



Approved at the meeting of department

Minutes nr. 1 of 29.08.2024

Head of department, PhD, professor

 *Vladimir Valica*

**Calendar Plan
of the lectures at «Medicinal chemistry», the IXth semester,
2024-2025 academic year**

<i>Nr.</i>	<i>Date</i>	<i>Hours</i>	<i>Theme</i>
1-2.	02–13.09.2024	2	Medical Chemistry: Definition and Purpose. Basic steps for finding and rational building of the drugs. Targets for drug action - lipids, enzymes, receptors, nucleic acids. Biological membranes, structure, transport of drugs.
3-4.	16–27.09.2024	2	Drug-receptor interactions. Types of receptors, their chemical nature. Kinetic interactions. Basic theories of reception ligands. Transmission systems and mediators: the adenylate cyclase. Metabolic products of phospholipids. Calcium ions. Enzymes; principles of action and regulatory activity. Inhibitors of enzymes in the arsenal of drugs. Nucleic acids as a target for biologically active substances. Drugs involved in the synthesis of nucleic acids and proteins.
5-6.	30.09–11.10.2024	2	Solubility and lipophilicity of drug substances. Surfactant, membrane-active and electron-conducting pharmacological agents. Chemical bonds and biological activity of molecules. The connection of the pharmacological activity, the electronic properties and ionization constants.
7-8.	14–25.10.2024	2	Drug design. QSAR. Main stages of drug design. Total screening. Molecular mechanics and its applications.
9-10.	28.10–08.11.2024	2	Structural concepts in predicting the toxicity of medicinal preparations, chirality and biological activity. Isosterism and bioisosterism. Natural compounds as leading products for the design of new drugs.
11-13.	11–29.11.2024	3	Principles of bioavailability and biotransformation of drugs. Bioequivalence of medicines.

Associate professor



Livia Uncu



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**Calendar Plan
of the laboratory lessons at at «Medicinal chemistry», the IXth semester,
2024-2025 academic year**

<i>Nr.</i>	<i>Date</i>	<i>Hours</i>	<i>Theme</i>
1.	02–06.09.2024	2	Medical chemistry: definition and purpose. Integration of medical chemistry with other specialized disciplines. Drug-receptor interactions. Types of receptors, their chemical nature. Kinetics of interactions. Transmission systems and mediators.
2-3.	09–20.09.2024	4	The relations between the physico-chemical properties of the active principle and its pharmacological action.
4.	23–27.09.2024	2	Drug design. QSAR. The main stages of drug design. Total screening.
5.	30.09–04.10.2024	2	Molecular modeling in drug design. Molecular mechanics and its applications. The design of the ligands. Natural compounds as leading products for the design of new drugs. Structural concepts in predicting the toxicity of drug preparations.
6.	07–11.10.2024	2	<i>Control assessment.</i>
7.	14–18.10.2024	2	Bioavailability. Factors influencing bioavailability.
8.	21–25.10.2024	2	Bioavailability optimization.
9-10.	28.10–08.11.2024	4	Drug biotransformation.
11.	11–15.11.2024	2	Bioequivalence. Bioequivalence studies.
12-13.	18–29.11.2024	4	<i>Control assessment.</i>

Associate professor



Livia Uncu