from the initial to the long-term tolerance induction in a mouse model of AIT against the model antigen ovalbumin (OVA) are investigated. The functional role of different populations of tolerogenic DCs in the generation of regulatory T cell subsets (Tr1, Foxp3+ Treg) in the different phases of an established AIT scheme will be investigated by different stains of genetically modified mice (cre/lox, reporter, KO) and RNA-sequencing and samples from human patients. We expect the project to provide new insights into essential switches in a successful AIT that could provide the basis for better therapies for IgE-mediated allergic diseases.

Requirements:

• A very good master's degree in biology / biochemistry / molecular biology / molecular medicine or a similar discipline
• Commitment to basic and clinical research and interest in immunology and dermatology
• Team spirit, high motivation and the ability to work in competitive research

We offer:

• Modern laboratories for immunology (multi-parameter flow cytometry and sorting, confocal microscopy, molecular biology, biochemistry in an international environment with great experience
• Clinical sample analysis correlating mouse and human results
• Core units for RNA deep sequencing, imaging
• Structured doctoral program of the Graduate School of Life Sciences (GSLS) including mentoring, transferable skills courses etc.
• Employment as a research assistant (m/f/d) according to TV-L 13 (65%) for 3 years.

Applications with the usual documents including curriculum vitae, method spectrum, summary of the bachelor and master thesis to: m.lutz@vim.uni-wuerzburg.de or Kerstan_A@ukw.de

Literature


