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POSTER PRESENTATION

ANTIMICROBIAL ACTIVITY AND ANTI-BIOFILM EFFECTS OF SOME MEDICINAL PLANT EXTRACTS

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Abstract

Antimicrobial resistance continues to be a significant problem worldwide. Therefore, researchers are trying to solve the problem of resistance by developing antimicrobial agents, antiseptics, and disinfectants with different formulations. In our study, the methanol extracts of the aerial parts and roots of *Echium vulgare* L., *E. plantagineum* L., and *E. orientale* L. species form the family Boraginaceae and the methanol extracts of the leaves and the fruits of *Phytolacca americana* L. (Phytolaccaceae) will be evaluated for their antimicrobial activities (MICs) and anti-biofilm effects using microdilution method and anti-biofilm assay, taking into account the cytotoxic (IC_{50} : 3-8 µg/mL; HCS Cell Line, HSNB cell, NIH-3T3 cell; MTT) doses determined. The effects will be investigated against yeast-like fungi *Candida albicans, C. parapsilosis*, and *C. krusei*, as well as bacterial strains such as *Staphylococcus aureus, Streptococcus pyogenes, Bacillus subtilis, Enterococcus faecalis, Escherichia coli, Pseudomonas aeruginosa, Klebsiella pneumoniae, Acinetobacter baumannii* and the results will be evaluated by comparison with controls.

Key Words: pharmaceutical microbiology, antimicrobial, antibiofilm, *Echium*, *Phytolacca,* disinfectant