

Abstract

Comparative Evaluation of the Cytotoxic Effects of Stem and Flower Extracts of *Rhaponticoides iconiensis* (Hub.-Mor.) M.V.Agab. & Greuter [†]

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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: 14 November 2017

Abstract: Asteraceae is an exceedingly large and widespread family of flowering plants. The family has more than 1100 genus and 2500 species worldwide. *Centaurea*, is one of the largest and most diverse genera of this family. *Rhaponticoides iconiensis* is one of the species from this genera and endemic for Konya (Turkey). It was reported that various species from *Centaurea* genus has showed considerable cytotoxic activity against various cancer cell lines. To the best of our knowledge, there are not any phytochemical and cytotoxic activity studies on this species. Therefore, in this study the cytotoxic effects of methanol extracts of steam and flowers of *R. iconiensis* were evaluated against A-549, HEPG2, MCF-7, COLO-205 and BEAS-2b cell lines by MTT and SRB methods. Both methods supported each other. Extracts were cytotoxic on all cell lines except A549. Consequently both of the methanol extracts partitioned to *n*-hexane, dichloromethane, ethyl acetate and *n*-buthanol sub-extracts. Then cytotoxic effect of these sub-extracts also evaluated. In result, *n*-hexane, dichloromethane and ethyl acetate sub-extracts obtained from methanol extracts of steam and flower of plant is more effective against cancer cell lines than methanol extracts itself. The phytochemical and activity studies on this species are on going.

Keywords: *Rhaponticoides iconiensis*; cytotoxic activity; *Centaurea*



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