Activity of Zizyphus spira-christi against COVID 19 through deactivation of methyltransferase-stimulatory factor complex of NSP16 and NSP10 (6W61)

Gurujyoti Rout[1], Pradip Kumar Prusty[2]

[1]190705180061@cutm.ac.in

[2]pradip.prusty@cutm.ac.in

Centurion University of Technology and Management, Odisha, India

Abstract: An in-silico study was performed to determine the activity of Zizyphus spira-christi 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 Eugenol helped to prevent COVID 19.

Introduction: Zizyphus spira-christi is known for its medicinal activities. Fruits of Z. spina-christi is used as food. The wood is used as a source of fuel and it produces an excellent charcoal. Z. spina-christi fruits are eaten to treat diarrhoea and malaria and as an antispasmodic. The powder of the twigs is used externally to treat rheumatism and scorpion sting. Ash of wood mixed with vinegar is applied to heal snake bites and a tea made of fruit is used to treat measles. Fruits and crashed kernels are eaten to treat chest pains, respiratory problems and as a tonic.

The plant is classified as follows:

Kingdom	Plantae
Division	Tracheophytes
Class	Angiosperms
Order	Rosales
Family	Rhamnaceae
Genus	Ziziphus
Species	spina-christi

Major phytochemicals present in the plant are:

a. Eugenol
b. Daidzein
c. Peonidin
d. Quercetin

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.