

Phytochemical Screening, Antioxidant and Antibacterial Activity of *Annona cherimola* Mill

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Abstract : Exploration of the chemical constituents of the plants and pharmacological screening may provide us the basis for the development of novel agents. Plants have provided us some of the very important life saving drugs used in the modern medicine. The aim of our work was to screen the phytochemical constituents and antimicrobial and antioxidant activities of methanol extract of leaves of *Annona cherimola* Mill plant from Tirumala forest, Tirupathi. It was originally called Chirimuya by the Inca people who lived where it was growing in the Andes of South America, is an edible fruit-bearing species of the genus *Annona* from the family Annonaceae. *Annona cherimola* Mill is a multipurpose tree with edible fruits and is one of the sources of the medicinal products. The antibacterial activity was measured by agar well diffusion method; the diameter of the zone of bacterial growth inhibition was measured after incubation of plates. The inhibitory effect was studied against the pathogenic bacteria (*Klebsiella pneumonia*, *Bacillus subtilis*, *Staphylococcus aureus* and *Escherichia coli* (*E. coli*)). Antioxidant assays were also performed for the same extracts by spectrophotometric methods using known standard antioxidants as reference. The studied plant extracts were found to be very effective against the pathogenic microorganisms tested. The methanolic extract of *Annona cherimola* Mill from showed maximum activity against *Escherichia coli* and *Staphylococcus aureus* and the least concentration required showing the activity was 0.5mg/ml. Phytochemical screening of the plants revealed the presence of flavonoids, alkaloids, steroids and carbohydrates. Good presence of antioxidants was also found in the methanolic extracts.

Keywords : *annona cherimola*, phytochemicals, antioxidant and antibacterial activity, methanol extract

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