

PhD position in Biochemistry – Structural biology

Research Group Piano
Institute of Human Genetics / CMMC
University Hospital Cologne

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PhD position (early stage researcher) (f/m/d)

We offer a fully-funded PhD position funded by the DFG to investigate the regulatory mechanisms that drive reorganization and partition of the mitochondrial network during cell division.

Research focus

The cell cycle, chromosome inheritance and mitochondrial dynamics are intricately interconnected, with cross-talks and interdependencies remaining to be revealed.

Our research goal is to build a comprehensive functional understanding of these disparate but inherently connected processes that will shed light on the etiology of numerous human pathologies. Our lab focus is to elucidate the molecular signalling pathways that control mitochondrial fission and redistribution in mitosis, and how defects in these mechanisms can cause chromosome instability and aneuploidy. We will combine biochemical reconstitution and structural biology with cell-based assays to i) reconstruct *in vitro* the protein network that regulates mitochondrial fission in mitosis; ii) develop cellular systems to study the effects of depleting mitochondrial fission on mitotic progression and chromosome segregation.

To read about our experimental approach see DOI: [10.1126/science.abc1152](https://doi.org/10.1126/science.abc1152) and [10.7554/eLife.4828](https://doi.org/10.7554/eLife.4828) and our website: <https://pianolab.wixsite.com/pianolab>.

About us

The Piano Lab started in June 2022 as part of the Institute of Human Genetics of the [University of Cologne](https://www.uni-koeln.de), embedded in the [Centre of Molecular Medicine of Cologne](https://www.cmmc.uni-koeln.de) (CMMC). We are located in the green Cologne Campus, where the faculties, many research centres and non-university partners are located. The campus offers support for international students and a vibrant international network. Our laboratory can benefit of collaborations with long-standing experts in mitochondrial biology located in the adjacent research institutes, and of the many different experimental approaches of the numerous research groups at CMMC. Our research group is associated to the [CECAD](https://www.cecad.uni-koeln.de) and of the [CRC1218](https://www.crc1218.uni-koeln.de).

About you

You have

- o A master degree with very good grades in Biochemistry, Molecular biology, or related disciplines;
- o Acquired previous experience in working in a wet lab;
- o Excellent command of written and spoken English (no German required);
- o Experience in recombinant protein expression and purification/structural biology (not required but strongly advantageous);
- o A strong motivation in pursuing biological questions by learning and working with many different techniques; determination to actively contribute in establishing new research directions; strong interpersonal and teamwork skills.

Position details

The position will be funded for 3 years and is available from April 2023. Payment and benefits are based on the German public service pay scale (TVL-13; 65%) guidelines. The successful candidate will enrol in the [Graduate School for Biological Science](https://www.graduiertenkolleg.uni-koeln.de) of the University of Cologne. The recruitment strategy of the Institute fully complies with the Code of Conduct definition of merit. For example, merit is not just measured by a researcher's grades, but on a range of evaluation criteria, such as teamwork, interdisciplinary knowledge, soft skills and awareness of the policy impact of science.

How to apply

Please submit your application as a single PDF file, that includes: a cover letter (explaining background and motivation), your CV (including extra-curricular activities), copies of certificates, list of publications (if applicable), and the contact details (e-mail address and phone number) of two academic referees.

Submit the application to valentina.piano@uk-koeln.de.

Application deadline: 1.03.2023