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In Vitro Antimicrobial Activity Screening of *Tortella bambergeri* and *Tortella tortuosa*

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Introduction: Previous studies have shown that bryophytes produce a variety of secondary metabolites that present pharmaceutical activities including antimicrobial activity against various pathogenic bacteria and fungi.The resistance of pathogen to antibiotics is became a critical problem, so novel antimicrobial agent related research is required.

Material and Methods: *Tortella bambergeri* and *Tortella tortuosa* are collected from Akdağ, Amasya. A wide range of Gram positive and Gram negative bacteria and yeast were selected to test the antimicrobial activity. These microbial species Bacillus subtilis ATCC 6633, Candida albicans ATCC 10231, Enterobacter aerogenes ATCC13048, Enterococcus durans, Enterococcus faecalis ATCC 29212, Enterococcus faecium, Escherichia coli ATCC 25922, Escherichia coli CFAI, Klebsiella pneumoniae, Listeria monocytogenes ATCC 7644, Salmonella enteritidis ATCC 13075, Salmonella infantis, Salmonella kentucky, Salmonella typhimurium SL 1344, Staphylococcus aureus ATCC 25923, Staphylococcus carnosus MC1.B, Staphylococcus epidermidis DSMZ 20044 and Streptococcus agalactiae DSMZ 6784. Twelve of them are standard species and they are important for exact determination of antimicrobial potential.

Results: Our present study has shown that *T. bambergeri* have antimicrobial activity against four and *T. tortuosa* have antimicrobial activity against eleven of the studied strains respectively.

Discussion: Our study clearly presents that *T. bambergeri* and *T. tortuosa* have a possible medicinal uses. However, further researches are needed in order to analyse the active substances and their activity mechanisms in details.

Keywords: Tortella bambergeri, Tortella tortuosa, Antimicrobial activity, Bryophyte, Moss