

Mushroom derived bioactive compounds have potential to combat COVID-19 and other viral infections

Posted On: 29 DEC 2023 11:48AM by PIB Delhi

Natural anti-infective, antiviral, anti-inflammatory, and antithrombotic products derived from a wide range of easily sourced mushrooms and their bioactive molecules have the potential to combat covid, according to a new paper.

The COVID-19 pandemic brought the focus on bioactive ingredients that boost the immune system. Consequently, scientists worldwide resumed intensive studies on bioactive compounds that can boost the immune system to protect against SARS-CoV-2 and limit the accelerated transmission of this virus. Consequently, bioactive compounds from herbal sources and edible mushrooms gained commercial interest due to their easy availability, high antioxidant activity, nutritional value, and low side effects.

Mushrooms are a popular source of food and North-East India is home to diverse groups of edible mushrooms. This increasing popularity of mushrooms led researchers from IASST, an autonomous institute of Department of Science and Technology (DST) to critically analyse the importance of edible mushroom and natural compounds from mushroom to attenuate the complications against COVID-19 and other viral infections.

Research group lead by Prof. Ashis K Mukherjee, Director, IASST including Dr. Aparup Patra, Dr. M. R. Khan, Dr. Sagar R. Barge, and Mr. Paran Baruah from IASST, Guwahati carried out an analysis of the current therapies against COVID-19 versus the potential of natural anti-infective, antiviral, anti-inflammatory, and antithrombotic products derived from a wide range of easily sourced mushrooms and their bioactive molecules.

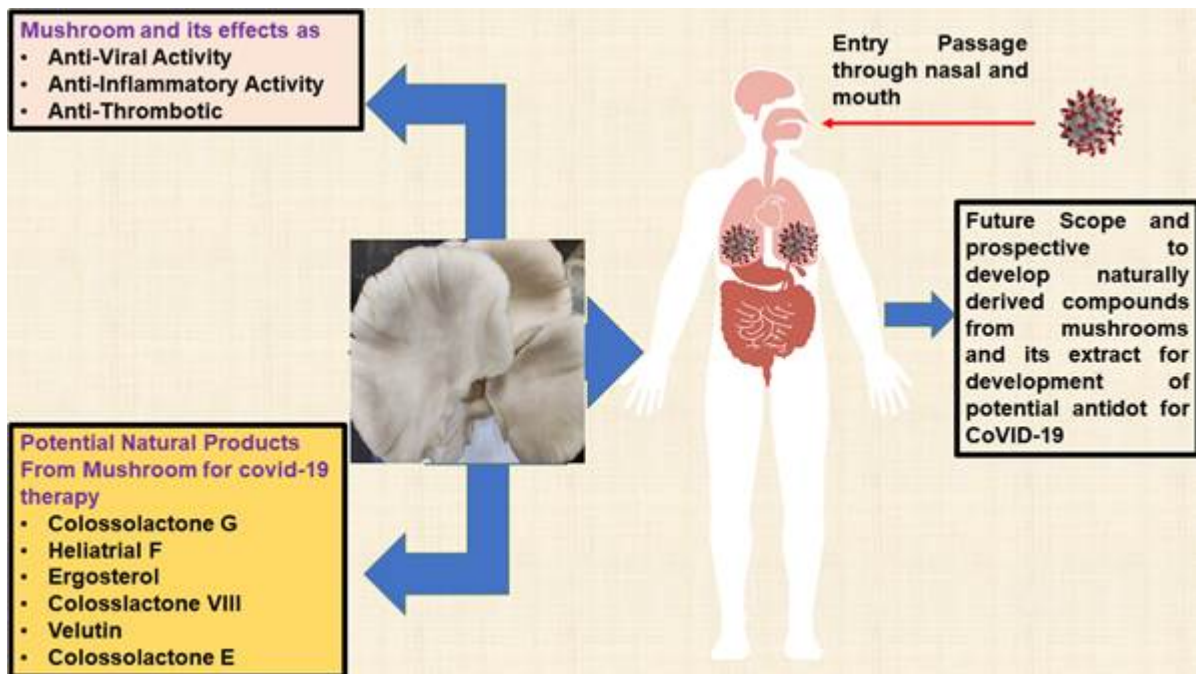
In the review article the scientists have assessed the roles and mechanisms of 13 different mushroom-derived bioactive compounds in preventing SARS-CoV-2 infection and the pathophysiology associated with its infection, such as lung infection, inflammation, cytokine storm, and thrombotic and cardiovascular effects.

Their study said that mushrooms contain bioactive polysaccharides and compounds with immunomodulating, antiviral, antibacterial, antifungal, and other medicinal properties. It also said that mushroom-based drugs are being tested in human trials, with promising results against SARS-CoV-2.

The main advantages of using edible mushroom against viral infections are- they can be used as a nutraceutical supplement with no side-effects and can be act as an immunity booster.

The study in the *Journal of Fungi* also suggests that there are huge opportunities for better understanding the role of mushroom-derived bioactive compounds by in-depth pre-clinical and clinical studies. In this regard a coordination between researcher, health professionals, and policymakers are warranted.

Publication Link: <https://doi.org/10.3390/jof9090897>



SNC/PK

(Release ID: 1991432)