

POSTDOC POSITION

LAB

Our lab focuses on RNA viruses and their constraints of viral evolution on a molecular level. Put as a simple question: Why do viruses evolve the way they do and not in other ways?

For this, we look at single mutations, secondary RNA structures, genome organisation, enzymatic functions and cellular pathways. To help us address this question, we use a diverse set of methods, such as reverse genetics systems, Next Generation Sequencing (NGS), proteomics or classical virological methods. We are also interested in developing new methods that will allow us new lines of investigation.

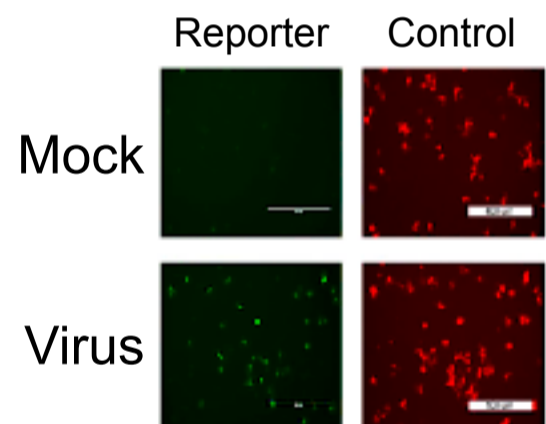
We aim to understand the individual evolutionary paths viruses take in different situations and what might be limiting factors in this process. Can we use this knowledge and processes for the development of new therapeutic strategies?

PROJECT

The project will develop a new set of methods for the lab. It will initially focus on the establishment of fluorescent reporter cell lines, in mosquito cells for the detection of arbovirus infection. The project will use proteomics to identify suitable cellular proteins in different mosquito cell lines. Cellular candidates interacting with arbovirus proteases will be characterised further and serve as starting point for a fluorescent reporter construct. The reporter construct will be optimised for the expression and activation by arboviruses in mosquito cells. Finally, the reporter construct will be tested and benchmarked in various assays, including a proof-of-concept small molecule screen.

YOU...

- PhD or equivalent in Molecular Virology (or related subject)
- Extensive experience with Arboviruses and insect cell culture
- Extensive experience with molecular biology/cloning methods
- Experience with proteomics
- Experience with fluorescence microscopy and FACS
- Self-motivated, organised and willing to supervise students in the lab
- Fluent in English (written and oral) mandatory



WHAT WE OFFER...

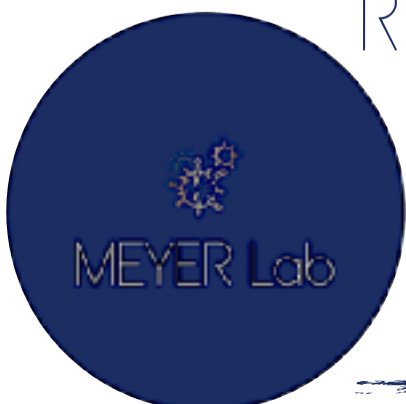
- Postdoc Position (m/f/d) (TV-L 13) for initial 18 months
- New, highly motivated research group using molecular biology to gain insights into RNA viruses, virus-host interactions and viral evolution
- Possibility to attend (international) conferences
- Possibility for (international) collaborations
- Well-equipped BSL-2/BSL-3 facilities
- Safe & supportive work environment

APPLICATION

- Apply with a motivation letter (why this lab and project), own line of research and CV with 2 referees
- Address application to Björn Meyer, PhD (also get in touch for informal inquiries)
- Send to: bjoern.meyer@med.ovgu.de
- Application Deadline: 30 April 2023 or until position filled
- Expected Start Date: as soon as possible thereafter

REFERENCES

Drayman *et al.* (2021), Masitinib is a broad coronavirus 3CL inhibitor that blocks replication of SARS-CoV-2, *Science*, 373(6557), 931–936.
Meyer, B., & Vignuzzi, M. (2022) Activated reporter protein for the detection of infection in a biological sample. WO Patent WO2022003184A1



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