

Immunity against commensal skin fungi: host protection vs. immunopathology

PROJECT DESCRIPTION:

Our lab studies the interaction between the mammalian immune system and commensal fungi. As part of the microbiota, fungi colonize the skin, similarly to bacteria, but they remain much less well studied. IL-17 immunity is key for the maintenance of fungal and tissue homeostasis. At the same time, skin commensal fungi are associated with inflammatory and allergic disorders such as atopic and seborrheic dermatitis, and the question arises to what extent these diseases are driven by the antifungal response.

This project will investigate the immune response against the skin commensal yeast *Malassezia* in the normal and diseased skin and identify fungal secreted products that activate and modulate the Th17 and $\gamma\delta$ T17 antifungal response. The project relies on mouse models of skin fungal commensalism and of atopic dermatitis in combination with cell culture experiments. The project will involve immunological, microbiological, genetic, transcriptomic, and biochemical approaches.

WHAT WE OFFER:

The 4-year PhD project is available immediately or by agreement. Our team consists of 10 enthusiasts for fungal research including PhD students, postdocs, master students and a lab manager. We provide an enjoyable working environment characterized by team spirit and collaborations within the lab and with other labs in Switzerland and internationally. Our lab is located at the Irchel Campus of University of Zürich (Vetsuisse Faculty). We are also affiliated with the Institute of Experimental Immunology of University of Zürich and benefit from the inspiring and collaborative network of immunologists and microbiologists across Zürich. PhD students in the LeibundGut-lab are member of the Microbiology and Immunology (MIM) PhD program of the Life Science Graduate School Zürich and they are registered at the Science Faculty of the University of Zürich. For further details please visit www.immunology-vs-f.uzh.ch

WHAT WE EXPECT:

We are looking for a dedicated and highly motivated candidate with enthusiasm for basic research and a strong background in immunology (preferably T cell immunology) and microbiology. Experience with animal experimentation and multicolour flow cytometry are an asset.

Are you creative, hardworking and a team player? Are you committed to driving your own project and to actively contribute to an inspiring scientific environment? Then we are looking forward to getting your application.

APPLICATION:

Please send your complete application including CV, a letter of motivation and two reference letters (compiled in a single pdf file) to

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