

SUPERVISION OF FINAL THESES

DEFENDED FINAL THESES – RIGOROUS, MASTER'S, AND BACHELOR'S

Final theses supervised by department staff members:

RNDr. Terézia Hudáková, PhD.

RNDr. Lucia Klimčáková, PhD.

RNDr. Helena Mičková, PhD.

RNDr. Eva Slabá, PhD.

doc. RNDr. Peter Solár, PhD.

prof. RNDr. Ján Šalagovič, PhD.

RNDr. Martina Šemeláková, PhD.

prof. RNDr. Janka Vašková, PhD.

RNDr. Jozef Židzik, PhD.

RNDr. Terézia Hudáková, PhD.

Master's theses – Supervisor:

- Phenylketonuria – A hereditary metabolic disorder – Martin Tarabčák – 2022 – General Medicine, UPJŠ FM (in Slovak)
- Genetic aspects of Huntington's disease – Balázs Abaházi – 2025 – General Medicine, UPJŠ FM (in Slovak)
- Genomic mutation-related genetic syndromes – Chiara Haršányová – 2025 – General Medicine, UPJŠ FM (in Slovak)

RNDr. Lucia Klimčáková, PhD.

Master's theses – Supervisor:

- Cancer stem cells: Biological significance and therapeutic consequences – Ana Lucía Osoreo Fernández – 2019 – General Medicine, UPJŠ FM
- Genetics of follicular lymphoma – Christopher Jay Cordell – 2016 – General Medicine, UPJŠ FM
- Risk of follicular lymphoma development in relation to DNA repair gene polymorphisms – Bc. Hana Hermanová – 2011 – Genetics and Molecular Cytology, UPJŠ FoS (in Slovak)
- Genetics of dyslipidemias – Alican Antonio Conte – 2025 – General Medicine, UPJŠ FM

RNDr. Helena Mičková, PhD.

Master's theses – Supervisor:

- Genetically determined myopathies in humans – Patrícia Takáčová – 2018 – General Medicine, UPJŠ FM (in Slovak)

RNDr. Eva Slabá, PhD.

Master's theses – Supervisor:

- Genetic causes of thrombophilia and its consequences in humans – Tatiana Ďurkovičová – 2016 – General Medicine, UPJŠ FM (in Slovak)
- Genetic causes of spontaneous abortions – Natalie Al Tarcheh – 2019 – General Medicine, UPJŠ FM

- Genetic causes of autoimmune diseases – Stella Poulová – 2023 – General Medicine, UPJŠ FM (in Slovak)
- Gene polymorphisms associated with recurrent pregnancy loss – Noreen Madiha Ghafoor – 2023 – General Medicine, UPJŠ FM
- Epigenetics of multiple sclerosis – Mahra Ekbal – 2024 – General Medicine, UPJŠ FM
- Application of mesenchymal stem cells in gene therapy – Anna Novická – 2025 – General Medicine, UPJŠ FM (in Slovak)

Master's theses – Consultant:

- Genetic susceptibility to chronic obstructive pulmonary disease – Diego Teixeira Faustino – 2012 – General Medicine, UPJŠ FM

doc. RNDr. Peter Solár, PhD.

Bachelor's Thesis – Supervisor:

- Effect of erythropoietin on photodynamic therapy and chemotherapy of ovarian adenocarcinomas A2780 and SKOV-3 – Zuzana Brinská – 2006 – UPJŠ FoS (in Slovak)
- Adverse effects of erythropoietin in patients with various diagnoses, including cancer – Veronika Kopačková – 2007 – UPJŠ FoS (in Slovak)
- Geldanamycin and its antitumor effects – Mária Chomová – 2007 – UPJŠ FoS (in Slovak)
- Relationship between heat shock proteins and cancer cell resistance to chemotherapeutic agents – Jana Žofčáková – 2007 – UPJŠ FoS (in Slovak)
- Expression of heat shock proteins HSP90 and HSP96 and their relationship to cancer cell progression – Dávid Drutovič – 2008 – UPJŠ FoS (in Slovak)
- Erythropoietin and tumor angiogenesis – Valentína Čabalová – 2009 – UPJŠ FoS (in Slovak)
- Erythropoietin and its adverse effects in relation to cancer cell – Renáta Šimková – 2010 – UPJŠ FoS (in Slovak)
- Akt protein as a target molecule in anticancer therapy – Barbora Pleceníková – 2010 – UPJŠ FoS (in Slovak)
- p16 protein as a diagnostic marker of HPV infection: PCR analysis of HPV16 and HPV18 types – Michal Goga – 2011 – UPJŠ FoS (in Slovak)
- Ansamycins as a potential therapeutic approach in cancer treatment – Lenka Koptašíková – 2011 – UPJŠ FoS (in Slovak)
- HIF-alpha and its expression under normoxic conditions – Michaela Némedyová – 2011 – UPJŠ FoS (in Slovak)
- Cellular and molecular mechanisms of the action of lichen secondary metabolites – Michaela Memňáková – 2012 – UPJŠ FoS (in Slovak)
- HER-2 protein and targeted cancer therapy – Soňa Sokolská – 2012 – UPJŠ FoS (in Slovak)
- Erythropoietin receptor and its isoforms in normal and cancer cells – Barbora Fecková – 2012 – UPJŠ FoS (in Slovak)

