



Abstract

Cytotoxic and Antioxidant Activity of Four *Cousinia* Species of *Stenocephalae* Bunge. Section [†]

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[†] Presented at the 2nd International Conference on Natural Products for Cancer Prevention and Therapy, Kayseri, Turkey, 8–11 November 2017.

Publish: 15 November 2017

Abstract: Therapeutic efficacy and low toxicity makes natural compounds important for anticancer studies. *Cousinia*, is one of the most diverse genera of Asteraceae family. There are 6 sections of this genus in Turkey. One of them is *Stenocephalae* Bunge. Section including the species *C. davisiana*, *C. foliosa*, *C. ramosissima* and *C. stenocephala*. In this study, the antioxidant and cytotoxic effects of species were evaluated. Activity tests were carried out on methanol extracts of these plants. As a result, for antioxidant activity, *C. davisiana* and for cytotoxic activity *C. stenocephala* were selected as the guide plants due to their potent activity and sub-extracts were prepared, more active sub-extracts were also identified by activity tests. Bioactivity guided fractionations of extracts were evaluated on A549, Beas-2b and Colo205 cell lines and were carried out on dichloromethane sub-extract (IC₅₀ = 130 µg/mL on CoLo 205 cell line) of *C. stenocephala* and n-butanol sub-extract of *C. davisiana*. LC-MS/MS and NMR results revealed that the n-butanol sub-extract was found to be rich of with flavonoids and phenolics, dichloromethane sub-extract was found to be rich of with steroidal and triterpenic compounds.

Keywords: *cousinia*; asteraceae; cytotoxicity; antioxidant; A549; beas-2b; colo205; NMR; LC-MS/MS



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