7th International Congress on APPLIED BIOLOGICAL SCIENCES

ABSTRACT BOOK

Editor
Prof. Dr. Hatice KORKMAZ GÜVENMEZ

E-ISBN: 978-605-73778-9-0
ANT ACADEMY

IN VITRO ANTIMICROBIAL ACTIVITY SCREENING OF *Mentha longifolia* subsp. *typhoides* (Briq.) Harley

Dilay TURU[1], Atakan BENEK[2], Merve Ülkü SAYIM[1], Rüveyde PALA[1], Gizem GÜL[3], Cenker YAMAN[3], Mustafa Eray BOZYEL[4], Kerem CANLI[3,5]

[1]Dokuz Eylül University, Graduate School of Natural and Applied Science, Department of Biology, Izmir, Turkey
[2]Kastamonu University, Graduate School of Natural and Applied Science, Department of Biology, Kastamonu, Turkey
[3]Dokuz Eylül University, Faculty of Science, Department of Biology, Izmir, Turkey
[4]Çanakkale Onsekiz Mart University, Faculty of Science, Department of Biology, Çanakkale, Turkey
[5]Dokuz Eylül University, Research and Application Center of Fauna Flora (FAMER), Izmir, Turkey

Corresponding author: dilayturu@gmail.com

Oral Presentation

Antimicrobial resistance reduces the effectiveness of antibiotics and endangers human health by increasing the risk of death from serious diseases. We need to prevent both the transmission of resistant bacteria and the infections they cause, which are a growing threat with the increasing world population. In this context, new antimicrobial agents are needed. Compounds of plant origin are mostly secondary metabolites that have antimicrobial properties against microbial pathogens. Recently, it has been reported that various phytochemical agents suppress the growth of microorganisms. Medicinal plants are very rich in phytochemicals that can be converted into new drugs, but it is known that there are significant differences in the chemical composition of each plant species, and therefore the bioactivity they have shown is different. *Mentha longifolia* is one of the wild mint species in Turkey and there are three subspecies of its two species. *M. longifolia* has been reported to produce various bioactive secondary metabolites such as flavonoids, phenolic acids, and essential oils. These plant metabolites exhibit a wide range of biological activities, such as antimicrobial, antioxidant, cytotoxic, and antidiarrheal. In this study, 50 µl, 100 µl and 200 µl (0.375 mg, 0.750 mg, 1.5 mg) of ethanol extract of *M. longifolia* subsp. *typhoides* plant were loaded on empty sterile antibiotic disks to evaluate the antimicrobial activity and the results were observed by disk diffusion test. To test the antimicrobial activity, strains with resistance to many antibiotics were selected. As a result of the study, the effect against many strains such as *Staphylococcus aureus* ATCC 25923, *Staphylococcus epidermidis* DSMZ 20044, and *Staphylococcus mutans* was observed.

Keywords: Antimicrobial activity, Disk diffusion, *Mentha longifolia* subsp. *typhoides* (Briq.) Harley