- Erythropoietin and erythropoiesis-stimulating agents – Erika Szentpéteriová – 2013 – UPJŠ FoS (in Slovak)
- Antitumor effects of lichen secondary metabolites – Lukáš Urbán – 2014 – UPJŠ FoS (in Slovak)
- PTEN protein and its role in cancer cells – Ivana Rokytová – 2014 – UPJŠ FoS (in Slovak)
- Erythropoietin receptor and its role in tumor cell resistance – Aneta Petříková – 2015 – UPJŠ FoS (in Slovak)
- EGFR and cell transformation – Miriama Sanetříková – 2016 – UPJŠ FoS (in Slovak)
- Pleiotropic effects of recombinant erythropoietin and its analogues – Diana Rošková – 2017 – UPJŠ FoS (in Slovak)
- Ephrin receptor as an alternative pathway for erythropoietin signaling – Slavka Kormaníková – 2017 – UPJŠ FoS (in Slovak)
- Immodin and the molecular mechanisms of its action – Kristína Meňhartová – 2017 – UPJŠ FoS (in Slovak)
- Molecular mechanisms of tumor cell resistance to paclitaxel – Ivana Kušnírová – 2017 – UPJŠ FoS (in Slovak)
- Molecular mechanisms of tumor cell resistance to tamoxifen – Barbora Bariová – 2018 – UPJŠ FoS (in Slovak)

Master's theses – Supervisor:

- Regulation of the mammalian cell cycle with a focus on intracellular signal transmission leading to cell division – Adriana Vadászová – 2000 – Biology, molecular biology, and genetics, UPJŠ FoS (in Slovak)
- Hypericin and photodynamic therapy of U-937 leukemia cells – Lenka Rusková – 2001 – Biology, molecular biology, and genetics, UPJŠ FoS (in Slovak)
- Study of photodynamic therapy on the HT-29 adenocarcinoma cell line depending on hypericin concentration and photoactivating light dose – Jaromír Mikeš – 2003 – Biology, molecular biology, and genetics, UPJŠ FoS (in Slovak)
- Modification of hypericin-based photodynamic therapy with the tyrosine kinase inhibitor genistein – Peter Ferenc – 2006 – Biology, molecular biology, and genetics, UPJŠ FoS (in Slovak)
- Expression of heat shock protein 96 in mammary and ovarian tumors – Lenka Bučková – 2007 – Biology, molecular biology, and genetics, UPJŠ FoS (in Slovak)
- Geldanamycin – an HSP90 inhibitor increases the sensitivity of A2780cis ovarian adenocarcinoma cells to cisplatin – Beata Bíleková – 2007 – Biology, molecular biology, and genetics, UPJŠ FoS (in Slovak)
- Erythropoietin and its effect on chemotherapy and photodynamic therapy of selected ovarian adenocarcinoma cells – Veronika Kopačková – 2008 – Biology, molecular biology, and genetics, UPJŠ UPJŠ FoS (in Slovak)
- 17-DMAG and its effect on the human mammary adenocarcinoma cell line SKBR3 – Mária Chytilová – 2009 – Biology, molecular biology, and genetics, UPJŠ FoS (in Slovak)
- Erythropoietin and its effect on the expression changes of hypoxia-inducible factor and vascular endothelial growth factor in ovarian adenocarcinomas in vitro – Alexandra Nagyová – 2010 – Biology, molecular biology, and genetics, UPJŠ FoS (in Slovak)
- Proliferation of HUVEC cells induced by conditioned medium from A2780 ovarian adenocarcinoma cells: the effect of erythropoietin – Renáta Šimková – 2012 – Biology, molecular biology, and genetics, UPJŠ FoS (in Slovak)

