

## Genetics, Bachelor Studies Programme, 2025

Institution		Departments, Laboratories	Themes
VU Life Science Center	Institute of Biosciences	Department of Botany and Genetics ( <i>Plant Genetics Research Group</i> )	Genetic Analysis of <i>tweaky spike (tw)</i> Locus in Allelic <i>tw</i> Mutants Genotoxicological Studies of Surface Water and Soil in Municipal Waste Landfills Comparison of DNA Extraction Methods From Herbarized Plants: Is It Possible to Identify the Most Suitable One
		Department of Botany and Genetics ( <i>Genotoxicological Research Group</i> )	The Influence of Environmental and Genetic Factors of the Body Shape of European Perch ( <i>Perca fluviatilis</i> ) Analysis of Ionizing Radiation Impact on Somatic Cells of <i>Drosophila melanogaster In Vivo</i> <i>In Vitro</i> Genotoxicity Assessment of Polychlorinated Biphenyls (PCB), Dichlorodiphenyldichloroethylene (4,4'-DDE) and Homosalate in Peripheral Blood Lymphocytes of Juvenile Grey Seals ( <i>Halichoerus Grypus</i> ) Genotoxic Effects of Ionising Radiation at Different Dose Rates in Human Lymphocytes <i>In Vitro</i> Genotoxicity Assessment of <i>Cordyceps sinensis</i> Extract Using Cytogenetic Tests Genotoxicity Study of Chemical Substances Found in the Baltic Sea in the Peripheral Blood Mononuclear Cells of Grey Seal ( <i>Halichoerus grypus</i> ) Pups
		Department of Botany and Genetics ( <i>Human Genome Research Group</i> )	Analysis of Novel Epigenetic Biomarkers for Renal Clear Cell Carcinoma Diagnosis and Prognosis The Analysis of Potential Epigenetic Biomarkers for Non-invasive Detection of Renal Cancer

		Department of Biochemistry and Molecular Biology	<p>The Impact of Capsular Polysaccharides Produced by <i>Acinetobacter baumannii</i> on the Resistance to Photodynamic Therapy</p> <p>Investigation of Resistance Mechanisms to <math>\beta</math>-lactam Antibiotics in the Opportunistic Pathogen <i>Stenotrophomonas maltophilia</i></p> <p>Response of the Opportunistic Pathogen <i>Stenotrophomonas maltophilia</i> to Oxidative Stress Induced by Antimicrobial Photodynamic Therapy</p>
		Department of Microbiology and Biotechnology	The Analysis of the Properties and Functions of the T7 Ssb Family Protein Encoded by Bacteriophage Vpae1
	<b>Institute of Biotechnology</b>	Department of Protein - DNA Interactions	Exploring the Interactions of Split Prokaryotic Argonaute Proteins With a Type I Restriction-modification System
		Department of Eukaryote Gene Engineering	<p>Generation of a Transgenic <i>Danio rerio</i> Line for Rapid Lineage Tracing</p> <p>Influence of Different Cre Recombinase Transgene Elements on Recombination Efficiency</p> <p>The Effect of <i>tbx5a</i> Gene Enhancers on Zebrafish (<i>Danio rerio</i>) Heart Development</p>
		Department of Biological DNA Modification	<p>Development of an Application for the Identification and Analysis of Bacterial Small Regulatory RNAs</p> <p>Comparative Bioinformatic Analysis of Defense and Regulatory Mechanisms Within the Genus <i>Lactococcus</i></p>
	<b>VU Faculty of Medicine</b>	<b>Institute of Biomedical Sciences</b>	<p>Variation in <i>MCM6</i> Gene and Its Flanking Sequences in Lithuanian Population</p> <p>Genetic Profiling of Human Remains From the 13th–15th Centuries Collected in Lithuania</p>
<b>Botanical Garden of Vilnius University</b>		Scientific Programs Department	Features of Centromeric Fesreba Sequences in Grasses and Woody Plants

Nature Research Centre		Laboratory of Molecular Ecology	<p>Diversity of <i>Sarcocystis</i> Species in European Pine Martens (<i>Martes martes</i>)</p> <p>Search for Genetic Markers for Better Diagnosis of <i>Sarcocystis</i> Species</p>
		Laboratory of Algology and Microbial Ecology	Changes in <i>Raphidiopsis</i> Cyanosphere During Phage Infection
		Laboratory of Ecotoxicology	<p>Environmental Genotoxicity and Cytotoxicity Studies in Erythrocytes of Flounder (<i>Platichthys flesus</i>) Caught in the Būtingė Oil Terminal Area</p> <p>Cytogenetic Status Assessment of Sea Trout (<i>Salmo trutta</i>) Spawners During Their Spawning Migration Period in the Rivers of the Nemunas River Basin District</p> <p>Evaluation of Genotoxic and Cytotoxic Effects in Sea Trout (<i>Salmo trutta</i>) Embryos and Larvae: Interactions of Urea, <i>Saprolegnia parasitica</i> and Metal Mixture</p>
National Cancer Institute		Laboratory of Genetic Diagnostic	<p>Analysis of Immunoepigenetic Markers and Their Association With Clinical Outcomes in Bladder Cancer Patients</p> <p>Diagnostic and Prognostic Value of <i>C-MYC</i> and <i>CTNNB1</i> in Plasma Samples of Clear Cell Renal Cell Carcinoma Patients</p> <p>Single Nucleotide Polymorphism Analysis of the <i>CD274</i> Gene in Cohorts of Prostate Cancer Patients</p>
Thermo Fisher Scientific Baltics			Application of Colorimetric Detection for Isothermal Amplification