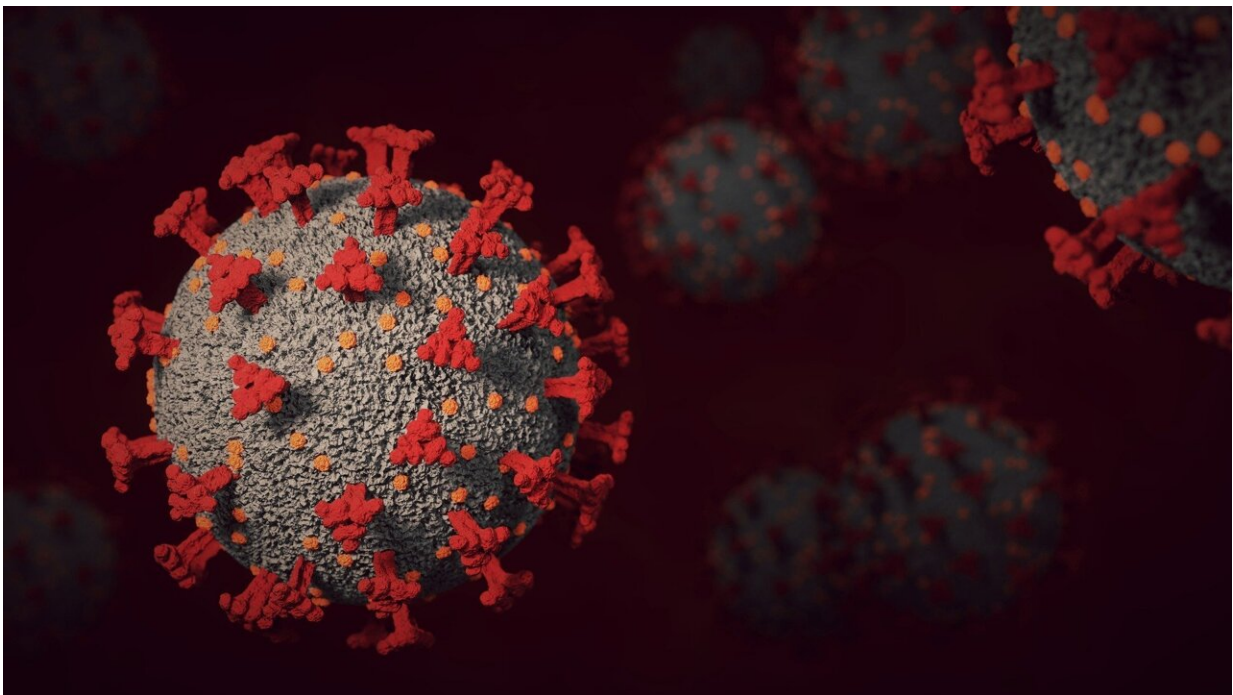


# Antivirals, some antibodies found to work well against BA.2 Omicron variant of COVID-19 virus

March 10 2022, by Eric Hamilton

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The antiviral therapies remdesivir, molnupiravir, and the active ingredient in Pfizer's Paxlovid pill (nirmatrelvir), remain effective in laboratory tests against the BA.2 variant of SARS-CoV-2, the virus that causes COVID-19.

The BA.2 variant also remains susceptible to at least some of the monoclonal antibodies used to treat COVID-19, such as Evusheld by AstraZeneca. However, the antibodies etesevimab and bamlanivmab, which are used together as a single treatment, were not able to neutralize the BA.2 virus at common dosages in these [lab tests](#). Other antibody treatments were less effective against BA.2 than they are against earlier strains of SARS-COV-2.

These results come from new research led by Yoshihiro Kawaoka, a virologist at the UW School of Veterinary Medicine and the University of Tokyo. The BA.2 Omicron variant is related to the more common BA.1 Omicron virus, and some evidence suggests that BA.2 can spread more quickly than the already highly contagious BA.1 variant.

"The bottom line is we have antibodies that appear to be more effective against BA. 2 compared with BA.1 or BA.1.1. That's good news, but we don't know whether what we found in in the lab translates into [clinical settings](#)," says Kawaoka, who previously tested how the BA.1 variant responds to treatments. "We also tested clinically available antiviral compounds, and they are all highly efficacious."

Kawaoka and his collaborators at UW-Madison and the National Institute of Infectious Diseases in Tokyo published their findings in the *New England Journal of Medicine* on March 9.

In lab experiments using non-human primate cells, Kawaoka's team tested seven [monoclonal antibodies](#), three combinations of antibodies, and three antiviral treatments against the BA.2 variant. Most clinically approved antibody treatments are a combination of multiple antibodies.

The intravenous drug remdesivir and the [active ingredients](#) in two anti-COVID-19 pills, Paxlovid and Merck's molnupiravir, were nearly as effective against BA.1 as they are against the original strain of SARS-

CoV-2.

The most effective antibody treatment against the BA.2 variant was Evusheld, which is approved in the U.S. to help prevent COVID-19 infection in people vulnerable to severe disease. The antibodies sold by Regeneron and GlaxoSmithKline were much more effective against BA.2 than they are against the BA.1 Omicron variant, although they were not as potent against BA.2 as they are against earlier versions of the virus.

Available anti-COVID treatments are typically less effective against new variants than they are against the original virus strain, because they were designed and tested against earlier versions of the virus. Researchers and [pharmaceutical companies](#) can design and test treatments against new variants, but that process takes months.

**More information:** Emi Takashita et al, Efficacy of Antiviral Agents against the SARS-CoV-2 Omicron Subvariant BA.2, *New England Journal of Medicine* (2022). [DOI: 10.1056/NEJMc2201933](https://doi.org/10.1056/NEJMc2201933)

Provided by University of Wisconsin-Madison

Citation: Antivirals, some antibodies found to work well against BA.2 Omicron variant of COVID-19 virus (2022, March 10) retrieved 29 March 2023 from <https://medicalxpress.com/news/2022-03-antivirals-antibodies-ba2-omicron-variant.html>

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