



***In-Vitro* Cytotoxic and Antioxidant Activity of *Gnidia glauca* (Fresen) Gilg Root Extract**

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ABSTRACT

Cytotoxic and antioxidant activity of petroleum ether, chloroform and ethanol root extract of Gnidia glauca have been carried out. The MTT assay was used for in-vitro cytotoxic activity on two human cancer cell lines HT-29 and A-549. Results of MTT assay showed that chloroform extract exhibited excellent cytotoxic activity on A-549 and ethanol extract showed excellent activity on HT-29 with IC₅₀ value less than 10µg ml⁻¹. All the extracts exhibited a dose dependent growth inhibitory effect on both the cell lines. The antioxidant activity of the extracts has been evaluated using DPPH radical scavenging, reducing power and nitric oxide method. The results of the study indicate that, ethanol extract of the roots of Gnidia glauca possess promising activity in DPPH radical scavenging, reducing power and nitric oxide scavenging methods. The petroleum ether and chloroform extracts also showed moderate antioxidant activity in all the three models. The cytotoxic and antioxidant activities may be attributed to the presence of phenolic and flavonoids present in the extracts.

Keywords: *Gnidia glauca*, MTT assay, DPPH assay, reducing power, nitric oxide activity.
