

## COURSE UNIT INFORMATION FORM

<b>University:</b> Comenius University in Bratislava	
<b>Faculty:</b> Jessenius Faculty of Medicine in Martin	
<b>Subject code:</b> 2-JVL-529	<b>Name of the subject:</b> Pharmacology 1.
<b>Form, extent and method of teaching activities:</b> Lecture/Practical Extent (in hours) – per week: 2/2 Method - attendance form	
<b>Number of credits:</b> 4 credits	
<b>Recommended semester/trimester of study:</b> 7 <sup>th</sup> semester	
<b>Level of study:</b> joint 1 <sup>st</sup> and 2 <sup>nd</sup> level (MUDr.)	
<b>Prerequisites:</b> Pathological Physiology 2.	
<p><b>Subject completion requirements:</b></p> <ol style="list-style-type: none"> <li>1. To participate actively on the practical sessions;</li> <li>2. To pass 2 written tests during the semester or one final test in the end of semester.</li> <li>3. Presentation of written work.</li> </ol> <p>The minimal limit of successfulness: 60 %. Assessment: A: 91–100 %, B: 81–90 %, C: 73–80 %, D: 66–72 %, E: 60–65 %, Fx: 60 % and lower.</p>	
<p><b>Learning outcomes:</b></p> <p>The student graduated a subject knows:</p> <p>The basic pharmacokinetic principles (absorption, distribution, biotransformation and elimination of drugs) and factors influencing the fate of drugs in organism;</p> <p>The essential of pharmacodynamics –mechanisms of drugs action from the molecular to the level of the organism;</p> <p>Drugs prescription – the basic rules and methods for prescription of brand products (HVLP) as well individually prepared medicinal products (ILP);</p> <p>The following special pharmacology topics: Pharmacological groups of agents influencing vegetative nervous system; Respiratory system; Gastrointestinal system; Anticancer agents and essential of Immunopharmacology; Drugs influencing the metabolism of hormones, homeostasis of minerals, bone metabolism and Pharmacology of vitamins.</p> <p>The main properties of drugs classified as members of different pharmacological groups from the following point of view: mechanism of action, indications, contraindications, side effects, important interactions and dosage.</p>	
<p><b>Brief syllabus:</b></p> <p><i>General Pharmacology:</i></p> <p>Introduction to pharmacology: basic definitions, kinds of therapy, the route of drug administrations; Drug metabolism: absorption, distribution, metabolism, elimination and excretion of drugs; The basic pharmacokinetic parameters; Basics of pharmacodynamics: mechanism of drug action, the drug action at molecular level; Factors influencing pharmacokinetic and pharmacodynamic of drugs, endogenous and exogenous factors determined drug effect.</p> <p><i>Basics of drugs prescription:</i></p> <p>Pharmacopoeia, classification and nomenclature of drugs, ways of administration, prescription, rules for drugs prescribing – trade products, extemporaneous drugs, opiates, antibiotics; Prescription of liquid drug forms – trade products, basic extemporaneous drugs; Prescription of solid and soft drug forms – trade products, basic extemporaneous drugs;</p> <p><i>Special Pharmacology:</i></p> <p>Pharmacology of ANS – parasympathomimetics, parasympatholytics; sympathomimetics; sympatholytics;</p> <p>Pharmacology of GIT - treatment of peptic ulcer disease and inflammatory bowel disease, antiemetics, emetics, prokinetic agent, spasmolytics, treatment of diarrhoea, laxatives, pancreatic enzymes, drugs affecting the function of the bile ducts;</p> <p>Pharmacology of respiratory system - treatment of asthma and COPD, antitussives and</p>	

<p>expectorants;  Hormones: pancreatic hormones and antidiabetic drugs, adrenal hormones, sex hormones and contraceptives, the hypothalamus and pituitary hormones, thyroid hormones and antithyroidal drugs;  Drugs affecting homeostasis of minerals, bone metabolism, vitamins;  Principles of anticancer pharmacotherapy;  Fundamentals immunopharmacology (immunosuppression, immunomodulation);  Clinical trials of drugs;  <i>Practical lessons aimed at the application of acquired knowledge obtained from the subjects Pharmacology 1. in clinical cases.</i></p>
<p><b>Recommended literature:</b>  Rang HP, Dale MM, Ritter JM.: Pharmacology. 7th ed., Churchill Livingstone, 2012.  Rang HP, Dale MM: Pharmacology. 8th ed., Churchill Livingstone, 2015.  Katzung, B.G.: Basic Clinical Pharmacology, 12th edition, New York : McGraw-Hill, 2015.  Katzung, B.G.: Basic Clinical Pharmacology, 11th edition, New York : McGraw-Hill, 2013.</p>
<p><b>Language of instruction needed for subject completion:</b> English language</p>
<p><b>Notes:</b> ---</p>
<p><b>Assessment of subjects</b>  Total number of students assessed: 121  A: %, B: %, C: %, D: %, E: %, FX: %, ABS0: %</p>
<p><b>Teachers:</b> Prof. Soňa Fraňová, RNDr., PhD., Assoc. Prof. Juraj Mokry MD., PhD., Assoc. Prof. Martina Šutovská, MD., PhD., Marta Jošková, MD., PhD.</p>
<p><b>Date of the last modification:</b> 31.8.2018</p>
<p><b>Approved by:</b> Prof. RNDr. Soňa Fraňová, PhD.</p>

