

Introduction to Translational Pathology 5 ECTS

Online course for 5 weeks (22.2.-30.3.2021)

The aim of the course is to learn mouse histology and compare it to human. The subject is very important, because mouse is widely used as a model for human diseases. In order to understand human disease-like manifestations in mouse models, such as in genetically modified mice, the normal mouse histology and its similarities and differences to human histology must be understood. Another aim of the course is to learn how to collect and process samples for histological analyses. Without this knowledge, it is not possible to estimate the quality of the samples and ignore possible artefacts.



Learning outcomes

After the course students

1. know in theory how to dissect male and female mice and collect samples for biomedical research
2. know in theory how to process histological samples
3. know mouse histology
4. are aware of spontaneous pathological alterations in different mouse strains
5. know the most relevant differences between mouse and human histology

Contents

This course covers the following topics

1. Mouse dissection
2. Histological sample preparation
3. Mouse histology demonstrated in six common mouse strains (C56Bl6J and N, FVB/N, C3HeBFeJ, 129P2OlaHsd and BalbcbyJ)
4. Mouse versus human comparative anatomy and histology

Teaching methods

1. On-line videos and lectures (recorded)
2. Independent learning (webmicroscopy and reading)
3. On-line exercises
4. Final examination

Teaching language

English

Evaluation and evaluation criteria

Passed/failed. Approved on-line exercises and final examination.

Study material

Online material in Moodle. The official study book of the course is "Comparative Anatomy and Histology", edited by Piper Treuting and Suzanne Dintzis.