

## عنوان مقاله:

Expression of Virulence Factors of Clostridium difficile at sub-Minimum Inhibitory Concentration of Antibiotics; a Review

## محل انتشار:

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

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## خلاصه مقاله:

**Introduction and Objectives:** Clostridium difficile (C. difficile) generally colonizes in the intestinal tract of hospitalized patients who receive antibiotics for a long time. C. difficile expresses its virulence factors which are associated with pathogenesis. Naturally, the expression of these virulence factors may be influenced by antibiotics. **Materials and Methods:** The databases (PubMed, ScienceDirect, google scholar and so on) were searched by appropriate criteria. **Results:** The effect of antibiotics has investigated at a sub-minimum inhibitory concentration (MIC) on virulence factors. The expression of virulence factors of C. difficile was varied and depended on the type of antibiotic and C. difficile isolate. Some of the antibiotics at sub-MIC upregulated virulence factors and, while others downregulated theirs. Meanwhile, some antibiotics had no detectable effects on the regulation of virulence factors. Most of the antibiotics at sub-MICs regulate genes expression of virulence factors, toxin production, spore formation, and germination by several mechanisms especially SOS response system. **Conclusion:** In order to achieve a clear understanding of the effect of antibiotics at sub-MIC on the expression of genes of virulence factors, which are related to the pathogenesis of C. difficile, further and wider investigations are needed, especially on the issue of the numbers of isolates.

## کلمات کلیدی:

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