

# CHARACTERIZATION OF BACTERIA ISOLATED FROM *PENAEUS MONODON* DIGESTIVE TRACT WITH CYTOTOXIC EVALUATION

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## ABSTRACT

A gram negative, motile, lactose fermenting, *Pseudomonas aeruginosa* was isolated from the dissected digestive tract of *Penaeus monodon* by plating the sample onto an agar solidified LB medium. The optimum growth of the bacteria was observed at pH 7.5 and at temperature 30<sup>0</sup>C. Cytotoxic effect of bacteria and bacteriocin was tested on *Artemia salina* through LC<sub>50</sub> to evaluate whether they have any beneficial effect or not. LC<sub>50</sub> for bacteria was 205.9645 µl (O.D.=600) and the regression equation was  $Y = -1.064911 + 2.621199 X$ , while the 95% confidence limits are 143.3878 to 295.8508 µl for 12h exposure. Whereas for bacteriocin LC<sub>50</sub> was 65.65591 µl and the regression equation was  $Y = 2.166407 + 1.559255 X$ , while the 95% confidence limits are 25.40323 to 69.691 µl for 6h exposure only. So, the bacteriocin has adverse effect on *Artemia salina* and the bacteria showed resistant against Gentamycin, Ceftazidime and Nalidixic acid and the MIC value was 12.5 µg/ml against Gentamycin.

**KEYWORDS:** Bacteriocin, Cytotoxicity, LC<sub>50</sub>, *Penaeus monodon*, *Pseudomonas aeruginosa*