

## عنوان مقاله:

Inhibitory Effect of the Brown Seaweed *Sargassum angustifolium* Extraction on Growth and Virulence Factors of *Staphylococcus aureus*

## محل انتشار:

مجله تحقیقات زیست شناسی، دوره 3، شماره 2 (سال: 1398)

تعداد صفحات اصل مقاله: 11

## نویسندگان:

Afsaneh Mohkami - *Research and technology institute of plant production, Shahid Bahonar University, Kerman, Iran*

Maziar Habibi-Pirkoohi - *Zist Pajoochan Baran knowledge-based Inc., Shahid Bahonar University, Kerman, Iran*

## خلاصه مقاله:

Regarding the growing trend of multi-drug resistant strains of *Staphylococcus aureus*, the search for alternative and novel antimicrobial agent has been intensified. For this purpose, the present study was carried out to investigate the antagonistic effect of the brown seaweed *Sargassum angustifolium* on growth and virulence factors of *S. aureus*. A typical microdilution assay was performed to monitor inhibitory effect of *S. angustifolium* extraction on growth of the bacteria within a 6 hours period. Furthermore, Real-Time PCR assay with specific primers was conducted to evaluate the impact of extraction on expression of genes encoding staphylococcal enterotoxins (sea) and capsule formation (capA). The results revealed that *S. angustifolium* extract inhibited bacterial growth in a dose-dependent way; so that bacterial growth was fully stopped at the end of the assay. Antibacterial effect was enhanced by increasing in *S. angustifolium* extraction concentration. The results of Real-Time PCR assay indicated seaweed extraction was able to decrease virulence genes expression significantly. Again, by increasing extraction concentration, stronger inhibitory effect was observed. As a whole, the findings of this study suggest that *S. angustifolium* extract has potent ..antimicrobial effect that can be used for development of new generation of anti-staphylococcal medicines

## کلمات کلیدی:

Antimicrobial, Seaweed, *Sargassum angustifolium*, extraction, *Staphylococcus aureus*, Virulence factor

## لینک ثابت مقاله در پایگاه سیویلیکا:

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