### Job posting

**Type of position**
- ☒ scientific
- ☐ administrative

**Target group**
- ☐ graduates
- ☒ post docs
- ☐ other

**Title**
112/2020 Postdoctoral position: ERC Funded Project T-FRAME (all genders)

**Institution**
The Helmholtz Institute for RNA-based Infection Research investigates the role of ribonucleic acids (RNA) in infection processes. In this way, we contribute to the fight against increasing antibiotic resistance, chronic infections and newly emerging pathogens. We develop innovative therapeutic approaches at the interface of RNA and infection research and make these findings clinically applicable.

The Helmholtz Institute for RNA-based Infection Research was established in May 2017 as a joint venture between the Helmholtz Centre for Infection Research (HZI) in Braunschweig and the Julius Maximilian University of Würzburg (JMU). For more information, please visit www.helmholtz-hiri.de.

The Caliskan lab is well equipped with access to a rapid quench flow, microscale thermophoresis, single-molecule fluorescence optical tweezers, confocal microscope and single-quadrupole mass spectrometer assisted HPLC. In addition, the lab is entitled to use all core facilities both at HZI in Braunschweig and at the University of Würzburg.

**Project summary and goals:**
The segments of certain genes that carry the code for proteins, can also contain sequence elements that can hinder the production of proteins. However, these obstacles do not only cause problems, but also hold opportunities for the cell to increase its coding capacity by using an “alternative reading grid” also known as programmed ribosome frameshifting.

Frameshifting has been extensively studied in viruses and bacteria, but is poorly understood in humans. Caliskan lab aims to close this gap by combining interdisciplinary expertise ranging from global to single-molecule analysis of frameshifting molecular complexes. Understanding the effects of frameshifting on infections and innate immunity will in the long run provide us with new tools for synthetic biology and new opportunities for RNA-centric antiviral drugs and immunotherapies.
Position

The Helmholtz Institute for RNA-based Infection Research (HIRI) is offering a Postdoctoral position: ERC Funded Project T-FRAME (all genders) in the Research Group "Recoding Mechanisms in Infections" of Junior Professor Neva Caliskan.

Responsibilities

Junior Professor Caliskan heads the research group "Recoding Mechanisms in Infections" at the Helmholtz Institute for RNA-based Infection Research (HIRI) in Würzburg. With her ERC-funded project "T-FRAME" she is investigating the relevance of so-called frameshifting in eukaryotic cells during infections. To work on this project, we are looking for highly motivated Postdoc candidates to study the complexity of eukaryotic and bacterial translation and the role of RNA-protein complexes using single molecule and ensemble analysis tools. The project will be carried out in a highly international, collaborative and interdisciplinary work environment, with a range of possibilities to develop new skills.

Requirements

- PhD or equivalent in biochemistry, molecular biology, biophysics or a related field of the life sciences or engineering
- Exceptionally strong background in RNA biochemistry including the analysis of RNP complexes and translation assays in vivo and in vitro (through thesis, publications or work experience)
- Experience with single-molecule methods and microscopy techniques (TIRF, confocal, light sheet), and image analysis is an advantage
- Experience in next-generation sequencing (RNA-seq and Ribo-seq), as well as NGS library preparations is desired
- Experience with Python, MatLab or R for data analysis is a must
- Strong written and spoken English language communication skills. Note that knowledge of German is not required, but an advantage

Application procedure (deadline etc.)

Our range/offer:
We offer compensation according to TVöD and varied activities on an international team. The hiring is through the Helmholtz Center for Infection Research GmbH in Braunschweig. The place of employment is Würzburg. Equal opportunities are part of our personnel policy. Disabled applicants will be preferred, given they possess equal professional qualifications. We support flexible working and part time models to improve the work-life-balance. This position is suitable for part-time employment; close-to-full-time employment models are also possible.

Starting date: February 1, 2021, initially for one year with the possibility of extension throughout the entire funding period
Remuneration: E13 TVöD / Bund
Workplace: Würzburg
Probation: 6 months
Application deadline: 22.11.2020

Please confirm that you have read and understood our privacy policy and that you agree to the processing of your personal data (text module, see privacy policy: https://www.helmholtz-hzi.de/en/service/data-protection/#c33722) when you send us your application documents. Without these declarations, we cannot consider your application or process it further and will delete already received application documents at the end of the application period.

Contact

For more details regarding the project, please contact Junior Professor Caliskan via e-mail: neva.caliskan@helmholtz-hiri.de

We look forward to receiving your detailed application (Cover letter, CV without picture, and certificates) quoting the reference number 112/2020 preferably by e-mail to JobsHIRI@helmholtz-hzi.de or to:

Helmholtz Center for Infection Research GmbH
Personnel department
Inhoffenstraße 7
38124 Braunschweig