In vitro antimycobacterial studies on the leaf extracts and fractions of Pavetta crassipes K. Schum

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Abstract

Tuberculosis is a major public health threat and Nigeria has the world’s fifth largest tuberculosis burden, with nearly 311,000 estimated cases annually. Mycobacterium tuberculosis, the causative organism, has acquired resistance against most of the current chemotherapy, thereby calling for the urgent development of new antituberculosis drugs. Preliminary phytochemical and antimycobacterial studies were carried out on Pavetta crassipes, an ethnomedicinal plant, used in Nigeria by Traditional Medicine Practitioners (TMPs) to treat tuberculosis. The leaf extracts showed in vitro antimycobacterial activity with the methanol and ethyl acetate extracts being most active with MICs of 250 and 521 µg/ml, respectively. Further fractionation of the methanol and ethyl acetate extracts yielded five fractions with MICs ≤ 900 µg/ml. One of the ethyl acetate fractions had the most potent activity with MIC of 200 µg/ml.

Key words: Mycobacterium tuberculosis, Pavetta crassipes, antimycobacterial activity, bacilli galmette guerin (BCG).