

The pathogenicity island VPI2 of the Amazonia strain of *Vibrio cholerae*

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The Amazonia strain of *Vibrio cholerae* was isolated in 1991 from cholera patients in Brazil. It is a O1 serovar non-toxigenic and non-TCP producing strain. Even though these major virulence factors are not present, other virulence factors such as hemolysin and neuraminidase are. A pathogenicity island (VPI-2) is present in the Amazonia strain. VPI-2 carries several gene modules, one for a restriction and modification system, another for aminosugars metabolism, the neuraminidase gene, and a region of phage-related genes. It was previously thought that VPI-2 was present only in toxigenic strains, and its presence in the non-toxigenic Amazonia strain is relevant. Here we analyze two regions of VPI-2 of the Amazonia strain (~50kb) which are different in this strain in a comparison to the sequenced El Tor N16961 strain. One region is in the left part, where we found two insertion sequences, one inserted in VC1760, and another in VC1762. The other region analyzed was the right region, contained in a 28kb PvuII fragment, where we found the absence of the phage related genes. In addition we also found a gene duplication of gene VC1808. The normal copy with a sequence identical to VC1808 was found, but also a second degenerate copy, which could be involved in the complex structure found for the Amazonia VPI-2.

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