

عنوان مقاله:

The effect of Satureja essential oils on *Pseudomonas aeruginosa* virulence factors

محل انتشار:

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

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خلاصه مقاله:

Introduction and Objectives: *P. aeruginosa* is one of the most common opportunistic bacteria in nosocomial infections, which has a significant resistance to antimicrobial agents. Due to restrictions in the use of antibiotics, the tendency to replace them with natural products is increasing. In this study, evaluated the antimicrobial effects of 4 species of Satureja essential oils (*S. mutica*, *S. bachtiarica*, *S. rechingeri jamzad* and *S. khuzestanica*) on virulence factors of *P. aeruginosa*. **Materials and Methods:** The minimum inhibitory concentration of Satureja essential oils was determined by microdilution broth method against standard strains of *P. aeruginosa* PAO1 and *P. aeruginosa* 8821M. In the following, the effects of Sub-MIC concentrations of essential oils were investigated on motility, biofilm formation, alginate, elastase and alkaline protease production of these two strains. **Results:** Each of the four Satureja essential oils had antimicrobial effects against standard strains of *P. aeruginosa*, and also sub-MIC concentrations of the extracts significantly reduced the virulence factors production of these strains. Meanwhile, *S. khuzestanica* had the most antimicrobial activity. **Conclusion:** In this study, the antagonistic effects of Satureja essential oils were observed against *P. aeruginosa*. By further study, these essential oils can be used as an antimicrobial compound against this bacterium.

کلمات کلیدی:

.Essential oils, *Pseudomonas aeruginosa*, Virulence factors, Satureja

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