



MAX PLANCK INSTITUTE
FOR DYNAMICS OF COMPLEX
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MAGDEBURG

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Master Thesis (m/f/d) in Molecular biology / Biotechnology

Magdeburg, 2025/05/22

The Molecular Biology Team (homepage: https://www.mpi-magdeburg.mpg.de/25630/molecular_biology) of the Bioprocess Engineering Group at the Max Planck Institute for Dynamics of Complex Technical Systems (Magdeburg) is looking for a motivated Master student to work on the following topic:

“Structural and functional analysis of viral RNA interactions in influenza virus DIPs in vitro”

Defective interfering particles (DIPs) are naturally occurring viral mutants, that interfere with the replication of fully infectious virus strains during co-infection. This results in reduced infectivity of the released viral particles. Previous studies indicate that DIPs may serve as effective antiviral agents; however, our knowledge of the mechanisms involved in the action of DIPs is still limited. The aim of this study is to gain insight into these processes by conducting experimental research to explore the intermolecular interactions between DIP genomic viral RNAs in vitro.

The Master student will have the opportunity to learn a variety of methods, including site-directed mutagenesis, molecular cloning, bacterial cell culture, electrophoretic mobility shift assay (EMSA), reverse genetics, mammalian cell culture maintenance, transfection, infection, virus quantification (HA assay, plaque assay), real-time RT-qPCR and data analysis. We offer research work in an international and cooperative environment. Remuneration within a HiWi employment contract is possible.

The offer is addressed to students of Biotechnology, Biosystems technology, Biochemistry, Biology or similar; requiring knowledge in the field of molecular biology and virology. We are looking for highly motivated candidates and expect initiative, accuracy, the ability to work independently as well as in a research team and to present the project and its results in English. The start date is as soon as possible.

Please submit your application including a cover letter and CV (in **English**), reference letters or internship certificate (if applicable) and transcript of records (high school and Bachelor degree), only via email to:

Julita Piasecka, PhD
piasecka@mpi-magdeburg.mpg.de

Submission deadline: 31.07.2025



The Max Planck Society is committed to increasing the number of individuals with disabilities in its workforce and therefore encourages applications from such qualified individuals. Furthermore, the Max Planck Society seeks to increase the number of women in those areas where they are underrepresented and therefore explicitly encourages women to apply.

Please note the information regarding the storage of personal data:
<https://www.mpi-magdeburg.mpg.de/data-protection-for-applicants>