

Master student project**Milk-derived extracellular vesicles for the treatment of Inflammatory Bowel Diseases (IBD)**

Expected duration: ca 4-6 months (unpaid), with the opportunity for a remunerated extension to 12 months

Start date: upon agreement

We are looking for a highly motivated student with excellent curricular training in biochemistry/cell biology to work on a master thesis project at the Paris-Lodron University of Salzburg (PLUS). The research project will support a larger initiative on therapeutic applications of extracellular vesicles (EVs) to treat Inflammatory Bowel Diseases. Hereby it will be of utmost importance to develop histological methods to detect EVs in the intestine as well as *in vitro* methods to help with dose finding ahead of *in vivo* studies. Furthermore, this master project involves assistance with *in vivo* studies that are ongoing in the lab. The project is also associated with the new Ludwig Boltzmann Institute for Nanovesicular Precision Medicine (LBI-NVPM) at the PLUS and will be embedded within its larger interdisciplinary scientific mission of translating the fundamental biology of extracellular vesicles into therapeutic applications.

The successful candidate will learn and establish histological methods as well as complex *in vitro* assays within their master project. Apart from that, the candidate will learn dissection techniques of mice and will be part of the team around *in vivo* studies at the LBI-NVPM.

Techniques and learning opportunities:

- Culture of mammalian cells
- Advanced 3D co-culture assay for preclinical drug profiling and molecular transport analysis
- Immunoassays
- Histology
- Immunohistochemistry / Immunofluorescence techniques
- Advanced fluorescence microscopy
- Dissection and sample processing of mouse organs for epifluorescence and histology
- Data analysis, documentation, and presentation at the group's internal and external meetings
- Working within a research environment at the interface of basic research, clinical translation and the pharmaceutical industry

Minimum requirements:

- Bachelors degree in Life Sciences
- Comprehensive knowledge in the areas of biochemistry and molecular biology
- Excellent command of the English language
- Excellent organizational skills
- Additional hands-on experience in cell culture and in vitro assay development is highly desired

We specifically welcome applicants who:

- Are passionate to work in an interdisciplinary team towards a common mission
- Are reliable
- Have the desire and attitude to acquire knowledge
- Think creatively and critically
- Are motivated by translating basic science into therapeutic applications

Interested?

Applications should be submitted to: martina.dicker@plus.ac.at and cc to nicole.meisner-kober@plus.ac.at, including a motivation letter, curriculum vitae, a copy of the certificates of highest obtained degree and a specification of previous training in biochemistry/cell biology or histology. Applications will be accepted until the position is filled.

Univ. Prof. Dr.Nicole Meisner-Kober

Professor of Chemical Biology and Biological Therapeutics
Director Ludwig Boltzmann Institute for Nanovesicular Precision Medicine at the PLUS
Department of Biosciences and Medical Biology, Paris-Lodron University of Salzburg
Hellbrunnerstrasse 34, 5020 Salzburg, Austria
<https://www.plus.ac.at/meisner-kober>
<https://nvpm.lbg.ac.at>