

Pharmacognosy and Medicinal Plants

EVALUATION OF PHYTOCHEMICAL AND ANTIDIABETIC COMPONENTS OF CHROMOLAENA ODORATA L. KING AND ROBINSON (ASTERACEAE) CULTIVATED IN NIGERIA

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Medicinal plants provide the best option as a safer and more effective medication due to the presence of various compounds. Presently, available therapeutic agents for non-insulin-dependent diabetes mellitus such as insulin, oral hypoglycaemics, and dietary modification all have limitations. *Chromolaena odorata* has been reported to be traditionally used in Nigeria for the treatment of diabetes without scientific justification. This study was carried out to investigate the presence of antidiabetic bioactive constituents present in the leaves of *C. odorata* and also to determine the best solvent suitable for extracting its various phytochemical compounds. *C. odorata* leaves extract obtained by soxhlet extraction using seven solvents of varying polarity, were quantitatively analyzed using standard laboratory methods for the presence of phytochemical constituents with diabetic activity. Results obtained revealed the

presence of tannins, saponins, flavonoids, anthraquinones, cardiac glycosides, triterpenoids and sterols in all the solvent extracts of the leaf sample of *C. odorata*. There was however, absence of alkaloids. The aqueous solvent showed higher dissolution and extraction of the bioactive compounds followed by ethanol, methanol, ethyl acetate, chloroform, acetone and petroleum ether in descending order. The results from the study could be useful in the selection of appropriate solvents for the extraction of pharmacologically active constituents in the formulation and development of antidiabetic herbal drug from *C. odorata* leaves. The presence of the various compounds could be responsible for the antidiabetic activity of *C. odorata*, thus justifying the folkloric use of the plant for treating diabetes.

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