

## **Helmholtz-Zentrum Dresden-Rossendorf e.V.**



With cutting-edge research in the fields of ENERGY, HEALTH and MATTER, around 1,500 employees from more than 70 nations at Helmholtz-Zentrum Dresden-Rossendorf (HZDR) are committed to mastering the great challenges facing society today. At the Helmholtz Institute Freiberg for Resource Technology (HIF), innovative technologies for the circular economy are developed to provide and use mineral and metal-bearing raw materials more efficiently and to recycle them in an environmentally friendly way. The Group Pep2Rec within the department of Biotechnology is looking for a

### **Scientific Assistant (f/m/d) - Peptide Engineering: Molecular Modeling, Machine Learning and Quantum Chemical Approaches**

City: Dresden; Starting date (earliest): 01/12/25; Remuneration: TvÖD-Bund; Reference number: 2025/106; Closing date: 09/09/25

#### **Working field**

- Development of theoretical models of circular, palladium-binding peptides
- Literature research on metal-binding organic molecules as design templates
- Execution of classical molecular dynamics simulations
- Application and further development of AI-supported methods for structure prediction and optimization
- Quantum mechanical simulations (e.g. DFT, QM/MM) to characterize the palladium bond

#### **Requirements**

- Completed university studies (Master/Diploma/PhD) in the field of Biology, Chemistry, Biochemistry, Physical or Theoretical Chemistry or related disciplines
- Profound knowledge in at least one of the following areas: molecular dynamics, Quantum chemistry (e.g. DFT) AI methods in structural biology or chemoinformatics
- Experience with biophysical characterization methods such as circular dichroism (CD) measurements, dynamic light scattering (DLS) measurements, isothermal titration microcalorimetry (ITC) measurements, absorption spectroscopy, nuclear magnetic resonance spectroscopy (NMR) and liquid chromatography coupled mass spectrometry (LC-MS) is desirable
- Initial experience in publishing/scientific writing is desirable
- Previous knowledge of Python and machine learning frameworks (e.g. PyTorch, TensorFlow)
- Ability to carry out independent scientific work as well as creative problem-solving development
- Open-ness towards working in an interdisciplinary and international team
- English spoken and written (laboratory and colloquial language of the team)

## What we offer

- A vibrant research community in an open, diverse and international work environment
- Scientific excellence and extensive professional networking opportunities
- Salary and social benefits in accordance with the collective agreement for the public sector (TVöD-Bund) including 30 days of paid holiday leave, company pension scheme (VBL)
- We support a good work-life balance with the possibility of part-time employment, mobile working and flexible working hours
- Numerous company health management offerings
- Employee discounts with well-known providers via the platform Corporate Benefits
- An employer subsidy for the "Deutschland-Ticket Jobticket"

## Application

We look forward to receiving your application documents (including cover letter, CV, diplomas/transcripts, etc.), which you can submit via our online-application-system: <https://www.hzdr.de/db/Cms?pNid=490&pLang=en&pOid=75419>

More information at <https://stellenticket.de/197038/TUBS/>  
Offer visible until 09/09/25

