

Genetics, Bachelor Studies Programme, 2023

Institution		Departments, Laboratories	Themes
VU Life Science Center	Institute of Biosciences	Department of Botany and Genetics // <i>Plant Genetics Research Group</i>	<p>Genetic Determination of Barley Melatonin Biosynthesis Path and It's Importance for Barley Spike Architecture</p> <p>Study of Genetic Diversity of Rare Species <i>Cypripedium calceolus</i> and <i>Stuckenia × fennica</i> by ISSR Method</p> <p>Genotoxicity Study of Soil from the Kazokiškės Landfill Site in Vilnius City Using <i>Tradescantia</i> Micronucleus Bioassay</p>
	Institute of Biosciences	Department of Botany and Genetics // <i>Genotoxicological Research Group</i>	<p>Genotoxicity Studies of Polystyrene Nanoparticles</p> <p>Genotoxicity Studies of Silver and Gold Nanoparticles of Different Sizes in Human Peripheral Blood Lymphocytes in vitro</p> <p>Research of the Effects of Polystyrene Nanoparticles on <i>Allium cepa</i> Root Meristem Cells by Cytogenetic Methods</p> <p>Study of Genotoxic and Antigenotoxic Properties of Phytopharmaceutical Curcumin</p> <p>Biological Dosimetry of Acute Exposure to Ionizing Radiation</p> <p>Application of Mutagen Sensitivity Test in Lymphocytes from Diabetic Patients by Sister Chromatid Exchange Method</p> <p>Analysis of Patients with Diabetes Mellitus Sensitivity to 4-Nitroquinoline-1-oxide Using Micronucleus Assay in Dinucleus Lymphocytes</p> <p>Investigation of the Effects of Polystyrene Nanoparticles on Root Cells of <i>Allium cepa</i> Using ISSR Markers</p> <p>Evaluation of α-Lipoic Acid Effect on DNA Repair Level in Diabetic Human Lymphocytes in vitro</p>

		Department of Botany and Genetics// <i>Human Genome Research Group</i>	<p>Serum miRNA Analysis in Juvenile Idiopathic Arthritis</p> <p>Quantitative miRNA and lncRNA Analysis in Blood Samples of Women Diagnosed with Gestational Diabetes Mellitus</p> <p>Quantitative MicroRNA Analysis In Blood Plasma of Patients With Type 2 Diabetes Mellitus</p> <p>Urinary miRNA Analysis in Renal Cancer Patients</p> <p>Analysis of miRNAs in Serial Urine Samples from Children with Juvenile Idiopathic Arthritis</p>
		Department of Biochemistry and Molecular Biology	<p>Functional Analysis of Primary Human Dermal Fibroblasts Harboring Splice-Site Variant in the DYNC1H1 Gene</p> <p>Comparative Analysis of Gene Silencing</p>
	Institute of Biochemistry	Department of Bioelectrochemistry and Biospectroscopy	Investigating Pleiotropic Effects of Statins in Chemotherapy: Cancer Cell Death and DNA Damage
	Institute of Biotechnology	Department of Protein - DNA Interactions	Characterization of Novel CRISPR-Cas12 Effector Complexes Research of the Inhibitors of the Bacterial Antiviral CRISPR-Cas System
		Department of Eukaryote Gene Engineering	<p>Investigation of the Synthesis Efficiency of Betapolyomavirus securanorvegicus VP1 Protein Mutants in Yeast</p> <p>Generation of a Transgenic Danio rerio Line with Strong CreERT2 Recombinase Expression</p> <p>Identification of Candidate tbx5a Gene Enhancers in Zebrafish (Danio rerio)</p>
		Department of Biological DNA Modification	<p>Enzymatic Characterization of the Halide Methyltransferase AclHmt</p> <p>Bioinformatical Analysis of Epigenomic Layers Identified with TOP-Seq</p> <p>The Role of Transposable Elements and piRNA in Parkinson's Disease</p>

VU LSC-EMBL PI European Molecular Biology Laboratory (EMBL) Partnership Institute (PI)		Laboratory of Dr. Jonathan Arias	Creation of Bioluminescent Human Induced Pluripotent Stem Cell Lines Generation of Human Cell Line Encoding Inducible Recombination System Using Cas9 Nuclease
VU Faculty of Medicine	Institute of Biomedical Sciences	Department of Human and Medical Genetics	Possibilities for the DNA Extraction from Lithuanian Paleo- Osteological Materials and Protocol Optimization
Botanical Garden of Vilnius University		Department of Science Programs	Features of Specific Sequence FISH in <i>Festuca gigantea</i> and <i>Lolium perenne</i> Species and Their Hybrids Identification of Endophytic Fungi in <i>Festuca gigantea</i> and <i>Lolium perenne</i> Species and Their Hybrids
Nature Research Centre		Laboratory of Molecular Ecology	Genetic Diversity and Population Structure Study of Rock Pigeon (<i>Columba livia f. domestica</i>) Using Mitochondrial Genome D-Loop Sequence Analysis
		Laboratory of Plant Pathology	Genetic Characterization of Phytopathogenic Bacteria <i>Xanthomonas spp.</i>
		Laboratory of Algology and Microbial Ecology	Proliferation of Alien Cyanobacteria <i>Raphidiopsis raciborskii</i> in Lake Jieznas, Characterization and Biogeography of Isolates
National Cancer Institute		Biobank	Evaluation of Cytotoxic Effects of Flavonoids: Baicalein, Rutin and Quercetin, and Gene Expression Changes in Breast Cancer Cell Line MDA-MB-231
		Laboratory of Genetic Diagnostic	UPF3A, BCL-2, R-RAS- Gene Expression Changes for Treatment Monitoring in Plasma of TNBC Patients
Centre for Innovative Medicine		Department of Regenerative Medicine	Paracrine Effects of Human Menstrual Blood Mesenchymal Stem Cells on Cartilage Tissue Regeneration <i>in vitro</i>
Klaipėda University Hospital (KUL)		Department of Medical Genetics and Molecular Diagnostics	Analysis of Homologous Recombination Repair (HRR) Gene Variants of Uncertain Significance in Genomic DNA of Breast Cancer Patients
Thermo Fisher Scientific Baltics			The Method for Precise Mapping of Site-directed and Random Integration Events