

Study program: Integrated academic studies in medicine			
Type and level of the study program: integrated academic studies			
Course title: Experimental pharmacodynamic methods in experimental animals (M4-EXPH)			
Teacher: Aleksandar L. Rašković, Isidora N. Samojlik, Olga J. Horvat, Saša N. Vukmirović, Boris T. Milijašević, Nebojša P. Stilinović, Vesna M. Mijatović			
Course status: elective			
ECTS Credits: 3			
Condition: -			
Course aim Students get acquainted with with the basic principles of testing and pharmacodynamic properties and safety of ancillary medications and dietary supplements.			
Expected outcome of the course Students acquire knowledge about the basic principles of pharmacodynamic studies, pharmacokinetic and toxicological properties of ancillary medications and dietary supplements on experimental animals, based on the principles of evidence based medicine. At the end of the course students are expected to master skills and basic methods used on experimental animals to examine pharmacodynamic, pharmacokinetic and toxicological properties of ancillary medications and dietary supplements.			
Course description <i>Theoretical education:</i> Basic characteristics of preclinical testing. Experimental methods examining potential sites of action of test substances in experimental animals. Experimental methods examining the safety of substances in experimental animals. Analysis of information relevant for planning and conducting pharmacodynamic studies in experimental animals. Pharmacodynamic methods examining the impact of ancillary medications and dietary supplements on glucose metabolism. Pharmacodynamic properties of medicinal mushrooms. Experiments on laboratory animals examining the antioxidant and hepatoprotective properties of ancillary medications and dietary supplements. Pharmacodynamic studies examining the impact of ancillary medications and dietary supplements on the function of the central nervous system. Pharmacodynamic studies examining the impact of ancillary medications and dietary supplements on the function of the cardiovascular system. Pharmacodynamic studies examining the impact of ancillary medications and dietary supplements on the function of the digestive system. Examination of interactions between ancillary medications and dietary supplements and traditional medicines in experimental animals. Safety of ancillary medications and dietary supplements during pregnancy and lactation. Safety of ancillary medications and dietary supplements in children. Safety of ancillary medications and dietary supplements in geriatrics. Adverse effects of ancillary medications and dietary supplements. <i>Practical education: exercises, other forms of education, research related activities:</i> Data sources for ancillary medications and dietary supplements. Research results important for safety assessment of ancillary medications and dietary supplements . Results of experimental investigations on the impact of ancillary medications and dietary supplements on the function of the endocrine system and metabolism. Results of experimental investigations on the impact of ancillary medications and dietary supplements on the function of the cardiovascular system. Results of experimental investigations on the impact of ancillary medications and dietary supplements on the functions of the central nervous system . Results of experimental studies on interactions between ancillary medications and dietary supplements and traditional medications. Test results of antioxidant and hepatoprotective properties of ancillary medications and dietary supplements . Students' essays.			
Literature <i>Compulsory</i> 1. Chow P, Ng R, Ogden B. Using animal models in biomedical research. World Scientific Publishing Co. Pte. Ltd., Singapore 2007. 2. Wahlsten D. Mouse Behavioral Testing. Academic Press, Elsevier, London NW1 7BY, UK, 2011. 3. Hau J, Van Hoosier GL. Handbook Of Laboratory Animal Science, Vol I &II, CRC Press, Boca Raton, Florida 33431, 2003.; <i>Additional</i> -			
Number of active classes			Other:
Lectures: 30	Practice: 15	Other types of teaching:	
Research related activities:			
Teaching methods Theoretical and practical			
Student activity assessment (maximally 100 points)			
Pre-exam activities	points	Final exam	points
Lectures	5	Written	
Practices	5	Oral	40
Colloquium		
Essay	50		