

Accepted Manuscript

Immunomodulatory and cytotoxic effects of *Nigella sativa* and thymoquinone on rat splenocytes

Zahra Gholamnezhad, Houshang Rafatpanah, Hamid Reza Sadeghnia, Mohammad Hossein Boskabady, M.D. Ph.D.



PII: S0278-6915(15)30050-8

DOI: [10.1016/j.fct.2015.08.028](https://doi.org/10.1016/j.fct.2015.08.028)

Reference: FCT 8385

To appear in: *Food and Chemical Toxicology*

Received Date: 30 June 2015

Revised Date: 23 July 2015

Accepted Date: 28 August 2015

Please cite this article as: Gholamnezhad, Z., Rafatpanah, H., Sadeghnia, H.R., Boskabady, M.H., Immunomodulatory and cytotoxic effects of *Nigella sativa* and thymoquinone on rat splenocytes, *Food and Chemical Toxicology* (2015), doi: 10.1016/j.fct.2015.08.028.

This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting proof before it is published in its final form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.

Immunomodulatory and cytotoxic effects of *Nigella sativa* and thymoquinone on rat splenocytes

Zahra Gholamnezhad^a, Houshang Rafatpanah^b, Hamid Reza Sadeghnia^c, Mohammad Hossein Boskabady^{*a}

Affiliation

^aNeurogenic Inflammation Research Center and Department of Physiology, School of Medicine, Mashhad University of Medical Sciences, Mashhad, Iran

^bInflammation and Inflammatory Diseases Research Center, Mashhad University of Medical Sciences, Mashhad, Iran

^cPharmacological Research Center of Medicinal Plants, School of Medicine, Mashhad University of Medical Sciences, Mashhad, Iran

Correspondence

Mohammad Hossein Boskabady, M.D., Ph.D., Department of Physiology, School of Medicine, Mashhad University of Medical Sciences, Mashhad, Post Code 9177948564, Iran, (Fax +98 511 8828564), E-mail: boskabadyhm@mums.ac.ir

Running head: Immunomodulatory effect of *Nigella sativa* and thymoquinone on splenocytes

*

Abbreviation: *N. sativa*, *Nigella sativa*; TQ, thymoquinone; IL-4, interleukin 4; IFN- γ , interferon- γ ; PHA, phytohemagglutinin; Con A, concavaline A; MNCs, mononuclear cells; OVA, ovalbumin; CC-5, ethyl acetate column chromatographic fraction; TNF- α , tumor necrosis factor alpha; NO, nitric oxide; BAL, bronchoalveolar lavage; DMSO, dimethyl sulfoxide; WST, water-soluble tetrazolium salts; BrdU, bromodeoxyuridine.

Download English Version:

<https://daneshyari.com/en/article/5849572>

Download Persian Version:

<https://daneshyari.com/article/5849572>

[Daneshyari.com](https://daneshyari.com)