

***In vitro* cytotoxicity of *Asphodelus aestivus* against human cancer cell lines**

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Asphodelus aestivus Brot. (Asphodelaceae) (AA) is a Libyan medicinal plant used traditionally to treat haemorrhoids, burns and some skin diseases. Previous studies on AA identified the presence of anthranoids, flavonoids and triterpenes. In this study, the cytotoxicity of *n*-hexane, dichloromethane (DCM) and methanol (MeOH) extracts of the leaves and tubers of AA were studied against EJ138 (human bladder carcinoma), HepG2 (human liver hepatocellular carcinoma), A549 (human lung carcinoma), MCF7 (human breast adenocarcinoma) and PC3 (human prostate carcinoma) cell lines using the MTT assay. The DCM tuber extract showed high cytotoxicity against both A549 and PC3 cell lines with IC₅₀ values 16 and 19 µg/mL, respectively, while the DCM extract of the leaves displayed cytotoxicity against both HepG2 and A549 cell lines with IC₅₀ values of 70 and 90 µg/mL, respectively. Six compounds were isolated from different extracts of AA including: luteolin (**1**), *p*-hydroxy-phenethyl *trans*-ferulate (**2**), chrysophanol anthrone (**3**), chrysophanol-10,10'-bianthrone (**4**), aloë-emodin (**5**) and C- α -rhamnopyranosyl bianthracene-9, 9'-trione glycoside (**6**). The isolated compounds **1**, **3**, **4** and **6** were tested for their cytotoxicity against the prostate cancer (PC3) cell lines. Compound **6** revealed good cytotoxicity with an IC₅₀ value of 62 µM, while luteolin (**1**) showed moderate cytotoxicity with an IC₅₀ value of 201 µM.

Acknowledgements

The Libyan Government for the PhD scholarship is gratefully acknowledged by the author Afaf Al Groshi. All authors would like to thank the specialist in plant taxonomy Prof. Fathi Rateeb for identification of the plant and the EPSRC National Mass Spectrometry Service, Swansea, UK for MS analyses of samples used in this research.