Job posting

**Type of position**
- [x] scientific
- [ ] administrative

**Target group**
- [x] graduates
- [ ] post docs
- [ ] other

**Title**
2 PhD positions (f/m/d) - Increasing pandemic preparedness by computational high-throughput virus discovery: Identification of RNA viruses and host reservoirs with high spillover risk

**Institution**
TWINCORE Centre for Experimental and Clinical Infection Research in Hannover is a translational centre, which closely links basic and clinical research. Our research is focused on the interdisciplinary search for new strategies for the diagnosis, prevention and treatment of infectious diseases.

The German Cancer Research Center (DKFZ) is the largest biomedical research institution in Germany. With more than 3,000 employees, we operate an extensive scientific program in the field of cancer research.

**Position**
CoViPa (Corona Virus Pathogenesis) is a newly funded, internationally competitive and interdisciplinary network funded by the Helmholtz Association for the duration of 4 years starting on 1st of August 2021. The main focus of the network is to gain knowledge about the virological and immunological drivers of COVID-19 pathogenesis and the parameters of immune protection.

We are a highly complementary research team located at the TWINCORE Centre for Experimental and Clinical Infection Research in Hannover (Chris Lauber) and the German Cancer Research Center in Heidelberg (Stefan Seitz). Our work is dedicated to the large-scale discovery and evolutionary analysis of novel viruses by high-throughput screening of Next-Generation sequencing data. To this end we established and applied sensitive computational pipelines that allowed us to retrieve thousands of genomes of so far unknown eukaryotic viruses. The current project aims at assessing the spillover risk of these infectious agents from non-human host reservoirs into mankind and thus contributes to fostering our preparedness against future pandemics.

Detailed project descriptions: https://covipa.dkfz.de
**Responsibilities**
• The candidate works accurately, is able to conduct independent research, but also enjoys working in an international and interdisciplinary environment and is willing to advise students in the lab.
• Fluency in English language (written and spoken) is mandatory.

**Requirements**
To join our research team, we are seeking for highly motivated candidates holding a Master’s degree in (bio)informatics or biotechnology with a focus on computational biology. Desired qualifications are:
• Strong hands-on experience in programming with at least one scripting language, like Perl, Python or R, under Linux.
• Knowledge in and understanding of state-of-the-art methods of computational biology, e.g. NGS data processing, sequence alignment, phylogenetic tree reconstructions, protein functional annotation, motif search and structural predictions.
• Experience with high-performance computing is a plus.
• Experience with tools for workflow management (e.g. Snakemake, Nextflow) and version control (e.g. git) is a plus.
• Prior knowledge in virology is of advantage.

**Application procedure (deadline etc.)**
! Deadline: 2\(^{nd}\) of July 2021 !
Submission of written applications to the CoViPa Office (covipa-bw@dkfz-heidelberg.de)
The applications will be forwarded to Prof. Dr. Chris Lauber and Dr. Stefan Seitz.

**Contact**
CoViPa Office
covipa-bw@dkfz-heidelberg.de