



The University of Lübeck stands for excellent research and teaching. We are a modern foundation university with thematically focused study courses. Under the motto "Focus on life", as a life science university we offer a spectrum of programmes ranging from medicine, health sciences and psychology to mathematics, computer science, natural sciences and technology.

The Institute of Biochemistry (Director: Univ.-Prof. Dr. Thomas Krey) at the University of Lübeck has an opening in the Krey lab for a position as

### **Postdoc (m/w/d)**

This is a full-time position with 100% of the regular weekly hours (currently 38.7 hours per week), allows further academic qualification and is limited for 3 years.

Our group is interested in the study of viruses that constitute a global public health and/or veterinary concern and their interactions with the immune system including B- and T-cell receptors. We use mostly structural biology/biophysical techniques with a special focus on X-ray crystallography and more recently also cryo electron microscopy. The structural knowledge gained from our experiments can be used for structure-based design of antivirals and/or vaccines, i.e., has a direct translational potential.

The collaborative project of interest aims at the design of an efficient vaccine targeting the porcine reproductive and respiratory syndrome virus (PRRSV) using reverse vaccinology and is funded by the German Research Foundation (DFG). In addition to the UzL, the Institute of Virology of the University of Giessen and the Institute of Virology of the University of Veterinary Medicine Vienna are involved in the collaborative project.

#### **Main areas of activity:**

- Protein expression in pro- and eukaryotic systems
- Characterization of the PRRSV-specific B-cell repertoire of vaccinated pigs and immunized mice.
- Characterization of neutralizing PRRSV-specific mAbs
- X-ray crystallographic structure determination of antibody-peptide complexes
- Design, development and evaluation of a structure-based vaccine targeting PRRSV
- Methods: protein biochemistry, X-ray crystallography, next generation sequencing (NGS), surface plasmon resonance, SEC-MALS.
- Presentation of research results, both oral and written

#### **Requirements:**

- Completed master's degree in life sciences, preferably biochemistry, life sciences, chemistry or biology.
- Practical and theoretical knowledge in protein production, purification and crystallization as well as in antibody biology.
- Interest in immunology/virology
- Experience and interest in protein biochemistry and structural virology (preferably X-ray crystallography) are desirable
- Ability and enthusiasm to work both independently in an interdisciplinary field and an international team
- Interest in participating in international conferences and presentation of own results
- Creativity and enthusiasm to search for innovative solutions

The position will be graded according to the automatic pay scale up to pay group E 13 TV-L if the requirements of the collective agreement are met. A final job evaluation remains reserved.



UNIVERSITÄT ZU LÜBECK

The University of Lübeck sees itself as a modern and cosmopolitan employer. We welcome your application regardless of your age, gender, cultural and social origin, religion, ideology, disability or sexual identity. We promote gender equality. Women will be given priority in cases of equal suitability, ability and professional performance. Applicants with severe disabilities or persons of equal status will be given preferential consideration if they are suitable.

Please contact Prof. Dr. Thomas Krey ([krey@biochem.uni-luebeck.de](mailto:krey@biochem.uni-luebeck.de)) for any further questions.

Please send your written application with the usual documents (cover letter with research interests, curriculum vitae, references) summarised **in a single PDF document** by **21.05.2023 (date of receipt)** at the latest to **bewerbung@uni-luebeck.de**, quoting the reference number **1023/23**.

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