

Antibacterial activity of different phytochemical extracts from the stem bark of *Ficus benghalensis*

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ABSTRACT

The plant extracts and phytochemicals having antimicrobial properties can be of great use in therapeutics. These phytoconstitueunts contribute antimicrobial properties to plants and thus used as natural protective substances against bacterial, fungal and even pesticidal attacks on the plants. Antibacterial activity of various phytoconstituents from the bark of *Ficus benghalensis* (The banyan tree) was studied to rationalize its traditional use. The bark was extracted to various phytoconstituents in order to carryout antibacterial assay which include Tannins, Flavonoids and Saponins. Four concentrations 25µg/ml, 50 µg/ml 75µg/ml and 100 µg/ml of each phytoconstituent of bark extract were applied against five bacterial strains i.e., *Staphylococcus aureus*, *Bacillus subtilis*, *Pseudomonas aeruginosa*, *Proteus vulgaris* and *E.coli* by using disc diffusion method. The inhibition zones were measured in millimeter. The data showed that the inhibition zones the flavonid extract of bark of *Ficus benghalensis* were greater than each of other phytoconstituents, and 100 µg/ml concentration was the more effective than other concentrations. Flavonoid extract was found to be more active than saponin and tannin extracts. Moreover, flavonoid extract of *Ficus benghalensis* recorded more or less equal inhibitory activity against all the five bacteria *Escherichia coli*, *Proteus vulgaris*, *Pseudomonas aeruginosa*, *Bacillus subtilis*, *Staphylococcus aureus*. The flavonoid extract showed maximum activity against *Bacillus subtilis*, a gram positive bacteria and *Pseudomonas aeruginosa*, a gram negative bacterium. *Ficus benghalensis* can be used to source antibacterial substances for development of novel drugs for the treatment of various ailments.