

Molecular Biology, Bachelor Studies Programme, 2022

Institution		Department/Laboratory	Themes
VU Life Sciences Center	Institute of Biosciences	Department of Biochemistry and Molecular Biology	The Impact of the Intensive Fish Farming on the Occurrence of Antibiotic Resistance Genes in the Water
			Changes in Serpin B5 Subcellular Localization in Human Colorectal Carcinoma Cells
			RIPK3 Significance for Colorectal Cancer Cells Response to Chemotherapeutic Treatment
	Institute of Biochemistry	Department of Bioelectrochemistry and Biospectroscopy	Phenotypic and Molecular Characterization of <i>Acinetobacter baumannii</i> Isolates from Lithuanian National Cancer Institute
			Influence of Conjugative Plasmid p2AB52 from Opportunistic Pathogen <i>Acinetobacter baumannii</i> on its Virulence Traits
			Comparison of The Prevalence of <i>Acinetobacter baumannii</i> Plasmids Among Clinical Isolates and Databases
Institute of Biochemistry	Department of Molecular Cell Biology	Inactivation of <i>Acinetobacter baumannii</i> and <i>Stenotrophomonas maltophilia</i> by 5- Aminolevulinic Acid Induced Photodynamic Therapy	
		Heterologous Expression and Purification of SARS-CoV-2 3-chymotrypsin-like Protease Using <i>E. coli</i> Expression System	
		Research of Minimal GD-95 Lipase Structure Required for Lipolytic Activity	
Institute of Biochemistry	Department of Molecular Cell Biology	Model Membrane Mimicking Bacterial Membrane Formation and Analysis of Their Interaction with Antimicrobial Peptides	
		Study of the Effects of Apoptosis Inducing Agents on Human Acute Myeloid Leukemia Cells	
Institute of Biochemistry	Department of Molecular Cell Biology	Study of Combined Actinomycin D, Venetoclax, and Metformin Treatment Impact on Human Leukemia Cells	

			Epigenetic Modifications and Differentiation of Endometrial Stromal Cells
		Department of Molecular Microbiology and Biotechnology	<p>Construction and Investigation of Bacteriophages' Tail Structural Proteins and Amidohydrolase YqfB Protein Hybrids</p> <p>Investigation of Bacteriophage Proteins Against Bacterial Defence Systems</p> <p>Investigation of Bacteriophage Proteins Exhibiting Depolymerase Activity</p> <p>Analysis of Recombinant Deaminases from Microbacterium sp. SINO2 bacterium</p>
		Department of Biological Models	<i>In vitro</i> Study of Bacterial Amidohydrolase Application in Cancer Therapy
	Institute of Biotechnology	Department of Protein – DNA Interactions	<p>Evaluation of the Applicability of Different Phototransformable Fluorescent Proteins to sptPALM Experiments</p> <p>Structural and Functional Studies of CRISPR-Cas-related Toxin</p> <p>Functional Studies of Sir2 Domain-Associated Short Prokaryotic Argonaute Protein from <i>Geobacter sulfurreducens</i></p>
		Department of Bioinformatics	Comparative Analysis of Methods for Defining Contacts in Protein Structures
		Department of Biothermodynamics and Drug Design	The Effect of Flavone Oxidation Products on α - Synuclein Aggregation
		Department of Eukaryote Gene Engineering	<p>Biosynthesis of Novel Rodent Polyomaviruses-Like Particles in Yeast <i>S.cerevisiae</i></p> <p>Surface Display of Maltose-binding and Green Fluorescent Proteins Using the Yeast <i>Saccharomyces cerevisiae</i></p>
		Department of Immunology and Cell Biology	<p>Development, Characterization and Application of Monoclonal Antibodies Against SARS-CoV-2 Nucleocapsid Protein</p> <p>Investigation of Oligomeric Proteins Phagocytosis and Macrophage Activation</p>

Nature Research Centre	Institute of Ecology	Laboratory of Molecular Ecology	Identification of Parasitic <i>Sarcocystis</i> Species in Domestic Sheep Via Molecular Methods Genotyping of <i>Cyprinus carpio</i> in Offspring Generation of Lithuanian Strains Utilising Microsatellite Markers
		Laboratory of Chemical and Behavioural Ecology	Analysis of <i>Wolbachia pipentis</i> Bacteria in <i>Rhagoletis cerasi</i> and <i>Rhagoletis batava</i> Flies
		Laboratory of Ecotoxicology	Toxicity Evaluation of Polystyrene Nanoplastics in Salmonid Embryos and Larvae
	Institute of Botany	Laboratory of Genetics	Investigation of Yeast Viruses Inactivating Factors
National Cancer Institute		Biomedical Physics Laboratory	Study of Human Dermal Mesenchymal Stem Cells Application for Nanoparticles Delivery Towards Cancer Cells
		Laboratory of Immunology	An <i>In Vitro</i> System of anti-Cancer Local Therapeutic Modality Evaluation Exploring Human Prostate Cancer Line DU-145 and Immunomodulatory anti-PD-L1 Drug Atezolizumab
Centre of Innovative Medicine	Department of Immunology		Tumor Elimination <i>In Vivo</i> Using Combined Calcium Electroporation
National Public Health Surveillance Laboratory (NPHSL)			Analysis of SARS-CoV-2 Gene Expression in Positive COVID-19 Samples Using Three Different SARS-CoV-2 Detection Kits
Thermo Fisher Scientific Baltics			Real-Time <i>in vitro</i> Transcription Product Detection
			Application of Immobilized Recombinant Dnase I and Nucleic Acid Binding Proteins for Nucleic Acid Fragmentation