

Job advertisement

Vacancy ID: 169/2024

Closing date: 9 September 2024



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

The **DFG Research Training Group (RTG) 2723 Materials-Microbes-Microenvironments (M-M-M): Antimicrobial biomaterials with tailored structures and properties**, at Friedrich Schiller University Jena, Germany, combines expertise in materials, life, medical, optical and computational sciences to **develop ground-breaking and highly innovative antimicrobial biomaterials for the prevention of biomaterials-associated infections (BAI)**. This will be approached by six interdisciplinary PhD tandem projects, each with two doctoral researchers (DRs) working on complementary **materials science** and **medical/life science** aspects of these questions in each project, with one materials scientist and one medical/life science professional working as team supervisors. Friedrich Schiller University (FSU) and Jena University Hospital (UKJ) closely cooperate within the RTG. Our full spectrum of excellent expertise in materials science and life sciences will be leveraged to address the critical issues of novel antimicrobial biomaterials in a collaborative spirit. The affiliated early career programs of the RTG, Jena School for Microbial Communication (JSMC) and Jena Graduate Academy offer ambitious, structured and interdisciplinary post-graduate training based on top-level basic and applied research.

The research groups of the RTG M-M-M invite applications for

12 Doctoral Researcher Positions

to conduct research and training in the development of novel antimicrobial materials and their biological/medical compatibility and reactions.

Commencing on 1 February 2025 (fixed date), the positions are for up to 4 years. Six of the positions (materials science) are full time (100%), six of the positions (life sciences) are part time (65%). Each doctoral researcher will work in one of the following interdisciplinary tandem projects (materials science & life sciences):

- Project A: Switchable antimicrobial materials (Prof. Dr. K. D. Jandt (FSU) & Prof. Dr. B. Löffler (UKJ))
- Project B: Antimicrobial and bioactive nanoparticle functionalized protein coatings (Prof. Dr. K. D. Jandt (FSU) & Prof. Dr. B. Wildemann (UKJ))
- Project C: Antimicrobial bioactive glass for treatment of traumatic or pathological bone defects (Prof. Dr. D. Brauer (FSU) & Prof. Dr. G. Matziolis (UKJ))
- Project D: Graphene based antimicrobial biomaterials (Prof. Dr. A. Turchanin (FSU) & Prof. Dr. B. Löffler (UKJ))
- Project E: Microbiological testing of materials (Prof. Dr. M. Pletz (UKJ) & Prof. Dr. C. Eggeling (FSU))
- Project F: Digitized antimicrobial biomaterials semantic knowledge base (Prof. Dr. M. Sierka (FSU) & Prof. Dr. M. T. Figge (FSU/HKI))

Your responsibilities:

- Actively and effectively contribute to the development of the project in research, training and organization of the RTG
- Cooperate and support within the project and beyond
- Produce high-quality written manuscripts for publication
- Present your results at national and international conferences
- Assist with training other researchers, including masters' and undergraduate project students, as required
- Contribute to maintaining the collaborative, friendly and welcoming environment within the RTG and its collaboration partners

Your profile

- An outstanding master's degree (MSc) in materials science or physics or chemistry or chemical science or materials engineering or closely related (for materials science DRs), or microbiology or cell biology, molecular biology, biochemistry, biotechnologies, medicine, computer science, bioinformatics or closely related (for life science DRs). Candidates in the final stages of obtaining their degree are also eligible to apply.
- Desired methodological skills materials science (one or more): materials design and synthesis, materials characterization and testing, PVD, microscopy methods, handling of proteins and nanomaterials, organic and inorganic materials preparation, computational materials science, data base experience, materials engineering skills
- **Or:** Desired methodological skills life science (one or more): basic training in microbiology and bacterial culture; experience in cell culture and infection experiments; basic knowledge in molecular biology, FACS-analysis, advanced automated image data analysis, programming skills
- Highly motivated individual with an interest in joining one of the interdisciplinary research areas of the RTG and cooperate with other projects and partners
- The ability to work creatively and independently towards developing your own research project and collaborate with DRs of other disciplines
- An integrative and cooperative personality with enthusiasm for actively participating in the dynamic RTG community
- Outstanding English communication skills, both written and spoken

We offer:

- Research in a clinically highly relevant topic
- A highly communicative atmosphere within an energetic scientific network
- A comprehensive mentoring program and soft skills courses for early career researchers
- An international competitive interdisciplinary training program in materials science and life science
- *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) and an occupational pension (VBL)
- 30 days of vacation per calendar year plus two days off on December 24 and 31
- Remuneration based on the provisions of the Collective Agreement for the Public Sector of the Federal States (TV-L) at salary scale 13 – depending on the candidate's personal qualifications—, including a special annual payment in accordance with the collective agreement.

Doctoral Research Positions are funded by the German federal and state governments. Friedrich Schiller University Jena is an equal opportunity employer. To promote gender equality in science, applications by woman are particularly welcome. Candidates with severe disabilities will be given preference in case of equal qualifications and suitability.

Applications in English should comprise a cover letter, a detailed curriculum vitae and copies of academic certificates as well as a minimum of two letters of support from referees. Please familiarize yourself with the available doctoral researcher projects at the website <https://www.mmm.uni-jena.de/22/job-advertisement> 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 169/2024 by **9. September 2024**:

<https://apply2.uni-jena.de/94vod>.

For further information on your application and the collection of personal data, please refer to our [Privacy Statement for Applicants](#)