

Sublethal concentrations of ichthyotoxic alga *Prymnesium parvum* affect rainbow trout susceptibility to viral haemorrhagic septicaemia virus - DTU Orbit (08/11/2017)

Sublethal concentrations of ichthyotoxic alga *Prymnesium parvum* affect rainbow trout susceptibility to viral haemorrhagic septicaemia virus

Ichthyotoxic algal blooms are normally considered a threat to maricultured fish only when blooms reach lethal cell concentrations. The degree to which sublethal algal concentrations challenge the health of the fish during blooms is practically unknown. In this study, we analysed whether sublethal concentrations of the ichthyotoxic alga *Prymnesium parvum* affect the susceptibility of rainbow trout *Oncorhynchus mykiss* to viral haemorrhagic septicaemia virus (VHSV). During exposure to sublethal algal concentrations, the fish increased production of mucus on their gills. When fish were exposed to the algae for 12 h prior to the addition of virus, a marginal decrease in the susceptibility to VHSV was observed compared to fish exposed to VHSV without algae. If virus and algae were added simultaneously, inclusion of the algae increased mortality by 50% compared to fish exposed to virus only, depending on the experimental setup. We concluded that depending on the local exposure conditions, sublethal concentrations of *P. parvum* could affect susceptibility of fish to infectious agents such as VHSV.

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