

Ellis lab

MSc rotation/thesis student

About the Ellis lab

The Ellis lab studies tissue morphogenesis and maintenance through the lens of cell competition in the developing mouse skin. We ask how these epithelial tissues are organized and how their growth is controlled employing tools from genetics, cell biology and quantitative biology. We use both mouse models and primary cell/organoid lines in our projects.

About the position / the research project

Currently we have one open position in the lab:

1. **Tissue mechanics in mouse skin development:** Using the developing mouse epidermis and primary mouse keratinocyte culture, this project investigates how cells that are not able to carry out their function (so called “losers”) are recognized and eliminated from the developing tissue. We characterize and manipulate different cell shape parameters to infer which features tag a cell for elimination. For that we employ different molecular biology techniques, fluorescent microscopy and optogenetic manipulation. Your work can include: culturing primary mouse keratinocytes, processing embryonic skin tissue, histology, immunofluorescence staining and imaging, image analysis, FACS.

Candidates

We are seeking a motivated Master's student to join our research team. The ideal candidate holds a Bachelor's degree in Molecular Biology, Cell Biology, Biotechnology, or a related field.

Important to note: all projects in the lab require some degree of mouse handling so please be advised of this before you apply (no mouse handling experience is required).

Experience in cell culture techniques (cells/organoids), fluorescence microscopy and image analysis is a plus. An interest in microscopy, quantitative image analysis and molecular biology techniques is expected. We look for a proactive mindset, curiosity about epithelial and developmental biology, and the ability to work both independently and collaboratively.

The position begins with a 8-week rotation (unpaid), with the possibility to continue into the Master's thesis based on successful performance and mutual agreement (this will be paid for the entire duration, 500€ per month).

Application

How to apply?

The position is available from January. Send your detailed **CV** along with a **short motivation letter** explaining your background and how you could contribute to our projects to stephanie.ellis@univie.ac.at with the subject line “MSc thesis application”. You can also write to this email with any further questions.

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 around 40 research groups, involving approximately 450 scientists and staff from more than 50 nations.

www.maxperutzlabs.ac.at