- Modulation of the effect of hypericin-based photodynamic therapy using genistein on breast adenocarcinoma tumor cells – Patrícia Kimáková – 2012 – Biology, molecular biology, and genetics, UPJŠ FoS (in Slovak)
- Anticancer and antiproliferative effects of atranorin on mouse mammary adenocarcinoma cell line 4T1 and normal mammary NMuMG cell line – Lenka Koptašíková – 2013 – Biology, molecular biology, and genetics, UPJŠ FoS (in Slovak)
- Characterization of erythropoietin receptor isoforms in A2780 and HUVEC cells – Barbora Fecková – 2014 – Biology, molecular biology, and genetics, UPJŠ FoS (in Slovak)
- Pharmacological effect of atranorin on mouse mammary adenocarcinoma induced by inoculation of 4T1 cells – Soňa Sokolská – 2014 – Biology, molecular biology, and genetics, UPJŠ FoS (in Slovak)
- Functionality of the erythropoietin receptor and its relation to the sensitivity of breast adenocarcinoma cells to tamoxifen – Erika Szentpéteriová – 2015 – Biology, molecular biology, and genetics UPJŠ FoS (in Slovak)
- Erythropoietin receptor and its role in breast tumor cell resistance to paclitaxel – Aneta Petříková – 2017 – Biology, molecular biology, and genetics, UPJŠ FoS (in Slovak)
- The role of carbonic anhydrase 9, beta-tubulin 3, and forkhead box protein M1 in breast cancer cell resistance to paclitaxel – Ivana Kušnírová – 2019 – Biology, molecular biology, and genetics, UPJŠ FoS (in Slovak)
- The Mechanism of Breast Cancer Cell Resistance to Chemotherapy – Esraa Yousif – 2021 – General Medicine, UPJŠ FM (in Slovak)
- Molecular mechanisms of cancer cell resistance to paclitaxel – Ander Arranz Cabezuelo – 2022 – General Medicine, UPJŠ FM
- Treatment of various diseases by using recombinant DNA technology – Abraham Popal – 2022 – General Medicine, UPJŠ FM
- The role of heat shock proteins in the resistance of cancer cell – Mikael Rikardsen – 2022 – General Medicine, UPJŠ FM
- Autosomal recessive disorder – alkaptonuria – Zuzana Balogová – General Medicine, UPJŠ FM (in Slovak)
- Oral cancer risks, symptoms and prevention – Milad Eftekhari Shahroodi – 2023 – Dental Medicine, UPJŠ FM
- Molecular mechanisms of cancer cell resistance to cisplatin – Berkay Bayram Ucar – 2024 – General Medicine, UPJŠ FM
- Erythropoietin receptor and its role in ovarian carcinoma cells – Loren Shehadeh – 2025 – General Medicine, UPJŠ FM

prof. RNDr. Ján Šalagovič, PhD.

Master's theses – Supervisor:

- Molecular biological methods in reproductive medicine – Tomáš Gačala – 2001 – General Biology, UPJŠ FoS (in Slovak)
- The significance of certain gene polymorphisms in relation to vascular diseases in type 2 diabetes – Branislav Fleischer – 2002 – General Biology, UPJŠ FoS (in Slovak)
- Application of molecular biological methods in paternity disputes – Miloš Ander – 2003 – General Biology, UPJŠ FoS (in Slovak)

- Genetic analysis in the optimization of targeted therapy in cancer diseases – Šváby Stanislav – 2012 – General Medicine, UPJŠ FM (in Slovak)
- Genes involved in xenobiotic metabolism and their role in cancer susceptibility – Kostková Mária – 2013 – General Medicine, UPJŠ FM (in Slovak)
- Latest insights into the genetic basis of orofacial clefts – Gabajová Dana – 2015 – Dental Medicine, UPJŠ FM (in Slovak)
- Signaling pathways and targeted therapy – Drenčáková Petra – 2016 – General Medicine, UPJŠ FM (in Slovak)
- Genetics of bladder cancer – Švecová Silvia – 2016 – General Medicine, UPJŠ FM (in Slovak)
- Gene polymorphisms in routine clinical diagnostics: Promise or doubt? – Dreveňáková Jana – 2022 – General Medicine, UPJŠ FM (in Slovak)
- Epigenetics and medicine – Vargic Martin – 2023 – General Medicine, UPJŠ FM (in Slovak)
- Therapeutic potential of CBD in clinical practice? – Fabian Viktor – 2024 – General Medicine, UPJŠ FM (in Slovak)
- Excessive intake of added saccharides – a modern medical concern – Ďulajová Dominika – 2024 – General Medicine, UPJŠ FM (in Slovak)
- Genetics and epigenetics of obesity – Skasko Erik – 2025 – General Medicine, UPJŠ FM (in Slovak)

RNDr. Martina Šemeláková, PhD.

