

LIVING

Scientist asks for breast milk to study coronavirus treatment

By Hannah Sparks

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Could the cure for coronavirus be abreast?

Medical researcher Rebecca Powell, Ph.D., is asking mothers of newborns to donate breast milk to her study, with hopes of analyzing its healing powers. The human milk immunologist [made the strange request on social media](#) recently, asking specifically for samples in the NYC area.

“Are you a healthy, lactating person in NYC? Do you own a breast pump? Are you comfortable expressing breast milk that your baby will not need?” reads the wanted ad, produced by the Icahn School of Medicine at Mount Sinai.

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volunteer submissions.

g infected and would be ready and willing to donate milk — I can tell you because I te, and many of them have said they had highly suspected infection or a positive

powerful disease-fighting proteins, dubbed antibodies, which can help fortify babies — which is part of the reason why doctors urge new moms to breastfeed if they’re elp lead scientists to an effective treatment against COVID-19.

Despite its known health benefits for newborns, human breast milk has not been extensively studied for its utility outside of infant development. And just as mothers are able to pass their healing power to newborns through milk, it's not yet clear whether or not they could also **pass a virus the same way**. But Powell, a lactation specialist, said moms shouldn't be concerned about that just yet.

"It was never done with SARS, it was never done with MERS, and even for flu, which is so well-studied," said Powell. "The data on milk protection is actually really sparse, unfortunately."

Her team at Mount Sinai is willing to pay \$5 for every ounce of donated milk from women in NYC, which she plans to collect from individuals' homes. She also welcomes samples outside of the city, sent through the mail, as long as they are confirmed or suspected to have been infected with COVID-19, or if they are someone at a high risk of exposure — such as a health-care worker or caretaker.

Women are asked to freeze their breast milk every few weeks, with the hope of tracking the antibodies over time in individual case studies and continuing to collect over the next year — though volunteers may opt out at any time.

The first step will be to search for antibodies in the milk of women who were confirmed to have had the coronavirus. Then, she'll analyze those antibodies to find out exactly how well they function as virus killers. If all goes the way she hopes, doctors will devise a way to separate milk's immune properties and infuse it into patients.

Earlier this week, the US Food and Drug Administration approved the emergency use of **convalescent plasma** for the coronavirus on a case-by-case basis. Doctors aim to collect blood, donated by healthy coronavirus patients in recovery, to use on currently sick patients. Like breast milk, plasma is also full of antibodies and immune cells, which could be infused into the bloodstream of infected individuals to help them fight off the virus.

The question driving Powell's research is: "If we find that there's really potent antibodies in the milk, can those be used therapeutically in a way that Mt. Sinai and other hospitals are now using convalescent plasma — to treat those who are really ill?"

Neither plasma infusions nor breast milk have been widely studied for their efficacy. Nevertheless, desperate physicians are at their wit's end and throwing any treatment theory they can at the deadly virus.

And, compared to blood plasma's antibodies, she thinks breast milk may have an upper-hand — thanks to one special factor, called secretory immunoglobulin A (IgA) that is particularly resistant to attack. Secretory IgA makes up 90% of human milk antibody content.

A solution could be there, said Powell, "and I don't think it should be overlooked."

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