

A COMPARATIVE ASSESSMENT OF THE ANTIMICROBIAL EFFECTS OF GARLIC (*ALLIUM SATIVUM*) AND ANTIBIOTICS ON DIARRHEAGENIC ORGANISMS

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Abstract. Antimicrobial sensitivity tests were carried out on *Escherichia coli*, *Shigella* sp, *Salmonella* sp, and *Proteus mirabilis* using standard procedures. Significant differences ($p < 0.01$) were seen in the effect of the antimicrobial agents (garlic, ciprofloxacin and ampicillin), and in the sensitivities of the microbial species ($p < 0.01$) to the antimicrobial agents were observed. The gram-negative diarrheagenic pathogens from the stool samples were highly sensitive to garlic, while ciprofloxacin (CPX) was most effective against *E. coli*. The differences were inferred to result from genetic differences among the organisms and differences in the modes of action of the antibiotics. No isolates were resistant to garlic, making it a promising antimicrobial agent. It appears that antibiotics that interfere with DNA and RNA syntheses, such as garlic does, could constitute an effective partner in the synergic effect of garlic currently being investigated worldwide.

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