«Agribusiness, Environmental Engineering and Biotechnologies»
AGRITECH-III 2020

«Virological research as an integral part of complex monitoring of fish diseases»

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Problem statement

- The most effective way to combat diseases of any etiology can be considered a comprehensive diagnosis, one of the components of which is virological research.
- The purpose of this article is a comparative analysis of the results of epizootological monitoring of viral fish diseases in Russia in 2001-2008 and 2009-2019
Solution methods

• **2.1 Virological studies.** Samples of the liver, kidneys and spleen were taken from fish in sterile vials with the medium MEM. The material was passed in cell cultures.

• **2.2 Cell culture.** For virus release from pathological material and passivation of culture viruses, we used finite cell lines.

• **2.3 Bioassay**

• **2.4 Enzyme linked immunoassay (ELISA)** of tissue biomaterial and viral-culture suspension was performed using kits developed in the laboratory of ichthyopathology in FSC VIEV for the identification of SVC, IPN, IHN and VHS pathogens.

• **2.5 Polymerase chain reaction (PCR).** PCR was performed using the methods and primers proposed by the OIE and the author's design.
Conclusions

Results, implementation

- In the early 2000s, there were no Russian test systems for detecting fish viruses, the work was carried out in cell cultures and in the neutralization reaction, which is effective, but the result was obtained no earlier than 10 days, simultaneously with the release of the virus in the cell culture, which undoubtedly increased the time of diagnosis.

- In 2009, the addition of existing methods to polymerase chain reaction and enzyme linked immunoassay methods made it possible to detect not only open forms of the disease, but also virus carriers, which is the most important information in the organization of cross-border transport of hydrobionts.

- Systematic comprehensive diagnostic studies in fish farms have allowed us to get a clear idea of the epizootic situation and identify areas of trouble for viral fish diseases and take timely measures to stop the disease.
Contacts

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