Bachelor's Thesis – Supervisor:

- Gene mutations affecting adhesiveness in metastatic tumors – Mgr. Kristína Kožušková – 2019 – Biology, UPJŠ FoS (in Slovak)
- Signaling pathways leading to invasiveness and metastasis of colorectal cancer – Mgr. Silvia Hradovská – 2019 – Biology–Chemistry, UPJŠ FoS (in Slovak)
- Polymorphisms of genes involved in drug detoxification – Mgr. Lucia Šebaljšová – 2016– Biology, UPJŠ FoS (in Slovak)
- Tumor cell microenvironment – Bc. Soňa Jakšová – 2015– Biology, UPJŠ FoS (in Slovak)
- Development of new drugs in anti-angiogenic cancer therapy – Mgr. Mária Varadyová – 2014 – Biology–Chemistry, UPJŠ FoS (in Slovak)
- Molecular transport membrane systems – Mgr. Zuzana Balintová – 2013– Biology, UPJŠ FoS (in Slovak)
- Biologically active compounds in cancer therapy – Mgr. Petra Merkovská – 2013– Biology, UPJŠ FoS (in Slovak)
- Recent insights into the metastasis process and the study of invasiveness after photodynamic therapy – Mgr. Jana Vargová – 2010 – Biology, UPJŠ FoS (in Slovak)
- Recent findings on the inhibition of the metastasis process and the role of adhesion molecules – Mgr. Lucia Melníková – 2006 – Biology, UPJŠ FoS (in Slovak)
- The role of cytokines in the process of tumor tissue angiogenesis – Mgr. Žaneta Špil'ková – 2006 – Biology, UPJŠ FoS (in Slovak)
- Application of DGGE analysis in the identification of soil bacteria – Mgr. Veronika Libová – 2006 – Biology, UPJŠ FoS (in Slovak)

Master's theses – Supervisor:

- Nutrition and probiotics in infants and the impact of microbiome composition on health status in adulthood – Zdenek Polizoakis – 2024 – General Medicine, UPJŠ FM (in Slovak)
- The role of the transmembrane receptor ACE2 in infectious diseases – Ján Gregor – 2023 – General Medicine, UPJŠ FM (in Slovak)
- Incidence of infection diseases in Sudan – Ethar Yousif – 2022 – General Medicine, UPJŠ FM
- Gene mutations in colorectal cancer – Elena Viazanková – 2022 – General Medicine, UPJŠ FM (in Slovak)
- Diagnosis and genetic profiling of autism – Bc. Ivana Kišiková – 2021 – General Medicine, UPJŠ FM (in Slovak)
- The role of hTERT and molecular markers associated with metastasis – Ivana Nevická – 2020 – Genetics and molecular cytology, UPJŠ FoS (in Slovak)
- CYP3A4 polymorphisms in tumor cells – Zuzana Balintová – 2016 – Genetics and molecular cytology, UPJŠ FoS (in Slovak)
- Phylogeography of *Erebia euryale* (Lepidoptera, Satyridae) in the Western Carpathians – Lenka Paučulová – 2012 – Genetics and molecular cytology, UPJŠ FoS (in Slovak)

prof. RNDr. Janka Vašková, PhD.

Bachelor's Thesis – Supervisor:

- Methods for detecting cell apoptosis – Eva Vavrečanová – 2010 – UPJŠ FM (in Slovak)
- Methods for detecting vitamins – Lucia Tuchyňová – 2010 – UPJŠ FM (in Slovak)

Bachelor's Thesis – Consultant:

- Integration of molecular elements into miniaturized systems – Marek Hruška – 2015 – UPJŠ FoS (in Slovak)
- Nanoscale sensor films for detection in biological systems – Miroslava Krajníková – 2015 – UPJŠ FoS (in Slovak)
- Ecophysiology of nutrition and digestion – Lea Kováčová – 2015 – biológia, FHPV PU (in Slovak)
- Stress and its impact on the physiological status in humans and animals – Zuzana Palenčíková – 2015 – biológia, FHPV PU (in Slovak)
- Selected molecular-genetic aspects of osteoporosis in postmenopausal women – Iné Minarčíková – 2021 – biológia, FHPV PU (in Slovak)

Master's theses – Supervisor:

- Observation of leukocyte changes in rats with mammary gland tumors using the comet assay method – Anna Cisnerosová – 2009 – Biology, UPJŠ FoS (in Slovak)
- Lipid profile of patients with various diseases – Viktor Radvanský – 2014 – General Medicine, UPJŠ FM (in Slovak)
- Monitoring the toxic effects of selected substances in vitro – Liliána Buzogánová – 2015 – General Medicine, UPJŠ FM (in Slovak)

