New study into green tea's potential to help tackle COVID-19

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As India continues to be ravaged by the pandemic, a Swansea University academic is investigating how green tea could give rise to a drug capable of tackling COVID-19.

Dr. Suresh Mohankumar carried out the research with colleagues in India during his time at JSS College of Pharmacy, JSS Academy of Higher Education and Research in Ooty prior to taking up his current role at Swansea University Medical School.

According to Dr. Mohankumar, "nature's oldest pharmacy has always been a treasure of potential novel drugs and we questioned if any of these compounds could assist us in battling the COVID-19 pandemic? We screened and sorted a library of natural compounds already know to be active against other coronaviruses using an artificial intelligence-aided computer program. Our findings suggested that one of the compounds in green tea could combat the coronavirus behind COVID-19."

The researchers' work has now been highlighted by online journal *RSC Advances* and has been included in its prestigious hot articles collection chosen by editors and reviewers.

Associate Professor Dr. Mohankumar emphasized that the research was still in its early days and a long way from any kind of clinical application.

"The compound that our model predicts to be most active is gallocatechin, which is present in green tea and could be readily available, accessible, and affordable. There now needs to be further investigation to show if it can be proven clinically effective and safe for preventing or treating COVID-19.

"This is still a preliminary step, but it could be a potential lead to tackling the devastating COVID-19 pandemic.

Dr. Mohankumar has worked in pharmacy education, research and administration around the world for more than 18 years and recently

moved to Swansea to join its new MPharm program.

Head of Pharmacy Professor Andrew Morris said: "This is fascinating research and demonstrates that natural products remain an important source of lead compounds in the fight against infectious diseases. I'm also really pleased to see this international research collaboration continuing now that Dr. Mohankumar has joined the Pharmacy team."

Dr. Mohankumar added he is now looking forward to seeing how the work can be developed: "There now needs to be appropriate pre-clinical and clinical studies and we would welcome potential collaborators and partners to help carry this work forward."

More information: Jubie Selvaraj et al, Identification of (2R,3R)-2-(3,4-dihydroxyphenyl)chroman-3-yl-3,4,5-trihydroxy benzoate as multiple inhibitors of SARS-CoV-2 targets; a systematic molecular modeling approach, *RSC Advances* (2021). DOI: 10.1039/D1RA01603B

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