



## PHYTOCHEMICAL COMPONENTS AND ANTIMICROBIAL PROPERTIES OF KNOBWEED (*Hyptis capitata*) AND BUSHMINT (*Hyptis suave lens*)

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### ABSTRACT

Nature has been a source of medicinal agents for thousands of years, and an impressive number of modern drugs have been isolated from natural sources. The rich biodiversity of different countries contributes to the wealth of medicinal plants, which are very much used in traditional medical systems. The resistance problem demands that a renewed effort be made to screen various medicinal plants for their potential antimicrobial traits, which are due to compounds synthesized and the secondary metabolism of the plant. The most important of these bioactive compounds of plants are Alkaloids, Flavonoids, Tannins, Phenolic compounds, Steroids, resins, fatty acids and gums which are capable of producing definite physiological action in the body (World Health Organization, 2002). The study was conducted to find out the difference between the two *Hyptis*, *Hyptis suaveolens* and *Hyptis capitata*, in terms of Phytochemical components and Anti-microbial activities. Samples of the plants were used as test subjects, the roots and leaves. T-test was utilized in order to provide statistically correct result and was found that the Phytochemical properties of *Hyptis suaveolens* and *Hyptis capitata*, tested positive on *steroids, terpenoids, flavonoids, alkaloids, saponins, glycosides and tannins*. For the Anti-microbial properties of the roots of the two species, both displayed inhibitory properties for the five organisms, specifically; *Escherichia coli*, *Staphylococcus aureus*, *Salmonella typhimurium* and *Pseudomonas aeruginosa*. From the test results, it is clearly shown that there is no significant difference between the Phytochemical constituent of both plants and the zone of inhibition displayed by the root and stem extracts of the two plants against the test microorganisms. The specific parts of the two *Hyptis* species were abundant in Phytochemical constituents that were patented for medical processes. Furthermore, both exhibited inhibitory activity against five out of six microorganisms tested. There is no significant difference whatsoever between the Phytochemical constituents and Antimicrobial activities of the two species.

*Keywords: medicinal agents, Antimicrobial traits, bioactive compounds, phytochemical components, antimicrobial activities*