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
Postdoctoral Researcher Position (Ref. No. 103/2019)
to conduct research in the group of Prof. Kirsten Küsel on the project

Resilience of the Groundwater Microbiome

Microbiomes can tolerate disturbances to a certain extent due to their resilience or switch to an alternative state. We will induce stress in groundwater microbiomes that might be very sensitive to disturbances, because pristine groundwater is dominated by ultra-small microbes that are adapted to nutrient-poor conditions and often lack essential genes for living independently. This projects specifically aims to elucidate the interactions and metabolic dependencies of microbes that coexist with bacteria of the Candidate Phyla Radiation (CPR) in groundwater. By using an innovative microfluidics platform we will be able to screen for conditions that allow for independent growth of previously uncultivable microbes, thereby gaining insight into their metabolic potential and requirements. Through targeted manipulation using chemical mediators such as antibiotics, addition of viruses/phages, or manipulation of nutrients, we aim to understand the stability and resilience of microbial communities in groundwater.

We expect:
- A PhD (or equivalent) in the life or natural sciences. Candidates in the final stages of obtaining their doctorate are also eligible to apply
- Desirable methodological skills: excellent background in molecular microbiology, theoretical microbial ecology and evolution, NGS and multi-omic analysis.
- 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 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 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 postdoctoral projects (www.microverse-cluster.de) and the application process as described in the Online Application Portal. Selected applicants will be invited to a recruitment meeting in Jena in early December. Awarding decisions will be announced shortly thereafter, and candidates are expected to be available to start their projects in early 2020.

Application deadline: 11th November 2019