

Our research group at the Institute of Synthetic Biology at the Heinrich-Heine University (HHU) Düsseldorf is looking for a highly motivated and talented **postdoctoral researcher**. Candidates should possess a strong background in cell and molecular biology, human disease research, and must have experience and interest in mammalian stem cell technologies and the cultivation of 3-dimensional tissue cultures including organoids. Experience with confocal microscopy, synthetic biology, and deep knowledge in developmental biology, physiology, and biochemistry are of advantage.

Activities and responsibilities

The candidate will be part of a project funded by the *VolkswagenStiftung* synergizing concepts of synthetic biology and advanced mammalian cell culture model systems. In particular, the project focuses on induced pluripotent stem cell engineering and the implementation and application of synthetic and optogenetic tools with the aim to utilize these techniques in 3D cultures. The high spatial and temporal precision and the possibility to obtain quantitative informative data are key advantages of the developed technologies, fostering the development of customized 3-dimensional model systems to advance the study of disease, shape approaches in personalized medicine, and enable new strategies in drug screening and metabolic engineering with novel innovation.

For reference, see: pubmed.ncbi.nlm.nih.gov/34028208,
pubmed.ncbi.nlm.nih.gov/33623712, pubmed.ncbi.nlm.nih.gov/30165200

Qualification profile

- PhD degree in biology, biomedicine, developmental biology, tissue engineering, cell and molecular biology, biochemistry, biotechnology, or related fields.
- Working experience with stem cells and their maturation into 3-dimensional tissue cultures e.g., organoids.
- Background on human physiology, disease models.
- Interest in learning and applying the principles of synthetic biology to stem cell and organoid research.

- Deep and broad interest in biology and advanced technologies, biomedicine, self-driven working attitude, good teamworking skills.
- Proven advanced English skills.

We offer

The candidate will pioneer in a young and enthusiastic fully equipped group hosted at the Institute of Synthetic Biology in an international environment. The Institute has all required infrastructure and equipment, within the new biology building complex, and in close interaction with the Center of Advanced Imaging, Structural Biology, and Metabolomics. The candidate will deeply integrate into a joint curriculum within the host institute and participate in seminars, scientific discussions, teaching activities, and infrastructure-related tasks. Preference will be given to handicapped applicants with equal qualifications. The 3-year positions will be based on salary grade E 13 (100%) according to the Collective Agreement for the Civil Service (TVöD). The position is available immediately, the starting date is negotiable.

Please send your application including CV, motivation letter, and the contact details of two references as a single document to Dr. Hannes Beyer (hannes.beyer@uni-duesseldorf.de).