

Title of Article: Anticancer and antiradical scavenging activity of *Ageratum conyzoides* L. (Asteraceae)

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Abstract

Ageratum conyzoides has been used in folklore for the treatment of a wide range of diseases. In the present investigation, the *in vitro* activity of ethanol, petroleum ether, ethylacetate, butanol, and water extracts of *A. conyzoides* were screened in some cancer cell lines using the sulphorhodamine B (SRB) assay. These cell lines include: Human non-small cell lung carcinoma (A-549), human colon adenocarcinoma (HT-29), human gastric carcinoma (SGC-7901), human glioma (U-251), human breast carcinoma (MDA-MB-231), human prostate carcinoma (DU-145), human hepatic carcinoma (BEL-7402), and mouse leukemia (P-388) cancer cell lines. Furthermore, kaempferol was isolated from the ethylacetate extract and the structure was elucidated by nuclear magnetic resonance (NMR) and mass spectroscopy. The effect of DPPH antiradical activity on the extracts and kaempferol was also determined. The results showed that ethylacetate extract exhibited the highest cytotoxic activity on A-549 and P-388 cancer cells with IC₅₀ values of 0.68 and 0.0003 µg/ml, respectively. Kaempferol isolated from the ethylacetate extract of *A. conyzoides* rapidly scavenged DPPH at a concentration of 130.07 ± 17.36 g/kg. The result therefore showed that *A. conyzoides* possessed anticancer and antiradical properties.