module code / module title

Module D-Proteo/ Proteostasis in *C. elegans*

date / version of the module description	14.01.2021

1	**INFORMATION ON THE MODULE**	
1a	module code	Module D-Proteo
1b	module title *(German title)*	Klicken Sie hier, um Text einzugeben.
1c	module title *(English title)*	Proteostasis in *C. elegans*
1d	credit points	6
1e	responsible for the module	Prof. Janine Kirstein
1f	type of module	elective module
1g	programs using the module	M.Sc. Biochemistry and Molecular Biology
1h	organizational unit offering the module	Klicken Sie hier, um Text einzugeben.
1i	content-related prior knowledge or skills	Klicken Sie hier, um Text einzugeben.
1j	learning contents	A balanced proteostasis network is fundamental for the physiology of a cell and the fitness of an organism. *C. elegans* is an excellent model system to study protein aggregation and the consequences of a challenged proteostasis network. *Theoretical part of the course will be covered in lectures and seminars:* • Diversity and function of molecular chaperones and proteases • Amyloid proteins and neurodegenerative diseases

		• Methods to study protein aggregation in vivo • Functional readouts to study a compromised proteostasis network • Manipulation and maintenance of *C. elegans* *The following techniques will be applied in the practical part of the course:* • Growth and maintenance of *C. elegans* • Genetic crosses of *C. elegans* • Phenotypic assays using the nematode • Generation of transgenic *C. elegans* • Fluorescence imaging of *C. elegans*
1k	learning outcomes/ competencies/ targeted competencies	• Students have a basic understanding of concepts of protein folding, aggregation and neurodegenerative diseases • Students can employ a model system to understand human diseases and general phenomena in biology such as aging • Students have acquired the technical skills to work with the nematode • Students are able to plan long-term experiments when working with a living system • Students can analyse complex phenotypic assays
1l	calculation of student workload *(part a: calculation of presence time and working hours)*	**The total amount of the presence time and working hours of the module has to be calculated additionally in the detailed calculation a) to c).** **a)** detailed calculation: **SWS / presence time/working hours in each course of the module**

☒	1	lecture(s) with	2	SWS/ contact hours	28	hours of presence time
☐		seminar(s) with		SWS/ contact hours		hours of presence time
☐		exercise(s) with		SWS/ contact hours		hours of presence time

☐	internship(s) with			sum of working hours			
☐	seminar(s) with			SWS/ contact hours		total hours of presence time	
☒ 1	laboratory/laboratories with	4		SWS/ contact hours	56	total hours of presence time	
☐	tutorial(s) with			SWS/ contact hours			
☐	excursion(s) with			SWS contact hours in total		working hours	

☐ other form of course (e.g. block seminar), namely this:

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with SWS / with totaly contact hours ☐ presence time ☐ working hours

= sum of presence time and working hours:

84

calculation of student workload *(part b: preparation time and follow-up work/self-study)*	**b) working hours for preparation/follow-up work of the course(s) and/or self-study** = sum of working hours: 10
calculation of student workload *(part c: exam preparation etc.)*	**c) exam preparation (incl. examination)** = sum of working hours: 86
calculation of student workload *(total amount of hours including a) - c))*	**Total amount of the presence time and working hours a) to c):** 180

1m	description of possible optional courses in the module	*Can a student choose between different courses within the module?* NO *Short description of selection option* Klicken Sie hier, um Text einzugeben.
1n	language(s) of instruction	☐ German ☒ English ☐ Spanish ☐ French ☐ Other, namely this: Klicken Sie hier, um Text einzugeben.
1o	frequency	*(regular cycle module is offered) e.g.: winter semester, yearly or summer semester, yearly or each semester* summer semester yearly Klicken Sie hier, um Text einzugeben.
1p	duration	one semester module Klicken Sie hier, um Text einzugeben.
1q	Literature (*optional*)	Klicken Sie hier, um Text einzugeben.
1r	more information on the module (*optional*)	Klicken Sie hier, um Text einzugeben.
2	**INFORMATION ON THE MODULE EXAMINATION** (see also AT Art. 5 section 8)	
2a	type of examination	☐ module exam; i.e. exam with only one component (MP) ☒ combination exam, i.e. exam with several components (administered by instructors) (KP) ☐ partial exam; i.e. exam with several components (administered by registrar) (TP)
2b	exam components or prerequisites *(type, number)*	***PL*** *= graded component of the examination* ***SL*** *= ungraded component of the examination, coursework* ***PVL*** *= prerequisite of the examination (see AT Art. 5 Section 10)* ☒ PL | 2 ☐ SL | ☐ PVL | justification If necessary, further explanations:

2c	Give this information for combination examinations only: Weights (in percentage) of component grades	PL 1: 50% Presentation, oral (seminar talk) PL 2: 50% Protocol (50%) PL 3: Klicken Sie hier, um Text einzugeben. PL 4: Klicken Sie hier, um Text einzugeben. If necessary, further comments: Klicken Sie hier, um Text einzugeben.
2d	form of examination (see AT BPO/AT MPO Art. 8, 9 and 10)	☐ Assignment ☐ Oral examination (single) ☒ Presentation, oral ☐ Written examination ☐ Group examination, oral ☐ Presentation and written assignment ☐ Portfolio ☐ Project report ☐ Bachelor Thesis ☐ Internship report ☐ Colloquium ☐ Master Thesis ☒ Other (concrete definition is given in the examination regulations): Protocol
2e	language(s) of instruction	☐ German ☒ English ☐ Spanish ☐ French ☐ Other, namely this: Klicken Sie hier, um Text einzugeben.