

Job Offer No. 46/2023

The Helmholtz Institute for Pharmaceutical Research Saarland (HIPS), *Department Microbial Natural Products*, is offering a position as

Doctoral researcher in the field of biological screening (f/m/d)

Project title: Automated image-based detection of early toxicity events in zebrafish larvae (ImageTox)

The Helmholtz Institute for Pharmaceutical Research Saarland (HIPS) focusses on identifying and developing new treatment options for infectious diseases with an emphasis on natural product research. Especially researchers in the department of *Microbial Natural Products* are aiming to identify, investigate and optimize novel natural product based actives, applying diverse approaches and methods mainly from the field of biotechnology, microbiology, molecular biology and biochemistry. HIPS was jointly started in August 2009 by the HZI in Braunschweig and Saarland University on Campus Saarbrücken. In 2015 HIPS moved into a new 4500 m² research building in which currently 220 international employees work. HIPS represents the first and only publicly funded extra-university research unit in Germany dedicated to pharmaceutical research. The Institute collaborates with universities and various industries both nationally and internationally.

Project description:

The department *Microbial Natural Products* entertains a zebrafish facility since 2017, and zebrafish larvae models (not classified as animal experiments according to EU Directive 2010/63/EU) are applied to characterize new natural product-based antibiotics. One research focus is to establish a detailed understanding of potential toxicological properties and off-target effects of these new antibiotics. You will be responsible to establish, improve and modify toxicity models in zebrafish larvae (e.g. based on OECD guideline 236) with the aim to make them available for medium-throughput microscopy-based screening. In the course of a project funded by the Helmholtz Imaging Platform, you will work closely together with scientists from HIPS and the CISPA Helmholtz Center for Information Security with the goal to provide a high-quality workflow for the acquisition and automated image-based analysis of early toxicological events. You will apply the established screens to assess in particular advanced natural product classes currently under development as novel therapeutic agents. Such studies will be followed by a more detailed assessment of underlying modes and mechanisms of toxic action applying state-of-the-art technology to characterize e.g., direct off-target binding, enzyme activity and transporter functionality. The aim will be the early identification of promising antibiotic drug candidates through de-risking of new compound classes with regard to potential adverse (side) effects.

Qualifications:

- Master's degree or equivalent in pharmaceutical sciences, biology, toxicology, ecotoxicology or equivalent, or a related field within the life sciences
- First experience in microscopy, biological screening and/or (aquatic) toxicity testing
- Ability to work independently and as part of an international and interdisciplinary team covering the domains of biology, chemistry, pharmacy and biotechnology
- Experience in handling zebrafish larvae (or related model organisms), a FELASA certificate as well as basic knowledge in image analysis, mass spectrometry data analysis and/or technology affinity is considered an advantage.
- Excellent English communication skills (written and spoken)
- The project demands a well-structured and communicative working style.

Disabled persons are given preference in the case of equal professional qualification. The HIPS aims for professional equality between women and men. The position is suitable for part-time work.

We offer you:

- Modern laboratories and state-of-the-art instrumentation
- Participation in a Graduate School
- Challenging and varied tasks in a dynamic and international research environment
- Close ties to both Saarland University and the HZI
- Unique network of excellent partners to support your research endeavors
- 30 days vacation (24.12. & 31.12. are considered as completely free days)
- An annual additional payment (Weihnachtsgeld) analogue to § 20 TVöD
- Social security included
- Flexible working hours

Starting date: May 1st, 2023 – initial contract for 3 years
Salary: E13 TVöD/Bund (55%)
Probation period: 6 months
Working place: Saarbrücken
Published: **February 28th, 2023**
Closing date: **April 11th, 2023**
Application: Applicants are required to complete the online application form here:
<https://hzi.opencampus.net/> (Please select Job No. **46/2023**)

For more details regarding the position, please contact Dr. Jonas Baumann at jonas.baumann@helmholtz-hips.de