

Job advertisement

Vacancy ID: XXX/2022

Closing date: 28 August 2022



FRIEDRICH-SCHILLER-
UNIVERSITÄT
JENA

Friedrich Schiller University is a traditional university with a strong research profile rooted in the heart of Germany. As a university covering all disciplines, it offers a wide range of subjects. Its research is focused on the areas Light—Life—Liberty. It is closely networked with non-research institutions, research companies and renowned cultural institutions. With around 18,000 students and more than 8,600 employees, the university plays a major role in shaping Jena's character as a cosmopolitan and future-oriented city.

Over the past decade, viromics has revealed an unprecedented diversity of viruses in many biomes. One of the most complex and fascinating biomes is the rhizosphere, the environment between root and soil where specific microbes interact with the plant, affecting disease susceptibility and crop yield. While many fundamental questions about the rhizosphere remain unanswered, root-associated microbes are recognized as a promising target for innovative agricultural applications. Rhizobia, which form a mutualistic interaction with legumes (e.g. peas, beans, clover) play a key role in soil ecology and sustainable agriculture, especially in developing countries. Rhizobial bacteria have been studied for many decades, but we still have a very limited understanding of how bacteriophages affect them and their interaction with the plant. Using cutting-edge experimental and computational tools, you will characterize the genes involved in bacteriophage-rhizobium and rhizobium-legume interactions. Do you want to understand the eco-evolutionary mechanisms shaping the tri-partite bacteriophage-rhizobium-plant interaction and contribute to the research field of viral ecology? Join our team as a:

Doctoral researcher (m/f/d) “Genomics of Bacteriophage-Host Interactions”

commencing as soon as possible. The PhD position will be funded for 4 years.

Our group, the Viral Ecology and Omics Group of Prof. Bas E. Dutilh, studies microbiome functioning and dynamics, in particular the role of viruses across biomes. We combine microbiological and eco/evolutionary experiments with molecular biology, microscopy, (meta-) genomics, bioinformatics, artificial intelligence, and computational modelling. We are embedded in the Cluster of Excellence *Balance of the Microverse* (microverse-cluster.de) which combines expertise in life, material, optical and computational sciences to elucidate fundamental principles of the interactions and functions in microbial communities in diverse habitats. The affiliated early career program of the *Jena School for Microbial Communication* (JSMC) offers a structured and interdisciplinary post-graduate training based on top-level fundamental research.

Your responsibilities:

- Perform microbiological and ecological experiments to study the interactions between microbes and viruses.
- Investigate the underlying mechanisms, with an emphasis on bacteriophage-host interactions.
- Use molecular biology experiments to test specific hypotheses, contribute experimental evidence to unravel the mechanisms shaping the Microverse.
- Communicate and discuss your predictions with computational group members.
- Report your findings in publications and presentation at international scientific platforms.
- Support Master students and undergraduate project students.
- Collaborate productively with experimental and computational researchers in the Microverse.

Your profile:

- An MSc or equivalent degree in microbiology, virology, microbial ecology, or related discipline.
- Hands-on experience in microbiological techniques including bacterial and bacteriophage cultivation, DNA extraction, amplification, and NGS library preparation is required.



- Experience with microcosms and/or experimental evolution is a plus.
- Experience with bioinformatics and/or genomics is a plus.
- Excellent communication skills, ability to work as a team and to interact with people from diverse nationalities and scientific backgrounds.
- Strong motivation, excellent organisation skills and ability to contribute to a friendly and collaborative working environment in a cross-disciplinary scientific research group and in the dynamic Microverse community.
- Fluency in English is required, both written and spoken. Fluency in German is advantageous. Fluency in other languages is a plus.

We offer:

- A highly communicative atmosphere within an energetic scientific network.
- Embedding in a leading research group in the field of viral ecology and metagenomics.
- A unique opportunity to integrate modelling, omics data, and wet lab experiments.
- A comprehensive continuing education programme and individual qualification and development measures.
- Jena – City of Science: a young and lively town with a vibrant local cultural agenda. Jena is among the most liveable cities in Germany. Situated on the Saale River and surrounded by the famous Thuringian Forest, this city is ideal for lovers of nature and hiking.
- 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 PhD position (75% TV-L E13) position 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. 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, copies of academic certificates and a list of publications. Please submit your application by email as a single PDF file by 28 August 2022:

jannick.van.cauwenberghe@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 <https://www.uni-jena.de/en/job-market>

Please also note the information on the collection of personal data at <https://www.uni-jena.de/en/job-market#dataprotection>