



## Postdoctoral Position in the Gerold lab

The research group “Molecular and Clinical Infection Biology“ at the Research Center for Emerging Infections and Zoonoses & the Department of Biochemistry, University of Veterinary Medicine Hannover, Germany, is recruiting a research associate (postdoc) on a 2-year position in virology to pursue a project within the One Health sector. The project aims at investigating (re-)emerging virus infection and intervention strategies.

### Research Topic

Our group focuses on the study of zoonotic enveloped viruses including alphaviruses, flaviviruses, coronaviruses and through local collaborations influenza viruses. Our core expertise is the analysis of virus-host factor interactions using mass spectrometry. Specifically, we use biophysical, virological and cell biological techniques to characterize determinants of virus infection and transmission with the ultimate goal of deducing virus antiviral treatments and inactivation methods. Specifically, follow up of our proteomics work will include the evaluation of host-targeting antiviral strategies and the analysis of the role of host factors in species tropism and zoonotic spillover.

### Your role

You will be responsible for carrying out research in the Gerold laboratory ([tiho-hannover.de/en/group-gerold](https://tiho-hannover.de/en/group-gerold); [GeroldLab@Twitter](https://twitter.com/GeroldLab)) in close collaboration with local and international experts. Specifically, you will employ crosslinking and proximity labeling approaches in conjunction with MS-based proteomics to identify host factors for emerging viruses. Follow up on candidate proteins will include CRISPR/Cas9 knockdown and confirmation in organoid models, iPSC-derived air-liquid interface cultures, and if applicable *in vivo* models. You may further contribute to projects on analyzing virus host tropism and assessing the efficacy of candidate host-targeting agents previously identified by the Gerold lab. Your work will be assisted by a lab technician, whom you will guide to generate quality-controlled virus preparations.

### Responsibilities

- Employ a set of reporter and non-reporter viruses at BSL2 and BSL3 level.
- Develop and conduct assays to identify host factors of (re-)emerging viruses.
- Evaluate candidate host factors by orthogonal methods including CRISPR/Cas9.
- Follow up on antiviral compound discovery in *ex vivo* tissue, organoid, and iPSC-derived air-liquid interface cultures.
- Guide a technician responsible for virus stock preparation and titration.
- Participate and contribute to scientific group meetings.
- Coordinate work with collaboration partners.
- Contribute as appropriate to the publication of research findings.
- Participate in training and supervision of scientists and research students.
- Comply with the University’s Equal Opportunities and Data Protection policies.

### Selection criteria

#### Essential

- PhD in infection biology, biochemistry, molecular biology, or cell biology; degree completed no more than 5 years ago.
- Excellent written and oral English communication skills.
- Significant experience in mammalian cell culture and virology methods.
- Relevant experience in molecular cloning and ectopic protein expression.
- Interest in protein biochemistry of virus-host interactions.



- Ability to work as part of a team as well as independently.
- Ability to deliver results to required standard and schedule.
- Ability to organize and prioritize own work with minimal supervision.

### **Desirable**

- Experience in BSL3 environments.
- Previous practical experience with ALI cultures and organoids.
- Experience in MS data processing and R programming.
- Background in veterinary medicine and/or animal experimentation.

### **Research environment**

We are an international team based at the Research Center for Emerging Infections and Zoonoses. Virological expertise and latest instruments to study virus infection in real time are available on site. Within the local networks, organoid models, iPSC-derived air-liquid interface cultures, *in vivo* models and high-resolution mass spectrometry instruments are accessible. We offer an international, stimulating, and collaborative research environment, in which your scientific career development is fostered.

### **Position summary**

Full-time 2 years with full salary.

### **Application**

Please apply until July 31<sup>st</sup>, 2021 at

[Nawaphat.Wanphen@tiho-hannover.de](mailto:Nawaphat.Wanphen@tiho-hannover.de)

with the following documents:

1. Letter highlighting your qualification and motivation
2. CV including publication list
3. Copy of PhD certificate
4. Contact information of 2-3 references

For questions, please contact:

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