

ABSTRACT

Aim- The present study was undertaken to screen the anticancer activity of alcoholic extract of *Calotropis gigantea* (Linn.) flowers (AFCG).

Material & methods- The anti cancer effect of alcoholic extract of flowers of *Calotropis gigantea* (Linn.) was evaluated by using different experimental models such as micronucleus test, ames test, MTT assay, cell viability assay, DNA fragmentation analysis and clonogenic assay. AFCG was used in the doses of 286 and 667 mg/kg on micronucleus test and 5, 10, 15 and 20 mg/ml in ames test, MTT assay, cell viability assay, DNA fragmentation analysis and clonogenic assay.

Results- AFCG produced significant ($P < 0.01$) dose dependant anticancer activity, by inducing the MNPCE in micronucleus test, mutagenic index in ames test and DNA fragmentation in DNA fragmentation analysis and also by inhibiting the HL-60 cell proliferation, growth and tumor formation in MTT assay, cell viability assay and clonogenic assay respectively.

Conclusion- Results suggest that the anticancer activity of AFCG might have been mediated by apoptosis mechanisms.

Key words: *Calotropis gigantea* (Linn.); anti cancer; apoptosis.