As a member of the Helmholtz Association, Forschungszentrum Jülich makes an effective contribution to solving major challenges facing society in the fields of information, energy, and bioeconomy. It focuses on varied tasks in the area of research management and utilizes large, often unique, scientific infrastructure. Come and work with around 6,100 colleagues across a range of topics and disciplines at one of Europe’s largest research centres.

We look forward to receiving your application until 10.07.2019 via our Online-Recruitment-System!

Questions about the vacancy?
Contact us by mentioning the reference number 2019D-150: career@fz-juelich.de
Please note that for technical reasons we cannot accept applications via email.
www.fz-juelich.de

This is a multidisciplinary joint research effort within the Institute of Complex Systems 4 (ICS-4) – Cellular Biophysics, Institute of Neuroscience and Medicine (INM-9) and Institute for Advanced Simulations (IAS-5) and Central Institute for Engineering, Electronics and Analytics 3 (ZEA-3) at Forschungszentrum Jülich.

We are offering a

2019D-150 - PhD position with a focus on characterization of protein-protein interactions surfaces using cross-linking mass spectrometry, computational modelling and experimental mutagenesis

Your Job:
In excitable cells, voltage-gated calcium channels open upon depolarization and couple electrical activity to neurotransmission, muscle contraction, endocrine gland secretion and gene expression. The actin-based cellular cytoskeleton provide the scaffold for the cellular organization and the tracks for the intracellular trafficking of the channel toward and from the plasma membrane. The association between voltage-gated calcium channel and actin filaments regulates synaptic transmission. This project aims to characterize the calcium channel/actin interaction in health and disease states at the molecular level using a multi-methodology platform.

Your tasks in detail:
• Performing crosslinking, mass spectrometry and information-guided computational modeling of the protein complex
• Validation of the generated model using mutagenesis and cell-based assays
Your Profile:
• Master degree in Biology, or related natural sciences disciplines (Biochemistry, Biotechnology, Biomedicine, Pharmacy or Molecular Medicine)
• Strong interest in structure-function relationship of membrane proteins
• Methodological competence in standard biochemical and molecular biology techniques
• Experience in mass-spectrometry and bioinformatics is of advantage
• High degree of commitment, and ability to work in a team in different environments
• Good communication and written skills in English

Our Offer:
• Outstanding technical infrastructure – ideal conditions for successfully completing the suggested project for a doctoral degree
• Opportunity to get expertise in state-of art techniques and strategies in the field of innovative methods for analyzing protein-interaction networks and probing disease mechanisms caused by genetic mutations
• Embedding in a multidisciplinary environment where you will be in continuous contact with scientists of three different institutes within Forschungszentrum Jülich
• Continuous scientific mentoring and discussions by the three scientists directing this project with expertise in cross-linking, cell-based assays, mass spectrometry analysis and computational modeling
• A contract for the duration of 3 years
• Further development of your personal strengths, e.g. via a comprehensive further training programme
• The doctoral degree will be conferred by the Heinrich Heine University, Düsseldorf
• Pay in line with 50 % of pay group 13 of the Collective Agreement for the Public Service (TVöD-Bund)
• Information on employment as a PhD student at Forschungszentrum Jülich can be found here (http://www.fz-juelich.de/gp/Careers_Docs)

Forschungszentrum Jülich aims to employ more women in this area and therefore particularly welcomes applications from women.

We also welcome applications from disabled persons.