

Anatomia patologica speciale veterinaria II e patologia forense - Prof. Leonardo Della Salda - a.a. 2018/2019

Leonardo Della Salda was born in S.Cristobal (Venezuela) on November 1st, 1960. He worked as a resident student within the Institute of General Pathology and Pathological Anatomy (University of Bologna) from 1983 to 1985 and got his degree in Vet. Medicine on December 18th, 1985. In 1987 he started his post-doctoral Ph.D. fellowship at the Institute of General Pathology and Pathological Anatomy (University of Bologna). On November 1st, 1988 he became a Researcher in General Pathology and Pathological Anatomy. From 1991 to 1993, he taught postgraduate courses in Pathological Anatomy and Health Inspection in Bologna. Since 1994 he has lectured in Veterinary Pathology at the University of Teramo. In September 1998 he was appointed as a Diplomate of the European College of Veterinary Pathologists and in the same year, he was also appointed as an Associate Professor of Pathological Anatomy at the Veterinary School of the University of Teramo. He is currently Professor of the Special Veterinary Pathology Anatomy I and II and of the English language course "Diagnostic histology applied to the cell and tissues of the reproductive system" at the University of Teramo. He was a member of the Consiglio di Amministrazione of the University of Teramo during the academic years 2011/2012 and 2012/2013. On October 2nd, 2000 he became "Full Professor" of Pathological Anatomy at the same University. He was the coordinator of the Ph.D. course in "Ultrastructural Pathology" (XVIII cycle) and of the Ph.D. course "Epidemiology and advanced diagnostics in comparative pathology" from 2005 to 2012 (CICLO XXVIII). In September 1998 he obtained the Diploma of the European College of Veterinary Pathologists. From 2017 he is an ordinary member of the "Academy of Sciences of Abruzzo and of the Adriatic Regions". He was the promoter of the Erasmus exchange program agreements with the University of Warmia and Mazury Veterinary Medicine Faculty of Olsztyn (Poland) and Teramo, as well as a teacher in English at the same Faculty of Veterinary Medicine of Olsztyn, as part of the Erasmus programs and by invitation. He is currently a member of the National Commission for National Scientific Qualification (ASN - set- Conc. 7 / H2). He is a member of specialized scientific societies in the field of pathology ESVP, AIPVet. He is President of the "Italian Association of Human and Veterinary Dermatologists" (AIDUV) (from 2002 until today) and President of the "Italian Society of Veterinary Pathologists (AIPVET) (2015/2017)." Referee for Journal of Veterinary Medicine Series A, BMC Cancer, Acta Veterinaria Scandinavica, co-editor of the international journal Journal of Elementology since 2010 and member of the Editorial advisory board of the "Polish journal of veterinary sciences" since 2013. She is a member of the Board of the National Interuniversity Consortium for the Bioncologia (CIMBO) for the three-year period 2011-2014 and for the three-year period 2018/20121. Special emphasis has been placed, since 1997 up to date, on research and training activities concerning oncology, as well as on research and training activities regarding the dermatology, with special emphasis on the histopathology and the comparative studies with the human medicine. Relevant research and training activities have also concerned the ultrastructural pathology. He is author or co-author of numerous scientific papers (more than 150), most of them concerning oncology, dermato-histopathology and ultrastructural pathology. He is author or coauthor of chapters of books of Veterinary Systematic Pathology. He is in charge of the Anatomico-pathological Diagnostic service of the Veterinary Didactic Hospital of the Faculty of Veterinary Medicine. He was responsible for

projects funded by various public authorities, including some PRIN projects, with oncology issues, as Principal Investigator in 2008 "Phenotypic, Genotypic and Biomolecular Study of Osteosarcoma and Giant Cell Cancer Dell Dog, Cat, and Man's Bone to Identify Possible Molecular Targets of Innovative Biological Drugs ". as Responsible of research Unit in 2006 "Study of Papillomavirus-induced Oncogenic Mechanisms in Cutaneous and Ocular Neoplasms in Capra"; and in 2004 Anatomic-histopathological and biomolecular characterization of ocular squamous cell carcinoma in papillomavirus-supported goat. He also participated in the project entitled "Receptors Tyrosine Kinase In Canine osteosarcoma: Molecular Targets for Innovative Therapeutic Strategies" funded by the University of Turin.

