

# Animal Science, Biotechnology and Biodiversity

Prof. Dr. Komlósi István





Breeding



Reproduction



Technology



Animal Nutrition



Nature Conservation and Wild Life Management

# Members

- 3 Professors
- 4 Associate professors
- 6 Lecturers
- 1 Lecturer's assistant
- 2 Research fellows
- 30 PhD students

# Courses

- BSc in Nature Conservation (Hungarian, full-time, part-time)
- BSc in Wildlife Management (Hungarian, full-time, part-time)
- MSc in Nature Conservation (Hungarian, Full-time, part-time)
- MSc in Animal Husbandry (Hungarian, English full-time, distance)
- PhD in Animal Science (Hungarian, English, full-time, part-time)

# Main infrastructures

Laboratory of Molecular Biology and Proteomics

Laboratory of Aquaculture

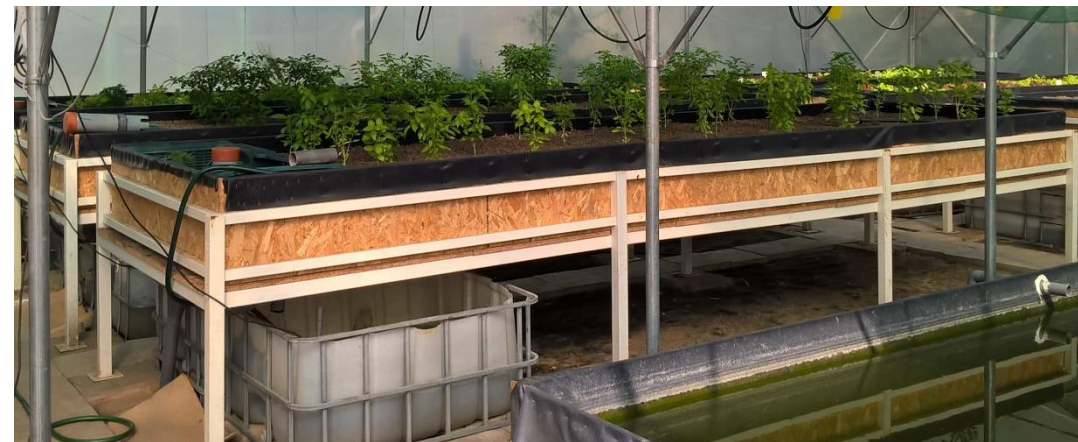
Experimental Animal House and Farm

Population genetic softwares

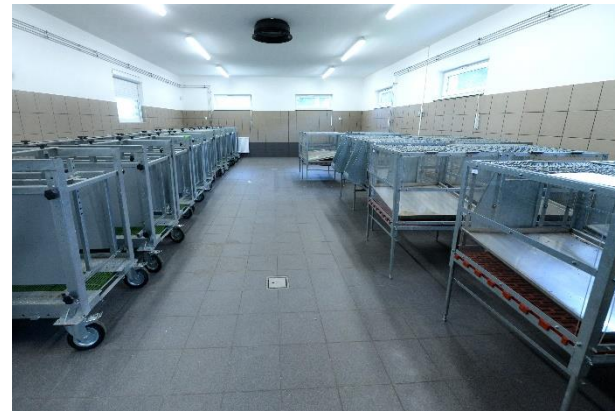
# Laboratory of Molecular Biology and Proteomics



# Laboratory of Aquaculture



# Experimental Animal House





# Present research topics - Molecular genetics

- Investigation of the genetic diversity of different wild and domesticated animal species
- Investigation of genes associated with heat stress in native breeds
- Expression study of genes encoding spinal deformity and growth in fish
- Improving the production parameters of domestic pigeons

# Present topics- Proteomics

- Investigation of proteome change and cytokine expression induced by bioactive plant components in poultry species
- Bioactive plant components for mitigation of inflammation and microbiom ecosystem
- Investigation of molecular biomarkers and bioactive substances in animal product production
- Nutritional programming of the embryo, gene expressions
- Effect of AS profile of food on growth and aging, description of biosynthesis
- Production of in vitro muscle cell culture

# Present topics- Quantitative genetics

- Pedigree analysis of domesticated animals
- Improvement of national cattle, horse and sheep breeding programs
- Conservation of local breeds

# Present topics - Animal Health and Reproduction

- Assisted reproduction technologies in horse and small ruminants
- Parasite control of small ruminants
- Factors in eradication programs (e.g. Salmonella)
- Hatching success in different bird species
- Microbiological status of animal products - One Health

# Present topics - Aquaculture

- Development of aquaponic plant production technologies
- Combined (intensive-extensive) breeding-rearing technologies of different fish species
- Insect proteins and zooplanktons in fish nutritions

# Present topics - Nutrition

- Amino Acid contents in feed and food by photometric methods
- Plant extracts to improve immunity and nutritional value of the fish
- Heat stress mitigation diets for poultry
- Bioconversion of nanoselenium

# Present topics - Nature conservation and wildlife management

- Monitoring of the migration of birds and invading species
- Wild animal and human interaction in settlements (behaviour, health)
- Arable land for wild animals
- **ASP control in wild boars**
- Climatic effects on pastures under protection
- Meat quality of wild animals