



## ANTIBACTERIAL ACTIVITY OF LEAF EXTRACTS OF *ANTHOCLEISTA DJALONENSIS* ON SELECTED DIARRHOEA CAUSING BACTERIA IN SOUTHWESTERN NIGERIA

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### ABSTRACT

The antibacterial potency of methanol, petroleum ether and hot water leaf extracts of *Anthocleista djalonensis* was screened against some pathogenic bacteria namely: *Staphylococcus aureus*, *Salmonella typhi* and *Escherichia coli* that causes diarrhoea. Clinical and typed isolates of the test organisms were used for this study. The antibacterial assay was carried out *in-vitro* and it revealed that the extracts inhibited the test organisms at a concentration of 50 mg/ml except petroleum ether which was unable to inhibit the growth of *Escherichia coli*. The result of the phytochemical screening reveals the presence of tannin, saponin, steroid, flavonoid, terpenoid and cardiac glycoside in the leaf extracts. The minimum inhibitory concentration (MIC) of the leaf extracts ranges from 30 mg/ml to 5.0 mg/ml. The rate at which the extract was able to kill the test organisms showed a decrease in the number of colonies of the organism with increased time of exposure to the extracts. Sodium and potassium ions were leaked from the cells of the test organisms which is indicative of the inhibitory effect of the extracts on the test organisms. The antibacterial assay of the column fractions had the highest zone of inhibition of 22.0 mm on *Salmonella typhi* with ethyl acetate and least on *Staphylococcus aureus* and *Escherichia coli* (NCIB 86) with 4.0 mm zone of inhibition respectively.

**Keywords:** Antibacterial potency, diarrhoea, phytochemical screening, column fractions, zone of inhibition.