

Activity of *Punica granatum* against COVID 19 through deactivation of methyltransferase-stimulatory factor complex of NSP16 and NSP10 (6W61)

Laxmipriya Panda¹, Pradip Kumar Prusty²

¹190705180059@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 methyltransferase-stimulatory factor complex of NSP16 and NSP10 (6W61) 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	<i>Punica</i>
Species	<i>granatum</i>

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 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.