

Activity of *Andrographis paniculata* against COVID 19 through deactivation of papain-like protease of SARS CoV-2 (6W9C)

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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 papain-like protease of SARS CoV-2 (6W9C) 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:

- Cryptoxanthin
- Quercetin
- Salicylic acid
- Glutathione

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.