Abstract
Selective Cytotoxic Activity of Scutellaria Species †

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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 Bentham (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

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