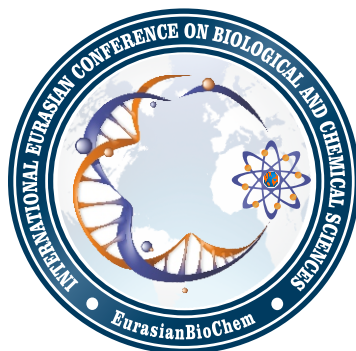




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POSTER PRESENTATION

Determination of antimicrobial activity of *Digitalis ferruginea* subsp. *ferruginea*

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Abstract

Antimicrobial activity studies have increased with the understanding of how important microbial resistance is for public health. The discovery that natural agents efficient against increasing resistance are effective at this point is one of the reasons for the increase in these studies. Especially the fact that the most effective natural antimicrobial compounds are found in plants is the reason why plants are preferred in these studies. Their ability to act on various microorganisms is another important reason for the use of plants. *Digitalis ferruginea* subsp. *ferruginea*, also found in Türkiye and popularly known as beehive, is also used in bioactivity studies. *D. ferruginea* subsp. *ferruginea* is a robust plant belonging to the *Plantaginaceae* family. It is a perennial species distributed in the Black Sea region and western parts of Türkiye. Studies have shown that it is rich in phenolic component content. It is known that compounds established to be effective such as rutin and ferulic acid are predominant. In this study, the antimicrobial activity of *D. ferruginea* subsp. *ferruginea* was evaluated using the disk diffusion test. A total of 40 strains were used for the test. In the study carried out with ethanol extract, the disks were impregnated with 40 µl and 160 µl amounts. The highest antimicrobial effects were observed in standard isolates of *Staphylococcus epidermidis* DSMZ 20044 (18-24 mm), *Staphylococcus aureus* ATCC 25923 (12-19 mm) and multidrug-resistant *Staphylococcus aureus* (15-20 mm). Scientific studies of *D. ferruginea* subsp. *ferruginea* can be improved by using the ability of *Pseudomonas* species to metabolize the rutin component. The bacterium *Pseudomonas fluorescens* P1 (0-11 mm) used in this study and the result obtained can be a start to guide future studies.

Keywords: *Digitalis ferruginea* subsp. *ferruginea*, antimicrobial activity, disk diffusion test