



Conducting research for a changing society: This is what drives us at Forschungszentrum Jülich. As a member of the Helmholtz Association, we aim to tackle the grand societal challenges of our time and conduct research into the possibilities of a digitized society, a climate-friendly energy system, and a resource-efficient economy. Work together with around 7,100 employees in one of Europe's biggest research centres and help us to shape change!

The Ernst Ruska Centre (ER-C) at the Forschungszentrum Jülich is one of the world-leading electron microscopy centres with more than 15 electron microscopes. At the ER-C-3, the Structural Biology division of the ER-C, we investigate the structural and molecular mechanism of membrane biology and push the development of cryo-EM related methodology. We use a comprehensive electron microscopy approach to study the biological structures of membrane-associated protein complexes. Our main methods of investigation are single-particle electron cryo-microscopy (cryo-EM) as well electron cryo-tomography (cryo-ET) that we are also developing to advance existing imaging technologies towards high-resolution structural biology. Please find more information about the ER-C-3 here: <http://www.fz-juelich.de/er-c/er-c-3>

We are offering a

PhD Position - Cryo-EM of membrane remodeling proteins

Your Job:

For the Ernst Ruska-Centre for Microscopy and Spectroscopy with Electrons under the direction of Prof. Sachse, you will be working on cryo-EM studies of membrane remodelling proteins in the field of Structural Biology at our institute. The Sachse lab recently determined a series of cryo-EM structures of bacterial as well as eukaryotic members of the endosomal sorting complexes required for transport (ESCRT) protein family. In order to gain a deep structural understanding, we biochemically purify and reconstitute ESCRT protein complexes in lipid environments and visualize them by cryo-EM methods. You will be working in a network of membrane biological research and latest cryo-EM infrastructure.

- Investigate protein lipid interactions using biochemical and biophysical methods
- Employ advanced imaging methods, including single-particle cryo-EM, electron tomography, correlative light and electron microscopy/tomography (CLEM) as well as associated image processing.

We look forward to receiving your application until 10.10.2022 via our **Online-Recruitment-System!**

Questions about the vacancy?

Get in touch with us by using **our contact form.**

Please note that for technical reasons we cannot accept applications via email. www.fz-juelich.de

- Cryo-EM structure determination in vitro and in situ

Your Profile:

- Master degree in biochemistry, molecular or cell biology or related field.
- Strong experimental skills in molecular cell biology experiment design including associated data analysis
- Prior knowledge of structural biology and/or light microscopy techniques is of great advantage
- Strong communication skills and ability to work in an international and interdisciplinary team
- Fluent command of written and spoken English, German language skills are welcome but not essential

Our Offer:

We work on the very latest issues that impact our society and are offering you the chance to actively help in shaping the change! We offer:

- The chance to work at one of the largest research centers in Germany, with excellent scientific equipment and leading European computational resources, located on a green campus, and near the cultural centers Köln, Düsseldorf, and Aachen. The Jülich campus also hosts a vibrant biophysics, bioinformatics and structural biology community.
- Direct access to high-level cryo-EM infrastructure at the Ernst-Ruska Centre. The facility has been extended with state-of-the-art cryo-microscopes and FIB-SEMs of ThermoFisher Titan Krios, Talos Arctica and Aquilos 2.
- Working in a dynamic team of researchers with backgrounds in different disciplines across biology, chemistry, physics and informatics to advance cryo-EM methods
- Further development of your personal strengths, e.g. through an extensive range of training courses; a structured program of continuing education and networking opportunities specifically for doctoral researchers via JuDocS, the Jülich Center for Doctoral Researchers and Supervisors: <https://www.fz-juelich.de/en/judocs>
- Targeted services for international employees, e.g. through our International Advisory Service

The employment of doctoral researchers at Jülich is governed by a doctoral contract, which usually has a term of three years. Pay is in line with 65 % of pay group 13 of the Collective Agreement for the Public Service (TVöD-Bund) and additionally 60 % of a monthly salary as special payment („Christmas bonus“). Further information on doctoral degrees at Forschungszentrum Jülich including our other locations is available at: https://www.fz-juelich.de/gp/Careers_Docs

We welcome applications from people with diverse backgrounds, e.g. in terms of age, gender, disability, sexual orientation / identity, and social, ethnic and religious origin. A diverse and inclusive working environment with equal opportunities in which everyone can realize their potential is important to us.