

Isolation and Characterisation of Bacteria and Fungus from the Intestine of Sea Cucumber *Acaudina molpadioides*

ABSTRACT

Acaudina molpadioides locally known as 'beronok' is a high valued sea cucumber that is widely distributed in the muddy shores in the west coast Peninsular Malaysia and being consumed by the local people as traditional healthy delicacies. They are made into dishes and are usually consumed raw as 'kerabu'. The aim of this study was to isolate and characterise the bacteria and fungus from the intestine of *A. molpadioides* using standard method for biochemical tests, safety assessments and molecular identification. A total of 100 samples were collected randomly from Pulau Langkawi, Malaysia and 1642 isolates were obtained from the intestine. Biochemical tests, safety evaluation and molecular identification were performed. Six strains (AM8h, AM47e, AM59a, AM67d, AM80d, and AM84d1) were selected for characterisation as they showed distinct morphology and from the biochemical tests. Further molecular identification showed the strains were identified as *Priestia megaterium*, *Carnobacterium maltaromaticum*, *Bacillus tropicus*, *Staphylococcus saprophyticus*, *Bacillus cereus*, and *Yarrowia lipolytica* (GenBank accession number: MZ947169, MZ934727, MZ947170, MZ934728, MZ934726, and MZ956769). The results indicated that both bacteria and fungus were present in the intestine of *A. molpadioides*, hence there is a need for adequate measures in consuming this sea cucumber raw.