

US wastewater tests spot highly mutated variant of COVID-19

August 24 2023, by Cara Murez



Public health officials have detected the new BA.2.86 variant of

COVID-19 in U.S. wastewater, giving rise to concerns about the highly mutated variant in the United States.

The U.S. Centers for Disease Control and Prevention announced [the detection](#) on Wednesday.

It was found as part of routine wastewater sampling. Officials did not specify where the samples were from.

Worldwide, nine sequences of the new variant have been reported from human COVID-19 infections, according to CNN. Besides two in the United States, the others are in Denmark, South Africa, the United Kingdom and Israel. Switzerland has detected the variant at low levels in wastewater.

"[This] is evidence of international transmission," the CDC said Wednesday.

The two U.S. sequences came from patients in Michigan and Virginia. The Virginia patient had just returned from a trip to Japan and was identified through the CDC's traveler-based genomic surveillance.

Most of these patients have had mild symptoms, CNN reported.

The concern is that BA.2.86 has more than 30 gene changes compared to its ancestor BA.2.

That makes its evolution similar to what happened when the virus mutated from Delta to the highly contagious omicron in 2021, CNN reported.

It's also on par with how BA.2 and XBB.1.5 diverged a year apart, the CDC said.

"I think, and I think everybody concurs, that this is very likely to be a neutralization antibody escape mutant, which means that will be harder for our bodies to protect us from infection with this variant," said Bette Korber, a computational biologist at Los Alamos National Labs in New Mexico, according to CNN.

It's not yet possible to know how immunity will hold, but that should become more apparent in the next few weeks.

Korber is working to clarify the structure of this variant, so other scientists can build models of it in their labs, CNN reported.

Also unclear is how this variant will compete against others for dominance.

"This is very early days. It was only discovered a week ago. So it may be that it just doesn't go very far because it's not competitive for other reasons," Korber said.

Michael Diamond, who studies globally emerging RNA viruses at the Washington University School of Medicine in St. Louis, called it a waiting game for now.

"While we know it has been circulating for several weeks (based on lineage analysis and slight differences in sequence), we don't yet know if it will emerge and become dominant," Diamond wrote in an email to CNN.

The earliest known samples of BA.2.86 were collected in late July, CNN reported.

Scientists suspect it may have been spreading in a region that isn't sending sequences to the open-access database GISAID, where [genetic](#)

[information](#) about the virus is shared.

That's different than when omicron spread and scientists could track its rapid growth. For this [variant](#), no one has observed its local spread.

"Virus samples are not yet broadly available for more reliable laboratory testing of antibodies, and it is too soon to know the real-world impacts on immunity," the CDC report said.

More information: The World Health Organization has more on [tracking COVID-19 variants](#).

Copyright © 2023 [HealthDay](#). All rights reserved.

Citation: US wastewater tests spot highly mutated variant of COVID-19 (2023, August 24) retrieved 12 May 2024 from <https://medicalxpress.com/news/2023-08-wastewater-highly-mutated-variant-covid-.html>

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.
