

ABSTRACT

Aloe turkanensis is a shrub and is commonly grown in the north - western Kenya and in the Karamajo district of Uganda. The leaf exudates and the roots of *A. turkanensis* is used traditionally to wound healing, to cure eye disease and to relief from headache. The rhizomes and leaves extracts of *A. turkanensis* were subjected to chromatographic separations which resulted in the isolation of twelve compounds. The structures of the isolated compounds were determined using spectroscopic methods including 1D and 2D NMR and MS. These compounds were two naphthoquinones seven anthraquinones, a preanthraquinone, a pyrone derivative and a benzoic acid derivative. The in - vitro anticancer activities of the isolated compounds were conducted against the human extra hepatic bile duct (TFK - 1) and liver (HuH7) cancer cell lines. Based on the 3 - [4,5 - dimethylthiazol - 2 - yl] - 2 - ,5 - diphenyltetrazolium bromide (MTT) assay, six compounds showed potent anticancer activity against extra hepatic bile duct cancer (TFK - 1) cell line and strong effect against hepatocellular cancer (HuH7) cell lines. The other six compounds also significantly inhibited TFK - 1 cell line. This is the first report on the anticancer activity of the isolated compounds against extra hepatic bile duct (TFK - 1) and liver (HuH7) cancer cell lines.