

Accessory toxins of vibriopathogens and their role in epithelial disruption during infection

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Gastrointestinal episodes associated with *Vibrio* species have been rising worldwide in the last few years. Consequently, it is important to comprehend how occurs the production of diarrhea, to establish new preventive and therapeutic measures. Besides the classical CT and TCP toxins, Zot, RTX, and Ace among others have been deeply studied in *V. Cholerae*. However, in other *Vibrio* species of clinical interest, where some of these toxins have been reported, there is practically no information. Zot activates a cascade of signals inside of the cell that increase the permeability of epithelial barrier, while RTX causes depolymerization of the actin cytoskeleton and Ace increases the permeability of intestinal cell monolayers. The goal of this study is to acquire information about the distribution of these toxins in human pathogenic *Vibrios* and to review the progress in the study of their role in the intestinal epithelium during infection. © 2007-2018 Frontiers Media S.A. All Rights Reserved.

Ace

Intestinal epithelia

RTX

Tight junctions

Toxins

Vibrio

Zot

ace toxin

bacterial toxin

cholera toxin

cholix toxin

heat stable enterotoxin

hemagglutinin

proteinase

repeats in toxin

tight junction protein

toxin coregulated pilus

unclassified drug

zonula occludens toxin

cell disruption

human

infection

intestine epithelium

nonhuman

organismal interaction

pathogenesis

pathogenicity

permeability barrier

protein function

Review

Vibrio

Vibrio cholerae

vibriosis