



Anti-proliferative and Apoptotic Potential of Ferula Asafoetida's Essential Oil

Hajar Khazraei^{1*}, PhD 

¹Colorectal Research Center, Shiraz University of Medical Sciences, Shiraz, Iran

***Corresponding author:**

Hajar Khazraei, PhD;
Colorectal Research Center, Shiraz University of Medical Sciences, Shiraz, Iran
Tel: +98 71 6281453
Email: khazraee@sums.ac.ir

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Dear Editor

I read with great interest the article in your journal entitled: Anti-proliferative and Apoptotic Potential of Ferula Asafoetida's Essential Oil via Inhibiting NF-kB and TNF-alpha Receptors Pathway (1). In this study, the anti-proliferative and apoptotic effect of various doses of essential oil from Ferula asafoetida as an herbal medicine was investigated on colon cancer cell lines i.e. SW620 and CT26. The authors determined the percentage cytotoxicity and the levels of NF-kB, TNF-alpha, TGF-beta and Caspases.

The study is very interesting and it investigated the role in gene regulation of herbal medicine and it is valuable for future studies. They concluded that this herbal medicine shows the role in gene regulation to attenuate the colon cancer. It could be used as a potent anti-cancer in the treatment of human colon cancer but after more in vivo and clinical studies.

Although the authors discussed their findings comprehensively, I feel that there are some additional issues to be clarified. In this study, the essential oil is used and significant cytotoxic potential on both cell

lines was seen. The IC50 value of the oil was 7.21±0.29 µg/ml for HepG2 and 8.0±0.36 g/ml for SK-Hep1, respectively, while the IC50 of crude extract against cancer cells doesn't exceed 30 µg/ml (2). According to the IC50 value of the Ferula Asafoetida's essential oil, is it possible to use it for cancer chemotherapy in animal models? I think the use of crude extract could be safer for animal or human studies. From this point of view, I think that it would be worthwhile if the authors considered this issue.

In this study, the authors used two forms of cell lines (SW620 and CT26) as colon cancer cell lines and it could be performed on other human cell lines instead of mouse cell line and they did not explain why these concentrations of essential oil were chosen? Based on the reported values in their study, comparison and significant differences between the groups are not clear and it would be better to demonstrate these by figures or separated tables.

Keywords: Essential Oil; Colon Cancer; Surgery

Conflicts of interest: None declared.

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