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SHORT COMMUNICATION



Bio-guided isolation of *Centaurea bruguierana* subsp. *belangerana* cytotoxic components

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ABSTRACT

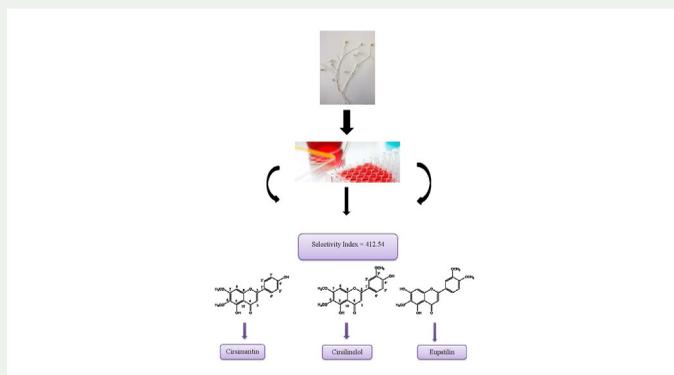
Centaurea bruguierana subsp. *belangerana* was extracted by 80% ethanol. The total extract was then partitioned into four fractions including chloroform, ethyl acetate and methanol. Cytotoxic effect of fractions was examined by MTT assay in K562 (chronic myelogenous leukemia), AGS (gastric adenocarcinoma), MCF-7 (breast adenocarcinoma) and SW742 (colon adenocarcinoma) cell lines. The Chloroform fraction, with the lowest LC₅₀ against K-562 cell lines, was partitioned into 14 subfractions and subjected to further purification by reversed-phase (C18) silica gel and sephadex LH-20 column chromatography. Three flavonoids including cirsimaritin, cirsilinelol and eupatilin were isolated for the first time from the species and the structures were confirmed by spectroscopic data. The high selectivity index of the purified flavonoids indicates valuable components with potential few side effects for normal cell lines. However, solubility tests for isolated components indicates the need for novel pharmaceutical dosage forms, in the case for using natural flavonoids as chemotherapeutic agents.

ARTICLE HISTORY

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