CHAPTER 4
PATHOGENICITY OF Vibrio alginoliticus ON THE POST LARVAE OF Macrobrachium rosenbergii

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INTRODUCTION

Giant freshwater prawn is one of the most important freshwater crustacean species in many countries, not limited to its natural habitat but extending beyond it, due to its high commercial value and its ability to survive in a wide range of salinities (Abdolnabi et al., 2015). Global production steadily increased to over 233, 898 tonnes in 2016 (Food and Agriculture Organization, 2019). In contrast, the production in Malaysia showed instability and declined in 2016 compared to 2015.

Factors limiting giant freshwater prawn production are not solely attributed to the challenges in controlling environment parameters. The intensification of aquaculture activities, especially for an important freshwater species has caused stress in prawns, leading to disease infections by bacteria, viruses, protozoa and fungi (Ayalew & Fufa, 2018). While most of the diseases are primarily caused by virus infections, bacterial infections cannot be ruled out.

Vibrio is a type of bacteria commonly found in apparently healthy prawns. These bacteria co-exist with the host without causing disease, but under certain condition, they can produce enzymes known to be important virulent factors such as caseinase, gelatinase and lecithinase (Nguyen Vu, et al., 2017). For this reason, *Vibrio* is considered a major threat to the commercial cultivation of *M. rosenbergii* aquaculture,