

عنوان مقاله:

Antibacterial Effects of Azerbaijan honey on *Pseudomonas aeruginosa* biofilm

محل انتشار:

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خلاصه مقاله:

Background and Aim: *Pseudomonas aeruginosa* is an opportunist pathogen. The infections due to biofilm are difficult to eradicate with current antimicrobial agents. In this study, we investigated the antimicrobial and antibiofilm activity of the honey against 40 *Pseudomonas aeruginosa* isolates. **Materials and Methods:** To assess antimicrobial activity, the MIC and MBC assays were used. Antibiofilm activity of tested honey evaluated using the MTP, Congo Red Agar, and tube methods. **Results:** The initial screening demonstrated that 40 of 80 *Pseudomonas aeruginosa* isolates were biofilm-producer. The honey exhibited a significant antibacterial activity against the planktonic form of *Pseudomonas aeruginosa*. The MIC of Polak, Baboneh and Yonjeh honeys against *Pseudomonas aeruginosa* were ۶.۲۵-۲۵، ۱۲.۵-۲۵، and ۱۲.۵-۲۵% w/v, respectively. The results indicated that the tested honey also had significant antibiofilm activity. **Conclusion:** Antibacterial effects of honey are observed in both planktonic and biofilm forms. However, higher concentrations of honey have needed to inhibit biofilm. These findings indicate the potential antimicrobial of Azerbaijan honey and, it can be used in the treatment of bacterial infections diseases due to *Pseudomonas aeruginosa*.

کلمات کلیدی:

Honey, Biofilm, *Pseudomonas aeruginosa*, بیوفیلم، عسل، پseudomonas اتروژینوز

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