

**ISOLATION OF A LUMINOUS BACTERIUM THAT CAUSES HEAVY MORTALITIES IN HATCHERY REARED POST LARVAE OF SHRIMP, *Penaeus monodon* IN SRI LANKA AND AN ATTEMPT TO PRODUCE VACCINES AGAINST THE BACTERIUM**

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Disease outbreaks, detected by a large number of luminescence post larvae in larval rearing tanks followed by heavy mortalities, have been recorded in most of the shrimp hatcheries in Sri Lanka. Broad spectrum antibiotics, probiotics, and occasionally, imported vaccines have been used indiscriminately to control the disease. During the present study, the bacterium causing luminescence in post larvae with heavy mortalities was isolated from seven shrimp hatcheries situated in the North Western Province, characterized, and identified as a strain of *Vibrio harveyi* using standard microbiological tests and biochemical reactions of bacteria including the tests incorporated to API 20 E rapid diagnostic system. Formalin killed and heat killed vaccines were prepared using the isolated strain of *Vibrio harveyi* and two groups of eighteen days old healthy post larvae (Pl<sub>18</sub>) were vaccinated with the two vaccines separately by immersion technique. Efficacy of both vaccines was then evaluated by challenging vaccinated post larvae after a week 2 weeks and 3 weeks from vaccination with the same bacteria in live form. Mean percentage survival of post larvae vaccinated with formalin killed vaccine and heat killed vaccine were 81.62% and 80.22 % respectively which were significantly higher (  $P < 0.05$ ) than that of the unvaccinated post larvae used as the control (35.21 % and 37.89 %).