'Mulethi' may help alleviate aggressive symptoms of COVID-19

New Delhi, June 30 (India Science Wire): In an interesting development, a team of scientists at the Government of India’s Department of Biotechnology (DBT)’s National Brain Research Centre (NBRC), has identified Mulethi, a commonly used herb, as a potential source for the development of a drug against COVID-19.

Scientists have found that an active ingredient in the root of the herb called Glycyrrhizin lowered the severity of the disease and brought down viral replication.

The finding assumes importance as there is still no specific drug to treat Covid-19 infection even while several vaccines have come up. The doctors currently manage with a few repurposed medicines.

The NBRC team started looking for a drug against Covid-19 last year. They studied Mulethi as it was known to have excellent anti-inflammatory properties. They carried out a series of experiments to check its potential against the COVID virus.

When the COVID virus infects human cells, the body’s immune system reacts by releasing a set of proteins called cytokines. In the case of a severe infection, the immune cells respond rapidly by releasing a “storm of cytokines”. Sometimes this can become uncontrolled leading to severe inflammation and fluid accumulation in lung tissues. This condition may lead to acute respiratory distress, cell death, and eventually, organ failure.

The NBRC scientists found that glycyrrhizin molecules in Mulethi could help avoid this problem. The researchers expressed specific viral proteins in human lung epithelial cells. The proteins triggered inflammation in these cells. Treatment with glycyrrhizin cleared the inflammation. The untreated cells succumbed to inflammation.

The scientists analysed the molecule further and found that apart from inhibiting the cytokine storm, glycyrrhizin also reduces viral replication by 90%. Mulethi is widely prescribed for lung ailments, chronic fevers and respiratory tract inflammation in Ayurveda, glycyrrhizin is used in the treatment of chronic hepatitis B and C.

“Given its safety profile and tolerability, Mulethi might constitute a viable therapeutic option in patients with SARS-CoV-2 infection,” scientists said. The team is now looking for partners to carry forward the research into the preclinical stage. They have published a report on their study in Cytokine, the official journal of the International Cytokine and Interferon Society. Senior scientist Ellora Sen, conducted the study with her fellow researchers Pruthvi Gowda, Shruti Patrick, Shanker Datt, Rajesh Joshi, and Kumar Kumawat.

Keywords: Department of Biotechnology, DBT, root, Glycyrrhizin, disease, viral replication, repurposed medicines, anti-inflammatory, immune system, proteins, cytokines, fluid, lung, tissue, respiratory, organ, epithelial cells. (India Science Wire)

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