

Workshop: Amoebic Gill Disease

Organisers:

Barbara Nowak (University of Tasmania, Launceston, Australia) and H. Rodger (Vet-Aqua International, Oranmore, Ireland)

Amoebic gill disease (AGD) is a condition affecting some species of farm-reared marine fish caused by *Neoparamoeba perurans*. AGD was initially reported only in Australia and USA but by now it has a significant impact on salmon production in Australia, Scotland, Norway and Ireland. Main treatments used commercially include fresh water and hydrogen peroxide. A range of other treatments are in experimental trials. Other management strategies such as use of vaccines and immunostimulants are being explored. AGD has been observed in a range of fish species farmed or held in the marine environment including wrasse and lumpsucker, which are used as cleaner fish to control sealice on Atlantic salmon. There is limited knowledge about the causative agent *Neoparamoeba perurans*. Reservoir populations of the amoeba and the mechanism of transmission to farmed fish have not been elucidated. While it is present in water it is only at a very low concentration, even on the affected salmon farms. Preliminary investigation showed negative results for sediments and biofouling organisms in AGD affected area in the USA. However *N. perurans* DNA was detected in alcoholic washings of salmon lice *Lepeophtheirus salmonis* collected from salmon from an affected farm in the USA. It has also been detected in biofouling organisms and *L. salmonis* in Ireland. Furthermore cross-infection with another species of sea lice *Caligus rogercresseyi* was reported during an AGD outbreak in Chile, however it was not clear if there was any synergistic effect and if the mortalities were due to AGD or the sea lice infection. This suggests that epidemiology of this disease may depend on the geographical locations. The effect of the disease on host at gene and protein level as well as AGD pathology will be discussed. This workshop will review and summarise our current knowledge of this disease and discuss research priorities.