BIOACTIVE NON-NUTRIENT COMPONENTS IN INDIGENOUS AFRICAN VEGETABLES

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Abstract

In many African cultures, vegetable are widely consumed together with starchy staple foods. Vegetables form an important part of a healthy traditional diet because of their nutritional and health benefits. Vegetables have been reported to have many health protecting properties, thus illustrating the relationship between nutrition and medicine that has long been recognized in African cultures. This study evaluated the phytochemical composition of selected indigenous vegetables in Uganda. The plant crude extracts of diethylether, 96% ethanol and distilled water indicated that Amaranthus hybridus, Amaranthus cruentus, Solanum aethiopicum, Cleome gynandra and Vigna unguiculata contained alkaloids, tannins, flavonoids, saponins, carotenoids, coumarin derivatives and glucides phytochemicals. Another phytochemical, steroid glycoside, was detected in the distilled water extract of A. cruentus, S. aethiopicum and V. unguiculata. Further investigation of the quantitative analysis of the total flavonoid content in A. hybridus, A. cruentus, S. aethiopicum, C. gynandra and V. unguiculata showed 8.7, 12.0, 15.2, 26.4 and 10.6 g per 100g dry weight, respectively while the total alkaloid content showed 2.7, 3.3, 4.0, 3.8 and 1.7 g per 100g dry weight, respectively. The phytochemical composition in respective indigenous vegetables justifies their therapeutic activity against a wide array of disease causing microorganisms and their antioxidant, antihypertensive, anti-diabetic and anti-ulcer properties that can prevent a number of diseases. With these health benefits, there is need to emphasis a diet rich in indigenous green leafy vegetables to promote health and prevent diseases in the population.