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Short communication

In Vitro Cytotoxicity of Two Subspecies of *Juniperus excelsa* on Cancer Cells

*[1]Hojjat Sadeghi-aliabadi, [2]Ahmad Emami, [1]Babak Sadeghi, [3]Abbas Jafarian

Abstract

Objective(s)
The cytotoxic effects of crude ethanol extracts of some previously tested Iranian conifers on tumor cell lines have motivated us to screen different parts of two subspecies in these genus.
Materials and Methods
Terminal branchlets and berries of *Juniperus excelsa* subsp. *excelsa* and *J. excelsa* subsp. *polycarpos* were collected, dried and extracted with ethanol/H_2O (80/20 v/v) via percolation procedure. Extracts were dried, reconstituted in ethanol and cytotoxic effects of different concentrations were determined on cancer cells by ELISA, using MTT assay. MDA-MB-468, Hela and KB cells were used in this study.
Results
The extracts of the branchlets of male and female of *J. excelsa* subsp. *polycarpos* as well as berries extract of *J. excelsa* subsp. *excelsa* showed inhibitory activities against KB cells. Extracts of female branchlets and berries of *J. excelsa* subsp. *polycarpos* were cytotoxic against all 3 cell lines.
Conclusion
In conclusion, obtained extracts from *J. excelsa* subsp. *polycarpos* showed cytotoxic effects against most tested cell lines which was comparable to doxorubicin; whereas, berries extracts of *J. excelsa* subsp. *excelsa* showed inhibitory effects only against KB cells.

Keywords: Cytotoxicity assay, Hela cells, *Juniperus excelsa*, *J. polycarpos*

1- Department of Pharmaceutical Chemistry, School of Pharmacy and Pharmaceutical Sciences and Isfahan Pharmaceutical Sciences Research Center, Isfahan University of Medical Sciences, Isfahan, Iran
* Corresponding author: Tel: +98-311- 7922564; Fax: +98-311-6680011; email: sadeghi@pharm.mui.ac.ir
2- Department of Pharmacognosy, School of Pharmacy, Mashhad University of Medical Sciences, Mashhad, Iran
3- Isfahan Pharmaceutical Sciences Research Center, Isfahan University of Medical Sciences, Isfahan, Iran