

## عنوان مقاله:

Evaluation of the Effect of *Heracleum persicum* Extract on the Quorum Quenching of Biofilm Production Disease Genes in *Staphylococcus aureus*

## 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:** Bacteria by regulating and communicating through the microcells of the n-acyl homoserine lactone messenger (AHL) regulate and express the synchronized genes. This phenomenon is called Quorum Sensing, which is done in response to bacterial cell density. QS regulates important processes, including biofilm production, antibiotics and pathogens. Disturbance and quenching in this process Quorum Quenching cause the lack of gene expressions responsible for biofilm formation. The aim of this study was to evaluate the anti QS effect of *Heracleum persicum* extract on biofilm production of *Staphylococcus aureus* isolates. **Materials and Methods:** 23 strains of *Staphylococcus aureus* isolated from dental implant infection by molecular method (PCR) were isolated and identified by amplification of the COA gene. After extraction, to evaluate the effect of QSI by *Chromobacterium violaceum* CV026 strain of anti QS test, and flask culture method was used to determine the inhibitory effect of violacin production and CV026 growth on the extract. The microtiter plate method (MTP) was also used to determine the inhibitory effect of the extracts on biofilm formation. **Results:** The results of the tests showed that the extract ( $17.5 \pm 0.3$ ) significantly ( $P > 0.05$ ) had a significant sensory impedance effect, and the flask test prevented the production of violacein in The concentration of 0.25 was found in CV026 strain, and the effect of this property on inhibiting biofilm formation in *Staphylococcus aureus* was reported at  $35 \mu\text{g} / \text{ml}$ . **Conclusion:** According to the effect of QSI extract of *Heracleum persicum* and due to the multi drug resistance of bacteria in the present age, these compounds can be used as non-synthetic drugs in the route of prevention and treatment of chronic infections

## کلمات کلیدی:

*S. aureus*, *Heracleum persicum*, AHL, QS, CV026, Biofilm

## لینک ثابت مقاله در پایگاه سیویلیکا:

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