



Abstract

Selective Cytotoxic Activity of *Scutellaria* Species [†]

Zeynep Dogan * and Iclal Saracoglu

Department of Pharmacognosy, Faculty of Pharmacy, Hacettepe University, Sıhhiye 06100, Turkey

* Correspondence: zeynep.ocak@hacettepe.edu.tr; Tel.: +90-312-305-1089

† 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: The genus *Scutellaria* (Labiatae) is represented by 25 species in Turkish flora. Some of *Scutellaria* species are used as tonic, wound healing, hemostatic, antioxidant and antitumor in the world. This is a comparative study to evaluate cytotoxic efficacy of three endemic *Scutellaria* species; *S. salviifolia* Benth (SS), *S. glaphyrostachys* Rech.f. (SG), *S. rubicunda* Hornem. subsp. *brevibracteata* J.R.Edm. (SB) against three different cell lines (HEp-2: human cervix epithelial carcinoma, HeLa: human cervix epithelial cancer cell lines and L929: mouse fibroblast non-cancerous cell line) by MTT method. For the activity tests, methanol extracts of the aerial parts were used. IC₅₀ values were found in a range of 378.0–494.7, 381.7–423.7 µg/ mL against HeLa and HEp-2 cell lines, respectively. All extracts showed lower cytotoxicity on L929 cell line than cancer cells with IC₅₀ value (753.0–1524.6 µg/mL). Due to the results, SB was the most effective extract to both cancer cell lines. SS and SG were more sensitive on HEp-2 than HeLa cell line. Our findings indicated that *Scutellaria* extracts have selective cytotoxic activity on both tested cancer and non-cancerous cell lines. This selectivity is important for discovery of new anticancer agents.

Keywords: *S. salviifolia*; *S. glaphyrostachys*; *S. rubicunda* subsp. *brevibracteata*; cytotoxic activity

Acknowledgement: This study was supported by TUBITAK 2211-C and HU-BAB TDK-2017-14236.



© 2017 by the authors. Licensee MDPI, Basel, Switzerland. This article is an open access article distributed under the terms and conditions of the Creative Commons Attribution (CC BY) license (<http://creativecommons.org/licenses/by/4.0/>).