Investigation of antibacterial compounds of *Vateria copallifera* seeds

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Abstract

Medicinal plants have received much renewed attention of the pharmaceutical and scientific communities and various publications have documented the therapeutic value of natural compounds in a bid to validate claims of their biological activity. According to the results of previous research done on the *Vateria copallifera* plant, antimicrobial compounds have been isolated from bark and seeds. In this research we focused on separation and characterization of antibacterial compounds present in *Vateria copallifera* seeds. Seed samples were collected from the Kalutara area and the freeze dried materials were extracted using solvents, which have different polarities. These extractes tested for antimicrobial activity against Methicillin resistant *Staphylococcus aureus* (MRSA) and Methicillin-sensitive *Staphylococcus aureus* (MSSA) using the agar disk diffusion method. The crude extracts of ethyl acetate and methanol were active against both MRSA and MSSA, while petroleum ether and chloroform crude extracts were inactive.

The two active extracts, were subjected to extensive bioassay guided fractions using both normal phase and reversed phase chromatography with a view to isolating the active compounds. ^{1}H NMR analysis of active fractions from the ethyl acetate and methanol crude extracts showed that these components are different to the previously isolated compounds from bark of *Vateria copallifera*. However the amount of bioactive compounds that isolated were not sufficient enough for structure elucidation.