

THE LIST OF STUDENTS INDEPENDENT WORK TOPICS
 to discipline “Biological and bioorganic chemistry” for students of medical faculty, speciality «General medicine» and
 «Pediatrics» 2017-2018 academic years

Module 2. Fundamental regularities of metabolism

№	Themes	Time(h)
1	Place of biochemistry among biomedical disciplines. History of biochemistry. Development of biochemical studies in Ukraine, scientific biochemical school	2
2	Isoenzymes: usages in enzymodiagnosics	4
3	History of the discovery and biological value of Citric Acid Cycle	2
4	O.M.Bah - famous Ukrainian biochemist, author of the theory of biological oxidation	2
5	The life and works of famous Ukrainian biochemist V.I.Palladin	2
6	Digestion of food carbohydrates in the gastrointestinal tract. Dietary fiber	2
7	History of glycolysis discovery and the contribution of certain scientists in its researches. Glycolysis and carcinogenesis. Scientific works of O.Varburg	2
8	Inherited disorders of carbohydrate metabolism: fruktosemia, galactosemia, abnormalities of glucose-6-phosphate dehydrogenase activity, glycogen storage diseases	2
9	Lipids: structure, biological significance	2
10	Transport and deposition of lipids in human body	2
11	Biological values of polyunsaturated fatty acids and their synthesis in human body	2
12	Metabolism of sphingolipids	2
13	Disorders of sphingolipids metabolism	2
14	Inherited disorders of urea synthesis cycle	2
15	Enzymopathies amino acids metabolism	2
16	Metabolism of homocysteine	2
17	Digestion of nucleoproteins in the gastrointestinal tract	2
18	Biosynthesis and catabolism of purine nucleotides	4
19	Biosynthesis and catabolism of pyrimidine nucleotides	4
20	Nucleic acids: definition, classification, structure, characteristics, biological significance.	2
21	History of molecular biology. I-st and II-nd Crick’s postulates	2
22	Modern aspects of genetic engineering. Genes cloning. DNA - diagnosis	4
23	Regulation of gene expression in human	4
24	History of discovery and significance of diffuse endocrine system	2
25	Physiologically active eicosanoids	2
26	Rational nutrition - component longevity	2
27	Vitamins as bioantioxidants	2
28	Biological role and manifestations of deficiency of some trace elements - Zn, Mn, Mg	2
29	History of thiamine discovery and its biological value	2
30	Biochemistry of blood coagulation and fibrinolysis	4
31	Immunochemistry. Immunosuppressants and adjuvants	2
32	Features of collagen synthesis and degradation	2
33	Biochemistry of muscle training and fatigability	2
34	Biochemistry of Human Nutrition, age peculiarities and in the context of severe chronic diseases	2
	Total	80