



## **JULIUS-MAXIMILIANS-UNIVERSITÄT WÜRZBURG, GERMANY**

**Molecular Infection Biology II, Institute of Molecular Infection Biology (IMIB)**

### **Postdoc position**

#### **“Exploring small protein encoding genes using global translome analysis”**

Applications are invited for a postdoctoral position at the chair of “Molecular Infection Biology II” (Cynthia Sharma) at the University of Würzburg, Germany. Our group studies mechanisms of gene regulation, mainly at the post-transcriptional level, in stress response and virulence control of the gastric pathogen *Helicobacter pylori* and the related food-borne pathogen *Campylobacter jejuni*. We employ and develop diverse deep-sequencing based approaches (differential RNA-seq, RIP-seq, Ribo-seq, Tn-seq) for genome-wide analyses of transcriptomes, RNA-protein complexes and translomes, as well as to identify novel virulence factors and regulators. We also develop and apply three dimensional infection models based on tissue engineering to study host-pathogen interactions. ([www.imib-wuerzburg.de/research/sharma/group-leader](http://www.imib-wuerzburg.de/research/sharma/group-leader))

The postdoctoral researcher will work in the framework of a central project on “Ribosome profiling” within the newly established SPP2002 “*Small protein in prokaryotes: an unexplored world*”. Our project aims to identify translated small open reading frames <50 codons in diverse prokaryotes based on global translome analysis using ribosome profiling (Ribo-seq). The handful of so far characterized small proteins in bacteria is involved in diverse physiological processes, including modulation of virulence and antibiotic resistance, indicating important roles in the cell. The postdoctoral researcher will set-up and optimize conditions and the experimental work flow for Ribo-seq analysis of several prokaryotes. This will be done in close collaboration with several research groups from the SPP network. In addition, we aim to establish Ribo-seq for bacterial pathogens in the infection context to identify genes and especially small proteins relevant during infections.

Applicants should have a doctoral degree and a strong background in either biochemistry, RNA biology, molecular biology, microbiology, or genomics approaches.

For informal inquiries contact **Prof. Dr. Cynthia M. Sharma** ([sharma.ngs@uni-wuerzburg.de](mailto:sharma.ngs@uni-wuerzburg.de)).

Applications from suitably qualified people from all sections of the community regardless of race, gender or disability are welcome. Preference will be given to severely handicapped persons in case of otherwise equal aptitude. Part time employment is also possible. **Please send your applications** with the reference “**Postdoc sORFs IMIBII**” including a letter of motivation, CV and publication list, copies of relevant documents, and contact information of 2-3 academic references as a single PDF-file until **August 20<sup>th</sup>, 2018** via E-mail to [petra.thomas@uni-wuerzburg.de](mailto:petra.thomas@uni-wuerzburg.de).