

## Helmholtz Call for Chinese Applicants Interested in Running for CSC 2021 Fellowship

- Helmholtz Centre:** Forschungszentrum Jülich GmbH – [www.fz-juelich.de](http://www.fz-juelich.de)
- Department/Institute:** Institute of Biological Information Processing, Structural Biochemistry (IBI-7), outstation Center for Structural Systems Biology at DESY-Campus, Hamburg  
[https://fz-juelich.de/ibi/ibi-7/EN/Research/Teams/OutstationCSSB/\\_node.html](https://fz-juelich.de/ibi/ibi-7/EN/Research/Teams/OutstationCSSB/_node.html)
- Supervising scientist:** Prof. Dr. Jörg Labahn
- University for registration or for a future degree:** Heinrich-Heine-University Düsseldorf
- Research Field:** Structural biology of proteins relevant in infectious diseases
- Position open for:** PhD Student X□
- Title of the research:** Interaction of bacterial virulence factors with gamma secretase

### More description of research topic:

Structural and functional characterization of proteins and their interactions, directed at proteins of human or pathogenic origin, which are relevant for the infection process or its sustenance. Already identified virulence factors shall be investigated for interaction with gamma-Secretase. The interaction and complexes of virulence factors and gamma-secretase are targeted to clarify the possible effect of microbial load ( Infection hypothesis of Alzheimer Disease)  
The problem should be approached using advanced light microscopy, SPR, MST and ELISA  
The research project bridges ongoing projects regarding bacterial virulence factors and enzymology of gamma-secretase.

We are mainly focused on spectroscopic and structural analysis in in-vitro experiments, but opportunities for NMR, EM and XFEL exist on Jülich or Desy-campus. We are open for in-vivo approaches to study infection-relevant processes (biological security level 3\* laboratory will be available in CSSB).

Candidates with interdisciplinary interests are welcome. The specific research program will be developed in cooperation with the applicant based on interest and skills.

### Specific requirements:

Interest in protein sciences ( molecular biology/biochemistry/biophysics).  
Masters in Biology or Biochemistry or related subject for a biological oriented study.  
Knowledge of basic laboratory techniques. Fluent in German or English (certified).  
Enrolment at Heinrich-Heine-Universität Düsseldorf is required:  
<http://www.uni-duesseldorf.de/>

**Working Place:** Center for Structural Systems Biology, Hamburg

**Earliest Start:** September 2021

**Language Requirement:** Very good knowledge of English language, written and spoken. German language courses are organised in the context of our in-house training program and are free of charge.

**Name and Address of the Supervisor:** Jörg Labahn, CSSB, 22607 Hamburg,  
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