INFO ABOUT THE COURSE

OBJECTIVES OF THE COURSE

Knowledge and understanding: Learning of anatomy and pathological histology and of the main nosological entities of organic systems in domestic animals through a problem-based learning approach during exercises and practical demonstrations of pathological anatomy. Definition, etiopathogenesis and description of the macro- and microscopic morphological patterns of the main diseases and alterations related to the hematopoietic and integumentary systems, including the breast, endocrine, digestive (including liver and exocrine pancreas), reproducer. Ability to recognize a lesion, describe it using the appropriate terminology and set a differential diagnosis using specific POA (problem oriented approach). In this context, the treatment of the evolutionary-pathogenetic mechanisms that preside over and regulate the onset and development of degenerative, inflammatory and immunopathological lesions involving the organs and tissues in question will also be of particular importance. The basic knowledge is used to critically address the different methodologies applied to diagnostics and research, through the collection, storage and processing of cells and tissues that the teacher teaches through guided and autonomous activity of the student in the histology and pathological cytology module. The exercises occupy an average of 78% of the hours available for the module and are addressed individually by the student given the availability of equipped educational workshops. The course in cytology and pathological histology is theoretical and practical. The goal is to provide students with the basics of the most common techniques used in cytology and pathological histology and on the most significant alterations of cells, tissues and organs in order to recognize the main anatomopathological lesions, as well as for the collection, conservation, preparation and subsequent interpretation of histopathological and cytopathological preparations. The subject matter, being purely diagnostic, integrates and finalizes the pathological knowledge acquired by the student.

Ability to apply knowledge and understanding: At the end of each course, through an oral exam, the theoretical knowledge of the topics covered in the course and the student's ability to link this knowledge to experimental operations or diagnostic procedures in the field of reproduction applied both in the veterinary and human field. During the

examination the practical ability carried out in the laboratory by the student to apply the acquired knowledge to macro and microscopic observation of tissues and organs, the ability to manage laboratory instruments and a good knowledge of methodologies and protocols are taken into consideration. used in common cytological and histological techniques applied to diagnostics.

Making judgments: During the practical lessons carried out by the student under the guidance of the lecturer in charge of teaching and of the technical scientific support staff (individual exercises) the student's ability to identify independently or through group work is evaluated. appropriate diagnostic procedure, to evaluate and correctly define the lesions observed in the organs as well as to prepare the appropriate cytological histology technique. During the exercises, the teacher can help to address, and therefore evaluate, his methodological skills as well as the ability to analyze and solve experimental criticalities and to manage and process the results obtained in real time.

Communication skills: The communicative ability of the student is assessed and stimulated during the lectures by answering questions asked by the teacher, during the exercises, as well as during the oral presentation in the final exam.

Learning skills: Learning skills are assessed during the lessons with a continuous dialogue with the students and by comparing their experiences (with already experienced students to have acquired the necessary preparatory training credits) and then to define the learning level by individually checking the ability to transfer theoretical knowledge to the application field, methodological skills and critical issues in different laboratory contexts. The overall assessment of learning is then performed at the end of the course.

PREREQUISITE AND PREPARATORY

- **Prerequisites:** Solid knowledge of the knowledge of Anatomy, physiology, general pathology and infectious diseases of animals.
- **Preparatory:** Special Veterinary Anatomy I

DUBLIN DESCRIPTORS FOR UNIT

TEACHING UNIT 1: Respiratory System

TEACHING UNIT 2: Urinary System

DIDACTIC UNIT 3: Musculoskeletal system

TEACHING UNIT 4: Forensic Pathology

The Dublin indicators are the same for all teaching units:

Knowledge and understanding: Learning of anatomy and pathological histology and of the main nosological entities of organic systems in domestic animals through a problem-based learning approach during exercises and practical demonstrations of pathological anatomy. At the end of the course the student knows the etiopathogenesis and the macro and microscopic morphological pictures of the main diseases related to the respiratory, cardiocirculatory,

urinary, locomotor and nervous systems. Ability to recognize a lesion, describe it using the appropriate terminology and set a differential diagnosis using the POA (problem oriented approach) system. The forensic pathology module aims to provide the student with knowledge of the necroscopic techniques and the methods of sampling and investigation to establish the cause of an animal's death. Knowledge in the field of forensic traumatology and investigations related to the death of an individual will be imparted, indications for conducting the inspection, for examining cadaverous phenomena, for interpreting injuries, for performing the autopsy in reference to the most frequent cases in the veterinary legal medical field, such as predation phenomena. The course also aims to stimulate the student to acquire those reasoning skills useful for achieving an epicritical interpretation, through the teaching and application of morpho-physiopathological diagnostic methods and to set up a scientifically correct dialogue between the various professional figures involved in the investigation in the event of the discovery of a corpse.

