

Bioorganic Chemistry
Academic plan of laboratory practical classes for students of FS faculty
II semester of 2022-2023 year

1. Introduction to the academic discipline "Bioorganic chemistry". Classification and nomenclature of organic compounds.
2. Spatial structure of organic molecules and stereoisomerism.
3. Chemical bond and mutual influence of atoms in an organic molecule.
4. Reactivity of hydrocarbons. Mechanisms of reactions of radical substitution and electrophilic addition.
5. Reactivity of hydrocarbons. The mechanism of electrophilic substitution reactions.
6. Reactivity of alcohols, phenols, thiols, amines. Acid-base properties of organic compounds.
7. Reactions of nucleophilic substitution at the trigonal carbon atom and competitive elimination reactions.
8. Reactivity of aldehydes and ketones.
9. Reactivity of carboxylic acids and its functional derivatives.
10. Lipids.
11. Poly- and heterofunctional compounds involved in vital processes.
12. Biologically active heterocyclic compounds.
13. Carbohydrates. Monosaccharides.
14. Oligo- and polysaccharides.
15. Amino acids.
16. Peptides. Proteins.
17. Nucleic acids.
18. Heterofunctional compounds of the benzene series, which form the basis of the most important groups of medications.

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Associate Professor



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