

Application of DNA vaccines in fish

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Abstract

Vaccination is a most cost-effective way of controlling infectious diseases in fish. However, some vaccination techniques when applied to hatchery conditions are not as effective as we expect them to be. Modern molecular biology techniques offer a number of opportunities for improving existing bacterial or viral vaccines or creating new ones. One of the most promising trends in vaccinology is development of DNA vaccination. DNA vaccines are based on the gene encoding specific antigen, which is expressed in vaccinated organism and induces the host immune system. DNA vaccines, compared to conventional vaccines, have many advantages including ability to trigger wider immune response, bigger stability and possibility of large-scale production. To date, there are several reports indicating effectiveness of DNA vaccines used against fish pathogens.

Key words: fish, DNA vaccine