

Fields of Master's Thesis

Department of Biochemistry and Biotechnology

1. The influence of quaternary ammonium ionic liquids (ILs) on growth and viability of *Pseudomonas aeruginosa*. (Dorota Narożna, associate professor, dorna@o2.pl)
2. Influence of humic acids on growth and modulation efficiency of *Bradyrhizobium japonicum* strains. (Krzysztof Pudełko, associate professor, kpudelko@o2.pl)
3. Elastin cross-links in mouse model of hyperhomocysteinemia. (Joanna Perła-Kajan, assistance professor, joanna.kajan@up.poznan.pl)

Department of Genetics and Animal Breeding

1. In vitro culture of individual bovine embryos in the time lapse system. (Izabela Szczerbal, associate professor, izabel@up.poznan.pl)
2. Identification of genetic or epigenetic factors involved in polyp progression in pig model of familial adenomatous polyposis (FAP). (Izabela Szczerbal, associate professor, izabel@up.poznan.pl)

Department of Genetics and Plant Breeding

1. Introduction of disease and pest resistance genes from wild *Brassica* species into selected *Brassica napus* cultivars.
2. Application of interspecific hybridization and embryo rescue technique in rapeseed resistance breeding.
3. Transfer of resistance genes to disease from wild species (*Aegilops*) to triticale.
4. Identification of molecular markers useful to MAS selection in wheat breeding. (Jerzy Nawracała, associate professor, jnawrac@up.poznan.pl)

Institute of Human Genetics, Polish Academy of Sciences

1. *ESR1* polymorphism analysis in patients with differentiated thyroid cancer. (Qualitative and quantitative assessment of DNA, melting curve analysis (HRM) and pyrosequencing, primers designing using BLAST tools and database support).
2. Possible modifier role of CD36 polymorphisms in Familial Adenomatous polyposis. (DNA isolation of patients peripheral blood, qualitative and quantitative assessment of DNA, melting curve analysis (HRM), comparison of the frequency between studied groups). (Szymon Hryhorowicz, assistance professor, szymon.hryhorowicz@gmail.com)