

Clinical trial begins to see if convalescent plasma can treat COVID-19

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Liise-anne Pirofski, M.D., chief of infectious diseases at Albert Einstein College of Medicine and Montefiore Health System Credit: Albert Einstein College of Medicine

Montefiore Health System, Albert Einstein College of Medicine and

NYU Langone have launched a new clinical trial to study if convalescent plasma—taken from people who have recovered from COVID-19—is effective in treating the disease.

The body's [immune response](#) to [viral infections](#) includes making molecules called antibodies. Antibodies can combat the infection and possibly prevent reinfection in people—and may be successful for helping people who are sick with COVID-19 fight the virus. This therapy, known as [convalescent plasma](#) therapy, has been deployed in viral outbreaks over the past century, and has shown promise in reducing the severity of illness and improving [survival rates](#).

The randomized controlled trial will enroll 300 people with COVID-19 respiratory symptoms. Half of these individuals will receive plasma that contains antibodies to the SARS-CoV-2 [coronavirus](#), while the remaining half will receive a placebo. Candidates for the clinical trial have had respiratory symptoms for less than a week, require some [supplemental oxygen](#) or have been in the hospital for less than four days.

"We created this study based on evidence from the pre-antibiotic era, but there has been no scientific proof it is really effective," said study co-leader Liise-anne Pirofski, M.D., chief of infectious diseases at Montefiore and Einstein and a leader of the national COVID-19 Convalescent Plasma Project.

Previous studies suggest that convalescent plasma may be a helpful treatment for other coronaviruses, including SARS, but this trial aims to provide proof that it is effective for COVID-19 patients. Last month, Dr. Pirofski co-authored a widely cited viewpoint in the *Journal of Clinical Investigation* that championed the use of convalescent serum as a treatment for COVID-19.

Since the start of the pandemic, Montefiore has successfully treated and

discharged approximately 4,000 severely ill COVID-19 patients from its hospitals. This presents an opportunity to get plasma from former patients and use these antibodies to treat a community disproportionately affected by COVID-19.

"Vaccines may not be available for more than a year. In the meantime, and given the lack of natural immunity and available vaccines, plasma therapy may help to provide the body what it needs to fight the infection," said co-lead study investigator, Mila Ortigoza, M.D., Ph.D., an instructor in the departments of Medicine and Microbiology at NYU Langone Health. "Infections like the new coronavirus that jump into humans from animals are dangerous because we have no antibodies against them, so we hope to learn if supplying them can save lives."

The first Montefiore plasma donors came from Young Israel synagogue in New Rochelle. The community, which was home to one of the largest clusters of COVID-19 cases in the country, now represents a beacon of hope.

"To have so many people who have recovered from COVID-19 donate their plasma and make this research possible and potentially help people they have never met is an incredible celebration of the human spirit," said Dr. Pirofski. "We are overwhelmed by the generosity of recovered patients and are confident this trial will help us learn if convalescent plasma is effective against COVID-19."

Provided by Albert Einstein College of Medicine

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