

## عنوان مقاله:

The role of CTX and satellite RS1 phages genomic arrangement in *Vibrio cholerae* toxin production in two recent cholera outbreaks (2012 and 2013) in IR Iran

## محل انتشار:

بیستمین کنگره بین المللی میکروب شناسی ایران (سال: 1398)

تعداد صفحات اصل مقاله: 1

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## خلاصه مقاله:

**Introduction and Objectives:** The objective of the present study was to investigate the genomic arrangement of CTX/RS1 prophages in 30 *V. cholerae* from 2 consecutive year's outbreaks and to compare the role of different CTX/RS1 arrangements in cholera toxin expression among El Tor strains. **Materials and Methods:** A total of 30 *V. cholerae* strains from cholera patients of Iran 2012 and 2013 outbreaks were included in this study. The identity of strains was confirmed by Biochemical and molecular methods. southern blot technique was used for determining Copy number of CTX and satellite RS1 phages. cholera toxin expression was evaluated by Real-time PCR method. **Result:** Profile A with TLC-RS1-CTX-RTX arrangement was observed in 46.7% of total isolates with RS1 phage locating adjacent to TLC element. Fifty percent of isolates showed profile B with TLC-CTX-RS1-RTX arrangement and one single isolate (3.3%) revealed TLC-CTX-RS1-RS1-RTX arrangement (profile C). No RS1 element was detected adjacent to TLC element in B and C profiles. No truncated CTX phage genome was detected among isolates of 2 years. Different CTX-RS1 arrangement profiles (A, B and C) with different RS1 copy numbers and locations, uniformly showed low cholera toxin production level in El Tor strains with no significant differences, which reveals that different RS1 copy numbers and locations do not affect cholera toxin production level ( $P$ -value > 0.05). Instead, increased cholera toxin expression was observed for control Classical biotype *V. cholerae* strain. **Conclusion:** variations in RS1 prophage did not affect CT expression level in related El Tor *V. cholerae* strains. CTX genotyping establishes a more valuable database for epidemiologic, pathogenesis and source tracking purposes.

## کلمات کلیدی:

*Vibrio cholerae*, CTX phage, RS1, Iran, Toxin Production

## لینک ثابت مقاله در پایگاه سیویلیکا:

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