

The mission of the Berlin Institute of Health (BIH) is medical translation: transferring biomedical research findings into novel approaches to personalized prediction, prevention, diagnostics and therapy and, conversely, using clinical observations to develop new research ideas. The aim is to deliver relevant medical benefits to patients and the population at large. The BIH is also committed to establishing a comprehensive translational ecosystem as translational research area at Charité – one that places emphasis on a system-wide understanding of health and disease and that promotes change in the biomedical research culture. The BIH is funded 90 percent by the Federal Ministry of Education and Research (BMBF) and 10 percent by the State of Berlin. The two founding institutions, Charité – Universitätsmedizin Berlin and Max Delbrück Center for Molecular Medicine in the Helmholtz Association (MDC), were independent member entities within the BIH until 2020. As of 2021, the BIH has been integrated into Charité as the so-called third pillar; the MDC is privileged partner of the BIH.

For the BIH we are looking for from
August / September 2022 limited for 3 years a

PhD candidate and Postdoctoral position (f/m/d)

We are seeking a motivated PhD candidate and/or post-doctoral researcher with a background in hematology and/or computational biology/data science to join the teams of Dr. Leif S. Ludwig and Prof. Dr. Frederik Damm, located at the Berlin Institute of Medical Systems Biology (BIMSB) and the Charité University Hospital in Berlin, Germany. The Ludwig lab is part of the Focus Area 'Single Cell Approaches for Personalized Medicine' and specializes in the development of single cell multi-omic technologies and their application in stem cell and leukemia research in hematology/oncology. The successful applicant(s) will work closely with an interdisciplinary and collaborative group, including clinicians and scientists across the BIMSB/MDC & BIH/Charité community, providing a range of opportunities to learn new skills. Local computational collaborators for the project include for example Dr. Laleh Hagverdi (BIMSB/MDC).

Your area of responsibility:

The general responsibilities may include, but are not limited to, the following activities:

- Isolation and processing of primary patient cells for single cell multi-omic sequencing
- Processing, quality control and integrated analysis of the resulting multi-omics data (e.g., transcriptome, accessible chromatin, protein expression, somatic nuclear and mitochondrial mutations).
- Identify cell types and cell programs among heterogeneous cell populations. Identify genomic features such as gene expression and mutational signatures characteristic of disease samples.
- Document progress, communicate and present analyses to group, institute members and collaborators verbally and in writing.
- Work with members of the group and collaborators as well as independently with respect to experimental design, data analysis, visualization and interpretation as well as planning next steps.
- Relevant publications:
[https://www.cell.com/cell/fulltext/S0092-8674\(19\)30055-8](https://www.cell.com/cell/fulltext/S0092-8674(19)30055-8),
<https://www.nature.com/articles/s41587-020-0645-6>,
<https://www.nejm.org/doi/full/10.1056/NEJMoa2001265>,
<https://www.nature.com/articles/s41587-021-00927-2>,
- Location: <https://www.mdc-berlin.de/bimsb#t-about>
- Weblinks: <https://www.bihealth.org/en/research/focus-areas/single-cell-technologies>,
<https://www.mdc-berlin.de/ludwig> and <https://www.bihealth.org/en/research/research-group/stem-cell-dynamics-mitochondrial-genomics/>

Your profile:

We are looking for a motivated PhD candidate and/or postdoctoral researcher with a background and interest in hematology, single cell multi-omics and data science. The ideal candidate may have the following qualifications:

- MSc (for the PhD position) or a PhD/MD or equivalent (for the postdoc position) in the life or natural sciences.
- Research experience in the areas of single cell genomics and hematology, ideally related to clonal hematopoiesis and myelodysplastic syndromes.
- Very good communications skills (lab and institute language is English) and desire to work with individuals of different backgrounds in a multidisciplinary team.
- Self-motivation, organizational skills, and desire to lead and develop scientific projects.
- Scientific curiosity, analytical thinking and interest in contributing to projects.
- Keen interest in learning new skills, research techniques, data processing and analysis/interpretation of results.
- Please send applications as a single pdf file, including cover letter (max. 2 pages) indicating past, current and future research interests, potential starting date, a curriculum vitae including publications, and 2-3 letters of recommendation. We are looking forward to hear from you!

We offer:

- A varied job in a forward-looking research institute,
- A temporary part-time PhD position (25,35 hours/week) and a temporary full-time PostDoc position (39 hours/week),
- Remuneration up to E13 TVöD VKA-K: The grouping takes into consideration the qualifications and the personal circumstances of the candidate
- Additional benefits customary in the public sector (including annual bonus, VBL),
- 30 vacation days per year (with a five-day week) and up to 24 floating days per year.
- Family - friendly, flexible working hours for better work-life balance

We live diversity!

BIH strongly encourages qualified women to apply. Applications from people with an immigrant background who meet the hiring requirements are expressly encouraged. Severely disabled applicants and those with equal status will be given preferential consideration in cases of equal suitability.

Please submit your application via the BIH Career portal <https://jobs.bihealth.org> until the **14.06.2022**, quoting the **reference number BIH-61.22**. We are looking forward to hear from you!

You can find more information about BIH at

www.bihealth.org/en/