Course Unit Descriptor

Study Programme: Veterinary Medicine

Course Unit Title: Immunity and Infection

Course Unit Code: 3DVM2I25

Name of Lecturer(s): Dragan R. Rogan, Aleksandar S. Potkonjak

Type and Level of Studies: Doctoral academic studies

Course Status (compulsory/elective): elective

Semester (winter/summer): summer

Language of instruction: English

Mode of course unit delivery (face-to-face/distance learning): face-to-face

Number of ECTS Allocated: 6

Prerequisites: Scientific research methods

Course Aims:

The Course Immunity and Infection is designed for those students who wish to increase their knowledge and understanding of infectious diseases, infection control and the functioning of the immune system.

Learning Outcomes:

After completion of this course, students will be able to effectively participate in future veterinary health care or research programs in infection and immunity.

Syllabus:

Evolution of the Immune System, The Defense of the Body, Innate Immunity, Systemic Responses to Inflammation, Cytokines and Their Receptors, Antigens, The Major Histocompatibility Complex, Organs of the Immune System, Adaptive Immunity, Antibodies, Immunity in the Fetus and Newborn, Immunity to Bacteria and Fungi, Immunity to Viruses, Immunity to Parasites, Attachment to and Entry of Microorganisms into the Body, Events Occurring Immediately After the Entry of the Microorganism, The Encounter with the Phagocytic Cell and the Microbe's Answers, The Spread of Microbes through the Body, Recovery from Infection, Failure to Eliminate Microbe, Concepts of Virulence, Biofilms, Pathogenesis in the Post-Genomic Era, Evolution of Pathogens, What are Pathogens and How do They Emerge.

Required Reading: Tizard I.R. Veterinary Immunology, Ninth edition, Saunders, 2012. Delves P.J. Roitt's Essential Immunology, Tenth edition, Mims C.A. et al. Mims' Pathogenesis of Infectious Disease, Fifth edition, Academic Press, 2000. Gyles C.L et al. Pathogenesis of Bacterial Infections in Animals, Fourth edition, Wiley-Blackwell, 2010. Demuth D.R., Lamont R. Bacterial Cell-to-Cell Communication: Role in Virulence and Pathogenesis. First edition, Cambridge University Press, 2006.

Weekly Contact Hours: Lectures: 3 Practical work: 2

Teaching Methods: Direct Instruction (Lecture); Experimential Learning (working in research laboratory); Instructional Skills (Explaining, Demonstrating).

Knowledge Assessment (maximum of 100 points):

| Pre-exam obligations | points | Final exam | points |
|----------------------|--------|----------------------|--------|
| Active class | 0 | written exam | 50 |
| participation | | | |
| Practical work | 0 | oral exam | 0 |
| Preliminary exam(s) | 0 | Project presentation | 50 |

| Seminar(s) | 0 | | |
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The methods of knowledge assessment may differ; the table presents only some of the options: written exam, oral exam, project presentation, seminars, etc.