

Antimicrobial Activity of Two Wild Mushrooms, *Clitocybe alexandri* (Gill.) Konrad and *Rhizopogon roseolus* (Corda) T.M. Fries, Collected in Turkey

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During the last decades, mushrooms have been shown to be able to exhibit antimicrobial activity. Two wild mushrooms, *Clitocybe alexandri* (Tricholomataceae) and *Rhizopogon roseolus* (Rhizopogonaceae), collected from the southwest of Turkey and consumed as edible mushrooms by the villagers, were analyzed for their antimicrobial activity by using the disc diffusion method. Alcohol, methanol, ether, water, ethyl acetate, and *n*-hexan extracts from fruit bodies of mushrooms were assayed against twelve microorganisms.

The test microorganisms selected for the antimicrobial activity study were *Bacillus cereus* CM 99, *B. subtilis* ATCC 6683, *Escherichia coli* ATCC 11230, *Proteus vulgaris* ATCC 6997, *Klebsiella pneumoniae* CCM 2318, *Saccharomyces cerevisiae* ATCC 9763, *Pseudomonas fluorescens*, *Micrococcus luteus* ATCC 9341, *Enterobacter aerogenes* ATCC 13048, *Salmonella typhimurium* CCM 5445, *Ser-*

ratia marcescens CCM 583, and *Staphylococcus aureus* ATCC 6538-P. Disks were saturated with about 20 µL of extracts and placed on an agar surface. Differences in the microbial activity of extracts were observed. Methanol extract obtained from two mushrooms presented significant activity against bacteria *E. coli*, *B. subtilis*, and *E. aerogenes*, as compared with test antibiotics, Novobiocin, Nalidixic acid, and Ampicillin. However, the best antifungal activity was recorded in ethyl acetate extract from *Clitocybe alexandri* against *Candida albicans* (14 mm) and *Saccharomyces cerevisiae* (12 mm). No antimicrobial activity against any microorganisms was recorded in water, ether, and *n*-hexan extract from *Rhizopogon roseolus* in this experimental study. This research has shown that different extracts obtained from two macromycetes have been used *in vitro* to inhibit the growth of some important bacteria and fungi.