Apporoved
Vice-Chancellor for Academic Affair
Prof. J.Guminsky
05.01.2017 _____

THE CALENDAR-THEME SCHEDULE OF LABORATORY LESSONS TO BIOCHEMISTRY FOR 2ND YEAR STUDENTS OF THE STOMATOLOGICAL FACULTY ON THE IV (SPRING) SEMESTER (2016-2017 academic years)

№	Date	Theme of laboratory lesson	Time
18	09- 13.01.2017	General pathways of amino acids metabolism: transamination and decarboxylation. Biogenic amines. Deamination of amino acids. Ways of ammonia neutralization. Urea synthesis. Quantitative determination of ALT activity in blood serum. Quantitative determination of urea in biological fluids.	2
19	16.01. - 20.01	Specialised ways of acyclic and cyclic amino acids metabolisms. Determination of glutathione and cysteine sum.	2
20	23.01- 27.01	Nucleoproteins. Nucleic acids. Metabolism of mononucleotides. Qualitative analysis of nucleoproteins.	2
21	30.01- 03.02	Molecular biology. Genetic code. Replication. Transcription. Quantitative determination of DNA and RNA in biological materials.	2
22	6.02 – 10.02	Translation. Regulation of genes expression. Mutations. Determination of phenyl pyruvate and homogentisic acid in urine.	2
23	**13.02 – 17.02**	**Concluding session "Metabolism of amino acids. Molecular biology"**	2
24	20.02 – 24.02	Hormones. Molecular mechanisms of regulatory signals transduction. Apoptosis. Effects of hormones of central and peripheral endocrine glands. Qualitative test on thyroxin. Determination of 17- ketosteroids in urine.	2
25	27.02 – 3.03	Hormones of endoexocrine glands characteristics. Endocrine control of Ca and P homeostasis. Influence of adrenalin and insulin on glucose levels in blood.	
26	06.03 – 10.03	Vitamins. Vitamine-like compounds. Lipid - soluble vitamins. Qualitative reactions on vitamins. Quantitative determination of vitamins C and P in food products.	2
27	13.03 – 17.03	Blood as biological fluid. Rest nitrogen. Blood proteins. Peculiarities of metabolism in erythrocytes. Hemoglobinopathies, porphyries. Quantitative determination of chlorides in blood. Qualitative tests on heme of haemoglobin.	2
28	20.03 – 24.03	Biochemical functions of liver and its role in protein, lipid and carbohydrate metabolisms. Catabolism of heme in tissues Jaundices. Determination of urobilin in urine(Florans test) and total bilirubin in blood. Quantitative determination of total protein in blood.	2
29	27.03 – 31.03	Detoxificational function of liver. Common pathways of xenobiotics metabolism. Reactions of conjugation. Detection of anilin metabolites in urine. Amidopirin test.	2
30	03.04 – 07.04	Water-mineral metabolism. Biochemistry of kidneys and urine. Physicochemical properties of urine, its titration acidity. Qualitative reactions on Ca^{2+}, Mg^{2+} and PO_4^{3-}.	2
31	**10.04 – 14.04**	**Concluding session "Functional biochemistry"**	2
32	17.04 - 21.04	Biochemistry of tooth and salive. Biochemistry of connective tissue. Qualitative reactions on glycosaminoglycans.	2
33	24.04 – 28.04	**Practical training and situational tasks. Computer testing for an exam.**	2
		Total	**32**

Head of Biochemistry Departament — **Associate prof. Zaichko N.V.**

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THE CALENDAR-THEME SCHEDULE OF LECTURES
to biochemistry for 2nd year students of the stomatological faculty on the IV (spring) semester (2016-2017 academic years)

№	Date	Theme of lecture	Lecturer	Time (h)
1	23.01.	**Molecular biology**. Genetic code. Replication. Transcription. Translation. Molecular genetics. Regulation and pecularity of genes expression in eucaryotes. Mutations. DNA-reparation. Genetic engineering principles.	Associate prof. M.M.Chervyack	2
2	6.02.	**Hormones.** Molecular mechanisms of regulatory signals transduction: membranous and cytosolic. Apoptosis.	Associate prof. M.M.Chervyack	2
3	20.02	**Biochemistry of blood**. Proteins and enzymes of blood. Blood buffer systems. Rest nitrogen. Peculiarity of metabolism in erythrocytes.	Associate prof. M.M.Chervyack	2
4	6.03	**Biochemistry of liver. Pigmentary metabolism**. Its role in protein, lipid and carbohydrate metabolisms. Jaundices: types, reasons, biochemical diagnostics.	Associate prof. M.M.Chervyack	2
5	20.03	**Biochemistry of kidneys.** Water-mineral metabolism.	Associate prof. M.M.Chervyack	
6	3.04	**Biochemistry of tooth and salive.**	Associate prof. M.M.Chervyack	2
			Total	12

Head of Biochemistry Departament — **Associate prof. Zaichko N.V.**