

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Medicine	
Course ID: ULBL/ LB/22	Course name: Medical Biology
Course type, scope and the method: Course type: Seminar Recommended course-load (hours): Per week: 3 Per study period: 42 Course method: present	
Number of ECTS credits: 5	
Recommended semester/trimester of the course:	
Course level: III.	
Prerequisites:	
Conditions for course completion: oral examination	
Learning outcomes: To introduce the basic concepts of cell and molecular biology. To give students a thorough grounding in the theoretical and practical foundations of molecular biology and cytology. Students have acquired an understanding of the major concepts in cell and molecular biology and have obtained basic information related to cytogenetics and molecular biology methods in clinical practice.	
Brief outline of the course: Biomacromolecules – the fundamental components of biological macromolecules, common characteristics, the structure and function of saccharides, lipids, proteins and nucleic acids. Cell structure – prokaryotic and eukaryotic cells, cell organelles, their structure and function. General characteristic of biomembranes, movement of molecules through the membrane. The structural organization of genome - organization of DNA in genomes, the basic principles of human cytogenetics. Replication of DNA. Cell cycle – phases, control of cell cycle, mitosis, meiosis, spermatogenesis, oogenesis. Cell signalling. Gene expression – gene structure and function, gene expression and regulation of gene expression. The basic principles of epigenetics. Cell differentiation, cell aging and cell death. Genomics and medicine.	
Recommended literature: 1. Šalagovič, J., Ondruššeková, A., Mičková, H., Klimčáková, L., Židzik, J., Slabá, E., Hudáková, T.: Lekárska biológia I., Equilibria, Košice 2009 2. Mičková, H., Šalagovič, J. a kol.: Lekárska biológia II., Equilibria, Košice 2007 3. Lodish, H. a kol.: Molecular Cell Biology. Macmillan learnings, 2021	
Course language: Slovak, English	
Notes:	

Course assessment	
Total number of assessed students: 0	
Ne	Pr
0.0	0.0
Provides: prof. RNDr. Ján Šalagovič, PhD.	
Date of last modification: 24.04.2022	
Approved:	