

TITLES OF THESES

#	Proposed title	Institute	Tutor	Tutor email	Co-tutor	Specialization	Applicable molecular biological techniques	Acceptable number of students
1	Molecular characterisation and resistance mechanisms of vancomycin-resistant <i>Enterococcus</i>	Department of Medical Microbiology	Ms. Zsuzsanna Dombrádi M.Sc., Ph.D	dombradi.zsuzsa@med.unideb.hu		Immunology, Cell and Microbiology	phenotypic and genotypic antimicrobial resistance analysis	1
2	The role of magnesium-dependent protein phosphatases in lung cancer	Department of Medical Chemistry	Ms. Beáta Lontay M.Sc., Ph.D.	lontay@med.unideb.hu		Biochemistry - Genomics	Tissue culture maintenance, Western blotting, ELISA, fluorescent	1
3	The role of protein phosphatase-1 and 2A holoenzymes in breast cancer	Department of Medical Chemistry	Ms. Andrea Kiss M.Sc., Ph.D.	kissand@med.unideb.hu		Biochemistry - Genomics	Tissue culture maintenance, cell transfection, Western blotting, fluorescent microscopy, immunoprecipitation, in vitro phosphatase assay	1
4	Investigation of TIMAP-PP1 signaling cancer progression	Department of Medical Chemistry	Ms. Anita Boratkó M.Sc., Ph.D.	boratko@med.unideb.hu		Biochemistry - Genomics	Cell culture, protein interactions, immunofluorescent, DNA cloning, Western blotting	2
5	The role of small molecule bacterial metabolites in epithelial-mesenchymal transition	Department of Medical Chemistry	Ms. Edit Kapitányiné Mikó M.Sc., Ph.D.	miko.edit@med.unideb.hu		Biochemistry - Genomics	Cell culture, Western blotting, qPCR	1
6	Genetically Modified Macrophages as Therapeutic Tools in Cancer	Department of Medical Chemistry	Máté Ágoston Demény M.D., Ph.D	demenym@med.unideb.hu		Biochemistry - Genomics	Cell culture, cell death assay, western blot, immunofluorescence, etc.	1
7	Enhancement of the tumor killing effect of CAR-expressing macrophages by chemotherapeutic	Department of Medical Chemistry	Endre Kókai M.Sc., Ph.D.	ekokai@med.unideb.hu		Biochemistry - Genomics	Cell culture, immunostaining, monitoring cell proliferation, cell death by High content confocal	1
8	Identification of immunometabolic targets in inflammatory skin diseases	Department of Medical Chemistry	Ms. Magdolna Szántó D. Pharm., Ph.D.	mszanto@med.unideb.hu		Biochemistry - Genomics	Cell culture, cell-based assays	1
9	The effect of the bacterial metabolite, deoxycholic acid, on intestinal motility	Department of Medical Chemistry	Ms. Karen Uray M.Sc., Ph.D.	karen.uray@med.unideb.hu		Biochemistry - Genomics	Organ bath chambers (gut)	1
10	The role of autophagy modulators in cancer therapy	Department of Medical Chemistry	Ms. Katalin Kovács M.Sc., Ph.D.	kovacs.katalin@med.unideb.hu		Biochemistry - Genomics	Cell culture, cell-based assays	1
11	Identification of compounds that inhibit tumor cell migration	Department of Medical Chemistry	Csaba Hegedűs M.Sc., Ph.D.	hcsaba@med.unideb.hu		Biochemistry - Genomics	Cell culture, Western blotting, HTS, HCA	1
12	Analysis of the interaction between the PP1 catalytic subunit and activating/inhibiting compounds in complex bioliquids	Department of Medical Chemistry	Bálint Bécsi M.Sc., Ph.D.	bbalint@med.unideb.hu		Biochemistry - Genomics	Cell culture, Western blotting, Microscale Thermophoresis	1
13	Side effects of SGLT inhibitor antidiabetics in small intestine. Role of GLUTs.	Department of Medical Chemistry	Tibor Docsa M.Sc., Ph.D.	tdocsa@med.unideb.hu		Biochemistry - Genomics	Cell culture, organ bath chamber experiments with animal tissues	1
14	Detection of deregulated mRNAs involved in tumorigenesis of Glioblastoma	Department of Medical Genetics	Ms. Zsuzsanna Birkó M.Sc., Ph.D.	birko@med.unideb.hu		Immunology, Cell and Microbiology	NGS, RT-qPCR, total RNA isolation, bioinformatic analysis	1
15	Functional characterization of miRNAs in human ovarian cell	Department of Medical Genetics	Ms. Melinda Szilágyi-Bónizs M.Sc., Ph.D.	szilagyi.melinda@med.unideb.hu		Immunology, Cell and Microbiology	cell culturing, cellular assays, RNA isolation, qPCR, miRNA mimic	1
16	Cardiac biomarkers in kidney transplant recipients	Division of Nephrology, Department of Internal Medicine, Faculty of Medicine	Ms. Réka P. Szabó M.D., Ph.D	rpszabo@belklinika.com				1
17	Impact of antihumoral therapy on hypercoagulability in kidney transplant recipients	Division of Nephrology, Department of Internal Medicine, Faculty of Medicine	Ms. Réka P. Szabó M.D., Ph.D	rpszabo@belklinika.com				1

