Abstract

The rise of aquaculture has been one of the most significant changes in global food production over the last 100 years. Driven by rising demand for seafood, the growth of population, the farming of aquatic animals has expanded rapidly to become a major global industry.

A number of aquatic animal species is kept in high densities in freshwater, brackish and marine systems where they are exposed to a new environment and potentially new diseases.

On-farm stresses may negatively affect their ability to defeat infection. Impefect farming practices often facilitate fast transmission of disease. Viral pathogens, whether they have been known for decades or whether they are newly emerging, are particularly challenging since there are few, if any, efficacious treatments. The development of effective viral vaccines for delivery in aquatic systems still remains almost elusive.

This thesis reviews a few of the more significant Rhabdoviral pathogens of finfish, their impacts, their prevention and the protective immune mechanisms that fish mount in response to rhabdovirus infections.