

Molecular Biology, Bachelor Studies Programme, 2025

Institution		Department/Laboratory	Themes
VU Life Sciences Center	Institute of Biosciences	Department of Biochemistry and Molecular Biology	Clonality and Resistance Gene Identification in Clinical <i>Acinetobacter baumannii</i> Isolates The Effect of Notch Signaling Inhibitors on Endometrial Cancer Cells Inactivation of the Opportunistic Pathogen <i>Stenotrophomonas maltophilia</i> by 5-aminolevulinic Acid-Based Photodynamic Therapy Significance of B7 family proteins for colorectal cancer cell resistance to chemotherapy drugs
		Department of Microbiology and Biotechnology	The Search and Selection of Plant Growth-Promoting Microorganisms
		Department of Neurobiology and Biophysics	The Effect of Maternal High-Fat Diet on the Peripheral Retina of the Offspring
	Institute of Biochemistry	Department of Bioelectrochemistry and Biospectroscopy	Formulation and Optimisation of Biomimetic Lipid-Based Nanoparticles for CRISPR-Cas9 Delivery
		Department of Biological Models	Screening and Identification of Psychobiotics Candidates Possessing Active Genes Involved in Neuroactive Compounds Synthesis
		Department of Molecular Cell Biology	The Effect of Probiotic Bacteria <i>Lactobacillus casei</i> Supernatant on the Characteristics and Decidualization of Endometrium Stromal Cells
		Department of Molecular Microbiology and Biotechnology	Non-Classic Protein Secretion: Mechanisms and Application
	Institute of Biotechnology	Sector of Amyloid Research	Aggregation of S100A1 and S100A8 Proteins
		Department of Protein – DNA Interactions	Studying the Target Search Dynamics of dCas9 in Live <i>Escherichia coli</i> Cells by Means of Single-Molecule Tracking

		Department of Biothermodynamics and Drug Design	Production and Functional Analysis of Cystein-mutated Recombinant Human Mitochondrial Carbonic Anhydrases CAVA and CAVB
		Department of Eukaryote Gene Engineering	Surface Display of Esterase from <i>Geobacillus stearothermophilus</i> on Yeast <i>Saccharomyces cerevisiae</i>
		Department of Immunology	Development and Characterization of Tools to Study the Effects of SARS-CoV-2 Nucleocapsid Protein on Lung Cells Impact of Inflammasome Components - ASC Specks - on Macrophage Activation Induced by Viral Antigens
		DNA Motors Laboratory	Deciphering the Role of Portal Protein Domains in Controlling Terminase Nuclease Activity: Insights from the Novel Jumbo Phage KLEB 27-3
	EMBL Partnership Institute	Laboratory of Dr. Urtė Neniškytė	<i>In vitro</i> Neural Cell Model Generation for Evaluation of Genome Editing Tools
		Laboratory of Dr. Patrick Pausch	High-Throughput Cloning and Expression of CRISPR-Cas Nucleases <i>Pseudomonas rhodesiae</i> IV-A2 tipo CRISPR-Cas sistemas charakterizavimas
		Laboratory of Dr. Stephen Knox Jones	From Discovery to Design of Genome Editors: Archaeal TnpB, Cas12f Systems and Engineered AsCas12a Variants
Botanical Garden of Vilnius University	Scientific Programs Department	Laboratory of Biotechnology and Genetics	Diversity of ISSR Sequences and Their Distribution in Coding and Non-Coding Regions of the Genome: Characteristics of Lolium Species
State Scientific Research Institute Nature Research Centre		Laboratory of Molecular Ecology	The Search for <i>Listeria monocytogenes</i> Loci Suitable for Identifying Intraspecies Genetic Diversity
		Laboratory of Ecotoxicology	Evaluation of Biochemical and Cytogenetic Biomarkers in European Perch (<i>Perca fluviatilis</i>) Caught in the Curonian Lagoon Changes in Genotoxic, Cytotoxic and Oxidative Stress Biomarkers in Brown Trout (<i>Salmo trutta</i>) Larvae After Exposure to Oomycetes at Different Temperature Conditions
Center for Physical Sciences and Technology	Department of Functional Materials and Electronics	Bioelectrics Laboratory	Fullerene Biopolymers With Light Effect and Their Ability to Combat Biofilms

Nacionalinė visuomenės sveikatos priežiūros laboratorija			Identification of Clinically and Epidemiologically Significant Colistin-Resistant Bacterial Genes and the Optimisation and Implementation of PCR
UAB Psylink			<i>Pichia pastoris</i> Engineering for Bufotenine Biosynthesis
Thermo Fisher Scientific Baltics			Development of a Novel Hot-Start Technology for Enzymatic Reactions