

Some virulence characteristics of *Aeromonas hydrophila* in walking catfish (*Clarias gariepinus*)

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Abstract

Aeromonas hydrophila isolated from diseased walking catfish from West Java, Indonesia was studied for its virulence using the following parameters: biochemical characteristics, presence of haemolysin genes by DNA-DNA hybridization, haemolytic activity, protein analysis by SDS-PAGE and LD₅₀. The results showed that many strains of *Aeromonas hydrophila* with differing virulence are present in the aquatic environment of this region. The virulent strains possess haemolysin genes and showed a 52-kDa band in SDS gel. The bacteria could lyse erythrocytes not only from fish but also from sheep, man, cow, horse and rabbit. They caused severe skin and muscle lesion at the injected sites of catfish fingerlings and remained in their ulcerative tissues, liver and kidney until 5 days after intramuscular injection. Fish began to die at 18 h after the bacterial injection. It is concluded that the outbreak of such disease in walking catfish in Java in 1980 could be attributed to these virulent strains of *Aeromonas hydrophila*.

Author Keywords: *Aeromonas hydrophila*; *Clarias gariepinus*; Diseases and their control - fish; Bacteria; Haemolysis

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