

Activity of Punica granatum against COVID 19 through deactivation of papain-like protease of SARS CoV-2 (6W9C)

Sushree Subhadarshani Barik¹, Pradip Kumar Prusty²

¹190705180091@cutm.ac.in

²pradip.prusty@cutm.ac.in

Centurion University of Technology and Management, Odisha, India

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 papain-like protease of SARS CoV-2 (6W9C) enzyme. It was found that Myricetin 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 papain-like protease of SARS CoV-2 (6W9C) enzyme. The objective of this work is to find the phytochemical that can deactivate the enzyme, thereby preventing the physiological activity of the organism.