

Schlögelhofer Lab

Master's Thesis in Plant Molecular Biology

About the Schlögelhofer Lab

We study mechanisms of meiotic DNA double strand break (DSB) formation, DNA repair and recombination in the model plant *Arabidopsis thaliana*. We aim at gaining a holistic understanding ranging from the organism to the molecular details. To this end, we generate (hypo- and hyper-morphic) mutant plant lines and investigate the spatial and temporal distribution of key factors by regular and super-resolution microscopy. To understand mechanistic details, we employ a wide range of techniques including *in vitro* reconstitution of protein complexes, classical biochemistry and single molecule assays. In collaboration with the excellent on-site facilities and colleagues we perform next generation sequencing, mass spectrometry and structural analyses.

About the research project

Meiosis is a specialised cell division prior to the formation of generative cells, creating new allelic combinations of maternal and paternal genetic material. Genetic recombination depends on the introduction of meiotic DSBs but their regulation during meiotic progression is not fully understood. We are interested how meiosis specific chromatin factors affect DSB formation in plants.

Candidates

Successful candidates should

- hold a BSc degree in Molecular Biology or a related field
- be highly motivated
- be interested in plant biology, meiosis and basic mechanistic questions.

Application

Please include the following in your application:

- C.V.
- Motivation letter
- Contact details of BSc and/or internship advisor(s)

Please send your application via email until 15.6.2025.

Contact

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About the Max Perutz Labs

The Max Perutz Labs are a research institute established by the University of Vienna and the Medical University of Vienna to provide an environment for excellent, internationally recognized research and education in the field of Molecular Biology. Dedicated to a mechanistic understanding of fundamental biomedical processes, scientists at the Max Perutz Labs aim to link breakthroughs in basic research to advances in human health. The Max Perutz Labs are located at the [Vienna BioCenter](#), one of Europe's hotspots for Life Sciences, and host 41 research groups, involving around 450 scientists and staff from more than 50 nations.

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