

Module title:	Clinical Immunology	ECTS	1
Polish translation:	Immunologia Kliniczna		
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 type="checkbox"/> basic <input type="checkbox"/> mandatory <input checked="" type="checkbox"/> directional <input checked="" type="checkbox"/> elective
		Semester: VIII	<input type="checkbox"/> winter semester <input checked="" type="checkbox"/> summer semester
Academic year:		2023/2024	Catalogue number: FVM-V-JMSS-08S-ED01_23

Module coordinator:	Prof. dr hab. Anna Winnicka		
Teachers responsible for the module:	Academic teachers of the Institute of Veterinary Medicine; Department of Pathology and Veterinary Diagnostics; PhD students in accordance to the internal legal acts; visiting professors; other specialists in the field of study		
Unit responsible for the module:	Institute of Veterinary Medicine, Department of Pathology and Veterinary Diagnostics		
Faculty in charge:	Faculty of Veterinary Medicine		
Objectives of the module:	<p>The main goal is to provide students with information about pathogenesis, diagnostics and treatment of the most common immune mediated diseases in domestic animals and to get students familiar with the general rules of diagnostic and treatment strategies in these diseases.</p> <p>Seminar topics:</p> <ul style="list-style-type: none"> • MECHANISMS OF HYPERSENSITIVITY • HYPERSENSITIVITY DISORDERS – ANAPHYLAXIS, CULICOIDES HYPERSENSITIVITY • EQUINE RECURRENT UVEITIS (ERU) • BLOOD TRANSFUSION • ATOPY, FOOD ALLERGY • HAEMOLYTIC ANAEMIA • TYPE III AND IV HYPERSENSITIVITY DISEASE • AUTOIMMUNE DISEASES 		
Teaching forms, number of hours:	a) Seminars; hours 15		
Teaching methods:	<ul style="list-style-type: none"> • Original multimedia presentations prepared by academic teachers • Short presentations prepared by students, regarding case studies (selected from the list given by the teacher) • Methods aimed at teaching practical skills: <ul style="list-style-type: none"> • students group working on case analyses (according to the materials prepared by the teacher), including discussion and the use of scientific sources • quizzes regarding diagnostic and treatment strategies • Consultations (1h/week) <p>Detailed schedule of the classes and detailed organization of consultations will be defined by the coordinator of the course at the beginning of semester.</p>		
Formal prerequisites and initial requirements:	Passing the courses: Immunology, Pathophysiology, Clinical and laboratory diagnostics, Veterinary Pharmacology, Parasitology and Invasiology		
Learning outcomes:	<p>Knowledge:</p> <ul style="list-style-type: none"> - Student knows and differentiates the normal and abnormal immune mechanisms - Student knows the hypersensitivity and autoimmune mechanisms and hypersensitivity (type I, II, III and IV) and autoimmune diseases - Student knows the clinical manifestations of immune mediated diseases and knows other diseases with similar clinical appearance - Student knows the diagnostic schemes and protocols (including differential diagnosis) for immune mediated diseases -Student knows the therapeutic schemes and protocols recommended for immune mediated diseases, pharmacodynamic properties of recommended products and the interactions among medicinal products -Student know the sources of information regarding diagnostic and therapeutic protocols, medicinal products and the current recommendations and understands the general rules of treatment -Student is familiar with the current nomenclature 	<p>Skills:</p> <ul style="list-style-type: none"> -Student is able to describe the mechanisms of immune mediated diseases comprehensively enough for effective communication with other members of veterinary team and the animal's owner -Student is able to use the current nomenclature - Student is able to plan the diagnostic procedures (including differential diagnosis) in the diseases that manifest by symptoms that may suggest immune mediated disorder -Student is able to plan and monitor the treatment strategies -Student is able to use the scientific sources as a help in clinical issues 	<p>Competences:</p> <ul style="list-style-type: none"> -Student is able to formulate responsible clinical decisions based primarily on the animal welfare but in respect to the owner's expectations -Student formulates the opinions understanding the onset of the disease, clinical appearance and therapeutic process in the context of normal and abnormal immune functions -Student is prepared to formulate opinions based on accumulate knowledge, following the consultation with other members of veterinary team and is able to share the competencies with veterinary team and the animal's owner -Student is aware of the necessity of constant education using scientific sources

