

VISVESVARAYA TECHNOLOGICAL UNIVERSITY
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A PROJECT REPORT ON

**“Evaluation of Antiproliferative activity of *Pavonia zeylanica* Cav.
on Mammalian Cancer Cells”**

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Abstract

Pavonia zeylanica, commonly called as “antutogari” and used as purgative and with vermifungal effects have been used in our study to evaluate the preliminary phytochemical, antimicrobial, antioxidant, anti-proliferative activities. Preliminary qualitative phytochemical analysis showed presence of proteins in ethanolic extract alone and carbohydrates in all the extract. Ethanolic extracts showed positive tests for phenols, flavonoids, terpenoids, tannins and alkaloids. Aqueous extracts showed positive for Alkaloids and terpenoids. The antimicrobial activity tested for the different solvent leaf extracts against *Shigella*, *Salmonella typhi*, *Staphylococcus aureus*, *Pseudomonas aeruginosa*, *Escherichia coli*, showed good results against *Shigella* sps. and *S. typhi* in ethanolic and aqueous extract and the Zone of inhibition was found to be 1.0 cm. The total antioxidant activity of ethanolic leaf extracts was evaluated by ABTS method and IC₅₀ value was found to be 7±0.74 µg/ml. Anti-proliferative activity was evaluated against MCF-7 cell lines (mammary cancer cells) wherein it was found that there is a presence of bio-active compound that is arresting the proliferation and growth of these cancerous cells. Thus, the plant can be taken for further analysis for the isolation of the bio-active compound against breast cancer.