

Abstract

Crude acetone extracts of leaf, bark, pericarp and seeds of *Vateria copallifera* were evaluated for antibacterial activity against ten pathogenic microorganisms, *Escherichia coli* ATCC 25922, *Pseudomonas aeruginosa* ATCC 27853, *Staphylococcus aureus* ATCC 25923, *Streptococcus faecalis* ATCC 29212, *Escherichia coli* 0-157, *Staphylococcus aureus* NCTC4163 and *Pseudomonas aeruginosa* var *erythro*gen NCTC 6749, *Salmonella typhi*, *Methicilin resistance staph aureus* (MRSA) and *Methicilin sensitive staphylococcus aureus* (MSSA). All the extracts inhibited the growth of five Gram-positive microorganisms, *Staphylococcus aureus* ATCC 25923 and *Streptococcus faecalis* ATCC 29212, *Staphylococcus aureus* NCTC4163 and *Pseudomonas aeruginosa* var *erythro*gen NCTC 6749, *Methicilin resistance staphylococcus aureus* (MRSA) and *Methicilin sensitive staphylococcus aureus* (MSSA). The highest antibacterial activity with zone of inhibition 20 ± 0 mm was reported from the seeds against MRSA as evident from MIC >0.01526 mg/ml and MBC > 0.125 mg/ml. The lowest antibacterial activity was reported from the pericarp against MRSA with MIC >0.125 mg/ml and MBC > 4 mg/ml. Commercially available antibiotic discs sulphamethoxazole trimethoprim (25 μ g), ampicilin (10 μ g), erythromycin (15 μ g) were used as positive controls. Absolute ethanol was the negative control with zone of inhibition 0 ± 0 . Seed extract which reported the highest antibacterial activity was subjected to column chromatography and obtained five fractions. (A, B, C, D, E). Fractions were tested for antibacterial activity and B reported the highest activity. Based on the current results it can be concluded that parts of the plant has antibacterial activity, which is as potent as standard antibacterial drugs against some microorganisms, especially against *Staphylococcus aureus*. This study also investigated the larvicidal potential of leaf, bark, pericarp and seeds of *Vateria copallifera* against mosquito larvae *Culex quinquefasciatus* and *Aedes aegypti*. The late third instar larvae were used for larvicidal assay. The highest larval mortality was found in seed extract with LC₅₀ and LC₉₀ values 465.3 mg/l, 661.3 mg/l and 915.8 mg/l, 1015.9 mg/l against *Culex quinquefasciatus* and *Aedes aegypti* respectively. This is an ecofriendly approach for the control of filariasis vector and dengue vector.