

The emergence of new *Vibrio* species as fish pathogens

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The type cultures of *Vibrio brasiliensis*, *V. coralliilyticus*, *V. ezurae*, *V. fortis*, *V. kanaloaei*, *V. neptunius* and *V. rotiferianus* were pathogenic to rainbow trout and *Artemia*, with the mode of action reflecting the presence of toxic extracellular products, which are present in culture supernatants. It is noteworthy that *V. coralliilyticus* killed rainbow trout within 24 h at the highest dose, with diseased fish developing pronounced neurological signs. The kidneys were liquefying and contained dense numbers of bacteria as determined by the subsequent growth on tryptone soya agar supplemented with 1% (w/v) sodium chloride. Ascites accumulated in the peritoneal cavity. Also, *Artemia* died within 24 h. The extracellular products (ECPs), which contained phospholipase, lipase, caseinase, elastase, gelatinase and β -haemolysin, were highly toxic to both fish and *Artemia nauplii*. In fish, there was extensive muscle necrosis with haemorrhaging. *V. fortis* LMG 21557^T and *V. kanaloaei* killed fish and *Artemia* at the lowest dose of 10^2 cells/animal. Again, the ECPs were toxic, and contained a wide range of enzymic activity. Certainly, it is clear that some of the newly described vibrios have the potential to kill fish and crustaceans. The significance of the coral pathogen *V. coralliilyticus* to aquaculture is now becoming realized as isolates have been recovered from diseased fish. The impact of these vibrios on aquaculture remains to be determined.