Module title: Functional Neuroimaging

Abbreviation: 03-TN-FI-142-m01

Module coordinator: University Hospital, Department of Nuclear Medicine

Module offered by: Faculty of Medicine

ECTS: 5

Method of grading: Only after succ. compl. of module(s)

Duration: 1 semester

Module level: graduate

Contents:
- Content: target identification for functional and molecular neuroimaging, basic concepts of radiochemistry, radiolabelling of surrogate markers for PET and SPECT, basic concepts of magnetic resonance imaging, basic concepts of positron emission tomography, single photon emission computed tomography and hybrid devices (PET/CT, SPECT/CT), anatomic and functional structures of the brain in small animals, anatomic and functional structures in humans and patients with neurodegenerative disorders and dementia, multimodality multiparametric imaging of brain tumours using MR, PET and SPECT.

Intended learning outcomes:
- Students who successfully completed this module will have acquired insights into current experimental approaches in neurobiology. They will have been introduced to preparations and recording techniques to study the function and pathomechanisms of neural model systems. The students will have examined clinical aspects of neurobiology with a focus on the molecular, cellular and physiological mechanisms. Additionally, they will have learned how to document their own data that they collected during lab courses. In addition, the students will have learned to critically reflect their data in the context of the experimental methods used.

Courses:
- V + S (no information on SWS (weekly contact hours) and course language available)

Method of assessment:
- methods of assessment: a) written examination (30 to 60 minutes, including multiple choice questions) or b) log (approx. 10 to 30 pages) or c) oral examination of one candidate each (30 to 60 minutes) or d) oral examination in groups of up to 3 candidates (approx. 30 to 60 minutes) or e) presentation (20 to 45 minutes); students will be informed about the method, length and scope of the assessment prior to the course

Allocation of places:
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Additional information:
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Referred to in LPO I (examination regulations for teaching-degree programmes):
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Module appears in:
- keinem Studiengang zugeordnet