

Cytotoxic Activity Of Major Iridoids From *Barleria Trispinosa* (Forssk.) Vahl. Growing In Saudi Arabia

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Abstract : Chemical investigation of the aerial parts of *Barleria trispinosa*(Forssk.) Vahl. resulted in isolation of four major iridoids that were identified as 6,8-O,O-diacetylshanzhiside methyl ester (acetyl barlerin) (1), 8-O-acetylshanzhiside methyl ester (barlerin) (2), shanzhiside methyl ester (3), and 6- β -L-rhamnopyranosyl-8-O-acetylshanzhiside methyl ester (4). The isolated compounds were confirmed by detailed one and two-dimensional NMR. Isolated compounds were tested for their cytotoxic activity on breast cancer (MCF-7, MDA-MB-231) and colon cancer (LS174T) cell lines using sulphorhodamine B (SRB) assay. It is noteworthy that compound 1 demonstrated a significant cytotoxic potential towards MDA-MB-231 cell line with $IC_{50} 16.7 \pm 2.7 \mu g / mL$ compared to doxorubicin whereas compounds 2, showed moderate cytotoxic potential with $IC_{50} 21.2 \pm 1.9 \mu g / mL$ on MCF-7. The other compounds showed moderate activity on the tested cell lines.

Keywords : acanthaceae, cytotoxicity, metabolites, barleria trispinosa

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