

The **group of Dr. Carmen Aguilar** at the  
**Institute of Molecular Infection Biology (IMIB)/**  
**Research Center for Infectious Diseases (ZINF)**  
at the **Julius-Maximilians-University of Würzburg** is offering a

## **PhD Student position (f/m/d)**

### **“Organoid-based models to explore host pathways controlling urinary tract infections”**

Applications are invited for a PhD student position in the Aguilar group at the Institute of Molecular Infection Biology/Research Center for Infectious Diseases in Würzburg. Successful candidates will work in an interdisciplinary project aiming to develop an organoid-based tissue-engineered model of the human bladder to study host pathways controlling uropathogenic *Escherichia coli* infection.

Our research group aims to better understand urinary tract infections from the host perspective and to exploit that knowledge to develop new host-directed therapies. We use adult stem cell-derived organoids as models for infection (Guedes et al. *BioRxiv* 2024, Aguilar et al. *Exp. Mol. Med.* 2021, Aguilar et al. *Nature Communications* 2022) and combine them with a wide range of cutting-edge technologies including advanced microscopy (e.g. Confocal microscopy, FISH), microRNA profiling, and RNA-seq approaches (i.e. bulk and single cell) as well as numerous molecular biotechnological methods such as gain- and loss-of-function assays (e.g. CRISPR/Cas9 knockout, siRNA, drugs interference; Aguilar et al. *Trends in Microbiology* 2019, Aguilar et al. *Nature Microbiology* 2020, Aguilar et al. *Nature Communications* 2021).

Applicants should have a M.Sc. degree (or defence planned before March 2026) in life sciences and a strong background in either organoid technology, infection biology or microbiology. Expertise in molecular biology, RNA-seq data analysis, and bioinformatics is desirable. For informal inquiries, please contact Dr. Carmen Aguilar ([carmen.aguilar@uni-wuerzburg.de](mailto:carmen.aguilar@uni-wuerzburg.de)).

We welcome applications from suitably qualified people from all sections of the community regardless of race, gender, or disability. The University aims to increase the proportion of female employees, therefore applications from qualified women are particularly welcome. Preference will be given to severely handicapped persons in case of otherwise equal aptitude. The position are initially limited to 1 year with the possibility of extension upon good progress. Salary is based on the pay scale for the public sector in Germany (TV-L).

Please send your application (Subject: PhD position AG Aguilar) including a letter of motivation, CV, publication list, and contact information of two academic references as a **single PDF-file** until **January 15<sup>th</sup>, 2026** via email to [carmen.aguilar@uni-wuerzburg.de](mailto:carmen.aguilar@uni-wuerzburg.de).

More information about Dr. Aguilar:

[https://scholar.google.com/citations?hl=en&user=IYJXg-YAAAAJ&view\\_op=list\\_works&sortby=pubdate](https://scholar.google.com/citations?hl=en&user=IYJXg-YAAAAJ&view_op=list_works&sortby=pubdate)