

**IIT Indore conducts study on...**

# Plant compounds that inhibit replication of SARS-CoV-2



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IIT Indore has conducted a study to identify natural plants compounds (NPACs) for the specific inhibition of SARS-CoV-2 replication by targeting the nucleocapsid (N) protein.

The study has been done by the Infection Bioengineering Group (IBEG) led by Dr Hem Chandra Jha, along with the Computational Biophysics Group led by Dr Parimal Kar, at the Department of Biosciences and Biomedical

Engineering along with their research students, Dharmendra Kashyap and Rajarshi Roy.

NPACs have been used traditionally for the prevention and treatment of various pathogenic diseases for several decades.

Previously, Dr Jha's team had reported a higher mutation rate in S, E, and M proteins. Meanwhile, the mutation rate in N protein has been very low since the outbreak. Hence, blocking the property of N protein for treatment through medicinal plant extracts could

be a unique approach.

The identified compounds may be effective for a longer duration due to less mutation in the N protein and higher binding affinity with withanolide D, hypericin, and silymarin.

Importantly, silymarin is in the second phase of clinical trials and is also known to inhibit the acute respiratory distress syndrome (ARDS). This project has also been supported by the Department of Science and Technology (DST).