

## Strategies to escape viral infection in archaea

### Project description:

In this project you will work with **archaea and their viruses** isolated from hypersaline environments. Archaea are ubiquitous micro-organisms, which are found in moderate environments as well as in extreme habitats. The viruses of archaea are characterized by a high morphological diversity. There is still very little known of the infection mechanisms of archaeal viruses. We study how these viruses infect cells of halophilic archaea, and how they recognize and attach to their host cell. With a combination of molecular biology, microbiology, electron- and light microscopy tools, the selected applicant will study the importance of the cell surface for viral entry. Specifically, the PhD student will focus on the changes at the **archaeal cell surface** that are required for **viral resistance**. This will give insight into mechanisms of defense against viruses acting at the cell surface, and will help to understand how viruses can contribute to the evolution of the archaeal cell surface.

### Keywords

Archaea, archaeal virus, virus-host interaction, infection mechanism, biofilm formation

### Entry requirements

MSc degree in Biology, Molecular Biology, Biochemistry or equivalent. Affinity for microbiology, virology and molecular biology are important. Practical experience in these fields is a plus. The applicant should be willing to bring research visits to collaborating laboratories in other countries to perform part of their experiments.

### Location

Faculty of Biology, Albert Ludwig University of Freiburg, Freiburg, Germany

### Starting date

September 1<sup>st</sup> 2021

### Funding

limited to 3 years

### How to apply

Please apply via the [HFA application portal](#).

The Hector Research Career Development Awardees will arrange interviews (via skype or if feasible in-person) with the most promising applicants. The final candidates will be invited for a personal presentation on July 8, 2021 in Bremen (Germany). The final decisions will be announced by August 2021.

### Application Deadline

March 31<sup>st</sup>, 2021

### Enquiries

For further details about the project, please contact the Hector Research Career Development Awardee at: [tessa.quax@biologie.uni-freiburg.de](mailto:tessa.quax@biologie.uni-freiburg.de)

For questions related to making your application, please contact Hector Fellow Academy Office: [application@hector-fellow-academy.de](mailto:application@hector-fellow-academy.de) or [www.hector-fellow-academy.de](http://www.hector-fellow-academy.de)