

Activity of *Curcuma longa* against COVID 19 through deactivation of ADP ribose phosphatase of NSP3 from SARS CoV-2 (6VXS)

Sushantika Biswal¹, Gyanranjan Mahalik²

¹190705180025@cutm.ac.in

²gyanranjan.mahalik@cutm.ac.in

Centurion University of Technology and Management, Odisha, India

Abstract: An in-silico study was performed to determine the activity of *Curcuma longa* against COVID 19. Molecular docking using Biovia Discovery Studio was performed to identify the phytochemical responsible to deactivate ADP ribose phosphatase of NSP3 from SARS CoV-2 (6VXS) enzyme. It was found that Pelletierine helped to prevent COVID 19.

Introduction: *Curcuma longa* is known for its medicinal activities. Turmeric is used widely as a spice in South Asian and Middle Eastern cooking. The golden yellow colour of turmeric is due to curcumin which contains an orange-coloured volatile oil. It is used to protect food products from sunlight. Curcumin reduces inflammation.

The plant is classified as follows:

Kingdom	Plantae
Division	Tracheophytes
Class	Angiosperms
Order	Zingiberales
Family	Zingiberaceae
Genus	Curcuma
Species	longa

Major phytochemicals present in the plant are:

- Pelletierine
- Isorhamnetin
- Theobromine
- Tannic acid

One of the major enzymes required for the survival of the organism causing COVID 19 is ADP ribose phosphatase of NSP3 from SARS CoV-2 (6VXS) enzyme. The objective of this work is to find the phytochemical that can deactivate the enzyme, thereby preventing the physiological activity of the organism.