UNIVERSITY OF WARMIA AND MAZURY IN OLSZTYN

Faculty of Veterinary Medicine

Veterinary pharmacology II

ECTS: 5.00

SUBJECT MATTER CONTENT

LECTURE

Non-steroidal and steroidal anti-inflammatory drugs. Antihistamines. Drugs affecting the respiratory system. Drugs affecting the gastrointestinal system. Drugs affecting the reproductive system. Fluid and electrolyte therapy. Chemotherapy of bacterial diseases (β-lactam antibiotics, aminoglicosides, pleuromutilins, macrolides, tetracyclines, lincosamides, phenicoles, polypeptide antibiotics, glycopeptide antibiotics, other antibiotics, fluoroquinolones, sulfonamides, trimethoprim, nitroimidazoles and nitrofuranes). Antifungal agents. Antiviral agents. Chemotherapy of parasitic diseases (antinematodal drugs, anticestodal and antitrematodal drugs, antiprotozoan drugs and ectoparasiticides). Antidiabetic drugs.

CLASSES

CPharmacology of blood: blood products and plasma substitutes, hemostatic and anticoagulant drugs. Drugs affecting gastrointestinal and respiratory systems - selected issues. Introduction to practical antimicrobial therapy Practical antimicrobial therapy in small animals. Practical antimicrobial: cattle, pigs and horses. Antiparasitic agents - selected issues. Nonsteroidal and steroidal anti-inflammatory drugs. Immunopharmacology (immunosuppressants, immunomodulators and immunostimulants). Chemotherapy of neoplastic diseases. Ocular pharmacology.

TEACHING OBJECTIVE

The aim of this course is to develop knowledge and skills of veterinary pharmacology and pharmacotherapy, which students need to be appropriately prepared to perform the profession of veterinary doctor.

DESCRIPTION OF THE LEARNING OUTCOMES OF THE COURSE IN RELATION TO THE DESCRIPTION OF THE CHARACTERISTICS OF THE SECOND LEVEL LEARNING OUTCOMES FOR QUALIFICATIONS AT LEVELS 6-8 OF THE POLISH QUALIFICATION FRAMEWORK IN RELATION TO THE SCIENTIFIC DISCIPLINES AND THE EFFECTS FOR FIELDS OF STUDY:

Symbols for outcomes related to the discipline:	R/WA_P7S+++
Symbols for outcomes related to the field of study:	A.W17. +, A.U11. +, K.1.+, K.5+, B.W3. +, A.W12. +, A.W16. +, A.W18. +, B.U9. +, B.U13. +, B.U10. +, K.8.+

LEARNING OUTCOMES:
Knowledge:
W1 – Student: (a) achieves the knowledge of groups of drugs discussed during course with respect to pharmacological effects, pharmacokinetic properties, interactions, side effects

and contraindications of these drugs (including among others antibacterial agents, antiparasitic agents anti-inflammatory agents as well as drugs affecting gastrointestinal, respiratory and reproductive system and coagulation); b) knows current guidelines for the treatment of most important gastrointestinal, respiratory and reproductive system diseases; (c) knows current guidelines for the treatment of most important canine, feline, bovine, equine and swine bacterial infections.

Skills:

U1 – Student: a) interprets and applies pharmacological terminology appropriately; b) is able to select appropriate drugs for the treatment of selected diseases and disorders (among others most important nonspecific systemic bacterial infections, spastic contractions of the intestine, vomiting, some allergic and autoimmune diseases) taking into consideration side effects, contraindications and interactions of applied drugs, and moreover age, coexisting diseases and physiological state of patient, so student knows how to balance risk/benefit ratio for the establishment of optimal treatment for the patient; c) is able to find reliable and objective sources of current guidelines for the treatment of canine, feline, bovine, equine and swine bacterial infections.

Social competence:

K1 – Student: a) shows initiative and updates the knowledge in the pharmacology field; b) is aware of the benefits and risks associated with drugs use; c) is aware of personal limitations.

TEACHING FORMS AND METHODS:

Lecture(W1;U1;):Informative lectures with multimedia presentations
Classes(W1;U1;K1;):Taking tests/tasks; antibiotic selection on based on results of microbial sensitivity tests and description of a case; interactive classes with the using so-called "puzzles": verification of the knowledge of pharmacological properties of particular groups of drugs (among others nonsteroidal and steroidal anti-inflammatory drugs and immunosuppressants); selection of cytostatic agents for specific neoplasms; a presentation of the effects of selected biologically active substances on the intestinal and uterine contractile activity with the use of the Schuler tissue bath system.

FORM AND CONDITIONS OF VERIFYING LEARNING OUTCOMES:

Lecture (Oral exam) - The requirement for passing the exam is to obtain a positive grade for each question. The grade of the exam will be determined by averaging the grades obtained on particular questions. Rules for rounding grades are described below. Student who fails the exam may retake the exam twice. -
Classes (Colloquium test) - Three written colloquiums will take place during the semester. The grade of the colloquium will be determined by averaging the grades obtained on particular questions. Rules for rounding grades: the average ≥ 4,76: excellent (5,0); the average 4,26 – 4,75: very good (4,5); the average: 3,76 – 4,25: good (4,0); the average 3,26 – 3,75: satisfactory (3,5); the average ≤ 3,25: sufficient (3,0). Student who fails colloquium may retake it only twice. In order to pass the subject it is required to have passed all colloquiums. Final grade for the subject is determined by averaging the grades (including failing grades) obtained on all colloquiums. Rules for rounding of final grade are the same as described above. Failure of any colloquiums constitutes failure of Veterinary Pharmacology II course. Only three absences (justified) in a semester are allowed. -

BASIC LITERATURE:

1. Riviere J.E. Papich M.G., *Veterinary Pharmacology Therapeutics*, Wyd. Wiley-Blackwell, R. 2018
2. Maddison J.E., Page S.W., Church D.B., *Small Animal Clinical Pharmacology*, Wyd. Elsevier Saunders, R. 2008
3. Maślanka T., *Farmakologia kliniczna małych zwierząt – wybrane zagadnienia*, Wyd. Druk-24h.com.pl, R. 2014
4. Grabowski T., *Farmakokinetyka i biofarmacja*, Wyd. www.biokinetica.pl, R. 2015
1. http://wet.uwm.edu.pl/wiedza-ogolna/plik/farmakologia-kliniczna-malych-zwierzat-wybrane-zagadnienia/545/file/
2. http://www.biokinetica.pl/farmakokinetyka.pdf

SUPPLEMENTARY LITERATURE:

1. Kostowski W. Hermann Z.S., *Farmakologia, Podstawy farmakoterapii*, Wyd. Wydawnictwo Lekarskie PZWL, R. 2017
2. Papich M.G., *Leki w weterynarii. Małe i duże zwierzęta*, Wyd. Elsevier Urban Partner, R. 2013
3. Katzung B.G. Masters S.B., *Basic and clinical pharmacology*, Wyd. McGraw-Hill, R. 2009