



**21 July 2020**

## **Convalescent plasma investigated as a possible COVID-19 therapy**

Investigators at the University of Cape Town (UCT) are working with the South African National Blood Service (SANBS) and the Western Cape Blood Service (WCBS) to conduct the PROTECT-patient trial.

The trial investigates the use of convalescent plasma (CP) from people who have recovered from COVID-19 to generate evidence on the effectiveness and safety as treatment for patients with moderate to severe COVID-19 pneumonia.

The trial comes as a surge of COVID-19 infections, the respiratory illness caused by the novel [severe acute respiratory syndrome] SARS-CoV-2 virus, is projected to peak in the country between July and September 2020. The spike of infections, according to South Africa's health minister Dr Zweli Mkhize, has changed hands from the Western Cape to Gauteng now becoming the epicenter of the pandemic.

Associate Professor Sean Wasserman at the Department of Medicine in the Faculty of Health Sciences, and the co-principal investigator of the PROTECT-patient trial said: "Other safe, accessible, and affordable treatment options are clearly needed and must be established through the conduct of well-designed clinical trials before being used in routine patient care."

International experience, which has been mirrored in South Africa, has shown that around a quarter of the people who need oxygen for more severe COVID-19 pneumonia may die from the disease.

"Outcomes for those placed on ventilators for respiratory failure is worse. Various drugs are being investigated to reduce the need for mechanical ventilation and improve survival for those with severe COVID-19; two have shown some efficacy so far, only one of which (dexamethasone) is available in South Africa," added Wasserman.

Plasma is the colourless part of blood that does not contain red blood cells. COVID-19 CP refers to plasma collected from donors who have recovered from COVID-19 and have likely produced neutralising antibodies to SARS-CoV-2. It is hypothesised that infusing plasma that has virus-specific antibodies will provide immediate transfer of passive immunity to the recipient and may improve their clinical course and outcomes by accelerating viral clearance and antibody-dependent killing of infected cells.

[A paper co-authored by Wasserman](#) and published in *The South African Medical Journal*

states: "The use of CP as passive immunisation to treat viral infections is not novel. Early administration of CP has proved successful in reducing mortality from severe influenza as well as the related epidemic coronavirus severe acute respiratory syndrome (SARS)-CoV and has been used successfully in Middle East respiratory syndrome (MERS)-CoV and Ebola virus disease.

"Where CP was used to treat SARS-CoV infections, the absolute risk reduction in mortality ranged between 7% and 23%, and CP was associated with earlier discharge from hospital. It is because of the positive results of these trials, in addition to the lack of successful treatment options available at present, that the use of CCP has been considered in the current SARS-CoV-2 pandemic."

Wasserman is also a contributing investigator at the [Wellcome Centre for Infectious Diseases Research in Africa](#), which is supporting the trial through its core infrastructure. The centre is housed at UCT's [Institute of Infectious Disease and Molecular Medicine](#).



SANBS CEO, Dr Jonathan Louw, was among one of the first people diagnosed with COVID-19 in South Africa. He is giving back by making the country's first convalescent plasma donation

Photo: SANBS

**ENDS**

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