

Genetics, Bachelor Studies Programme, 2026

Institution		Departments, Laboratories	Themes
VU Life Science Center	Institute of Biosciences	Department of Botany and Genetics (<i>Plant Genetics Research Group</i>)	<i>Heracleum sosnowskyi</i> Genetic Diversity Study Using ISSR and SSR Methods in Fragmented Populations Development of <i>SRA</i> Gene Knockout Barley Population Using Targeted Mutagenesis
		Department of Botany and Genetics (<i>Genotoxicological Research Group</i>)	Context-Dependent Effects of Natural Bioactive Compounds on Fruit Fly (<i>Drosophila melanogaster</i>) Phenotype Genotoxic Effects of Conventional and FLASH Ionizing Radiation on Human Lymphocytes <i>in vitro</i> Analysis of <i>in vitro</i> Cytotoxicity and Genotoxicity of Polystyrene Micro- and Nanoparticles in Human Alveolar Adenocarcinoma Cell Line A549 Genotoxicity Assessment of <i>Auricularia auricula-judae</i> Extract Using Cytogenetic Tests Analysis of <i>in vitro</i> Genotoxicity of Varying Sizes and Shapes of Gold Nanoparticles in Human Hepatoma Cell Line (HepG2) Assessment of the Toxic and Genotoxic Effects of the Ionizing Radiation Using the Model Organism <i>Drosophila melanogaster</i>
		Department of Botany and Genetics (<i>Human Genome Research Group</i>)	Analysis of Epigenetic Biomarkers of Kidney Cancer in Urine Samples
		Department of Biochemistry and Molecular Biology (<i>Laboratory of Molecular Biology</i>)	The Role of Biofilms and Polysaccharide Capsule in the Virulence of Opportunistic Pathogens <i>Acinetobacter baumannii</i> and <i>Stenotrophomonas maltophilia</i>
		Department of Microbiology and Biotechnology (<i>Laboratory of Molecular Microbiology of Eukaryotic Microorganisms</i>)	Prevalance of <i>Fusobacterium nucleatum</i> Virulence Factors in the Gut Microbiome During Colorectal Carcinogenesis Using PCR Analysis

	Institute of Biotechnology	Department of Protein-DNA Interactions	Study of Interactions between Short Prokaryotic Argonaute Protein and RNA Chaperone Hfq
		Department of Eukaryote Gene Engineering	Within- and Between-Patient Genomic Analysis of WGS Isolates from <i>Achromobacter spp.</i> in Patients with Primary Ciliary Dyskinesia Protein Structure-based Phylogenetic Studies of Orthomyxovirus Surface Protein gp64 Generation and Validation of Transgenic Zebrafish (<i>Danio rerio</i>) Lines for Monitoring Intracellular Actin Dynamics
		Department of Biological DNA Modification	Transcriptomic Studies of Neuroblastoma
	Institute of Biochemistry	Department of Biological Models	The Role of the CB2 Receptor in Regulating the Inflammatory Response of Mouse Microglia: the Effects of JWH-133 and β -hydroxybutyrate Development and Characterizations of Microglial CB2R Loss-of-Function Models for Neuroinflammation Studies
	EMBL Partnership Institute	Laboratory of Dr. Constantinos Patinios	Harnessing Novel ADP-ribosyltransferases for Genome Editing
		Laboratory of Dr. Patrick Pausch	Characterization of an <i>Enterobacter asburiae</i> Anti-Phage Defense System
VU Faculty of Medicine		Department of Human and Medical Genetics	The Impact of Genetic and Lifestyle Factors on Body Mass Analysis of a Partial <i>TRPM1</i> Gene Duplication Effect on Gene Expression and the <i>in silico</i> Structure of the Encoded Protein Identification of deletion breakpoints in the <i>ATP11A</i> gene and investigation of their effect on gene expression
State Scientific Research Institute Nature Research Centre		Laboratory of Molecular Ecology	Comparative Investigations of Phylogeographic Patterns of Eurasian Perch <i>Perca fluviatilis</i> Populations in The Chernobyl Zone and Water Bodies near Important Lithuanian and Latvian Power Plants

			The Species Diversity of <i>Sarcocystis</i> Parasites in Cattle (<i>Bos taurus</i>) Raised in Lithuania Comparative Studies on Genetic Diversity and Microbiota of <i>Salmo trutta</i> Subspecies
		Laboratory of Entomology	Studies of Trypanosomatids (<i>Euglenozoa</i> , <i>Trypanosomatida</i>) Found in Lithuania Using Different Genetic Markers
National Cancer Institute	Research Departments	Laboratory of Genetic Diagnostic	Analysis of the Expression and Diagnostic Potential of Hippo Signaling Pathway Components in Ovarian Cancer Evaluation of the Diagnostic Potential of Gene Expression of Kinesin Superfamily Members <i>KIF2C</i>, <i>KIF14</i>, and <i>KIF20A</i>, and <i>XIRP2</i> Gene, in Samples from Patients with Ovarian Cancer
Thermo Fisher Scientific Baltics			Investigation of Purification Tags' and Application Opportunities for Recombinant Protein Purification
UAB Psylink			Effects of Psilocybin and Its Analogues on Pro-inflammatory Cytokine and BDNF Protein Expression in U-87 MG Cells
Innovative Medicine Centre	Research Departments	Department of Stem Cell Biology	Paracrine Interactions Between Brain Endothelial Cells and Microglia under Physiological and Inflammatory Conditions
		Department of Regenerative Medicine	Gene Expression in Cartilage Tissue Engineering Using 3D Synthetic Scaffolds