

Activity of *Gardenia* sp. 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 *Gardenia* sp. 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 Pelargonidin and Genistein helped to prevent COVID 19.

Introduction: *Gardenia* sp. is known for its medicinal activities. *Gardenia* plants are known for its strong sweet scent of their flowers. *Gardenia jasminoides* (syn. *G. grandiflora*, *G. Florida*) is cultivated as a house plant. Its fruit is used as a yellow dye and used on fabric and food. Its fruits are also used in traditional Chinese medicine for their clearing, calming, and cooling properties.

The plant is classified as follows:

Kingdom	Plantae
Division	Tracheophytes
Class	Angiosperms
Order	Gentianales
Family	Rubiaceae
Genus	<i>Gardenieae</i>
Species	<i>Gardenia</i>

Major phytochemicals present in the plant are:

- a. Pelargonidin
- b. Genistein
- c. Peonidin
- d. Daidzein

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.