Activity of Wickstroemia indica 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 Wickstroemia indica 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 Zingiberene helped to prevent COVID 19.

Introduction: Wickstroemia indica is known for its medicinal activities. It is used in traditional Chinese medicine. This plant has antipyretic, detoxicant, expectorant, vermifuge, and abortifacient properties used in clinical practice in China. An alcoholic extract of the plant was found to contain daphnoretin, chrysophanol, myricitrime and rutin. The extract of W. indica displays antimicrobial and anti-inflammatory activities in vitro.

The plant is classified as follows:

Kingdom	Plantae
Division	Tracheophytes
Class	Angiosperms
Order	Malvales
Family	Thymelaeaceae
Genus	Wikstroemia
Species	indica

Major phytochemicals present in the plant are:

a. Naringin
b. Daidzein
c. Peonidin
d. Zingiberene

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.

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