

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

Bioinformatician (m/f/d) for Epigenetic Characterization of Pluripotent Stem Cells

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

Within the project “PluripotencyScreen” (supported by VIP+ BMBF), we are developing an innovative quality control method for iPSC based on epigenetic characteristics. To this end, we need to integrate public and own DNA methylation datasets of iPSCs during differentiation towards all three embryonic germ layers - endoderm, mesoderm and ectoderm. Furthermore, we aim for a better understanding of age-associated epigenetic modifications. Thus, 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, WGBS, and nanopore sequencing datasets.

You can find further information on our research group under: <http://www.stemcellbiology.ukaachen.de>.
Reference: Schmidt et al., *Stem Cell Reports* 2023 <https://doi.org/10.1016/j.stemcr.2022.11.001>

Your tasks

- Identification of lineage-specific epigenetic modifications
- Derivation of DNA methylation signatures for iPSC characterization
- Analysis and integration of age-associated DNA methylation and histone modifications
- Support documentation, quality control, and project management
- Scientific publication of the results

Your profile:

- Master degree in either Biology, Bioinformatics, or comparable degrees in Natural Sciences
- A successful PhD with bioinformatics on epigenetics or stem cell research
- Bioinformatic skills for DNA methylation analysis
- programming languages R and optionally perl or python
- Background knowledge in iPSC and or 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
- Interest in translational research with the perspective of spin-off

Why should you choose us?

- We provide a highly interactive and well-equipped environment, in an international team, with excellent partners, a broad spectrum of methods and a highly relevant research topic
- Contribution to a translational project that may result in a spin-off company
- 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 is **15.08.2024**. Applications should be sent as a PDF including (1) a cover 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).

Your application (preferentially combined as single PDF) should be sent by E-mail to Katharina Hayat (khayat@ukaachen.de) AND Prof. Dr. Dr. Wolfgang Wagner (wwagner@ukaachen.de).