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Viral haemorrhagic septicaemia in Norway – possible interactions between farmed and wild fish

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VHS (viral haemorrhagic septicaemia) was detected in a Norwegian rainbow trout farm in 2007, the first case for more than a decade. The disease was also diagnosed in two other farms in the vicinity (the same fjord system) in 2007, in further two farms in 2008, and one farm in 2009. VHS virus was cultured and sequenced from each outbreak and all isolates from farmed fish have been found to belong to genotype III, the first detection of genotype III in rainbow trout. The source of the virus is not known, but because of the genotype of the causative virus, and the highest sequence similarity is observed with VHSV isolates from northern European waters, a marine source is most likely. Results from challenge experiments with marine fish larvae of this and other VHS isolates is presented. Globally, VHSV has been isolated from 82 different freshwater and marine fish species. It has been hypothesized that cultured and susceptible fish, such as rainbow trout, may be infected by wild marine fish, with subsequent proliferation of the agent within farms, followed in turn by increased challenge pressure from the farms towards wild populations. Thus, a screening of wild fish so far comprising about 2000 fish from a variety of species in Norwegian coastal waters was initiated, and tentative results will be described.

Keywords: aquaculture, disease, transmission, VHSV, wild fish.

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