

SOME REGULATORY ISSUES RELATED TO PERKINSOSIS

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Perkinsosis is one of the OIE listed diseases of molluscs caused by *Perkinsus marinus* and *P. olseni*. Consequently, molluscs originating from endemic areas should not be transferred into areas free of the disease. Impediments to the implementation of international zoosanitary regulation will be reviewed.

Perkinsus atlanticus infects *Tapes decussatus* in Europe. Nucleotide sequences of the internal transcribed spacers (ITS) in the ribosomal gene cluster (rDNA), indicate that *P. atlanticus* is probably conspecific to *P. olseni*. Given the geographical distribution of the *olseni/atlanticus* complex, occurring from Pacific Islands through Australasia, Southeast Asia, to Europe, one could question whether this pathogen fulfils OIE listing criteria. However, within the geographic range of *P. marinus*, differences in virulence between isolates were demonstrated, suggesting the existence of several strains of this parasite with different genetic composition, geographic distribution and virulence. Thus, evaluation of risk associated to transfers of stocks should probably not take into account only the specification of pathogens but genotypes of both hosts and pathogens.

Understanding the taxonomy of disease organisms can be an important consideration for development of accurate and sensitive diagnostic methods, which are important for disease control in molluscan aquaculture. For example, although currently placed in the phylum Apicomplexa, recent phylogenetic investigations indicate that the genus *Perkinsus* may be more closely related to the Dinoflagellida. Polyclonal antibodies were developed for detection of *P. marinus* and initially tested only against apicomplexan species, although more recently, cross-reaction was observed with many dinoflagellates. Similarly, it is usually asserted that enlargement and staining by the Ray Fluid Thioglycollate Medium technique are specific for *Perkinsus* at a genus level. However, the RFTM culture assay of phytoplankton, containing dinoflagellates yields positive results. This raises the question of RFTM as a standard method for *Perkinsus* spp. diagnosis. Moreover, it has been shown that two species, *Perkinsus marinus* and *P. chesapeaki*, can co-infect a mollusc species in a particular area.

It is expected that molecular taxonomic and epidemiologic data can help to address some of these issues by clarifying taxa boundaries and providing detection tools to prevent the transfer of infected stocks to disease free areas.