

The IUF – Leibniz Research Institute for Environmental Medicine investigates the molecular mechanisms through which particles, radiation and environmental chemicals harm human health. The main working areas are environmentally induced aging of the pulmonary system and the skin as well as disturbances of the nervous and immune system. Through development of novel model systems, the IUF contributes to the improvement of risk assessment and the identification of novel strategies for the prevention / therapy of environmentally induced health damage. The working group "Genome Engineering and Model Development (GEMD)" led by Dr. Andrea Rossi is looking for

# a student (f/m/d) for a master thesis with the title:

## Investigation of differentiation dynamics in human induced pluripotent stem cells.

### The project:

Human induced pluripotent stem cells (iPSCs) can be obtained by somatic cells from patients and have great potential for individualized regenerative medicine. These cells are pluripotent, meaning that they can differentiate into the three primary germ layers endoderm, ectoderm, and mesoderm, and into further specialized cell types and complex three-dimensional structures such as organoids. The aim of this project is to investigate differentiation dynamics of human iPSCs employing a variety of methods, including third generation long-read sequencing, digital PCR, qPCR, FACS, and immunostaining.

#### Your profile:

We are looking for a highly motivated master student (m/w/d) who is eager to learn and develop scientific independence. The applicant should have a completed bachelor's degree in molecular biology, cell biology, or a related discipline. The applicant should have some interest in data analysis, interpretation, and visualization. Hands-on experience in cell culture can be a plus, but motivation and dedication are far more important. Good/fluent knowledge of English is mandatory.

#### We offer:

An interdisciplinary international team with the possibility to apply state-of-the art techniques, including iPSC culture, organoid generation, next generation sequencing and digital PCR. We have a pleasant working atmosphere and offer many options to learn and grow as a scientist.

#### Start: As soon as possible

Please address your application (letter of motivation, CV, references, qualification certificates) with the reference "Master AG Rossi" in the subject line to <u>Bewerbung@IUF-Duesseldorf.de</u>:

07.03.2024

Dr. Andrea Rossi IUF – Leibniz-Institut für umweltmedizinische Forschung c/o Personalstelle Auf'm Hennekamp 50 40225 Düsseldorf

Application documents submitted by post are not returned. Documents for applicants not considered are destroyed appropriately once the procedure is complete.