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<p><b>University:</b> Comenius University in Bratislava</p>	
<p><b>Faculty:</b> Jessenius Faculty of Medicine in Martin</p>	
<p><b>Subject code:</b> 2-JVL-530</p>	<p><b>Name of the subject:</b> Pharmacology 2.</p>
<p><b>Form, extent and method of teaching activities:</b> Lecture/Practical  Extent (in hours) – per week:2/2  Method - attendance form</p>	
<p><b>Number of credits:</b> 5 credits</p>	
<p><b>Recommended semester/trimester of study:</b> 8<sup>th</sup> semester</p>	
<p><b>Level of study:</b> joint 1<sup>st</sup> and 2<sup>nd</sup> level (MUDr.)</p>	
<p><b>Prerequisites:</b> Pharmacology 1.</p>	
<p><b>Subject completion requirements:</b>  During semester: The successful passing three written tests or one final test.  Final exam: Written test and oral examination (Content of final exam: General and Special Pharmacology, Drug prescription)  The minimal limit of successfulness: 60 %. Assessment: A: 91–100 %, B: 81–90 %, C: 73–80 %, D: 66–72 %, E: 60–65 %, Fx: 60 % and lower.</p>	
<p><b>Learning outcomes:</b>  The graduate of Pharmacology 2. acquire the extensive knowledge concerning the pharmacology of drugs affecting the functions of the central and peripheral nervous systems. After graduation of the subject, students gain detailed information about the pharmacotherapy of the cardiovascular system diseases, pain and inflammation, rational use of antibiotics and chemotherapeutic agents and poisoning treatment. Each part of the special pharmacology is aimed at pharmacological properties of selected representatives in terms of mechanism, indications, contraindications, side effects, serious interactions, dosage and pharmacokinetic parameters.</p>	

**Brief syllabus:**

Pharmacology of CNS: classification of the receptor systems and drugs; Sedatives; Anxiolytics; Antidepressants; Antimanics; Neuroleptics; Nootropic and cognitive substances; Anticonvulsants; Antiparkinsonic drugs;

Drugs used in anaesthesiology: General anaesthetics; Local anaesthetics; Muscle relaxants;

Pharmacology of CVS: Therapy of hypertension; Therapy of heart failure; Antiarrhythmic drugs;

Treatment of angina pectoris; Peripheral vasodilators; Anticoagulants; Thrombolytics; Prevention and therapy of CVS diseases; Antithrombotics, Lipid-lowering agents; Pharmacotherapy of obesity; Antibiotics and chemotherapeutics: Inhibitors of bacterial cell wall synthesis, Inhibitors of protein and nucleic acid synthesis; Antituberculous drugs; Antifungal agents; Anthelmintics; Antimalarial; Antiviral drugs;

Treatment of pain and inflammation: Opioid analgesics and adjuvant therapy; Non-opioid analgesics; Principles of pain treatment; NSAIDs and Antirheumatic drugs;

Principles of toxicology: Treatment of drug poisoning; Drug addiction and addiction therapy;

Pharmacology of autacoids;

Practical lessons aimed at the application of acquired knowledge obtained from the subjects Pharmacology 1. and Pharmacology 2. in clinical cases;

**Recommended literature:**

Rang HP, Dale MM, Ritter JM.: Pharmacology. 7th ed., Churchill Livingstone, 2012.

Rang HP, Dale MM: Pharmacology. 8th ed., Churchill Livingstone, 2015.

Katzung, B.G.: Basic Clinical Pharmacology, 12th edition, New York : McGraw-Hill, 2015.

Katzung, B.G.: Basic Clinical Pharmacology, 11th edition, New York : McGraw-Hill, 2013.

**Language of instruction needed for subject completion:** English language

**Notes:** ---

**Assessment of subjects**

Total number of students assessed:

A: %, B: %, C: %, D: %, E: %, FX: %, ABS0: %

**Teachers:** Prof. Soňa Fraňová, RNDr., PhD., Assoc. Prof. Juraj Mokry MD., PhD., Assoc. Prof. Martina Šutovská, MD., PhD., Marta Jošková, MD., PhD.

**Date of the last modification:** 31.8.2018

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