ROBERT KOCH INSTITUT

Open PhD position (m/f/d)- Pathogenicity of *Cryptosporidium* parasites in stem cell derived organoids

APPLICATION DEADLINE 15. DECEMBER 2025

▸ The Project

The parasitology team in Department 1 Unit16 (PI Dr. Christian Klotz) at RKI uses stem cell derived organoid technologies to study host-parasite interaction in order to dissect disease mechanisms of intestinal protozoa of Public Health concern, such as *Cryptospordium* spp. The offered PhD project specifically aims to compare *Cryptosporidium*-infected host epithelia derived from stem cell-based organoids of human and animal hosts in order to unravel parasite and host factors responsible for genotype-specific pathogenicity.

This project is funded by an internal grant of the Robert Koch Institute and offers a part-time position (65% of a full-time position), with the remainder of the time being reserved for you to work on your PhD research.

▸ Your job

Conduct scientific research using a well-established in vitro infection model based on stem cell-derived organoid cultures (DOI: 10.1053/j.gastro.2021.11.022). You will apply a wide range of cell biological and molecular methods, interact with collaboration partners and present your research results on scientific conferences and write scientific publications

▸ Your professional profile

Formal requirements: Completed university degree (master/diploma) in Cell Biology, alternatively in Biochemistry, Biology or related subjects

Skills and experience: The optimal candidate has experience using (complex) cell culture systems, preferably intestinal organoids, and has basic skills in fluorescence microscopy and standard molecular and cell biological tools such as PCR, Western blotting, etc.. Experience in routine application of MS-Office programs and English language skills (CEFR-level B2 or higher) will be required.

Further desirable skills include experience in generation, analysis and visualization of -omics data (e.g. RNAseq, Proteomics, etc). Ideal candidate has experience with CRISPR/Cas9-based technologies and is to able perform immunofluorescence analysis, high-end microscopy and image analyses. Experience in performing flow cytometry and working under S2 conditions, in particular parasite culturing would be of advantage.

▸ Job environment

As Germany's most important public health institute, we are actively committed to public health and offer an individual, flexible and family-friendly job environment. For further details: http://www.rki.de and https://jobs.rki.de

▸ Contact/Application

For application send usual documents to KlotzC@rki.de or FG16@rki.de

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