

Chapter 3

Objective

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V. parahaemolyticus is a highly diversified species and the diversity within species is due to the homologous recombination by acquiring DNA from the environment. The pathogenic and pandemic strain of *V. parahaemolyticus* emerged from nonpathogenic *V. parahaemolyticus* strain. The 1st pandemic strain of *V. parahaemolyticus* reported from India followed by other parts of the world. However, the genetic diversity, distribution of virulent genes and the pathogenicity of *V. parahaemolyticus* has not been studied well in India.

Realizing its serious outbreak nature and mortality rate; the genetic diversity, pathogenicity of *V. parahaemolyticus* was studied with the following objectives:

1. **To study the prevalence of *Vibrio parahaemolyticus* in fish and shellfish in India.**
2. **To study the genetic diversity of *Vibrio parahaemolyticus* in India.**
3. **To understand the molecular basis of pathogenesis mechanisms during the infection process.**