



UNIVERSIDADE DE LISBOA  
Faculdade de Medicina Veterinária

**Pharmacology, Pharmacy and Pharmacotherapy**

**Curricular Year:** 2<sup>nd</sup>

**Duration:** 2<sup>nd</sup> Semester

**Credits:** 9 ECTS

**Teachers:** Berta São Braz (CCC and R); Ana Mafalda Lourenço; Ana Reisinho; Anabela Moreira; Esmeralda Delgado; Frederico Aires da Silva; Gonçalo Vicente; Luís Madeira de Carvalho; Manuel Joaquim; Paula Tilley; Rodolfo Leal; Rui Máximo; Sandra Jesus.

**Contact Hours:** 126H Total.

56H Lectures; 56H Practical and laboratory teaching; 14H Seminar.

**Learning objectives:**

Critical and in-depth knowledge of the fundamentals and general and specific concepts of Pharmacology, to acquire skills in the pharmacotherapeutic in medicine and surgery, and in the correct assessment and management of the potential risks of their use for animal health and health public.

The student training and learning profile will give him skills that allow him to choose, interpret, discuss, evaluate and use the best strategies in pharmacotherapy, in order to apply the rules and calculate the constraints in the prescription and use of drugs, given its activity and appreciation of the risks and potential accidents in its use, particularly with regard to antimicrobials and antiparasitics, the use of which must be rational, with the implementation of measures that promote their sustainability research information and select the most relevant and reliable scientific data in an informed and critical way; have ethical, professional and socially responsible behavior related to the use of veterinary medicines.

**Program contents:**

Veterinary Medicines: from the origin of drugs to their commercialization as medicines; Veterinary Pharmacy; Veterinary Medical Prescription. Pharmacokinetics. Pharmacodynamics. Variability of response to drugs: Safety versus efficacy. General principles of pharmacotherapy. Pharmacology of the Central Nervous System, Autonomic Nervous System and Autacoids. Pharmacology and pharmacotherapy of inflammation and immunomodulation. Pharmacology and pharmacotherapy of the gastrointestinal tract, respiratory tract and endocrine system; drugs for the blood, vessels, heart and diuretics. Pharmacology and pharmacotherapy in cancer. Aetiological pharmacotherapy. Antimicrobial drugs: antibiotics, anti-fungal and anti-viral drugs. Antiseptics and disinfectants. Antiparasitic drugs: Anthelmintics, endectocides, ectoparasiticides, antiprotozoals.

Routes of drug administration. Pharmaceutical forms. Veterinary medical prescription. Pharmacological therapy in veterinary medicine.

**Bibliography:**

Riviere, J.E. & Papich, M.G. (Eds). Veterinary Pharmacology and Therapeutics. Iowa State University Press.

Boothe, D.M. Small Animal Clinical Pharmacology and Therapeutics, 2<sup>a</sup> Ed., W. B. Saunders Company.



## UNIVERSIDADE DE LISBOA

### Faculdade de Medicina Veterinária

Plumb, D.C. Plumb's Veterinary Drug Handbook. Wiley.

Baggot, D. The Physiological Basis of Veterinary Clinical Pharmacology, 1<sup>a</sup> Ed., Wiley.

Giguère S, Prescott JF, Baggot JD, Walker RD, Dowling PM. Antimicrobial Therapy in Veterinary Medicine. Blackwell Publishers.

Spinosa H.S.; Górnaiak, S.L.; Bernardi, M. Farmacologia Aplicada à Medicina Veterinária.

Papich MG. Saunders Handbook of Veterinary Drugs: Small and Large Animal. Saunders.

Riviere, J. Comparative Pharmacokinetics: Principles, Techniques and Applications. Wiley.

Hardman, J. G.; Limbird, L.E.; Molinoff, P.B.; Ruddon, R.W.; Goodman Gilman, A. Goodman & Gilman's The Pharmacological Basis and Therapeutics. McGraw-Hill Companies Inc.,

Katzung, B.G., Masters, S., Trevor, A. Basic and Clinical Pharmacology. McGraw-Hill-Lange.

#### **Assessment:**

The assessment of the theoretical component will be accomplished through a written examination including short answer / closed ended questions, multiple-choice questions (MCQ), true and false, missing words / incomplete sentences. It will be performed in the middle of the semester (50% of theoretical score) and at the final examination (50% of theoretical score).

The practical component will be evaluated (*options*):

a) In a continuous assessment during practical classes, including:

- i. Individual registration (attendance sheet / mini test / logbook, etc.)
- ii. Individual / group reports of tests performed and/or problem solving.
- iii. It is estimated that five assessment sessions will be performed, with 20% of final practical grade each one.

b) In written test at the final examination in which students solve problems proposed, for those that do not follow the continuous examination.

The student evaluation is also important to assess the efficiency of the teaching-learning methodologies, in compliance with the UC objectives, and to allow future adequate adjustments on the teaching methodologies and/or on the assessment of student's knowledge and skills.

The final classification is obtained using the formula:  $FC = 0,5 T + 0,5 P$ .