



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 ground water 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. 32/2019)
to conduct research in the group of Prof. Maria Mittag on the project

Biotic interactions of different stages of a green algal life cycle in a natural-structured microverse environment

Microalgae contribute significantly to carbon fixation on Earth and are at the basis of food-webs. Only a few microalgal model systems exist with well-established molecular tools including application of CRISPR/Cas9 and luminescence reporters. One of them is the green flagellate model alga *Chlamydomonas reinhardtii* that lives primarily in wet soil. Its vegetative and sexual life cycles are well known but exclusively studied under axenic laboratory conditions. We want to transfer this knowledge to study the influence of structured glass-based 2D- and at last 3D-microverse spheres on the life cycle and on the interaction of different stages of the life cycle with other organisms such as antagonistic bacteria or fungi.

We expect:

- An MSc (or equivalent) in natural or life sciences. Candidates in the final stages of obtaining their degree are eligible to apply.
- Desirable methodological skills: excellent background in molecular biology, biochemistry, cell biology, plant sciences and/or microbiology, hands-on knowledge of analytical methods. Experience in algal cell culture methodologies is advantageous but not essential.
- 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
- Excellent 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 and 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, the Carl Zeiss Foundation or the German Academic Exchange service. The Friedrich Schiller University Jena is an equal opportunity employer. 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 (post)doctoral 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 end of August/ mid-September 2019. Awarding decisions will be announced shortly thereafter, and candidates are expected to be available to start their projects in 2019.

Application deadline: 5th August 2019