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HYPOTHESIS PAPER

Nitric oxide boosters as defensive agents against COVID-19 infection: an opinion

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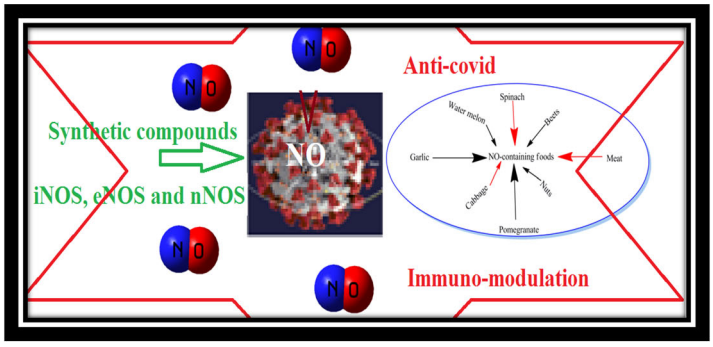
ABSTRACT

In the prevailing covid times, scientific community is busy in developing vaccine against COVID-19. Under such fascination this article describes the possible role of nitric oxide (NO) releasers in aiding the immune system of a human body against this dreadful pandemic disease. Despite some prodrug antiviral compounds are in practice to recover the patients suffering from covid-19, however, co-morbidity deaths are highest among the total deaths happened so far. This concurrence of a number of diseases in a patient along with this viral infection is indicative of the poor immunity. Literature background supports the use of NO as immunity boosting agent and hence, the nitric oxide releasing compounds could act as lucrative in this context. Some dietary suggestions of NO-containing food items have also been introduced in this article. Also, the profound effect of NO in relieving symptomatic severity of covid-19 has been opined in this work.



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NO; Immunity; NO-release; food; synthetic moieties

Introduction

Nitric oxide (NO) is considered as a biologically important free radical that is produced during the metabolic pathway of L-arginine (Mir et al., 2019). The molecule has been proven of its physiological role in maintaining vascular tone, neuronal functionality, tumor-suppressing ability and more importantly profound implicative in human immune system as well as a microbicide (Maurya & Mir, 2014; Mir et al., 2017; Palmer et al., 1987). Moreover, NO generated naturally is expressive in so many immune functions, viz, T-cell regulation. Due to the fact that this molecule possesses its physiological impacts almost in every system of a human body, scientists are busy in developing NO-releasers for the beneficial applicability in case of the requirement wherein its production is too low to maintain homeostasis (Hibbs et al., 1987). In due course so many inorganic and organic NO-donors have been proposed by the scientific community. Some of them are even consumed by well defined commercial names generally called as NO-boosters (NO-supplements) (Mir et al., 2019).

As of now the world is suffering from the deadly viral pandemic generally known as corona virus-19 (COVID-19). Till now no treatment is available for this disease. However, some known viral drugs and social distancing have decreased the effect and spread of this calamity. Such declining infection rates and lockdown strategies have shown a ray of hope. But, these precautionary measures alone are not sufficient to lessen the increasing peak of the covid-19 affected statistical graph. Even the developed countries like USA are hopeless in this combat. The increasing trend of this catastrophe thus cannot be halted completely. For every field

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