Study program: Integrated academic studies in dentistry

Type and level of the study program: integrated academic studies

Course title: Experimental pharmacodynamic methods in experimental animals (DIII-EXPH)

Teacher: Momir M. Mikov, Velibor M. Vasović, Ana J. Sabo, Zdenko S. Tomić, Aleksandar L. Rašković, Isidora N. Samojlik, Olga J. Horvat, Saša N.Vukmirović, Boris T.Milijašević, Vesna M.Mijatović, Nebojša P.Stilinović

Course status: ELECTIVE

ECTS Credits: 3

Condition: -

Course aim To get students acquainted with basic principles of investigating pharmacodynamic characteristics and safety of ancillary medicinal products and dietary supplements

Expected outcome of the course: The students will get acquainted with basic principles of investigating pharmacodynamic, pharmacokinetic and toxicological characteristics of ancillary medicinal products and dietary supplements on experimental animals, based on principles of evidence based medicine. The students are expected to be acquainted with basic methods of testing pharmacodynamic, pharmacokinetic and toxicological characteristics of ancillary medicinal products and dietary supplements on experimental animals

Course description

Theoretical education: Main characteristics of pre-clinical research. Experimental methods for identifying potential target-sites of action of the tested substances. Experimental methods for testing the safety of the investigated substance in experimental animals. Analysis of the data important for planning and start of pharmacodynamic investigation in experimental animals. Pharmacodynamic methods for examining effects of ancillary medicinal products and dietary supplements on glucose metabolism. Pharmacodynamic features of remedial fungi. Experiments on laboratory animals investigating antioxidative and hepatoprotective characteristics of ancillary medicinal products and dietary supplements. Pharmacodynamic examination of effects of ancillary medicinal products and dietary supplements on CNS function. Pharmacodynamic examination of effects of ancillary medicinal products and dietary supplements on cardiovascular system function. Pharmacodynamic examination of effects of ancillary medicinal products and dietary supplements on digestive system function. Investigation of interactions of ancillary medicinal products and dietary supplement with common drugs in experimental animals. Safety of application of ancillary medicinal products and dietary supplement during pregnancy and lactation. Safety of application of ancillary medicinal products and dietary supplement in childhood . Safety of application of ancillary medicinal products and dietary supplement in geriatrics . Adverse effects of ancillary medicinal products and dietary supplements.

Practical education: exercises, other forms of education, research related activities: Information sources on ancillary medicinal products and dietary supplement. Results of experimental trials of importance for assessment of safety of ancillary medicinal products and dietary supplements. Results of experimental trials on the effects of ancillary medicinal products and dietary supplements on endocrine system and metabolism functions. Results of experimental trials on the effects of ancillary medicinal products and dietary supplements on cardiovascular system functions. Results of experimental trials on the effects of ancillary medicinal products and dietary supplements on CNS functions. Results of experimental trials on interaction of ancillary medicinal products and dietary supplements with common drugs. Results of investigating antioxidative and hepatoprotective effects of ancillary medicinal products and dietary supplements. Seminar papers prepared by the students.

Literature

Compulsory

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.

Additional

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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		Other	
Essay	50		