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## Phytochemical investigation and anti-cancer activity of *Gardenia lucida* fruits

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**Purpose:** To investigate the phytochemistry and cytotoxic activity of methanolic ripe fruit extracts of *Gaedenia lucida* (*G. lucida*) belonging to the family Rubiaceae collected from the Eturnagaram Forest, Warangal, Telangana, India.

**Methods:** Extracts of the ripe fruits of *Gaedenia lucida* were obtained using various organic solvents. Thin-Layer Chromatography (TLC) and phytochemical screening were employed to identify the chemical constituents. Cytotoxicity was characterized by 50% inhibition (IC<sub>50</sub>) of human breast cancer cell lines (MCF-7) and cervical cancer cell lines (HeLa cell line) using 3-(4, 5-dimethylthiazol-2-yl)-2, 5-diphenyltetrazolium bromide (MTT) assay.

**Results:** Phytochemical screening of the extracts revealed that they were rich in secondary metabolite such as saponins, terpenoids, flavonoids, coumarins, cardiac glycosides, phenols and phytosterols. The methanolic extracts of the fruit was cytotoxic against MCF-7 cell line (IC<sub>50</sub>=50.0 µg/ml) and HeLa cell line (IC<sub>50</sub>=60.90 µg/ml). However, further studies, including identification and purification of the active compounds will need to be pursued.

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