

The Helmholtz Institute for Biomedical Engineering - Institute for Stem Cell Biology – is offering a position for a

Bioinformatician (m/f/d) for Epigenetic Networks in Aging and Cancer

The job posting is for a postdoctoral position (100% TV-L E13) starting from October 2024 and is initially limited to 2,5 years.

Within the project “Transform-Me” (supported by the Else Kröner-Fresenius Stiftung), we are investigating how epigenetic changes, particularly DNA methylation patterns, are coordinated across the genome. We anticipate these modifications are coherently modified in trans within epigenetic networks. We want to identify modules and hubs that are co-regulated in aging, development, and particularly in malignant transformation. Furthermore, we aim to modulate these epigenetic networks by epigenetic editing. We are looking for a bioinformatician with a strong background in epigenetic characterization of cell preparations with focus on DNA methylation. We are integrating own and public EPIC Illumina Bead Chip datasets, RNA-seq, ATAC-seq, ChIP-seq, nanopore, and single cell DNAm sequencing datasets.

You can find further information on our research group under: <http://www.stemcellbiology.ukaachen.de>.

References: Liesenfelder et al., 2025: <https://www.nature.com/articles/s43587-025-00841-1>

Varona Baranda et al., 2026: <https://www.biorxiv.org/content/10.64898/2026.06.05.729844v1>

Your tasks:

- Integrative analysis of many epigenetic datasets, particularly DNAm profiles from public repositories
- Coregulation and network analysis
- Machine learning approaches predicting epigenetic patterns
- Analysis and integration of chromatin accessibility and histone modifications
- Analysis of single cell DNAm datasets
- Design and analysis of epigenetic editing experiments
- Scientific publication of the results

Your profile:

- Master's degree in either Biology, Bioinformatics, or comparable degrees in Natural Sciences
- A successful PhD (grade very good) on bioinformatics or epigenetic research
- Bioinformatic experience for DNA methylation analysis
- programming languages R and optionally perl or python
- Knowledge in cancer and aging research
- Willingness to contribute to different projects within our team
- Able to communicate clearly in English and willing to work in an international team

Why should you choose us?

- We provide a highly interactive and well-equipped environment, in an international team, with excellent partners
- The research topic is very timely, clinically relevant, and challenging.
- We offer performance-based remuneration in accordance with the provisions of TV-L (EG 13), including attractive public service benefits.

This position is not gender specific. The RWTH Aachen University Hospital promotes equal opportunities and diversity. If suitably qualified, people with a registered disability will receive priority.

The application deadline for the advertised position **GB-P-56328** is **August 30, 2026**. Applications should be sent via our online portal:

<https://ukaachen.helixjobs.com/Wissenschaftliche-Mitarbeitende/jobad?prj=60P56328>

They should include (1) a motivation letter, which specifically emphasizes your interest in this project, (2) CV with publication list, (3) contacts of two references, and (4) copies of the most important certificates (with grades; all documents preferentially combined into a single PDF).

For specific questions, you can contact Prof. Dr. Dr. Wolfgang Wagner (wwagner@ukaachen.de).