

PROGRAMME OF THE SUBJECT „MEDICAL BIOCHEMISTRY 2“

STUDY BRANCH: „DENTISTRY“
2nd YEAR – FACULTY OF MEDICINE CU

LECTURES

Summer semester 2024/2025

1st week: 17.02. – 21.02.2025

Metabolism of nucleotides – synthesis of purine and pyrimidine nucleotides. Regulation of nucleotide synthesis. Degradation of nucleotides.

2nd week: 24.02. – 08.03.2025

Transfer of genetic information – replication of DNA, synthesis of RNAs, proteosynthesis.

3rd week: 03.03. – 07.03.2025

Meaning and mechanisms of regulation of biochemical processes in the organism. Regulation of metabolic processes at the cellular level and at the level of the organism.

4th week: 10.03. – 14.03.2025

Mechanisms of transfer of chemical signals into the cell. Types of receptors, cytosolic, membrane receptors. G-proteins and their role.

5th week: 17.03. – 21.03.2025

Principles of regulations by endocrine system. Hormones of pancreas.

6th week: 24.03. – 28.03.2025

Hormones of adrenal cortex – glucocorticoids, mineralocorticoids. – metabolic roles and regulation of their secretion.

7th week: 31.03. – 04.04.2025

Acid-base balance and its regulation. Role of buffer systems, kidneys and lungs. Disorders of acid-base balance.

8th week: 07.04. – 11.04.2025

Biochemical basis of nervous system functions. Vegetative nervous system and role in integration of organ functions.

9th week: 14.04. – 18.04.2025

Biochemistry of connective tissue. Protein and carbohydrate components of connective tissue. Synthesis of collagen.

10th week: 21.04. – 25.04.2025

Biochemistry of hard tissues – bones and teeth. Mineralization and factors influencing it.

11th week: 28.04. – 02.05.2025

Biochemistry of parodontopathies.

12th week: 05.05. – 09.05.2025

Relation of several diseases of organism and hypovitaminosis to pathologic situations in mouth cavity – diabetes, osteoporosis.