

**Diagnosis and potential treatments for acute hepatopancreatic necrosis disease (AHPND):
a review**

ABSTRACT

Acute hepatopancreatic necrosis disease (AHPND) or formerly known as early mortality syndrome (EMS) is an emerging disease that has caused significant economic losses to the aquaculture industry. The primary causative agent of AHPND is *Vibrio parahaemolyticus*, a Gram-negative rod-shaped bacterium that has gained plasmids encoding the fatal binary toxins Pir A/Pir B that cause rapid death of the infected shrimp. In this review, the current research studies and information about AHPND in shrimps have been presented. Molecular diagnostic tools and potential treatments regarding AHPND were also included. This review also includes relevant findings which may serve as guidelines that can help for further investigation and studies on AHPND or other shrimp diseases.

Keyword: Acute hepatopancreatic necrosis disease (AHPND); Diagnosis; Pir A; Pir B; Treatment