

Laboratory for Centrosome and Cytoskeleton Biology

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The Institute of Human Genetics at the Universitätsklinikum Düsseldorf, Heinrich-Heine-Universität, is a multidisciplinary institute providing a platform that brings physician scientists with basic researchers together to perform competitive basic, disease-oriented research.

The laboratory for centrosome and cytoskeleton biology of the Human Genetics Institute invites applications of bright and motivated individuals for two open positions for doctoral thesis

Two PhD Student positions

The concept of the laboratory is “Identifying the tunable biochemical mechanisms of centrosomes and cilia biogenesis and target them in engineered 3D human tissues for clinical application” For further information, please visit <http://centrosome-cilia-lab.com> to see our publications and learn more about our research.

The position is available from September 2018. The position is based on the German TV-L salary conditions. The Universitätsklinikum Düsseldorf places strong emphasis on gender equality and seeks to increase the proportional representation of women in this field. Applications from female scientists are especially welcomed; suitably qualified women will be given preferential consideration unless other candidates clearly demonstrate superior qualifications. We also welcome applications from disabled candidates, who will also be given preferential consideration over applicants with comparable qualifications.

What we look for:

Ideal candidates should have a proven record of demonstrating independent research and should have a strong interest in research around centrosome cilia biology. The ideal candidate will get a strong training to work with iPSC-derived human brain organoids to model microcephaly. Prior experience with iPSC cells is advantageous. Willingness to do complementary research with *Drosophila* genetics is highly welcome. Thus, the successful candidate will have a benefit of learning the interdisciplinary techniques and will have a wide range of possibilities to interact and work closely with clinical scientists. The team members will have opportunities to develop their own independent line of investigation for their future career.

Research overview:

Centrosomes are conserved eukaryotic cellular organelles essential for many cellular functions including accurate cell division, cilia formation, and microtubule nucleation. The focus of the laboratory is to understand the fundamental mechanisms and regulations of centrosome biogenesis and to uncover how their dysfunctions can lead to Microcephaly. The laboratory takes a multidisciplinary approach that combines genetics, biochemistry, and structural biology.

The laboratory primarily used *Drosophila* as a robust model system where genetic and biochemical strategies were applied together to study centrosome biogenesis both *in vivo* and *in vitro*, respectively.

Research Environment:

The laboratory is well known for centrosome / cilia biology and established with the state-of-the art facilities to perform high standard human organoids research. The institute of human genetics along with its partner institutes such as IUF – Leibniz Research Institute for Environmental Medicine, Natural science

faculty of Heinrich-Heine-Universität, Biological and medical research center (BMFZ), graduate programs such as iBrain, and center for advanced imaging all located near to each other. This provides a vibrant scientific community. Therefore, the laboratory for centrosome and cytoskeleton biology is placed perfectly at an environment where the basic research meets its cutting edge of translational science.

If you have further questions please do not hesitate to contact Prof. Dr. Jay Gopalakrishnan. Please forward your complete application (in a single pdf document) by e-mail to **Prof. Dr. Jay Gopalakrishnan** (jay.gopalakrishnan@uni-koeln.de)