

## Activity of *Gardenia* sp. against COVID 19 through deactivation of ADP ribose phosphatase of NSP3 from SARS CoV-2 (6VXS)

Zizibisa Lenka<sup>1</sup>, Kalpita Bhatta<sup>2</sup>

<sup>1</sup>190705180027@cutm.ac.in

<sup>2</sup>kalpita.bhatta@cutm.ac.in

Centurion University of Technology and Management, Odisha, India

**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 ADP ribose phosphatase of NSP3 from SARS CoV-2 (6VXS) enzyme. It was found that 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. Genistein
- d. Daidzein

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.