

***Essential non-saturated fatty acids of milk fat and milk quality of dairy cows in relation to production conditions and gene pool***

Coordinator of the project: Ing. Vladimír Foltys, PhD.

The objective is to study the composition of fatty acids in milk fat, mainly the non-saturated fatty acids, out of them linoleic acid, in relation to:

1. gene pool of the Slovak Pinzgau, Holstein and Slovak Spotted breeds as well as influence of fathers of dairy cows of these breeds,
2. production conditions – grazing, complete mixed ration and/or organic farming,
3. stage of lactation and changes in condition of dairy cows during lactation.

***Influence of selected implementors on fertilization capacity in rams' semen***

Coordinator of the project: Ing. Alexander Makarevic, DrSc.

Objective of the project is testing of selected substances (IGF-I, EGF, glutation, caffeine) as implementors for increase of fertilization capacity in spermatozoa.

***Bio-membranes: Structure and dynamics of biological membranes in relation to cell functions***

Coordinator of the project: RNDr. Ivan Hapala, CSc.

Principal investigator for APRC Nitra: Ing. Alexander Makarevixc, DrSc.

Objectives of the project:

1. Create VVCE as functioning network of scientific-research workplaces engaged in role of membranes in pathogenesis of serious disorders and in modern biotechnologies.
2. Improve social and professional conditions for doctoral students and post doctorands within VVCE.
3. Increase competitiveness of VVCE workplaces and create conditions for higher degree of integration into European research area.
4. Disseminate the obtained knowledge in various fields of biomedicine, agriculture and biotechnologies.

***Magnetic separation of animal cells for utilization in biomedical and agricultural area***

Coordinator of the project: Assoc. Prof. Ing. Peter Chrenek, DrSc.

Objective of the project is to use the method of magnetic separation to obtain rabbits' stem cells, and subsequently assess their quality by fluorescent and electron microscopy, to select annexin by magnetic separation.

***New dynamics in projects of knockout mice and of embryonic stem cell cultivations***

Coordinator of the project: Assoc. Prof. Ing. Peter Chrenek, DrSc.

Objective of the mobility project are short 10 days stays (2 times a year) to realize purpose modified experiments within running projects.

***Farm animal breeding systems using probiotics and plant substances with the objective to produce functional foodstuffs of animal origin***

Coordinator of the project: MVDr. Darina Pospíšilová, PhD, Assoc. Prof. Ján Rafay, CSc.

Objective of this project is to explore the influence of probiotics and plant substances administered to animals on composition of animal products for human consumption.