Stellenausschreibung

Reg.-Nr. 08/2021

Fristende 29.04.2021

FRIEDRICH-SCHILLER-UNIVERSITÄT JENA

The **Cluster of Excellence "*Balance of the Microverse*"** of the Friedrich Schiller University Jena, Germany, combines expertise in life, material, optical and computational sciences to elevate microbiome studies from descriptive to hypothesis-driven and functional analyses. Our core mission is to elucidate fundamental principles of the interactions and functions in microbial communities in diverse habitats ranging from oceans and groundwater to plant and human hosts. We aim to identify the shared characteristics of disturbed or polluted ecosystems as well as infectious diseases on the microbiome level, and develop strategies for their remediation by targeted interventions. Our full spectrum of expertise in the physical and life sciences will be leveraged to address these important issues in natural habitats as well as synthetic arenas in a collaborative manner. The affiliated early career program of the *Jena School for Microbial Communication* (JSMC) offers an ambitious, structured and interdisciplinary post-graduate training based on top-level fundamental research.

The Cluster of Excellence *Balance of the Microverse* invites applications for a

Doctoral Researcher Position (Ref. No. PhD 08/2021)

to conduct research in the group of Dr. Thierry Siemeni on the project

The role of CD4+ Foxp3+ regulatory T cells for gut microbiome constitution: atherosclerosis and modulatory effects of physical exercise

Our laboratory is interested in the balance and dysbiosis of the gut microbiome and the possibility to treat our patients by rebalancing their gut microbiome to a healthy state. We aim to assess the influence of exercise on Tregs, the gut microbiome and the resulting atherosclerotic process. Little is known about the molecules produced by microorganisms to activate Tregs, how Tregs structure the microbiome and how changes in the microbiome lead to atherosclerosis development, specifically in light of the role of Tregs. Therefore, we wish to use atherosclerosis as the dysbiosis trigger, analyse microbiome changes and the predicted change of metabolites deduced from the genome sequences of microorganisms in a balanced microbiome compared to the dysbalanced microbiome. In doing so, we hope to identify factors that can serve as diagnostic markers or as therapeutic agents to rebalance the microbiome as well as revealing the causal effects of the dysbalanced microbiome on atherosclerosis

We expect:

- A doctoral researcher in Molecular biology or related disciplines
- Desirable methodological skills: experience in molecular biology, microbiology and/or biomedicine as such as in surgical procedures on rodents.
- Highly motivated individuals with an interest in joining one of the interdisciplinary research areas of the Microverse Cluster
- The ability to work creatively and independently towards developing your own research project
- An integrative and cooperative personality with enthusiasm for actively participating in the dynamic Microverse community
- English communication skills, both written and spoken

We offer:

- A highly communicative atmosphere within an energetic scientific network providing top-level research facilities
- A comprehensive mentoring program and soft skill courses for early career researchers
- *Jena – City of Science*: a young and lively town with a vibrant local cultural agenda

The three and a half year full-time doctoral researcher position (65% TV-L E13) will be funded through the Excellence Strategy of the German federal and state governments or the Carl Zeiss Foundation. The Friedrich Schiller University Jena is an equal opportunity employer and part-time contracts can be discussed. Disabled persons with comparable qualifications will receive preferential status.

Applications are exclusively accepted via the JSMC Online Application Portal:

https://apply.jsmc.uni-jena.de/

Please familiarize yourself with the currently available doctoral projects (www.microverse-cluster.de) and the application process as described in the Online Application Portal. Selected applicants will be invited to an online recruitment meeting taking place in May. Awarding decisions will be announced shortly thereafter, and candidates are expected to be available to start their projects in mid of 2021.

Application deadline: 29th April 2021