medical sciences forum

MDPI

Abstract

Cytotoxic Activity of *Schinus molle* L. Berries and Leaves †

Selen İlgün [1,*] and Gökçe Şeker Karatoprak [2]

[1] Department of Pharmaceutical Botany, Faculty of Pharmacy, Erciyes Unıversity, Kayseri 38039, Turkey
[2] Department of Pharmacognosy, Faculty of Pharmacy, Erciyes University, Kayseri 38039, Turkey
* Correspondence: erturkselen@gmail.com
† Presented at the 8th International Electronic Conference on Medicinal Chemistry, 1–30 November 2022; Available online: https://ecmc2022.sciforum.net/.

Abstract: *Schinus molle* is a perennial tree commonly known as "Pirul" in Mexico. This aromatic plant belongs to the Anacardiaceae family and the antibacterial, antifungal, insecticidal and cytotoxic activities of its bioactive essential oils have been previously investigated. Locally, the plant is mainly used as an analgesic, antiseptic, antibacterial, purgative and diuretic agent. In this study, the plant, which is generally grown as an ornamental plant on the Mediterranean coast of Turkey, was evaluated in terms of its cytotoxic properties based on its secondary metabolites. Raw and ripe fruits, together with the plant's leaves, were collected and extracted using different solvents. Both 70% methanol and water extracts of leaves, ripe fruits and raw fruits were prepared. The six different extracts obtained were tested in cell lines of humans' most common cancer types (Du-145 prostate cancer, CaCo-2 colon cancer and MCF-7 breast cancer). As a result, methanol extracts prepared from the ripe fruits of the plant decreased the viability of three different cancer cells, especially MCF-7 and Du-145 cell lines, at low concentrations below 50%. Particularly in the MCF-7 cell line, the viability at 15 µg/mL was calculated as 46.03 ± 1.19%. While the cell line which was least effected by the extracts was CaCo-2, the extracts with the most negligible antiproliferative effect were the water extracts of the leaves and the raw and ripe fruits.

Keywords: *Schinus molle*; cytotoxicity; Anacardiaceae

Citation: İlgün, S.; Şeker Karatoprak, G. Cytotoxic Activity of *Schinus molle* L. Berries and Leaves. *Med. Sci. Forum* **2022**, *14*, 10. https://doi.org/10.3390/ECMC2022-13311

Academic Editor: Maria Emília Sousa

Published: 1 November 2022

Supplementary Materials: The following are available online at https://www.mdpi.com/article/10.3390/ECMC2022-13311/s1.

Author Contributions: S.İ. and G.Ş.K. contributed equally. All authors have read and agreed to the published version of the manuscript.

Funding: This research received no external funding.

Institutional Review Board Statement: Not applicable.

Informed Consent Statement: Not applicable.

Conflicts of Interest: The authors declare no conflict of interest.