Activity of Punica granatum against COVID 19 through deactivation of COVID-19 main protease (6M03)

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Abstract: An in-silico study was performed to determine the activity of Punica granatum against COVID 19. Molecular docking using Biovia Discovery Studio was performed to identify the phytochemical responsible to deactivate COVID-19 main protease (6M03) enzyme. It was found that Campesterol helped to prevent COVID 19.

Introduction: Punica granatum is known for its medicinal activities. Pomegranate seeds are used as a spice known as anar dana. Pomegranate is used mainly for juice. Pomegranate syrup or molasses is used in muhammara, a roasted red pepper, walnut, and garlic. Grenadine syrup originally consisted of thickened and sweetened pomegranate juice mainly used in cocktail mixing.

The plant is classified as follows:

Kingdom	Plantae
Division	Tracheophytes
Class	Angiosperms
Order	Myrtales
Family	Lythraceae
Genus	Punica
Species	granatum

Major phytochemicals present in the plant are:

a. Campesterol
b. Malvidin
c. Myricetin
d. Pelargonidin

One of the major enzymes required for the survival of the organism causing COVID 19 is COVID-19 main protease (6M03) 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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