INSTITUTE FOR VETERINARY MEDICAL RESEARCH

http://aoti.atk.hu/en

- **Located in Budapest**
- **Member of the Eötvös Loránd Research Network**
- **63 employees of which 40 researchers**
- **54 publications (2019)**
- **2522 citations (2019)**
- **Impact Factor: 132.5 (2019)**

The **Institute for Veterinary Medical Research** is open to further joint research activities at international level.

For any additional information on possible international cooperation please contact Mr. Miklós GYURANECZ at gyuranecz.miklos@vmri.hu.

The Institute is the sole research facility with principal dedication to veterinary science in Hungary, and is a cornerstone to molecular microbiological investigations in this field. Its fundamental purpose is basic research for gaining better knowledge on pathogens (viruses, bacteria, parasites) with significance in veterinary medicine. Another principal task is to prepare the practical implementation of the results, as well as to develop effective diagnostic methods, vaccines and defensive strategies against diseases. Researchers of the institute have a significant role in higher education of agriculture and sciences, principally in postgraduate training as well as vocational training of veterinarians.

Research teams

Virology
- Functional Virology Research Team
- Molecular and Comparative Virology Research Team

Bacteriology
- Enteric Bacteriology and Food-borne Zoonosis Research Team
- Respiratory Bacteriology Research Team
- Zoonotic Bacteriology and Mycoplasmatology Research Team (Momentum)

Parasitology
- Fish Parasitology Research Team
- Fish Pathology and Parasitology Research Team

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The main area of research of the **virology teams** in the Institute is some of the significant viral diseases of domestic animals. Analysing the immunological characteristics as well as the genomes of the viruses on the molecular level paves the way to developing new diagnostic methods and vaccines. Their studies also help in molecular epidemiological investigations, and in establishing a taxonomy which accurately reflects the phylogenetic relations of viruses.

The task of the **bacteriological and mycoplasmatology research teams** is to investigate bacteria and Mycoplasma which have significance in both human and animal healthcare. They characterize their virulence and their genetic background, as well as the potential use of this knowledge in disease prevention and diagnostics, with special emphasis on food safety and the prevention of infections spreading from animals to humans.

The purpose of the **fish pathology and fish parasitology research teams** is the regular investigation of fish from natural waters (the Danube, Lake Balaton and their water system) and also from fish farms. Their further tasks are the assessment of damage caused by parasites, studying the effects of pathologically significant parasites on the host, as well as experimental and molecular study of the ontogenesis, pathology and diversity of parasites belonging to Myxozoa and Coccidia.

In the institute **two Lendület ('Momentum') research teams** operate as well. Krisztián Bányai started a research group on new topics in 2011 which aims at assessing the diversity of pathogenic viruses and other microbes. In the case of novel described microbes they investigate their roles in pathogenesis, and identify pathogens associated with diseases using next generation sequencing methods. Miklós Gyuranecz started the Zoonotic bacteriology and mycoplasmatology 'Momentum' research group in 2012. The team studies pathogens capable of infecting both animals and humans. These so-called zoonotic pathogens are responsible for human diseases originating directly or indirectly from animals. He endorses the view 'One World – One Health', according to which human and animal healthcare cannot be separated, a notion which is increasingly accepted worldwide. Furthermore, Gyuranecz is involved in mycoplasmatology as well, investigating the smallest bacterial pathogens.

Human resources

In 2019 the average number of employees was 63, of which the number of researchers was 40. 52% of the researchers were women. 1 was Full or Corresponding Member of the Hungarian Academy of Sciences, 3 held the title of Doctor of the Hungarian Academy of Sciences, and 21 had a PhD. The rate of young researchers (under 35) was 35%.

List of articles on the main achievements of the Institute in 2020

- Recombination events shape the genomic evolution of infectious bronchitis virus in Europe (link)
- Digenean trematodes in Hungarian freshwater aquacultures (link)
- Antimicrobial susceptibility monitoring of *Mycoplasma hyopneumoniae* isolated from seven European countries during 2015 – 2016 (link)
- Genomic characterization of avian and neoavian orthoreoviruses detected in pheasants (link)

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