Assessment methods:	Attendance to the seminars is mandatory, student can be absent on 20% of seminars or according to the current academic regulations. Short presentation (case study) must be prepared by each student once during the course. The student can collect 0-2 points for the presentation. The grade is based on the presented content and discussion Final test consists of 15 questions (one choice test, 1 point per correct answer), to pass student must collect 9 points. Retake is 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.
Formal documentation of learning outcomes:	eHMS entry. Records collected in the course portfolio (general rules of the course, students' presentations, database of written questions, written final tests)
Elements impelling final grade:	The final grade is based on the sum of points from the final test (15 points) and the active participation during the classes (2 points), according to the scale: 0-8 failing grade (2), 9-10 passing grade (3), 11-12 passing plus grade (3.5), 13-14 good grade (4), 15-16 good plus grade (4.5), 17 excellent grade (5)
Teaching base:	Lecture facilities and laboratories of the Faculty of Veterinary Medicine
Mandatory and supportive materials: 1. Veterinary Immunology, Ian R. Tizard, 10th ed. Saunders, 2017 2. Pathologic Basis of Veterinary Disease, James Zachary, Mosby 2016 3. Case studies in Veterinary Immunology, Gershwin Laurel, Garland Publishing, 2017 4. Clinical Immunology of the Dog and Cat, Michael J. Day, CRC Press, 2011 5. Equine Clinical Immunology, M. Julia B. Felipe (Editor), Wiley Blackwell, 2016 6. Relevant scientific publications, including those of the module coordinator.	
ANNOTATIONS	

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:	24 h
Total ECTS points, accumulated by students during contact learning:	1 ECTS

Learning outcomes of the module relative to the learning outcomes of the subject:

Outcome category	Learning outcomes:	Learning outcomes relative to the course outcomes	Impact on the each of course outcomes*)
Knowledge -	- Student knows and differentiates the normal and abnormal immune mechanisms	A.W.11; A.W.12 A.W.2; A.W.10; B.W.1; B.W.2 B.W.3	3 2 1
Knowledge -	- Student knows the hypersensitivity and autoimmune mechanisms and hypersensitivity (type I, II, III and IV) and autoimmune diseases	A.W.11; A.W.12; B.W.2 A.W.10 B.W.3	3 2 1
Knowledge -	- Student knows the clinical manifestations of immune mediated diseases and knows other diseases with similar clinical appearance	A.W.12	3
Knowledge -	- Student knows the diagnostic schemes and protocols (including differential diagnosis) for immune mediated diseases	B.W.3	1
Knowledge -	-Student knows the therapeutic schemes and protocols recommended for immune mediated diseases, pharmacodynamic properties of recommended products and the interactions among medicinal products	B.W.3	1
Knowledge -	-Student know the sources of information regarding diagnostic and therapeutic protocols, medicinal products and the current recommendations and understands the general rules of treatment	B.W.3	1
Knowledge -	-Student is familiar with the current nomenclature	A.W.20	2
Skills -	-Student is able to describe the mechanisms of immune mediated diseases comprehensively enough for effective communication with other members of veterinary team and the animal's owner	A.U.4; A.U.12; A.U.13; A.U.14; A.U.15	3
Skills -	-Student is able to use the current nomenclature	A.U.15; A.U.21; A.U.23	3

Skills -	- Student is able to plan the diagnostic procedures (including differential diagnosis) in the diseases that manifest by symptoms that may suggest immune mediated disorder	A.U.12; A.U.13; A.U.23 A.U.19 B.U.7	3 2 1
Skills -	-Student is able to plan and monitor the treatment strategies	A.U.12, A.U.13; B.U.20 A.U.19	3 2
Skills -	-Student is able to use the scientific sources as a help in clinical issues	A.U.21; A.U.23; B.U.20	3
Competences -	-Student is able to formulate responsible clinical decisions based primarily on the animal welfare but in respect to the owner's expectations	KS.1; KS.2; KS.6; KS.7; KS.9 KS.3	3 2
Competences -	-Student formulates the opinions understanding the onset of the disease, clinical appearance and therapeutic process in the context of normal and abnormal immune functions	KS.4; KS.5; KS.6; KS.8	3
Competences -	-Student is prepared to formulate opinions based on accumulate knowledge, following the consultation with other members of veterinary team and is able to share the competencies with veterinary team and the animal's owner	KS.2; KS.4; KS.5; KS.6; KS.7; KS.8; KS.9 KS.3	3 2
Competences -	-Student is aware of the necessity of constant education using scientific sources	KS.4; KS.5; KS.6; KS.7; KS.8	3