

Postdoc position in Evolutionary Genetics of Adaptive Immunity

A postdoc position is available in the Research Unit for Evolutionary Immunogenomics at the University of Hamburg, for initially 3 years, with the possibility of extension for another 3 years upon positive evaluation. We are looking for a postdoctoral scientist to support our research on the evolution, genetics and genomics of the adaptive immune system (especially MHC), using the three-spined stickleback as an experimental model system.

The application deadline is July 18 (very soon!)

Please follow this link to apply online through the university system:

<https://www.uni-hamburg.de/en/stellenangebote/ausschreibung.html?jobID=27bc1b12f1f814c9eef0203b238c3cb6c5020835>

In my group we are studying the genetic basis for variation in immunocompetence and disease susceptibility in vertebrates, with a particular focus on the adaptive immune system and specifically the process of antigen presentation (MHC) and recognition (TCRs). We usually take an evolutionary perspective and aim to understand the factors and mechanisms that maintain genetic diversity in this context, but are also interested in the consequences of this diversity for the individual's health and have several ongoing collaborations with clinical groups on specific complex diseases.

This position will particularly strengthen our work on the evolutionary side, being responsible for driving our work on the genetics of adaptive immunity in sticklebacks forward. We see the stickleback as a fantastic model species for studying the adaptive immune system in the place where it originally evolved, i.e. in the organism's natural environment. At the same time the stickleback allows us to do fully controlled experiments in the lab (we have a newly equipped fish facility), including controlled exposure experiments and targeted breeding.

Previous work from us and others provides an excellent picture of the genetic organization of the MHC in the stickleback, on which we will build. More importantly, we have recently established a TCR sequencing protocol for sticklebacks and are now exploring the T cell repertoire diversity and dynamics in response to different conditions and its interaction with MHC diversity.

This position (and the environment we provide) thus holds great promise for exciting research projects into the evolution of antigen recognition and adaptive immunity in a naturally diverse species (nothing against laboratory mice, but they are just not the real thing!).

The position requires wet lab experience and a minor level of field work affinity, but also computer-based analyses and NGS data crunching. So some experience with NGS data analysis will be advantageous. For more specific requirements and duties, including a minor level of teaching, please see the advert above.

Our newly renovated labs and offices in the Institute for Animal Cell and Systems Biology at the University of Hamburg are situated in the middle of Hamburg, the second largest city in Germany. The institute is neighboring the main university campus with its bustling student life and cafes, and easy to reach by bike or any public transport (and car, if you must).

Please see also our lab website for more info:

<http://www.biologie.uni-hamburg.de/evolutionaryimmunogenomics>

We are also looking for a computational biologist with a focus on bioinformatics and biostatistics approaches to studying population genetics as well as the genetics and dynamics of antigen presentation in complex diseases:

<https://www.uni-hamburg.de/en/stellenangebote/ausschreibung.html?jobID=036b25971438a38372950a9d28f644e02959fa84>

Please do not hesitate to contact me for informal inquiries,
Tobias Lenz

Prof. Dr. Tobias Lenz, Heisenberg-Professor
Research Unit for Evolutionary Immunogenomics
University of Hamburg
Department of Biology
Institute of Animal Cell and Systems Biology
Martin-Luther-King-Platz 3
20146 Hamburg, Germany

Tel: +49 40 42838 5369
Email: tobias.lenz@uni-hamburg.de

<http://www.biologie.uni-hamburg.de/evolutionaryimmunogenomics>
