

# We Need More COVID Therapies

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Our understanding of coronavirus disease 2019 (COVID-19) therapy changes as the disease evolves. We now know that the approved immunizations for COVID in the USA do not prevent transmission of the disease. Studies suggest that immunization reduces the severity of COVID illness. However, the current variant of the virus also results in a reduced virulence.

A number of approved drugs that were thought able to be re-purposed to treat COVID have been found to have mixed results with little evidence of efficacy in randomized placebo-controlled trials. For the initial viral variant, a number of antibody infusions were available to reduce disease severity, but new variants of the virus fail to respond to antibody therapy. Currently only one treatment has been granted Food and Drug Administration (FDA) emergency use authorization and shown to be effective against the current variants of COVID. Paxlovid has proven effective but in many patients, there exists reason for serious potential toxicities through the interaction of the drug with other pharmaceuticals the patient is taking. Paxlovid is metabolized by cytochrome P450 system specifically by cytochrome CYP 3A4, a pathway used by many drugs for metabolism. The potential drug interactions are extensive, especially in the cardiovascular area, where many cardiovascular drugs are metabolized by 3A4. This is especially problematic since patients with cardiovascular disease are at a much-increased risk of morbid and mortal events due to COVID.

A recent report that a pegylated interferon lambda given to mostly vaccinated patients with COVID resulted in a lower incidence of emergency room (ER) visits and hospitalizations.

The study was done in Brazil and Canada. The results are promising and an agent to modify adverse COVID outcomes is definitely needed. As the world's experience with COVID and the viral variants evolve there is a critical need for disease modifying therapies. Pegylated interferon lambda should receive an emergency use authorization in the USA while further studies are undertaken.

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## Financial Disclosure

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## Conflict of Interest

None to declare.

## Data Availability

The author declares that data supporting the findings of this study are available within the article.

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