

عنوان مقاله:

A review on the effect of some medicinal plants against *Pseudomonasaeruginosa*

محل انتشار:

اولین همایش منطقه ای دستاوردهای نوین و پژوهشهای دانش بنیان در میکروبیولوژی و بیوتکنولوژی (سال: 1401)

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خلاصه مقاله:

In recent decades, in discriminate and excessive use of antibiotics caused drug resistance and resistant strains. *Pseudomonas aeruginosa* is a pathogenic gram-negative bacteria, bacilli form that is resistant to some antibiotics. High resistance of this bacteria to antibiotics can lead to significant mortality in patients. Then, researchers are trying to replace chemical drugs with drugs based on plants. The results obtained from several studies showed that the alcoholic or aqueous extracts of *Satureja bachtiarica* Bunge, *Ocimum basilium*, Thymes, *Ferula gummosa*, *Allium sativum*, *Quercus infectoria*, *Allium cepa*, *Malvasylvestris*, *Urtica*, and alcoholic extracts of *Geranium*, *Ziziphus jujuba*, and *Lamiaceae* have the greatest effect on them. They were on *Pseudomonas aeruginosa*. In addition, it was shown that plant essential oils combined with antibiotics could have a better effect on bacteria. Such as the combination of *Artemisia* essential oil with imipenem antibiotic was reported to have a significant synergistic effect in most cases. Nevertheless, the results of some articles indicate the resistance of bacteria to plant extracts or essential oils, including the low effect of Cardin extract on Gram-negative bacteria, as well as the resistance of clinical isolates of *Pseudomonas aeruginosa* to aloe vera extract. According to the studies conducted, it can be concluded that due to the increasing spread of microbial resistance, especially to chemical compounds, medical and pharmaceutical fields around the world prefer to use more medicinal plants. Hence, due to the complementarity of clinical and laboratory tests, after identifying the effects of medicinal plants, it is necessary to conduct an evaluation on laboratory animals and a clinical trial for final confirmation. Also, due to the presence of numerous compounds in the extracts of medicinal plants and their better effect on *Pseudomonas aeruginosa* and other bacteria, it is recommended that plants' effective compounds be isolated and investigated separately. Therefore, this research aims to review previous studies on the effect of different medicinal plants on *Pseudomonas aeruginosa*.

کلمات کلیدی:

Antibiotic resistance, Medicinal plants, *Pseudomonas aeruginosa*

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