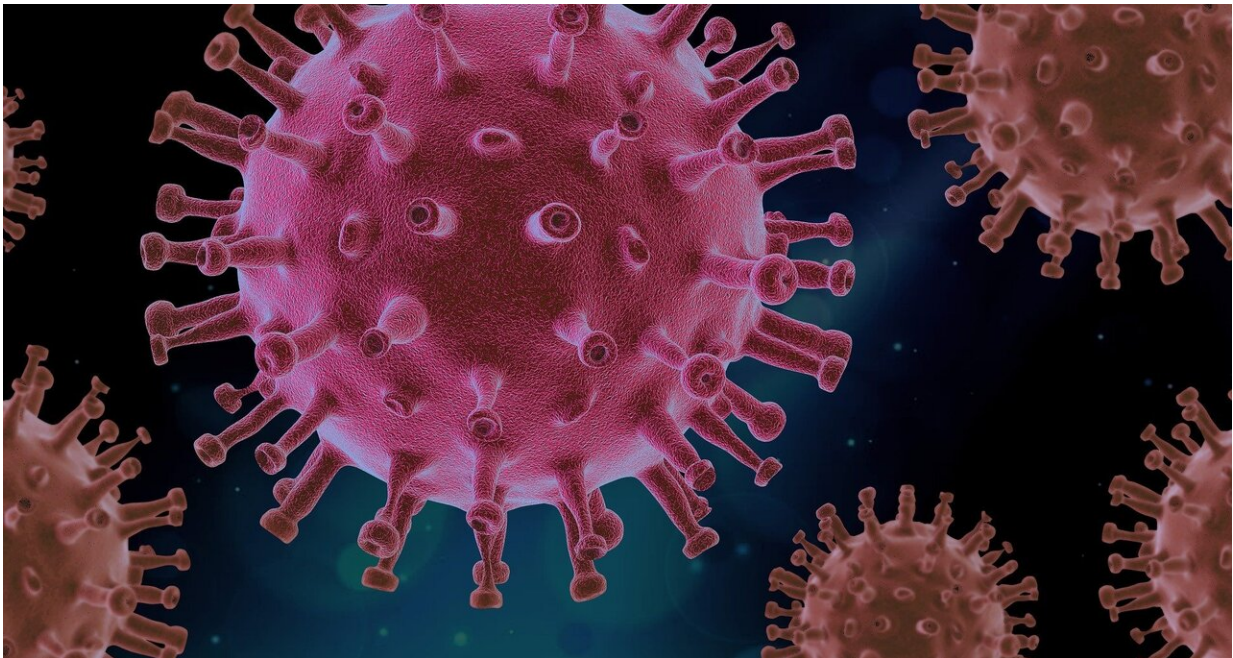


Researcher identifies four possible treatments for COVID-19

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While COVID-19 has infected millions of people worldwide and killed hundreds of thousands, there is currently no vaccine. In response, researchers have been evaluating the effectiveness of various antiviral drugs as possible COVID-19 treatments.

Now, a researcher at the University of Missouri has found that four

[antiviral drugs](#), including remdesivir, a drug originally developed to treat Ebola, are effective in inhibiting the replication of the coronavirus causing COVID-19.

Kamlendra Singh, an associate professor in the College of Veterinary Medicine, and his team used computer-aided [drug](#) design to examine the effectiveness of remdesivir, 5-fluorouracil, ribavirin and favipiravir in treating COVID-19. Singh found that all four drugs were effective in inhibiting, or blocking, the coronavirus' RNA proteins from making genomic copies of the [virus](#).

"As researchers, we have an obligation to search for possible treatments given that so many people are dying from this virus," Singh said. "These antiviral drugs, if they turn out to be effective, all have some limitations. But in the midst of a global pandemic, they are worth taking a deeper look at because based on our research, we have reason to believe that all of these drugs could potentially be effective in treating COVID-19."

The [coronavirus](#) (SARS-CoV-2) that causes COVID-19, like all viruses, can mutate and develop resistance to antiviral drugs. Therefore, further testing in a laboratory setting and in patients is needed to better evaluate how the proposed treatments interact with the virus' RNA polymerase.

"Our goal is to help doctors by providing options for possible treatments of COVID-19, and to ultimately contribute in improving the health outcomes of patients suffering from the infectious disease," Singh said. "As researchers, we are simply playing our part in the fight against the pandemic."

Singh's research is an example of translational medicine, a key component of the University of Missouri System's NextGen Precision Health Initiative. The NextGen initiative aims to improve large-scale interdisciplinary collaboration in pursuit of life-changing precision

health advancements and research.

More information: Ujjwal Neogi et al, Feasibility of Known RNA Polymerase Inhibitors as Anti-SARS-CoV-2 Drugs, *Pathogens* (2020).
[DOI: 10.3390/pathogens9050320](https://doi.org/10.3390/pathogens9050320)

Provided by University of Missouri

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