

<b>Module title</b>		<b>Abbreviation</b>
Model Organisms		o3-98-MMOD-122-mo1
<b>Module coordinator</b>		<b>Module offered by</b>
Dean of Studies Biomedizin (Biomedicine)		Faculty of Medicine
<b>ECTS</b>	<b>Method of grading</b>	<b>Only after succ. compl. of module(s)</b>
25	numerical grade	--
<b>Duration</b>	<b>Module level</b>	<b>Other prerequisites</b>
1 semester	undergraduate	--
<b>Contents</b>		
<p>With the help of selected eukaryotic model organisms (mouse, fish, Drosophila, nematodes and flatworms, yeast) and complex tissue models, students will become familiar with methods and questions of experimental biomedicine and will apply these. Building on the students' knowledge of anatomy, cell biology and developmental biology, the module will illustrate the relevance and usage of individual models for understanding physiological processes and pathophysiological changes and will experimentally analyse these with molecular, cell biological, histological and imaging techniques. The module will acquaint students with cell-based strategies for regenerative therapies and biodiagnostics as well as as an alternative to animal experiments. Over the course of one week each, students will examine model organisms in detail, also taking into account current research.</p>		
<b>Intended learning outcomes</b>		
<p>Students are able to define key terms for each model organism and use them in the right context. They are able to correctly assess the importance of model organisms and 3D tissue culture systems for current biomedical issues and questions. They are able to discuss the relevant scientific advantages and disadvantages in a deliberative manner, also taking into account ethical issues. Under supervision, they are able to independently perform sophisticated genetic, cell biological and histological experiments and document the results. In particular, they are able to present the results in a written report in accordance with scientific standards, to critically evaluate and interpret the data and put it in the context of current literature. Working in small groups as well as preparing and delivering group presentations, they demonstrate their knowledge of the contents covered as well as their team working skills.</p>		
<b>Courses</b> (type, number of weekly contact hours, language – if other than German)		
S + P (no information on SWS (weekly contact hours) and course language available)		
<b>Method of assessment</b> (type, scope, language – if other than German, examination offered – if not every semester, information on whether module is creditable for bonus)		
per block of organisms: one log (5 to 10 pages each); 5 to 7 organisms total		
<b>Allocation of places</b>		
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<b>Additional information</b>		
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<b>Workload</b>		
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<b>Teaching cycle</b>		
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<b>Referred to in LPO I</b> (examination regulations for teaching-degree programmes)		
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<b>Module appears in</b>		
Master's degree (1 major) Biomedicine (2012)		