

Job Offer No. 029/2025

The Helmholtz Institute for Pharmaceutical Research Saarland (HIPS), Junior Research Group *Antimicrobials through Chemoenzymatic Synthesis*, is offering a position as

Postdoctoral researcher in the field of biochemistry (f/m/d)

The HIPS in Saarbrücken was founded jointly by the Helmholtz Centre for Infection Research (HZI) and Saarland University as the first German research institute explicitly dedicated to pharmaceutical research in 2009. Scientists at HIPS develop and employ experimental and computational techniques to provide new active substances against infectious diseases, optimize them for use in humans and investigate how they can best be transported to their site of action in the human body. A special focus of the institute is on microbial natural products from soil bacteria and the human microbiota including their mode of action and production as well as innovative medicinal chemistry-driven approaches. HIPS is currently undergoing both a thematic and spatial expansion and is expected to grow to around 330 employees within the coming years.

The Junior Research Group *Antimicrobials through Chemoenzymatic Synthesis* provides state-of-the-art tools of modern organic chemistry and chemical biology to access and optimize complex antimicrobial target structures. By harnessing the unique reactivity and selectivity of enzymes from natural products (NPs) biosynthetic pathways combined with cutting-edge organic chemistry techniques, we aim to develop practical solutions to access those NPs and their analogs. Besides developing feasible synthetic routes for NPs, we are focusing on the discovery of novel biocatalysts. By generating a biocatalyst library, we are aiming to fortify the traditional synthetic toolkit available for NP synthesis while providing deeper insights into underexplored enzyme chemistry.

Responsibilities:

- Design, express, and characterize novel enzymes for biocatalytic applications
- Engineer enzyme properties for enhanced functionality, stability, and performance using computational and experimental approaches
- Develop and optimize protein expression systems
- Perform protein purification and characterization using techniques such as chromatography, SDS-PAGE, spectroscopy, and mass spectrometry
- Conduct mutagenesis and structure-function relationship studies
- Develop and optimize biocatalytic processes for scalable and sustainable chemical transformations
- Collaborate with interdisciplinary teams, including bioinformaticians and chemists
- Publish research findings in high-impact journals and present at conferences
- Contribute to grant writing and funding applications to support ongoing research initiatives

Requirements:

- Completed university degree and Ph.D. in Biochemistry, Molecular Biology, Bioengineering, or a related field
- Strong knowledge of protein structure, function, and biophysics
- Proficiency in molecular cloning, expression, and purification techniques
- Hands-on experience with computational protein design tools (e.g., AlphaFold, or PyMOL).
- Familiarity with analytical methods such as HPLC, SEC, and CD spectroscopy
- Excellent problem-solving skills and the ability to work independently or in a team
- Excellent English communication skills (written and spoken); very good skills in scientific writing

Advantageous for this position:

- Experience in directed evolution or high-throughput screening techniques
- Knowledge of enzymology and metabolic pathway engineering

We offer you:

- An attractive and varied job in a future-oriented research institute
- A state-of-the-art infrastructure and the latest technologies
- Flexible working hours, part-time models
- A corporate culture of appreciation and promotion of equal opportunities
- Extensive training and continuing education opportunities to develop professional knowledge and personal skills
- A family office to support family and career as well as childcare offers
- Interesting additional public service benefits
- Subsidization of the job ticket

People with severe disabilities and equivalent professional qualifications who are suitable for the position are given preference. In order to protect your rights, we ask you to provide us with a clearly recognizable reference to the existence of a degree of severe disability in your cover letter or resume.

The position is held at the Helmholtz Centre for Infection Research GmbH (HZI) in Braunschweig. The place of employment is Saarbrücken.

The HZI is actively committed to equality, diversity and integration. For this reason, the HZI pursues the goal of professional equality between women and men and expressly welcomes applications from qualified women. The position is suitable for part-time work.

Starting date:	01.07.2025. The contract will initially run for two years.
Salary:	E 13 TVöD Bund
Working time:	39 hours per week
Location:	Saarbrücken
Probation period:	6 months
Published:	05.03.2025
Closing date:	03.04.2025

For further information please contact **Dr. Alexander Kiefer** via email: alexander.kiefer@helmholtz-hips.de.

How to apply

When sending us your application documents, **please confirm** that you have read our privacy policy and that you agree to the processing of your personal data. Please use the text module in our [privacy policy](#) for this purpose. **Without these declarations, we cannot consider or process your application** and will immediately delete any application documents already received after the application deadline.

Please include a detailed CV highlighting relevant experience, a cover letter describing your research background, skills, and career aspirations, certificates and contact information for two professional references with your application documents. Please refrain from sending a photo.

Please send your complete application, quoting the **reference number 029/2025**, to the Helmholtz Centre for Infection Research GmbH, Human Resources Department, Inhoffenstr. 7, 38124 Braunschweig, Germany or by [e-mail](#). If you send your application in electronic form, please provide a **summary in one single (1) pdf document**. We look forward to receiving your application!