Abstract

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Journal of Pharmacological Reviews and Reports

2022
Vol.5 No.3

In vitro potential antiviral SARS-CoV-19- activity of natural product thymohydroquinone and dithymoquinone from Nigella sativa.

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Abstract

Inflammation, oxidation, and compromised immunity all increase the dangers of COVID-19, whereas many pharmaceutical protocols may lead to increased immunity such as ingesting from sources containing vitamin E and zinc. A global search for natural remedies to fight COVID-19 has emerged, to assist in the treatment of this infamous coronavirus. Nigella satvia is a world-renowned plant, an esteemed herbal remedy, which can be used as a liquid medicine to increase immunity while decreasing the dangers of acute respiratory distress syndrome. Thymoqinone (TQ), dithymoqinone (DTQ) and thymohydroquinone (THQ), are major compounds of the essential oil contained in N. sativa. A current study aims to discover the antiviral activity of two compounds, Thymohydroquinone and Dithymoquinone, which are synthesized through simple chemical procedures, deriving from thymoquinone, which happens to be a major compound of Nigella sativa. A half-maximal cytotoxic con-centration, “CC50”, was calculated by MTT assay for each individual drug, The sample showed anti-SARS-CoV-2 activity at non-cytotoxic nanomolar concentrations in vitro with a low selectivity index (CC50/IC50 = 31.74/23.15 = 1.4), whereby Dimthymoquinone shows high cytotoxicity.

Received date: April 13, 2022; **Accepted date:** April 18, 2022**; Published date:** May 04, 2022

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