- Effect of selected plant extracts on the activity of selenium-containing glutathione peroxidase – Michal Stanko – 2015 – General Medicine, UPJŠ FM (in Slovak)
- Effect of extraction method on the activity of berry extracts against selected reactive oxygen species – Maroš Sidun – 2016 – General Medicine, UPJŠ FM (in Slovak)
- Effect of synthetic substances on the activity of antioxidant enzymes – Tomáš Dubrovskij – 2019 – General Medicine, UPJŠ FM (in Slovak)
- Myeloperoxidase activity in the saliva of patients with periodontal disease – Frederik Filičko – 2022 – zubné lekárstvo, UPJŠ FM (in Slovak)
- Glutathione-S-transferase activity in saliva of patients with periodontal disease – Farah Salman – 2023 – Dental Medicine, UPJŠ FM

Master's theses – Consultant:

- Osteoporosis and osteoporotic fractures in relation to gastrointestinal diseases – Bc. Patrícia Dlugošová – 2021 – Biology, FHPV PU (in Slovak)
- Association of molecular-genetic and biochemical markers of osteoporosis in postmenopausal women in the Prešov Region – Bc. Mária Janigová – 2021 – Biology, FHPV PU (in Slovak)
- Association of the rs17289263 polymorphism of the CER1 gene with osteoporosis in postmenopausal women – Bc. Kristína Krajňáková – 2021 – Biology, FHPV PU (in Slovak)
- Monitoring of the G20210A (rs1799963) polymorphism for prothrombin in patients with atrial fibrillation – Bc. Eva Saxová – 2021 – Biology, FHPV PU (in Slovak)
- Statistics of cardiovascular diseases for the period 1997–2020 in the European context – Miroslava Hrabčáková – 2022 – Biology, FHPV PU (in Slovak)
- Bone density in relation to the onset and progression of osteoporosis – Alžbeta Lišková – 2022 – Biology, FHPV PU (in Slovak)
- Analysis of genetic markers in relation to osteoporosis and its complications – Michaela Petrušová – 2022 – Biology, FHPV PU (in Slovak)
- Polymorphic variants of the CER1 gene in the pathogenesis of osteoporosis – Samuel Liška – 2022 – Biology, FHPV PU (in Slovak)

RNDr. Jozef Židzik, PhD.

Master's theses – Supervisor:

- Polymorphisms of xenobiotic metabolism genes and chronic obstructive pulmonary disease – Bc. Michaela Čižmárová – 2011 – genetika a molekulárna cytológia, UPJŠ PF (in Slovak)
- Genetic susceptibility to chronic obstructive pulmonary disease – Diego Teixeira Faustino – 2012 – general medicine, UPJŠ FM
- Role of mutations in human pathogenesis – Ivana Petáková – 2014 – zubné lekárstvo, UPJŠ FM (in Slovak)
- Rare genetically determined human diseases with autosomal mode of inheritance – Diana Kobzošová – 2018 – General Medicine, UPJŠ FM (in Slovak)
- Human inherited disorders of hemoglobin – Rozalin Ghably – 2019 – general medicine, UPJŠ FM

- Rare genetically determined diseases in humans with gonosomal type of inheritance – Marián Žido – 2020 – General Medicine, UPJŠ FM (in Slovak)
- The role of telomerase in aging and cancer – Gökhun Onur – 2020 – General Medicine, UPJŠ FM
- Use of genetic markers in the diagnosis and treatment of breast and ovarian cancer – Bc. Monika Klimeková – 2021 – General Medicine, UPJŠ FM (in Slovak)
- CRISPR technology in treatment of trinucleotide repeat disorders – Ran Friedman – 2023 – General Medicine, UPJŠ FM
- Use of genetic markers in the diagnosis and treatment of colorectal cancer – Viktória Kudriková – 2023 – General Medicine, UPJŠ FM (in Slovak)
- Use of genetic markers in the diagnosis and treatment of lung cancer – Lenka Póšová – 2023 – General Medicine, UPJŠ FM (in Slovak)
- Genetics of Prader–Willi and Angelman syndromes – Mária Magyarová – 2024 – General Medicine, UPJŠ FM (in Slovak)
- Diseases with a matroclinous type of inheritance – Soňa Boháčová – 2024 – General Medicine, UPJŠ FM (in Slovak)
- Genetic testing and its application in clinical practice - Radoslava Kubaliaková– 2025 – General Medicine, UPJŠ FM (in Slovak)