

THE PHARMACEUTICAL CONSTITUENTS OF *CRATEVA ADANSONII* LEAF (OGWU OKU)

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ABSTRACT

The elucidation of the crude drug of *Crateva adansonii*, (family: *Capparidaceae*) leaves was carried out in terms of physico-chemical and biological techniques. Phytochemical screening showed the presence of saponins, tannins, flavonoids, alkaloids and steroids. The Fourier Transform Infrared Spectral analysis showed the compound contained aromatic amides, esters, ethers, and conjugated ethers. The TLC analysis of the extracted alkaloid gave R_f value of 0.93 in the methanol ammonia solvent. The AAS of the crude sample showed the presence of some metals such as Ca, Mg, Na, Fe, Zn, Pb, Mn, Cr, Cu and Cd in the decreasing order of their concentrations. Its alkaloid melting point was 250°C. Various fractions of the crude drug extracted had antimicrobial activity against *E. coli*, *S. aureus* and *Salmonella* spp. Its effect was more at a high concentration of 600mg/ml. The suggested active alkaloid ingredient might be an indole-amide from the FTIR, TLC and the melting point results.

INTRODUCTION

Over the years, man has suffered many ailments, diseases, infections etc, many of which are contributed to heart failure, weak musculoskeletal system, bacterial etc. Man in struggles to fight these diseases, ailments etc has discovered and developed chemotherapeutics, through medicinal plants which are chemically and synthetically produced.

Medicinal plants, as a product of nature, exert all their curative and preventive power when used in combination with other health-improving natural products like the sun, water, fresh air, healthy food and mental balance. They should not be used only, when looking for a curative action as we do with pharmaceutical products when the ailment appears.¹ The plant kingdom represents an enormous reservoir of biologically active molecules and so far only a small fraction of plants with medicinal activity have been assayed. Nearly 50% of drugs in Medicines are of plant origin.²

Crude plant extracts can be first assayed for particular activities and active fractions

then analyzed phytochemically. Therefore, more research is being carried out on herbal plants because much has been discovered in them that are of great importance to human health.²

Anti-rheumatic/arthritis plants act both internally and externally applied by producing a slow, but effective and harmless anti-inflammatory analgesic action. The plants are internally applied, taken as herbal teas or extracts, while others are used externally in the form of hot poultices applied on the affected area.³ The herbal plant worked on, in this research as anti-rheumatic/arthritis plant is *Crateva Adansonii* (ogwu oku) in the family *Capparidaceae* and has about 350 species.

From the available literature, it was found that no work has been done on *Crateva adansonii*, which belongs to dicotyledon family of the order Rhoeadales that include genera *Capparis*, *cleome* and others.⁴