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Announcement for Summer Term 2024/2025 1st year DENTISTRY

Revision Tests

Revision Test I: Core Metabolic Pathways

In the 7th week of the summer term the first year students of the dentistry program will take a revision test on the core metabolic pathways.

The test will focus on the basic metabolic pathways, namely the respiratory chain and oxidative phosphorylation, the citric acid cycle, oxidative decarboxylation, glycolysis, gluconeogenesis, synthesis and degradation of glycogen, β -oxidation and biosynthesis of fatty acids, origin and utilization of ketone bodies, the general conversions of amino acids (transamination, oxidative deamination, urea cycle), and the relationships among metabolism of saccharides, lipids and amino acids.

Knowledge of the following structural formulas will be required: amino acids found in proteins and products of their transamination, the basic monosaccharides and disaccharides (glucose, fructose, galactose, ribose, xylose, deoxyribose, maltose, lactose, and sucrose), the basic fatty acids (stearic, palmitic, oleic, linoleic, α -linolenic, and arachidonic acid), cholesterol, acylglycerols, ketone bodies, all intermediates of glycolysis, the citric acid cycle and β -oxidation of fatty acids.

The test may contain open questions, multiple-choice questions as well as fill-in metabolic schemes.

Revision Test II: Practical Lessons

The second test is scheduled for the 14th week of the term, and will focus on the principles of experiments performed at the practical lessons of the summer semester. For the estimation of analytes in biological fluids (blood, serum, plasma, urine, saliva) it will also include the reference values and basic interpretation of the results.

At least 60% of the maximal points must be obtained in order to pass each test. In case of failure two more chances to retake each test can be provided.

February 6th, 2025

Prof. MUDr. Tomáš Zima, DrSc., MBA Head of the Institute of Medical Biochemistry and Laboratory Medicine