



ISOLATION OF MARINE ACTINOMYCETES AND ITS ACTIVITY ON MULTIDRUG RESISTANT LUMINESCENT BACTERIA AND YELLOW HEAD VIRUS AFFECTING *Penaeus monodon*

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ABSTRACT

India is one of the leading suppliers of shrimps in the world market. High prices have benefitted the industry as well as farmers. In 2014-15, seafood exports touched Rs 18,856 crore (\$3.5 billion). Of the total seafood exports, around 65% revenue has come from shrimp alone. However, the global shrimp culture has faced with serious economic losses annually caused by disease outbreaks. Among the causative agents, bacteria and virus are regarded as the most threatened accounting for 60% losses. Luminescent bacteria and Yellow Head virus were found to affect adult shrimp causing Luminous Bacterial Disease and Yellow Head Virus Disease. Antibiotics have played an important role in controlling vast variety of diseases, which were previously thought to be untreatable. The recent studies on the rare Actinomycetes have revealed that they are capable of producing compounds which act against multi-drug organisms. The main objective of the project is to isolate marine Actinomycetes strains from soil along various coastal regions in Tamil Nadu and screen for the most active antimicrobial compound producing strains. The secondary metabolites synthesised from active strains are used to check the antibacterial and antiviral activity against these disease affecting *Penaeus monodon*.

Keywords: Marine Actinomycetes; *Penaeus monodon*; Luminescent bacteri; Yellow Head virus; metabolites; antibacterial; antiviral.

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