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| Course: | M547 - Veterinary Nursing in Small Animals Master |
| Degree: | Master |
| Curriculum Unit: | 4001004 - Analyzes and Laboratory Techniques |
| Scientific field: | Veterinary Sciences |
| ECTS^(*): | 6 |
| Curriculum year: | 1st |
| Curriculum semester: | 1st |
| Frequency Regime: | Semestrial |
| Teacher(s): | Helena Maria Vala Correia Edite Maria Relvas Neves Teixeira de Lemos João Rodrigo Gonçalves Goiana Mesquita Carmen Lúcia Vasconcelos Nóbrega Catarina Manuela Almeida Coelho |
| Contact hours ^(**): | TP-20; LP-10; TO-20 |
| Total work time (hours): | 150 |

(*) - ECTS - European Credit Transfer and Accumulation System

(**) – T- Theoretical; TP- Theoretical/Practical; LP- Lab Practice; S- Seminars; I- Internships; TU - Tutorials; TO – Tutorial Orientation; O- Other (Evaluations)

Objectives / Competences

To study the general principles of molecular and cell biology at the service of bacteriology, mycology and clinical virology as an aid to prevention, diagnosis and treatment of infectious disease.

Assign responsibilities for the efficient and safe collection, handling and processing of biological material in the light of current requirements to ensure compliance with the code of good practice in the laboratory.

Enable the student the basic tools of interpretation, and evaluation of treatment results as scientific value of data collection.

Instruct the student to the demands on quality, quantity, format and relevance of collection of clinical information to guarantee an adequate analysis and laboratory techniques.

To know the methods of research of tissue parasites for the service of clinical parasitology, as an aid in the prophylaxis and diagnosis of parasitic disease.

Assist or taking biological samples, minimizing animal stress and having minimal influence on the sample.

Syllabus

THEORETICAL: Essential concepts of the epidemiology of infectious diseases of bacterial, viral, fungal and parasitic. Study and identification of the main etiological agents by classical, automatic and semiautomatic methods. Principles of vaccination. WSAWA Guidelines. Laboratorial parasitology. Collection of samples for laboratory tests. Laboratory prediction of endocrine and tumor diseases. Serological markers. Tumor markers. Self-analyzers. Methods for

research and identification of Tissue Parasites. Enzymatic digestion of muscle samples. Immunological methods (immunofluorescence and immunoenzymatic methods). Methods for Hemoprotozoal Identification and research. PRACTICAL: Laboratory evaluation of the therapeutic efficacy of antibiotics of clinical interest. Biochemical tests and structural analysis. Research of viral antigens, viral genome and viral antibodies. Identification of Hemoprotozoa. Identification of tissue parasites. Methods for research on tissue parasites.

Teaching methodologies and evaluation criteria

This curricular unit will offer theoretical lectures, compilation of bibliography and practical laboratory classes, in real working context.

The assessment of the theoretical and practical knowledge will be carried out by means of a written test or work), as agreed at the beginning of the academic semester.

The student will obtain approval for the discipline if his classification is equal or superior to 9,5 values.

If the student does not pass or is not approved in the frequency, he/she will have access to the exam of the normal time or to the examination of the time of appeal.

Short bibliography

Barger AM, MacNeill AL (2015). Clinical pathology and laboratory techniques for veterinary technicians. Ames: Wiley-Blackwell: 264 p

Bexfield N, Lee K (2011). BSAVA guide to procedures in small animal practice. Quedgeley, BSAVA: 240 p.

Cunha MV, Inácio J (2014). Abordagens moleculares em veterinária: como desvendar a etiologia e a epidemiologia da infecção. Lisboa, Lidel - Ed Técnicas: 273 p.

OIE (2015). Terrestrial Animal Health Code 2015. Office international des épizooties. Paris.

Rosenblatt JE (2009). Laboratory Diagnosis of infections due to blood and tissue parasites. Medical Microb. 49: 1103-1108, retirado de <http://cid.oxfordjournals.org>

Songer JG, Post KW (2005). Veterinary microbiol. St. Louis, Elsevier Saunders: 434 p.

Zajac AM, Conboy GA (2012). Veterinary Clinical Parasitol (8th ed). AAVP Wiley-Blackwell: 368 p.

Pennisi MG (2015). Leishmaniosis of companion animals in Europe: an update. Vet Parasitol, 208(1-2):35-47. Retirado de <http://www.sciencedirect.com/science/article>