

A Systematic Review of the Antimicrobial Effects of Different Plant Extracts (Quercus infectoria) as Possible Candidates in the Treatment of Infectious Diseases

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Abstract : Background and Aim: The use of herbal medicines has a long history. Today, due to the resistance of microorganisms to antibiotics and antimicrobial substances, herbal medicines have attracted attention due to their significant antimicrobial effects and low toxicity. This study aims to systematically review the antimicrobial effects of different plant extracts (Quercus infectoria) as possible candidates for treating infectious diseases. Material and Methods: The present study is a review study by searching reputable scientific databases such as PubMed, Google Scholar, Scopus, and Web of Science from 2000 to 2023 using the keywords Antimicrobial, Quercus infectoria, Medicinal herbal, Infectious diseases the latest information obtained. Results: In this study, 45 articles were found and reviewed. Quercus infectoria is a small tree native to Greece, Asia Minor, and Iran. Quercus is a plant genus in the family of Fagaceae. This species is generally known under the name "baloot" in Iran and is commonly used as a medicinal plant. The extracts used included water, hydro-alcoholic, ethanol, methanol. This plant had high inhibition activity and a lethal effect on gram-positive and gram-negative bacteria of ATCC strains, hospital, and resistant strains. Therefore, in addition to antibacterial effects, antiparasitic and antifungal effects. The seed of the plant was the most used and the most effective antimicrobial extract among the ethanol and methanol extracts. Conclusion: The findings of this study suggest that Quercus infectoria has significant antimicrobial effects against a wide range of microorganisms. This makes it a potential candidate for the development of new antimicrobial drugs. Further research is needed to confirm the efficacy and safety of Quercus infectoria in clinical trials.

Keywords : antimicrobial, Quercus infectoria, medicinal herbal, infectious diseases

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