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International researchers identifies a globally accessible treatment strategy for COVID-19

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Research shows it may be possible to treat lethal COVID-19 inflammation with a widely available and inexpensive chemo drug

An international research collaboration involving researchers from the National University Cancer Institute, Singapore (NCIS) and the Icahn School of Medicine at Mount Sinai in the United States of America has found that a widely available and inexpensive drug used for cancer treatment could potentially be used in the treatment of COVID-19.

In pre-clinical tests, the team reported that the chemotherapeutic drug, Topotecan, reduces the morbidity and mortality of SARS-CoV-2 infection by inhibiting the expression of inflammatory genes in laboratory models of COVID-19. The findings from the study has potential implications for COVID-19 treatment in humans.

Co-author of the study, Dr Anand Jeyasekharan, Consultant and Assistant Director of Research (Medical Oncology) at the Department of Haematology-Oncology, National University Cancer Institute, Singapore (NCIS), said: “A key finding from this study is that the suppression of SARS-CoV-2 induced inflammation by the Topoisomerase 1 inhibitor (Topotecan) occurs at doses lower than that typically used in cancer treatment. Topotecan has been used in oncology for over 25 years, with a well understood safety profile in humans, and importantly is both inexpensive and globally available. This research is therefore timely given the lack of universal access to vaccines”.

Dr Jeyasekharan’s team has secured a research grant from the National Medical Research Council and the National Research Foundation to conduct a Phase 1 clinical trial of Topotecan in COVID-19 patients to study the safety and efficacy of this treatment strategy in humans.