

## Ethnobotanical and Laboratory Investigations of Plants Used for the Treatment of Typhoid Fever in Gombe State, North-Eastern Nigeria

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**Abstract :** The use of botanical raw materials to produce pharmaceuticals, herbal remedies, teas, spirits, cosmetics, sweets, dietary supplements, special industrial compounds and crude materials constitute an important global resource in terms of healthcare and economy. In Nigeria and other developing countries, the indigenous knowledge on the uses of plants lies with the older generation and the traditional healers. However, these custodians are decreasing in number due to death and other unforeseen occurrences. An Ethno-botanical survey was carried out to obtain information on the ethno medical values of wide range of plants used by the people of Gombe State, North-Eastern Nigeria, in the practice of healing and cure of typhoid (enteric) fever. Oral interviews were conducted so as to consider those with low literacy level who are involved in the practice of traditional medicine and thirty four (34) informants availed themselves for the interview and were consulted. All relevant information obtained from the respondents was recorded. A recent and valid nomenclature, along with local names, family names, part of the plant(s) used, methods of preparation and administration and fifty four (54) plant species belonging to 27 families as well as 7 unidentified species that are commonly used by the people of the state in ethnomedical treatment of the ailment were tabulated. Those interviewed included traditional practitioners, local herb sellers, traditional rulers, hunters, farmers and patients. Specific questions were asked and information supplied by informants was promptly documented. Results showed that the people of Gombe State are knowledgeable on herbal medicine in the treatment of diseases and ailments. Furthermore, the aqueous leaf extracts of *Senna siamea*, the plant species with the highest PPK (percentage of people who have knowledge about the use of a species for treating typhoid fever) in this ethnobotanical survey, was tested for its activity against clinical isolates of *Salmonella typhi* using the agar well diffusion method. The aqueous extracts showed some activity (zones of inhibition 11, 9, 7.5, 3.5, 1.3 mm) at 2000, 1800, 1600, 1400, 1200 µg/ml concentrations respectively. Preliminary phytochemical studies of the aqueous leaf extracts of the plant revealed the presence of secondary metabolites such as alkaloids, saponins, tannins, flavonoids and cardiac glycosides. Though a large number of traditionally used plants for the treatment of enteric fever were identified, further scientific validation of the traditional claims of anti-typhoid properties is imperative. This would establish their candidature for any possible future research for active principles and the possible development of new cheaper and more effective anti-typhoid drugs, as well as in the conservation of this rich diversity of medicinal plants.

**Keywords :** antimicrobial activities, ethnobotany, gombe state, north-eastern Nigeria, phytochemical screening, senna siamea, typhoid fever

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