



Cytotoxicity evaluation of subterranean part extracts of *Allium fistulosum* on HepG2 cell line

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Background and Aims: In the present study cytotoxic effect of different extracts from Subterranean part of *Allium fistulosum* was evaluated on HepG2 cell line.

Methods: Hexane, chloroform, chloroform:methanol(9:1), butanol and water extracts were obtained successively from air dried and powdered Subterranean part of *A. fistulosum* by maceration method. Cytotoxic effect of these extracts against HepG2 cell line were investigated with 4 different concentration (500, 200, 100 and 50 µg/ml) by MTT(3-(4, 5-dimethylthiazol-2-yl)-2, 5-diphenyl tetrazolium bromide) assay method.

Results: Overall results showed that the percentage of inhibition by *A. fistulosum* extracts against HepG2 cell line did not exceed 50% at concentration extracts of 500 µg/ml and below, therefore no IC₅₀ was registered thus reflecting that *A. fistulosum* extracts were not active against HepG2 cell line.

Conclusions: Although *A. fistulosum* are widely used as edible vegetable and it has been shown pharmacological effects such as antioxidant, anti-inflammatory, antiviral, limited or no comprehensive data was available on the cytotoxic activity of this plant. Cytotoxic evaluation in this study showed that *A. fistulosum* extracts were not toxic against HepG2 cell line therefore it is reasonable to promote *A. fistulosum* in cancer chemoprevention since it exhibits strong antioxidative activities and at the same time is not cytotoxic to human cell line.

Keywords: Cytotoxicity; *Allium fistulosum*; HepG2