

Module title		Abbreviation
Cell Biology - Focus signal transduction and stem cells		03-98-PZB1-172-m01
Module coordinator		Module offered by
Working Group Molecular Genetics of the Faculty of Medicine		Faculty of Medicine
ECTS	Method of grading	Only after succ. compl. of module(s)
5	numerical grade	--
Duration	Module level	Other prerequisites
1 semester	undergraduate	May not be combined with 03-98-PZB2 or 03-98-PZB3.
Contents		
<p>Becoming familiar with basic cell biological principles via hands-on training and individual seminars. Major topics are the structural organization of eukaryotic cells and differentiation of stem cells into different cell types. Analyses of cellular processes such as reorganization of the cytoskeleton under stress conditions, proliferation, apoptosis, differentiation, regulation of transcription, stimulation of signaling pathways and cellular responses. Application of the necessary techniques.</p>		
Intended learning outcomes		
<p>Problem-oriented handling of eukaryotic cells under sterile conditions as well as the ability to independently apply basic working techniques to analyze cells. Checking, evaluating and error analysis of the results. Understanding the molecular basis of cell biology as well as cellular malfunctions and their significance for disease processes. Independent extraction of relevant information and presentation of selected examples of the current literature in a seminar. Acquiring the ability to discuss scientific and ethical aspects of stem cell biology.</p>		
Courses (type, number of weekly contact hours, language — if other than German)		
P (5) + S (1) Module taught in: German / English		
Method of assessment (type, scope, language — if other than German, examination offered — if not every semester, information on whether module is creditable for bonus)		
<p>a) written examination (45 to 90 minutes) or c) oral examination of one candidate each (20 to 30 minutes). Students will be informed about the type and length of assessment at the beginning of the course. Language of assessment: German and/or English</p>		
Allocation of places		
Biomedizin (Biomedicine) Bachelor's: 18 places.		
Additional information		
Additional information on module duration: 2 weeks, full time.		
Workload		
150 h		
Teaching cycle		
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Referred to in LPO I (examination regulations for teaching-degree programmes)		
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Module appears in		
<p>Bachelor' degree (1 major) Biomedicine (2015) Bachelor' degree (1 major) Biomedicine (2018) Bachelor' degree (1 major) Biomedicine (2020)</p>		