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18	Characteristics of adipocyte differentiation in orbital fibroblasts	Division of Endocrinology, Department of Internal Medicine, Faculty of Medicine	Ms. Erika Csanádiné Galgóczi M.Sc., Ph.D.	galgoczi.erika@med.unideb.hu		Biochemistry - Genomics	primary cell culture, differentiation, PCR, Western blot, ELISA, proliferation assay, MTT,	1
19	Characteristics of myofibroblast differentiation in orbital fibroblasts	Division of Endocrinology, Department of Internal Medicine, Faculty of Medicine	Ms. Mónika Lestárné Katkó M.Sc., Ph.D.	katko.monika@med.unideb.hu		Biochemistry - Genomics	primary cell culture, differentiation, PCR, Western blot, ELISA, proliferation assay, MTT,	1
20	Development of Langerhans-cell based in vitro disease models	Department of Immunology	Attila Szöllősi M.D., Ph.D.	szollosi.attila@med.unideb.hu	Ms. Zsófia Péntes M.Sc. penzes.zsofia@med.unideb.hu	Biochemistry - Genomics	Sejtizolálás, sejtenyésztés, flow citometria, ELISA, ELISpot, RNS szekvenálás, immunhisztokémia, western blot	2
21	Comparing the immunological outcome of regulated cell death pathways	Department of Immunology	Ms. Anett Türk-Mázló M.Sc., Ph.D.	mazlo.anett@med.unideb.hu		Biochemistry - Genomics	Sejtizolálás, sejtenyésztés, flow citometria, ELISA, ELISpot, RNS szekvenálás, immunhisztokémia, western blot	1
22	Molecular genetics of obesity	Department of Pediatrics	Tamás Röszer M.D.	roszer.tamas@med.unideb.hu	Ms. Katalin Gyurina M.Sc., Ph.D. gyurina.katalin@med.unideb.hu	Biochemistry - Genomics	PCR, qPCR, NGS, cell culture, RNA isolation	2
23	Innate immunity of the adipose tissue	Department of Pediatrics	Tamás Röszer M.D.	roszer.tamas@med.unideb.hu	Ms. Katalin Gyurina M.Sc., Ph.D. gyurina.katalin@med.unideb.hu	Immunology, Cell and Microbiology	Histology, microscopy, imaging, cell culture	2
24	MODY phenotype - genotype correlation in pediatric population	Institute of Pediatrics	Enikő Felszeghy M.D., Ph.D.	felszeghy.eniko@med.unideb.hu				1
25	The role of pancreatic enzymes in the inflammatory diseases	Department of Biochemistry and Molecular Biology	András Szabó M.Sc., Ph.D.	andrasszabo@med.unideb.hu			PCR mutagenesis, cloning, PCR, Western blot, immunoprecipitation, protein expression and purification, protein-protein interactions	1
26	Transcription factor driven cell differentiation	Department of Biochemistry and Molecular Biology	István Szatmári M.Sc., Ph.D.	szatmari@med.unideb.hu			DNA cloning, RT-PCR, FACS, cell culture	1
27	Single cell transcriptomic data analysis	Department of Biochemistry and Molecular Biology	István Szatmári M.Sc., Ph.D.	szatmari@med.unideb.hu			Cell Ranger, Seurat (for scRNAseq analysis)	1
28	Biochemical characterization of retrovirus Gag-like proteins	Department of Biochemistry and Molecular Biology	János András Mótyán M.Sc., Ph.D.	motyan.janos@med.unideb.hu		Immunology, Cell and Microbiology	DNA cloning, cell culturing, Western-blot, immunoprecipitation, protein expression and purification, protein-protein interactions	1
29	The effect of membrane lipid alterations on membrane biophysical properties	Department of Biophysics and Cell Biology	Péter Viktor Nagy M.D., Ph.D., D.Sc.	nagyp@med.unideb.hu			konfokális mikroszkópia, digitális képanalízis, áramlási citometria	1
30	Effect of recombinant spider toxins on ion channels	Department of Biophysics and Cell Biology	Béla Péter Hajdu M.Sc., Ph.D.	hajdup@med.unideb.hu	Jesus Angel Borrego Terrazas M.Sc., Ph.D. jesus.borrego@med.unideb.hu Muhammed Naseem Umair M.Sc., Ph.D. umair.naseem@med.unideb.hu		molecular biology, protein production, HPLC, patch-clamping	1
31	Characterization of head and neck type atopic dermatitis	Department of Dermatology	Ms. Anikó Miskeiné Kapitány, M. Sc., Ph. D.	anikokapitany@gmail.com	Ms. Andrea Szegedi M.D., Ph.D., D.Sc. aszegedi@med.unideb.hu	Biochemistry - Genomics	immunohistochemistry, investigations at the mRNA level (RNA Seq, qPCR)	1