

Cloning sequencing and characterization of lipopolysaccharides genes of *Vibrio alginolyticus*

ABSTRACT

Bacterial lipopolysaccharides are the major outer surface membrane components present in almost all Gram-negative bacteria and act as extremely strong stimulators of innate or natural immunity in diverse eukaryotic species ranging from insects to humans. The DNA sequence of the O-antigen biosynthesis cluster of a putative probiotic and pathogenic strain, *Vibrio alginolyticus* has been determined. Here, we report the sequence of the LPS biosynthesis genes, *wzm*, *wzt* and *wbil* and the analysis of the genes using Biology Workbench 3.2. From the study, it shows that the sequences of LPS genes in *V. alginolyticus* are highly homologous to the LPS genes in *Vibrio cholerae* isolates with more 80% homology. However, several variants of the *wbil* sequence have been found in the *V. alginolyticus* isolates compared to the other genes, *wzm* and *wzt*.

Keyword: *Vibrio alginolyticus*; Lipopolysaccharides; Cloning; Sequencing; Primer; Genes