

Molecular Biotechnology, Bachelor Studies Programme, 2026

Institution		Departments, Laboratories	Themes
VU Life Sciences Center	Institute of Biochemistry	Department of Bioelectrochemistry and Biospectroscopy	Formation of Enzyme Monolayers on Gold-Coated Surfaces and Theirs Structural Characterization
		Department of Bioanalysis	The Use of Ferrocene-Modified Graphene Oxide for Fabrication of Glucose and Sarcosine Biosensors
			Synthesis of Ferrocene Aminohexanoic Acid and Bovine Serum Albumin Conjugate, its Properties and Application in Enzymatic Systems
			Biosynthesis of Aldonic Acids Using Immobilized Enzymes
		Department of Biological Models	Effect of Mechanical Stimulation on the Biological Activity of Extracellular Vesicles from Periosteum-Derived Mesenchymal Stem Cells
		Department of Molecular Microbiology and Biotechnology	Investigation of FtpM - a S-Adenosyl-L-Methionine Dependent Methyltransferase
			Investigation of PQQ Dependent Glucose Dehydrogenases
	Department of Molecular Cell Biology	Study of Fertility-Related Molecular Factors During Decidualization of Endometrial Stromal Cells and Simulated Implantation	
		Proteomics Center	Analysis of Chemotherapy Resistance and Senescence in HCT116 Cell Subclones
	Institute of Biotechnology	Sector of Amyloid Research	The Effect of Alpha-Synuclein Point Mutations on Liquid-Liquid Phase Separation
			The Effects of α-Synuclein and 14-3-3β Proteins on Human Cell Viability and Amyloid Aggregate Formation

		Department of Biothermodynamics and Drug Design	Production of Recombinant <i>Candida albicans</i> Hsp90N and Analysis of its Interactions with Small-Molecule Compounds
		Department of Immunology	Development of Chimeric Antibodies Targeting the Honeybee Venom Allergen Api m 3 Development of a Serological Method for Detection of Rat Hepatitis E Virus Infection Characterization and Application of Monoclonal Antibodies to Human Calnexin
		Sector of Applied Biocatalysis	Investigation of Enzymatic Hydrolysis of Potato Waste
	Institute of Biosciences	Department of Microbiology and Biotechnology	Investigation of the Properties of Mutant Variants of <i>Streptomyces scabiei</i> 87.22 Cutinase Studies on Cutinase Synthesized by <i>Saccharomonospora sp.</i> A1
State Scientific Research Institute Nature Research Centre		Laboratory of Molecular Ecology	Evaluation of Selected Loci for Intraspecific Differentiation of <i>Listeria monocytogenes</i> Isolates
Thermo Fisher Scientific Baltics			Thermophilic DNA Polymerase Assays Development and Optimization of a Fluorescence-Based Assay for Measuring Reverse Transcriptase Activity Application of Colorimetric Detection in DNA and RNA Amplification Methods
Center for Physical Sciences and Technology		Department of Electrochemical Material Science, Laboratory of nanostructure	The Formation and Application of Porous Gold Layers for Lactate Detection
		Department of Functional Materials and Electronics	Collagen Extraction from <i>Cyprinus carpio</i> Skin and Its Application for Improving Cell Adhesion in Microfluidic Chip Systems Synthesis and Characterization of Tetracycline Loaded Chitosan Nanoparticles Using a Microfluidic Method for Biofilm Suppression

		Department of Nanotechnology	Development of a Molecularly Imprinted Polymer-Based Electrochemical Sensor for CD133 Biomarker Detection
		Department of Organic chemistry	Synthesis of Archaeosine Base Derivatives for Biochemical Studies
National Cancer Institute			Development of A Model for Modulating KRAS Gene Activity in the MDA-MB-231 Breast Cancer Cell Line