

Module title:	Veterinary gerontology	ECTS	2
Polish translation:	Gerontologia weterynaryjna		
Course:	Veterinary Medicine		

Module language: English		Stage: JM-FVM	
Form of studies: <input checked="" type="checkbox"/> intramural <input type="checkbox"/> extramural	Type of module: <input checked="" type="checkbox"/> basic <input type="checkbox"/> directional	<input type="checkbox"/> mandatory <input checked="" type="checkbox"/> elective	Semester: ...6..... <input type="checkbox"/> winter semester <input checked="" type="checkbox"/> summer semester
Academic year: 2022/2023		Catalogue number:	FVM-V-JMSS-04S-EB04_20

Module coordinator:	Prof. dr hab. Piotr Ostaszewski			
Teachers responsible for the module:	Prof. dr hab. Piotr Ostaszewski			
Objectives of the module:	<p>„Veterinary gerontology” is an elective which is believed to provide students with the updated knowledge referred to physiological mechanisms controlling aging process in companion animals. Initially, the lectures present the theories of aging with the empirical evidence confirming each theory. Next, the mechanisms of aging are described at the molecular, ultrastructural, cellular, and macroscopic level. Origin and progress of the aging phenomenon will be shown at the level of some tissue and organ including age-related diseases and disturbances such as Hutchison-Gilford, and Werner’s syndrome or Leprechaunism in humans. There is a room for inter species differences and the interaction between the individual and external environment. Special concern will be put on dangers associated with elderly such as systemic diseases, neoplasms, or neuro-muscular disorders. Additionally, a methods of aging prevention and extended average animal life expectancy will be discussed. In particular, the molecular mechanisms and possibilities to prophylaxis will be presented. Practical aspects of geriatric medicine and gerontology in veterinary medicine are to be shown. Thanks to the lectures students should know the mechanisms of inevitable aging process and the strategy to improve the wellbeing of old animals. After completing the course students have to pass the final exam. After completing the course students can make use of knowledge acquired in other disciplines (i. e. diagnostics, palliative care etc).</p> <p><u>Lectures (15 lectures, 1 hour each):</u></p> <p>Theories of aging. Empirical evidence for underlying mechanisms of aging. Molecular indices of aging at substructural, cellular, tissue, organ and systemic level. Oxidative stress, origin, and impact on aging. Types of cell aging and the consequences on the whole-body organism. Metabolic changes in elderly. Markers of aging, laboratory diagnostics. Clinical symptoms of aging in the general examination. The role of central nervous system and endocrine function in the proces of aging. Diseases and disturbances in aging. Therapeutic approaches and modalities in elderly patient. Techniques use to improve the organ and tissue functions in old animals. Pain and suffering in older patients. Methods for reducing pain and suffering in older patients. Handling and care of older patient. Jurisdictional and ethical aspects of veterinary intervention in elderly. Euthanasia.</p>			
Teaching forms, number of hours:	a) Lectures; 15 hours b) Seminars; 15 hours			
Teaching methods:	<ul style="list-style-type: none"> • Lectures: Original multimedia presentations prepared by academic teachers employed at the Institute of Veterinary Medicine. • Seminars: Short presentations prepared by the students, on the topics selected from the list given by the teacher, followed by discussion. • Consultations (1h/week). The method and the schedule of consultations will be shown at the start of the semester. 			
Formal prerequisites and initial requirements:	Required is the knowledge in molecular cell physiology, animal physiology, pathophysiology, pathology, Veterinary pharmacology 1, Pathomorphology 1			
Learning effects	Course outcomes:	Learning outcomes relative to the course outcomes	Impact on the course outcomes*	
Knowledge:	1	Student knows metabolic processes on the molecular, cellular, organ and organism level	A.W.1, A.W.4 A.W.4, A.W.10	
	2	Mechanisms of neurohormonal regulation, reproduction, ageing and death	A.W.9	

	3	Mechanism underlining animal health, disease and their therapy- from the cellular level to the whole population of animals	A.W.10	
	4	Student knows relationship between factors influencing homeostasis of biological processes and physiological /pathological changes	A.W.11	
Skills:	1	Student is able to describe changes in the function of the organism occurring upon alteration of homeostasis.	A.U.4	
	2	Student defines physiological status of the animal as an adaptive process to environmental variability	A.U.7	
	3	Student listens and explains in the language that is understandable and appropriate for the situation	A.U..13	
	4	Student utilises computer systems and current sources of veterinary knowledge for effective use and process of information	C.U.2, C.U.3	
Competences:	1	Student formulates constructive criticism regarding cell functions with their relation to organs	KS.1, KS.4, KS.5, KS.6,	
	2	Student evaluates physiological parameters of the cell	KS.1, KS4	
	3	Student conducts basic physiological experiments (scientific) and draws correct conclusions based on the observations.	KS.5	
	4	Student performs critical self-evaluation, formulates constructive criticism regarding veterinary practice.	KS.4, KS.7, KS 8 KS9	
Objectives of the module required to obtain learning effects:	During the course student acquires general and current information in the field of veterinary gerontology with a special emphasis to companion animals. Student understands physiological mechanisms controlling aging process in companion animals, also becomes acquainted with various theories of aging Practical aspects of geriatric medicine and gerontology in veterinary medicine are demonstrated. Students understand the mechanism of inevitable aging process and the strategy to improve the wellbeing of old animals.			
Assessment methods:	Final exam: Final exam contains 25 questions (multiple choice test, 1 point per correct answer). To pass, student must collect 13 points (51%). Retake is provided for students who failed or could not attend the first term Both terms have the same form. No extra assessment methods are anticipated. In case of unforeseen, unusual circumstances mandatory remote teaching and remote assessment methods might be adopted.			
Detail description of assessment methods; Formal documentation of learning outcome:	<p>...</p> <p>Attendance to the seminars is mandatory, student can be absent on 20% seminars according to the current academic regulations.</p> <p>The following scale is used to grade the semester:</p> <p>0-12 pts – failing grade (2) 13-15 pts- passing grade (3) 16-17 pts- passing plus grade (3.5) 18-20 pts- good grade (4) 21-22 pts- good plus grade (4.5) 23-25 pts- excellent grade (5)</p> <p>eHMS entry. Records collected in the course portfolio i.e. individual records of student results, presence lists, database of oral and written questions, written assessments of the students.</p>			
Elements impelling final grade:	Exam results: 100%			
Teaching base:	Lecture facilities at the Faculty of Veterinary Medicine			
Mandatory and supportive materials :	<p>There is no single handbook covering all the lecture topics. Listed are some books suggested for self-study</p> <p>1.Hoskins,J.D. 2006. Geriatrics and Gerontology of the Dog and Cat – 2nd Edition. Saunders. 2.Salvador Cervantes Sala 23017. Geriatria canina y felina. Edra Urban & Partner 3.Relevant scientific publications, including those of the module coordinator.</p> <p>Relevant scientific publications including those of the module coordinator.</p>			
ANNOTATIONS				

* 3 – complete and detailed, 2 – moderate, 1 – basic.

Quantitative summary of the module:

Estimated number of work hours per student (contact and self-study) essential to achieve presumed learning outcomes of the module - base for quantifying ECTS:	50. h
Total ECTS points, accumulated by students during contact learning:	1 ECTS

