

The Chair of Virology of the Max von Pettenkofer Institute,  
(Director: Prof. Dr. med. Oliver T. Keppler), LMU Munich and the  
Laboratory for Functional Genome Analysis (LAFUGA) of the Gene Center, LMU Munich

are looking for a

### **Doctoral position in Bioinformatic Analysis of Viral Metagenomic Sequencing Data (m/f/x)**

#### **About us:**

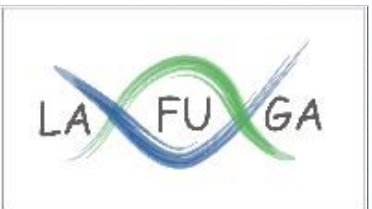
The Muenchhoff lab in collaboration with LAFUGA Genomics, both located at the Gene Center of LMU Munich is looking for a highly motivated doctoral candidate (m/w/d) for bioinformatic analysis of viral metagenome sequence datasets. We are aiming to apply cutting edge technology to achieve unprecedented resolution of genomic surveillance (eg wastewater samples) and clinical diagnostics of infectious diseases.

We employ oligo hybrid capture metagenomic sequencing to detect pathogens for diagnosis of complex clinical cases in close collaboration with the virology department of the Max von Pettenkofer Institute. Genomic surveillance is integrated in the Bay-VOC framework where a strong infrastructure has been established over the recent years with a tight network of waste water collection sites across Bavaria and patient sentinel samples. Advanced analysis algorithms will be developed to detect, characterize and track epidemic and pandemic outbreaks both quantitatively, but importantly also based on subtyping of circulating variants to map viral evolution over time. The wet lab work for these projects will mainly be carried out in the Muenchhoff lab, sequencing will be done by LAFUGA on Oxford Nanopore PromethION.

#### **Your tasks:**

The successful candidate of this call will be engaged to develop novel and optimise existing bioinformatic analysis pipelines for these exciting projects benefiting from the expertise of a senior bioinformatician. Research activities will be complemented by tasks in maintaining and developing the computational infrastructure of the LAFUGA sequencing facility. This facility host sequencers from Illumina (Nextseq2000) and Oxford Nanopore (PromethION P24) and is involved in a vast variety of interdisciplinary research projects, generating approximately 20 Tbp of sequencing data annually. The





IT infrastructure of LAFUGA consists of multiple Linux servers with a total storage capacity of more than 1.5 petabytes and a large number of GPUs, which are crucial for the acquisition, processing, and analysis of sequencing data. The successful candidate will support the maintenance, updating, and smooth operation of this infrastructure in close collaboration with the sequencing team, while contributing to efficient data management and user support.

**Your profile:**

Applicants should hold a Master's degree in the life sciences (M.Sc.) or an equivalent qualification. Previous experience in bioinformatics and analysis of sequencing data is welcome.

**Your benefits:**

The successful candidate will have the opportunity to contribute to high-impact research at the forefront of viral genomics, benefitting from a dynamic, interdisciplinary research environment. The project will be integrated in the Munich Medical Research School (MMRS) of the LMU Munich to receive the doctor of human biology (Dr. rer. hum. biol.) upon successful completion. The position will be remunerated with a minimum of 65% E13 depending on prior qualifications.

We encourage female candidates to apply. People with disabilities who are equally as qualified as other applicants will receive preferential treatment.

**Join our team:**

Use the time until 31<sup>st</sup> of January 2025 to apply. Please submit your online application including a possible starting date. For further information regarding the position and project, please contact PD Dr. Max Muenchhoff [muenchhoff@mvp.lmu.de](mailto:muenchhoff@mvp.lmu.de) or Dr. Stefan Krebs [krebs@genzentrum.lmu.de](mailto:krebs@genzentrum.lmu.de).

