Activity of Pandanus amaryllifoius 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 Pandanus amaryllifoius 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 Lutein helped to prevent COVID 19.

Introduction: Pandanus amaryllifoius is known for its medicinal activities. The leaves are used in the perfume industry and traditional medicine. P. amaryllifolius essence may substitute for vanilla essence. The leaves possess a pleasant aroma and can be used as natural air fresheners. The green juice acquired from its leaf is used extensively in Indonesian cuisine as green food colouring and flavouring agents that gave pleasant aroma for kue, a tapioca, flour or glutinous rice-based traditional cakes.

The plant is classified as follows:

Kingdom	Plantae
Division	Tracheophytes
Class	Angiosperms
Order	Pandanales
Family	Pandanaceae
Genus	Pandanus
Species	amaryllifolius

Major phytochemicals present in the plant are:

a. Lutein
b. Genistein
c. Gallic acid
d. Theobromine

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.