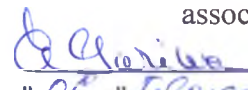


**Federal State Budgetary Educational Institution of Higher Education  
«North-Ossetia State Medical Academy» of the Ministry of Healthcare of the Russian  
Federation**

***Department of biological chemistry***

**Approved**  
Head of the department,  
associate professor

 A. E. Gurina  
"06" February 2023 year.

**Calendar-thematic plan of additional practical classes**

*Discipline of* biological chemistry

*Course* 2

*Medical faculty* \_\_\_\_\_

for the spring semester 2022-2023 school year

| №  | Date     | The name of the theme   | Teacher        |
|----|----------|---|----------------|
| 1  | 17.02.23 | Lipids: structure, properties, classification.  | Kaitukova D.I. |
| 2  | 17.02.23 | Digestion and absorption of lipids in the gastrointestinal tract. Stages, characteristic. The role of bile acids in this process.   | Kaitukova D.I. |
| 3  | 24.02.23 | Exchange of higher fatty acids: oxidation and biosynthesis. Regulation. Exchange of ketone bodies. Determination of ketone bodies in urine.   | Kaitukova D.I. |
| 4  | 24.02.23 | The exchange of simple and complex lipids, TAG and phospholipids.   | Kaitukova D.I. |
| 5  | 03.03.23 | Cholesterol metabolism. Quantitative determination of serum cholesterol.  | Kaitukova D.I. |
| 6  | 03.03.23 | Lipoprotein spectrum of blood plasma. Pathology of lipid metabolism. Biochemical aspects of the development of atherosclerosis. Lipidoses.  | Kaitukova D.I. |
| 7  | 10.03.23 | Digestion and absorption of proteins. Determination of the activity of the enzymes of the gastric juice.  | Kaitukova D.I. |
| 8  | 10.03.23 | Common pathways of amino acid catabolism: transamination. Clinical and diagnostic value of the determination of transaminase activity in blood serum  | Kaitukova D.I. |
| 9  | 17.03.23 | The general way of catabolism of amino acids: deamination, decarboxylation.   | Kaitukova D.I. |
| 10 | 17.03.23 | Ways of accumulation and neutralization of ammonia in the human body. Quantitative determination of urea in the blood.  | Kaitukova D.I. |
| 11 | 24.03.23 | The exchange of individual amino acids. Quantitative determination of creatinine in blood serum.  | Kaitukova D.I. |
| 12 | 24.03.23 | Exchange of nucleoproteins: purine nucleotides.   | Kaitukova D.I. |
| 13 | 31.03.23 | Exchange of nucleoproteins: pyrimidine nucleotides  | Kaitukova D.I. |
| 14 | 31.03.23 | Chromoprotein metabolism: biosynthesis and breakdown of hemoglobin in tissues. Iron metabolism. Metabolic disorders of bile pigments. Jaundices. Violations of heme synthesis, porphyria. Quantitative determination of direct blood bilirubin. | Kaitukova D.I. |
| 15 | 07.04.23 | Introduction to endocrinology. Chemistry of peptide hormones. Secondary messengers. Carrying a hormonal signal.   | Kaitukova D.I. |
| 16 | 07.04.23 | Iodine-containing thyroid hormones, biosynthesis, properties, hormonal effect. Hormones of pancreas: synthesis, properties, biological effects.   | Kaitukova D.I. |
| 17 | 14.04.23 | Steroid hormones: synthesis, mechanism of cellular action, biological role of   | Kaitukova D.I. |

|    |          |   |                |
|----|----------|---|----------------|
|    |          | mineralocorticoids.   |                |
| 18 | 14.04.23 | Steroid hormones: synthesis, mechanism of cellular action, biological role of glucocorticoids.  | Kaitukova D.I. |
| 19 | 21.04.23 | Sex hormones: female and male. Synthesis, mechanism of cellular action, biological role. Endocrinopathy.  | Kaitukova D.I. |
| 20 | 21.04.23 | Blood biochemistry: organic composition of blood. Biochemical aspects of the body's immune defense.   | Kaitukova D.I. |
| 21 | 28.04.23 | Inorganic composition of blood. Quantitative determination of blood calcium.  | Kaitukova D.I. |
| 22 | 28.04.23 | Biochemistry of the kidneys. The process of secondary urine formation. Physicochemical properties of urine. Organic and inorganic composition of urine. | Kaitukova D.I. |
| 23 | 05.05.23 | Pathological components of urine. Regulation of water-salt metabolism.  | Kaitukova D.I. |

Assistant of the department  
 "06" *Kaitukova* Kaitukova D.I.  
 "February" 2023 year.