

With over 48,000 students and around 5,000 employees, the Johann Wolfgang Goethe University Frankfurt am Main is one of the largest universities in Germany. Founded in 1914 by Frankfurt's citizens and since 2008 back in the legal form of a foundation, the Goethe University possesses a high degree of independence, modernity and professional diversity. As a comprehensive university, the Goethe University Frankfurt offers more than 100 courses of study on five campuses in a total of 16 subject areas and at the same time possesses outstanding research strength.

The **Institute of Biochemistry** (www.biochem.uni-frankfurt.de) in the **Department of Biochemistry, Chemistry and Pharmaceutical Sciences** of the Goethe University Frankfurt am Main, offers **as soon as possible** a position of a

Research Assistant / PhD-Student (m/f/d)
(E13 TV-G-U, 65% part-time)

for a limited period of 3 years. The salary grade is based on the job characteristics of the collective agreement applicable to Goethe University (TV-G-U).

Tasks:

We are seeking a PhD student for a project to uncover new regulatory mechanisms of protein biosynthesis by mRNA translation. The position is supervised by Prof. Robert Tampé and implemented in a network of international collaborations. The research group is sociable, multidisciplinary with a diverse range of research interests represented (including Structural and RNA Biology), perfectly equipped and well-connected locally and globally. The project will involve frequent interaction with other inter/national labs to coordinate strategies and experiments.

Protein biosynthesis via mRNA translation by the ribosome is linked to key signaling pathways. mRNA translation is modulated in response to environmental stress, metabolic needs, and/or extra- and intracellular stimuli. By fine-tuning the translation machinery, cells can adapt the global operating status and shift between survival, proliferation, differentiation, and apoptosis. Imbalances in this sensitive system thus lead to various diseases, including diabetes, neurodegeneration, cancer, or inherited ribosomopathies. In addition to these essential cellular functions, translational quality control systems contribute to effective surface presentation of endogenous immunopeptides and viral antigens for the adaptive immune response.

You are free to shape your project independently, choosing from a variety of interesting scientific questions and techniques including integrative structural biology by cryo-EM and X-ray crystallography, protein dynamics by single-molecule fluorescence, biochemical assays, cellular biology and interaction analysis. The candidate will be offered the opportunity to do self-directed research, especially working on his*her PhD, and develop further scientific qualification.

We offer:

- Highly topical research area at the intersection of cellular biochemistry and RNA biology with a well and modern equipped laboratory
- Small team with intensive mentoring
- Possibility of arranging the project autonomously by choosing out of a variety of interesting scientific techniques and questions
- Integration into an excellently cooperating research environment
- Possibility of inter-/national collaborations
- Excellent support of our PhD students

Skills and qualifications:

- Highly motivated candidates holding a Master degree or equivalent in biochemistry, biology, biophysics, chemistry or a related discipline
- The candidate should have a desire for working independently on his*her own responsibility
- Enthusiasm for basic science, creative experimental approaches and scientific networking
- Solid knowledge of structural biology and the respective bioinformatic techniques would be an advantage
- Excellent written and spoken English and a good team spirit are prerequisites

In order to increase the proportion of women in research, we particularly encourage women to apply for this position. Disabled people will be considered preferentially in the case of equal aptitude.

Electronic applications should be e-mailed until **16th of November 2021** to [application\(at\)biochem.uni-frankfurt.de](mailto:application(at)biochem.uni-frankfurt.de), to the attention of Prof. Dr. Robert Tampé, Institute of Biochemistry, Max-von-Laue Str. 9, 60438 Frankfurt/Main and should include the following (in one PDF file if possible):

- A short summary of research interests and letter of motivation (max. one page),
- Curriculum vitae (CV)
- Your Master Thesis (if complete/nearly complete) or an abstract of it (if still pending)
- A copy of your transcript of records for university education (should list courses and grades, but does not have to be official or certified)
- Names and contact information for one or, if possible, two references.

Further Readings:

Nürnberg-Goloub *et al.* (2020) *EMBO J* 39, e103788; Nürnberg-Goloub & Tampé (2019) *Biol Chem*, 401, 47; Gouridis *et al.* (2019) *Cell Rep* 28, 723; Gerovac & Tampé (2018) *Trends Biochem Sci* 44, 167; Heuer *et al.* (2017) *Nat Struct Mol Biol* 24, 453.