

Job advertisement

Vacancy ID: 03/2022

Closing date: 25.08.2022



FRIEDRICH-SCHILLER-
UNIVERSITÄT
JENA

The Cluster of Excellence “*Balance of the Microverse*” at 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 research group of Prof. Dr. Gianni Panagiotou
at the Cluster of Excellence *Balance of the Microverse* invites applications
for a

Postdoctoral Position (m/f/d) to conduct research on the project

“Identification of universal mediators of microbiome community structure through large scale cross-habitat comparisons”

commencing on 01.10.2022. A later start may be possible if desired. The position is initially limited to 2 years.

Short abstract of the project

An exciting new frontier in microbiome research is the rational editing of disbalanced microbial communities. However, the selection of species to be either introduced directly or serve as chassis strains for modifying the structure and function of a dysbiotic microbiome is challenging since many criteria must be fulfilled. In most cases the selection of promising species is based on the ability to cultivate and genetically modify them and their known phenotypic properties, however, their ecological properties are rarely considered. Towards this direction, we plan to develop artificial intelligence workflows using large-scale community sequencing data sets from host, soil, and aquatic environments to shed light on the ecological properties of the different genera and on the potential of using them as global or habitat-specific modifiers of microbial communities. Therefore, the successful candidate is expected to elucidate factors that determine microbial colonization and persistence, as well as, microbial interdependencies within complex communities.

Your responsibilities:

- Actively contribute to the development of the project.
- Produce high-quality written manuscripts.
- Present your results at national and international conferences.
- Assist with training other researchers, including Masters’ and undergraduate project students, where required.
- Contribute to maintaining the friendly, welcoming and collaborative environment within the group.
- Work at the boundaries of several research domains.



Your profile:

- PhD degree in Systems Biology, Computational Biology, Bioinformatics, Computer Science or a related discipline. Candidates in the final stages of obtaining their degree are also eligible to apply.
- Knowledge and experience in the analysis of biological high-throughput data.
- Knowledge in statistical methods and machine learning in the context of biological systems.
- Experience with programming (Python, Perl, C++, R).
- Highly motivated individual 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
- 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
- A family-friendly working environment with a variety of offers for families: University Family Office ‘JUniFamilie’ and flexible childcare (‘JUniKinder’);
- University health promotion and a wide range of university sports activities;
- Attractive fringe benefits, e.g. capital formation benefits (VL), Job Ticket (benefits for public transport), and an occupational pension (VBL)

The two year full-time postdoctoral researcher position (100% TV-L E13) will be funded through the Excellence Strategy of the German federal and state governments. The Friedrich Schiller University Jena and the Leibniz Institute for Natural Product Research and Infection Biology Hans Knöll Institute are equal opportunity employers and part-time contracts can be discussed.

To promote gender equality in science, applications by woman are especially welcome. Candidates with severe disabilities will be given preference in the case of equal qualifications and suitability.

Applications in English should comprise a cover letter, a detailed curriculum vitae and copies of academic certificates. Please familiarize yourself with the currently available postdoctoral projects (www.microverse-cluster.de) and the application process as described in the Online Application Portal. Please submit your application via the JSMC Online Application Portal, under the vacancy **ID 03/2022** by 25.08.2022:

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

Since all application documents will be duly destroyed after the recruitment process, we ask you to submit only copies of your documents. For further information for applicants, please also refer to [www.uni-jena.de/Job portal \(in German\)](http://www.uni-jena.de/Job_portal_(in_German)). Please also note the information on the collection of personal data at https://www4.uni-jena.de/en/jobs_information_collecting_personal_data-path-18.27.html.