

## Activity of Punica granatum against COVID 19 through deactivation of ADP ribose phosphatase of NSP3 from SARS CoV-2 (6VXS)

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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 ADP ribose phosphatase of NSP3 from SARS CoV-2 (6VXS) 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 ADP ribose phosphatase of NSP3 from SARS CoV-2 (6VXS) enzyme. The objective of this work is to find the phytochemical that can deactivate the enzyme, thereby preventing the physiological activity of the organism.