

Anticancer Potential of *Lepidium Sativum* Seeds Aqueous Extract on the Azoxymethane/ Dextran Sulfate Sodium-Induced Colon Cancer *In vivo*

Nahed Ahmed Hussien^{*1,2}, Ghazwaa Awad Alsulami¹

¹ Biology Department, Faculty of Science, Taif University, Al-Hawyeia 888, Kingdom of Saudi Arabia;

² Zoology Department, Faculty of Science, Cairo University, Giza12613, Egypt

Article Information

Identifiers and Pagination:

Year: 2021

Volume: 2

Issue: 1

First Page: 78

Last Page: 88

Publisher ID: [CNT-2-78](#)

DOI: [10.2174/2665978601999200928212236](#)

Article History:

Received Date: 04/06/2020

Revision Received Date: 29/08/2020

Acceptance Date: 03/09/2020

Electronic publication date: 2021

Copyright: 2021 Bentham Science Publishers

* Address correspondence to this author at the Zoology Department, Faculty of Science, Cairo University, Giza 12613, Egypt; Tel.: +20 2 35676781, Fax: +20 2 35727556;

Email: nahed@sci.cu.edu.eg; nahed199@gmail.com; n.nahed@tu.edu.sa

Background: Colon cancer is responsible for increasing the death rate worldwide. Commonly used anticancer drugs have various side effects and their clinical usage must be restricted due to their toxicity.

Objective: The present research aimed to evaluate the anticancer potential of *Lepidium sativum* L. (LS) seeds aqueous extract against azoxymethane/dextran sodium sulfate (AOM/DSS) induced-colon cancer in male albino mice.

Methods: Low (200 mg/kg) and high (400 mg/kg) doses of LS seeds extract were used to treat induced colon cancer in different stages.

Results: The present results report that LS treatment for mice with colon cancer especially in high dose, decreases colon polyps/tumor incidence and size, tissues disorder, expression of P53 and increases apoptosis in colon tissue. Moreover, LS decreases micronucleus induction in polychromatic (PCE), increases PCE/normochromatic erythrocytes ratio and decreases the percentage of sperm abnormalities.

Conclusion: The present study reports anticancer potential of LS for induced colorectal cancer mice by ameliorating the inflammatory steps of colon.

Keywords: *Lepidium sativum*, colitis, colorectal cancer, azoxymethane, dextran sodium sulfate, male albino mice.