# Noxopharm Aims to Test Veyonda® Against COVID-19, US FDA Approval To be Sought for Clinical Study

Clinical-stage Australian oncology drug development player Noxopharm (ASX:NOX) has revealed that the active ingredient in Veyonda® - idronoxil, blocks the STING (Stimulator of Interferon Genes) signalling pathway associated with the type of cellular damage caused by poor oxygen levels (hypoxia).

The discovery has led the Hudson Institute of Medical Research and Noxopharm to believe that Veyonda® holds the potential to prevent hyperinflammation originating from infection, which is believed to be causing deaths in COVID-19 patients.

The Hudson Institute had previously discovered anti-inflammatory properties of idronoxil in compliance with blocking 'cytokine storm', responsible for several COVID-19 deaths.

**Must Read** **Noxopharm Investigating Idronoxil's Potential in COVID-19 Treatment**

Post the key update, NOX stock rose ~12 per cent, closing the trading session at $0.190 on 21st April 2020. Today, the stock is trading at $0.180 as on 22nd April (1:35 PM AEST).

Noxopharm is now planning to seek approval from the US FDA for Veyonda® clinical study in COVID-19 patients. The Company initially considered using an oral dosage formulation of idronoxil in non-oncology patients. However, under advice, it has now decided to proceed with Veyonda®, given its clinical IND status in the US, along with substantial clinical experience and data collected with the current dosage form.

## ***How STING Triggers a 'Cytokine Storm' in COVID-19 Patients?***

As a part of a primitive defence mechanism, STING detects the existence of invading pathogenic organisms like bacteria or viruses. Additionally, it plays an important role in the clearance of damaged tissues and cells. In both these responses, proteins known as cytokines are produced that coordinate the consequent immune and tissue repair (inflammatory) responses.

STING engagement can contribute positively to the body's immune response to some pathogens in the early stages of infections, while it becomes a self-destructive and negative force if the infection persists and causes extensive tissue damage. Under negative conditions, the STING pathway facilitates 'cytokine storm' and produces blood clotting factors, promoting further organ damage and setting the stage for septic shock.

In COVID-19 patients, the mounting tissue damage associated with hypoxia originating from poor lung function triggers a 'cytokine storm' or septic shock, subsequently triggering a toxic STING response. It is worth noting that clotting factors and high levels of cytokines are proving to be an anticipator of mortality in COVID-19 patients.

## ***Noxopharm's Veyonda® can Block STING Signalling Pathway***

Noxopharm intends to use Veyonda® to block the STING signalling pathway, which results in lethal self-destruction of major organs in some COVID-19 patients.

In studies led by Dr Michael Gantier, the Hudson Institute has discovered that idronoxil blocks the STING signalling pathway connected with hypoxia-induced tissue damage. In addition, Veyonda® has an upper hand of having addressed the safety issue by proving to be well-tolerated in patients with advanced cancers and poor quality of life.

*According to Noxopharm's CEO, Dr Graham Kelly, "With the emerging probability that an abnormally high STING response induces COVID-19 death, having a STING signalling inhibitor ready to be tested in COVID-19 patients is a considerable opportunity as well as responsibility."*

*He also believes that the need to prevent septic shock and cytokine storm phenomenon in COVID-19 patients is likely to remain for some significant time period and can even represent a long-term need if the development of an effective vaccine remains a challenge.*

Notably, Noxopharm is also pursuing the option of testing Veyonda® in patients undergoing septic shock from an array of infective agents besides the SARS-CoV-2 virus.

## ***Why is Noxopharm's Approach More Rational Against Competitors?***

Clinical trials are in progress worldwide in COVID-19 patients to address the 'cytokine storm' phenomenon. These trials are testing drugs that impede the function of individual cytokines like TNF-alpha and IL-6 and will consequently demonstrate whether blocking individual cytokines involved in a 'cytokine storm' will have any significant effect.

Noxopharm believes its upstream approach to obstruct the 'cytokine storm' process at its roots by blocking the STING pathway is a more optimal approach. This approach offers the potential to block the production of a wide array of cytokines and brings hope of halting the rapid deterioration of COVID-19 patients when they develop poor lung function.

Building a scientific understanding of the crucial role of STING in septic shock and inflammation, has meant that other clinical studies associated with STING inhibitors have yet to get underway.

***Notably, Noxopharm seems to be in a position of possessing a clinic-ready drug candidate to examine the potential value of preventing STING signalling in COVID-19 patients, and potentially block progression of patients with early-stage disease into multi-organ failure and likely death. While Veyonda® is first and foremost an oncology drug, with end-stage prostate cancer remaining its primary focus, Noxopharm aims to achieve non-dilutive funding to conduct a COVID-19 clinical study once it receives the regulatory approval.***