

The **Institute of Molecular Infection Biology**, University of Würzburg is offering

PhD Student Positions (f/m/d) in RNA Biology of Bacterial Pathogens

We are looking for PhD students in the field of **RNA Biology / Molecular Biology / CRISPR-Cas Biology** to investigate **RNA-based gene regulation** in bacterial pathogens and/or the biology and mechanisms of **prokaryotic CRISPR-Cas systems**. Successful applicants will work in an interdisciplinary and international team at the Department of Molecular Infection Biology II (Prof. Dr. Cynthia Sharma) in Würzburg, Germany.

Research in our group focuses on mechanisms and functions of gene regulation in stress response and virulence control of the human pathogens *Helicobacter pylori* and *Campylobacter jejuni*. Our work on post-transcriptional gene expression includes the **identification and characterization of novel regulators** including **small RNAs**, **RNA-binding proteins (RBPs)**, and **small proteins** with the application of diverse **deep-sequencing technologies** combined with **RNA biochemistry**, **microbiology**, and **molecular biology** approaches. In addition, we study the physiological roles and molecular mechanisms of bacterial **CRISPR-Cas immune systems**.

For further information on our research, please see also our recent publications: König et al., 2024, *Nature Communications* (PMID: 38897989), Jiao et al., 2021, *Science* (PMID: 33906967), Pernitzsch et al., 2021, *Nature Communications* (PMID: 34290242), Eisenbart et al., 2020, *Molecular Cell* (PMID: 33002424), or our website: www.uni-wuerzburg.de/imib/forschung/sharma.

Possible projects include:

- Unraveling the mechanisms and functions of small RNAs and RBPs in pathogenic bacteria
- Set-up of new methods to study bacterial RBPomes during stress- and infection-relevant conditions
- Exploring biology and molecular mechanisms of CRISPR-Cas and other bacterial immune systems

Applicants should have the following qualifications:

- M.Sc. degree or equivalent in a life science field
- Research interest in RNA biology, microbiology, molecular biology, or biochemistry
- Strong written and spoken English skills, high-self motivation, dedication to perform excellent research

We offer:

- An interdisciplinary and international research team
- An open-minded and collaborative work environment with a strong focus on RNA and infection biology
- State-of-the-art infrastructure and cutting-edge technologies
- Diverse opportunities for further education, career development, and training at the JMU Würzburg

We welcome applications from all sections of the community regardless of race, gender, or disability. The University aims to increase the proportion of female employees. Thus, applications from qualified women are particularly welcome. Preference will be given to severely handicapped persons in case of otherwise equal aptitude. The position is available for one year with the possibility of extension. Salary is based on the pay scale for the public sector (TV-L).

Please send your application with **reference “PhD RNA Biology”** including a letter of motivation, CV, and publication list, copies of relevant documents, and contact information of two academic references as a **single PDF-file** until **April 30th, 2025** via email to petra.thomas@uni-wuerzburg.de.