

The Institute for Infectious Diseases and Infection Control (IIMK) invites applications for a

PhD student/Postdoc position in bioinformatics (m/f/div)

Initially limited to 2 (postdoc) or 3 years (PhD student), with the option to extend

Primary Duties & Responsibilities

We aim to develop strategies for pandemic preparedness to combat viral infections within the Antivirus Pandemic PrEpAredness pLatform (APPEAL). APPEAL is a new EU funded project with a duration of five years of an interdisciplinary research team at all levels comprising 12 European partners. The recent corona pandemic caused a public health threat worldwide. We want to be prepared for the next potential viral pandemic. Virus directed treatment is limited as viruses adapt to changing environmental conditions. Hence, employing host-directed antiviral therapy to disrupt the virus' life cycle is of great importance.

We will (1) develop machine learning models for identifying druggable host dependency factors from multi-omics data, (2) study protein interactions and gene regulation at the molecular level employing network analyses, and (3) integrate these data to find host proteins which are essential for the virus' life cycle and hence suit as drug targets for treatment.

Genome wide and targeted host factor screenings followed by microscopic imaging will be performed by cooperation partners. Outcomes from this data followed by our analyses will be validated in vitro and in vivo. We focus on emerging and re-emerging viruses with pandemic potential as listed by the WHO, and Influenza.

Required Skills & Qualifications

Interest in systematically detecting functional patterns in high dimensional data and gene networks

Degree in bioinformatics, biology or related subjects, or applied computer science

Machine learning or modeling background would be good, but is not necessary

Your application should be a single PDF file comprising a statement of purpose explaining your motivation for working with us and your relevant experience (one page), CV, transcripts (unofficial documents are sufficient), if you have, a list of publications, and contact information of two references. We are looking forward to reading from you! Do not hesitate to contact Prof. Rainer König with any questions you may have. Reference number: DM61/2023

Webpage: <https://www.uniklinikum-jena.de/infektionsmedizin/Forschung/Modelling.html>

LinkedIn: <https://www.linkedin.com/in/rainer-koenig-19a543174/>

In case of equal qualification, persons with disabilities will be given priority. Apply to rainer.koenig@uni-jena.de or marcus.oswald@med.uni-jena.de

Prof. Dr. Rainer König, Systemsbiology Research Group, Institute for Infectious Diseases and Infection Control, Jena University Hospital

Please apply quickly, the position needs to be filled as soon as possible.