

Activity of *Alpinia officinarum* against COVID 19 through deactivation of methyltransferase-stimulatory factor complex of NSP16 and NSP10 (6W61)

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Abstract: An in-silico study was performed to determine the activity of *Alpinia officinarum* against COVID 19. Molecular docking using Biovia Discovery Studio was performed to identify the phytochemical responsible to deactivate methyltransferase-stimulatory factor complex of NSP16 and NSP10 (6W61) enzyme. It was found that Phenyl isothiocyanate and Luteolin helped to prevent COVID 19.

Introduction: *Alpinia officinarum* is known for its medicinal activities. In Asia the rhizomes are ground to powder for use in curries, drinks, and jellies. In India an extract is used in perfumes. *Alpinia officinarum* contains high concentrations of the flavonol galangin. Historically, the rhizomes were reputed to have stimulant and digestive effects.

The plant is classified as follows:

Kingdom	Plantae
Division	Tracheophytes
Class	Angiosperms
Order	Zingiberales
Family	Zingiberaceae
Genus	<i>Alpinia</i>
Species	<i>officinarum</i>

Major phytochemicals present in the plant are:

- Resveratrol
- Phenyl isothiocyanate
- Luteolin
- Ferulic acid

One of the major enzymes required for the survival of the organism causing COVID 19 is methyltransferase-stimulatory factor complex of NSP16 and NSP10 (6W61) enzyme. The objective of this work is to find the phytochemical that can deactivate the enzyme, thereby preventing the physiological activity of the organism.