

The **Jena School for Microbial Communication (JSMC)** is an ambitious Graduate School with over 130 doctoral and postdoctoral scientists. We offer structured, interdisciplinary PhD and career training programs based on top-level fundamental research. They conceptually combine different research areas to a comprehensive picture of microbial communication. The '**Cluster of Excellence 'Balance of the Microverse'**' studies the fundamental principles underlying microbial community interactions and functions in diverse habitats, ranging from oceans and groundwater to plants and human hosts.

The research group of Adaptive Pathogenicity Strategies at the JSMC and the 'Cluster of Excellence "Balance of the Microverse"' invites applications for a

Postdoctoral Researcher (TV-L E13, 100%) in microbe-derived immunomodulatory signaling

commencing on 01.07.2026 or upon agreement. We offer a full-time position (100%) at the **Leibniz Institute for Natural Product Research and Infection Biology - Hans Knöll Institute**, offered as a fixed-term position for 2 years.

Vulvovaginal candidiasis (VVC) is a yeast infection of the vulva and vaginal mucosa, most commonly caused when the balance between the vaginal microbiome, fungal pathogenicity, and host immune control. Unlike other fungal infections, disease severity of VVC is strongly linked with the inflammatory responses mounted during infection, rather than being caused by compromised immunity. Therefore, sustainable therapeutic strategies that target both fungal pathogenicity as well as dysbalanced inflammatory signaling are urgently needed. In this project, the successful applicant will investigate how signals from live biotherapeutic yeast shape host-pathogen interactions to improve fungal clearance. Through combining live-cell analysis, the tripartite interactions between *Candida albicans*, a live biotherapeutic yeast, and innate immune cells will be resolved, followed by a dissection of metabolic and immunological signaling pathways that alter immune cell behavior. Efficacy of immune restoring capacities will be evaluated using organ-on-chip models.

Your responsibilities:

- Perform organ-on-chip experiments / immune-stimulations / live-cell imaging and work independently towards your postdoctoral research project
- Analyse project results, generate figures for publications, and write scientific manuscripts for publication
- Present your results at local, national, and international meetings and conferences
- Work closely together with other experimental and computational researchers in the research group and within the Cluster
- Assist with training and supervising other researchers (e.g. doctoral candidates, MSc students)
- Contribute to the friendly, welcoming, and collaborative environment in our team

Your profile:

- A PhD in biochemistry, cell biology, microbiology, immunology or closely related disciplines.
- Laboratory experience with signal transduction/signaling is desired. Desired methodological skills include immunological assays, organ-on-chip models, and live-cell imaging
- The project will require hands-on experience in at least microbiological culture/cell culture/immune cell isolation
- A high level of curiosity, self-motivation, enthusiasm and attention to detail
- A cooperative personality actively seeking to contribute to our interdisciplinary and inclusive Microverse community
- Very good written and spoken English communication skills



We offer:

- A highly communicative atmosphere within an energetic and interdisciplinary scientific network
- The Jena School for Microbial Communication offers a structured and interdisciplinary doctoral training program based on top-level fundamental research and provides comprehensive mentoring programs and soft skills courses
- Jena – City of Science, a young and lively city with a vibrant local cultural agenda
- A dedicated management team, providing support and information on non-scientific subjects, such as onboarding and family life, and organising individualised career development programs, and events on topics like mental health and communication
- Remuneration based on the provisions of the Collective Agreement for the Public Sector of the Federal States (TV-L) at salary scale E13 — depending on the candidate's personal qualifications—, including a special annual payment in accordance with the collective agreement

The 2-year doctoral researcher position (TV-L E13, 100%) will be funded through the JSMC through the Thuringian State government. The University of Jena and the participating research institutes are equal opportunity employers. Part-time contracts can be discussed. Candidates with severe disabilities will be given preference in the case of equal qualifications and suitability. The employment contract will be with the **Leibniz Institute for Natural Product Research and Infection Biology - Hans Knöll Institute**.

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

Are you eager to join us? Then, apply by **April 26, 2026**, using our online portal.

[Online application](#)