- **Ability to apply knowledge and understanding:** At the end of each course, through an oral exam, the theoretical knowledge of the topics covered in the course and the student's ability to link this knowledge to experimental operations or diagnostic procedures in the field of reproduction applied both in the veterinary and human field. During the examination, the student's practical ability in the necroscopic room to apply the acquired knowledge to macro and microscopic observation of tissues and organs, the ability to manage laboratory instruments and knowing how to perform a correct pathological interpretation is taken into consideration. , define the epicrisis and draw up a correct necroscopic relationship.

Making judgments: During the practical lessons carried out by the student under the guidance of the lecturer in charge of teaching and of the technical scientific support staff (individual exercises) the student's ability to identify, independently or through group work, the process is evaluated. appropriate diagnostic, to assess and correctly define the lesions observed in the organs as well as to draw up a correct necroscopic relationship. During the exercises, the teacher can help to address, and therefore evaluate, his methodological skills as well as the ability to analyze and solve experimental criticalities and to manage and process the results obtained in real time.

- **Communication skills:** The communicative ability of the student is assessed and stimulated during the lectures by answering questions asked by the teacher, during the exercises, as well as during the oral presentation in the final exam.

- **Learning skills:** Learning skills are assessed during the lessons with a continuous dialogue with the students and comparing their experiences (with already experienced students for having acquired the necessary preliminary educational credits and with teachers of the VET / 03 group, who assist the teacher guides with lectures and exercises and constitutes members of the final examination commission) and therefore to define the degree of learning by individually verifying the ability to transfer the theoretical knowledge to the application field, the methodological abilities and the critical points in different laboratory contexts. The overall assessment of the learning is then carried out at the end of the course.

COURSE BOOKS

Pathologic basis of veterinary disease 5° ed in inglese o la versione italiana della 4° ed "Patologia veterinaria sistematica"

- **Autore:** ZACHARY, McGAVIN
- **Edizione:** Elsevier Nasson, 2010, Milano

Tecnica Autoptica e Diagnostica Cadaverica

- **Autore:** Taccini E., Rossi G., Gili C.
- **Edizione:** Poletto Editore, 2006, Milano

Manuale di Tecnica delle Autopsie e di Diagnostica Anatomo-Patologica Veterinaria

- **Autore:** Petterino C. e coll.
- **Edizione:** Estense-Giraldi, 2003, Bologna

Tecnica delle autopsie e diagnostica cadaverica.

- **Autore:** Biavati S.
- **Edizione:** C. Giraldi, 1999, Bologna

RESEARCH MATERIAL

Patologia Sistematica Veterinaria

- **Autore:** Paolo Stefano Marcato
- **Edizione:** Edagricole, 2015, Bologna
- **Pagine di riferimento:** Volumi I e II

Cornell's Dr. John M. King's Necropsy Show and Tell

- **Link ebook:** <http://w3.vet.cornell.edu/nst/nst.asp>

Guida alla diagnosi necroscopica in patologia suina

- **Autore:** De las Heras Guillamòn M., García de Jalón J.A.
- **Rivista:** Iniziative Zooprofilattiche e Zootecniche Brescia , anno vol 56, 2004
- **Link ebook:** <http://www.fondiz.it/>

Guida alla diagnosi necroscopica in patologia del coniglio

- **Autore:** De las Heras M., García de Jalón J.A.
- **Rivista:** Iniziative Zooprofilattiche e Zootecniche - Brescia - , anno vol 63, 2006
- **Link ebook:** <http://www.fondiz.it/>

FINAL TEST

- **Date:**

12 aprile h. 9.00

10 maggio h. 9.00

7 giugno h. 9.00

12 luglio h. 9.00

ASSESSMENT METHOD

It is possible to carry out written tests consisting of projections of pathological images to be recognized and commented, tests written with open questions and, given the close contact existing between student and teacher, continuous checks on the learning level of the individual student and the group . The final exam is performed with oral examination and necroscopic practice on the organs and systems studied during the course. In the final evaluation, the experimental and manual skills of the individual student analyzed during the necroscopic exercises carried out together with the teaching and technical scientific staff are also taken into consideration. During these exercises the student obtains the frequency signature which also certifies the knowledge of the procedures. The student who has not obtained this signature cannot take the general final exam.