Activity of Ephedra sinica against COVID 19 through deactivation of methyltransferase-stimulatory factor complex of NSP16 and NSP10 (6W61)

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Abstract: An in-silico study was performed to determine the activity of Ephedra sinica against COVID 19. Molecular docking using Biovia Discovery Studio was performed to identify the phytochemical responsible to deactivate methyltransferase-stimulatory factor complex of NSP16 and NSP10 (6W61) enzyme. It was found that Theobromine helped to prevent COVID 19.

Introduction: Ephedra sinica is known for its medicinal activities. Ephedra is used for weight loss and obesity and to enhance athletic performance. It is also used for allergies and hay fever; nasal congestion; and respiratory tract conditions such as bronchospasm, asthma, and bronchitis. It is also used for colds, flu, swine flu, fever, chills, headache, inability to sweat, joint and bone pain, and as a "water pill" to increase urine flow in people who retain fluids.

The plant is classified as follows:

Kingdom	Plantae
Division	Tracheophytes
Class	Gnetophyta
Order	Ephedrales
Family	Ephedraceae
Genus	Ephedra
Species	E. sinica

Major phytochemicals present in the plant are:

a. Sulforaphane
b. Theobromine
c. Apigenin
d. Rosmarinic acid

One of the major enzymes required for the survival of the organism causing COVID 19 is methyltransferase-stimulatory factor complex of NSP16 and NSP10 (6W61) enzyme. The objective of this work is to find the phytochemical that can deactivate the enzyme, thereby preventing the physiological activity of the organism.

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