

The antibacterial activity of some medicinal plants used in Meru Central District, Kenya

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Abstract

Five medicinal plants used by traditional medical health practitioners (TMP) in Meru central district namely: *Piliostigma thonningii*, *Ajuga remota*, *Ocimum suave*, *Erythrina abyssinica* and *Harrisonia abyssinica* were investigated for their antibacterial activity against standard bacterial cultures namely; *Staphylococcus aureus*, *Bacillus cereus*, *Escherichia coli* and *Pseudomonas aeruginosa*. The antibacterial activity of the methanolic and water extracts was determined using the minimum bactericidal concentration (MBC) and minimum inhibitory concentration (MIC). Gram positive bacteria (*S. aureus* and *B. cereus*) were more susceptible to the plant extracts than Gram negative bacteria (*E. coli* and *P. aeruginosa*). The MIC and MBC of the positive control antibiotics (Ampicillin for gram positive and Gentamycin for gram negative) were less than 1mg/ml. The most susceptible bacteria was *S. aureus* followed by *B. cereus* while the most resistant was *E. coli* followed by *P. aeruginosa*. Methanolic extracts of *P. thonningii* stem and *Ocimum suave* leaves had the best antibacterial activity against the four bacterial species. There was no significant difference between the water and methanolic extracts of all the plants. These results justify the use of these plants by the traditional medical practitioners for management of bacterial conditions and further investigation on their safety and phytochemistry is needed.