

MOLECULAR GENETIC DIAGNOSTICS AS A METHOD FOR DETERMINING THE CARRIAGE OF BACTERIAL PATHOGENS INFECTIONS INTO WILD WATERFOWL BIRDS

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The material contains the information of using the methods of molecular genetic diagnostics for determining the carriage of bacterial pathogens infections into waterfowl birds

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Molecular genetic diagnostics is one of the methods of laboratory diagnostics, which is characterized by high accuracy and efficiency. Molecular diagnostics of the collected samples makes possible to determine the carriage of bacterial pathogens, even if they have a low concentration in the selected biological material. These methods have several advantages over other, more traditional laboratory methods (serological, bacteriological). Unlike methods which are based on work with bacterial cells, molecular genetic diagnostics is aimed at finding material that indicates the presence of pathogenic bacteria.

One of the high-precision methods of molecular genetic diagnostics is the polymerase chain reaction method, which is based on the direct determination of the pathogen in the test material. Diagnostic systems which are based on polymerase chain reaction and which is intended to identify etiologic agents of the disease directly from clinical samples without the need for its cultivation are relevant. This relevance increases if it is necessary to quickly detect uncultivated microorganisms or microorganisms which require special conditions for cultivation. In addition, the analysis of the sequence of amplified bacterial DNA allows to identify and complement the characteristics of the known pathogen. It becomes obvious that the variation of the subspecies which is determined by various methods plays an important role in the prognosis of a number of other diseases.

The causative agents of bacterial infections of wild waterfowl pose a threat to both domestic bird and human health. Infectious diseases that wild waterfowl can carry cause similar diseases among people. The study of the mechanism of occurrence and transmission of bacterial infections of wild and domestic birds is interesting for specialists in microbiology, veterinary medicine and medicine. We want to pay particular attention to the possibility of molecular genetic diagnostics as a method for determining the carriage of bacterial infections of wild waterfowl birds in connection with the relevance and advantages of using these methods which were described above.

For today, we do not have enough information and scientific data on the spread of infectious pathology among wild waterfowl birds and their role as carriers of pathogenic bacteria. All this is the reason to pay more attention to this problem.

Using of molecular genetic diagnosis allows us to assess the epizootic situation for bacterial diseases of wild waterfowl birds, to analyze the occurrence of bacterial infections among populations of these species of hunting fauna.

Bacterial infections monitoring is a special precaution of environmental safety; it is a method of reducing the risks of infection of animals and humans by bacterial diseases.

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