

## Activity of *Andrographis paniculata* 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 *Andrographis paniculata* 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 Quercetin helped to prevent COVID 19.

**Introduction:** *Andrographis paniculata* is known for its medicinal activities. *A. paniculata* has been used in Siddha and Ayurvedic medicine. It is promoted as a dietary supplement for cancer prevention and cure. In the traditional medicine of India, *A. paniculata* has also been used for jaundice therapy.

The plant is classified as follows:

Kingdom	Plantae
Division	Tracheophytes
Class	Angiosperms
Order	Lamiales
Family	Acanthaceae
Genus	<i>Andrographis</i>
Species	<i>paniculata</i>

Major phytochemicals present in the plant are:

- a. Cryptoxanthin
- b. Quercetin
- c. Salicylic acid
- d. Glutathione

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.