Lab methods: histology

BIOENG-516

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Summary

Presentation of the diverse techniques to prepare samples for bright field microscopy, as well as procedures for standard histology stains and proteins detection with observation of tissues under microscope.

Content

Theory:
- Sample preparation for bright field microscopy
- Artefacts
- Special staining
- Protein detection
- Introduction to pathology

Praxis:
- Frozen and paraffin section (cryostat and microtome)
- Routine stain for pathology (hematoxylin and eosine)
- Special stain to highlight different structures
- Immunohistochemistry
- Observation and description of tissues under microscope

Keywords

Techniques
Histology
Microscopy

Learning Prerequisites

Required courses
None

Learning Outcomes
By the end of the course, the student must be able to:
• Choose Methods to prepare samples
• Compare Advantages and disadvantages of different techniques
• Describe Methods for protein detection
• Perform Protocols for Hematoxylin and eosin as well as immunohistochemistry

Transversal skills
• Plan and carry out activities in a way which makes optimal use of available time and other resources.

Teaching methods
Ex cathedra teaching and praxis

Expected student activities
Lecture will take place on the 20th, 21st and 27th of September 2018

Attendance at lectures
Completing the pratical part
Prepare and present a description about one tissue and the techniques used during praxis

Assessment methods
Written exam

Resources
Bibliography

Ressources en bibliothèque
• Theory and practice of histological techniques / Bancroft

Websites
• http://hcf.epfl.ch

Moodle Link
• http://moodle.epfl.ch/course/view.php?id=13391