

## ALGERNON HIGHLIGHTS UT DALLAS RESEARCH STUDY IDENTIFYING IFENPRODIL AS A POSSIBLE COVID-19 TREATMENT

VANCOUVER, British Columbia, July 21, 2020 (GLOBE NEWSWIRE) -- Algernon Pharmaceuticals Inc. (CSE: AGN) (FRANKFURT: AGW) (OTCQB: AGNPF) (the "Company" or "Algernon") a clinical stage pharmaceutical development company, is pleased to highlight an independent research study (the "Study") from UT Dallas' Center for Advanced Pain Studies, that identified Ifenprodil as one of a number of possible drug candidates for the treatment of COVID -19. The Study was recently published online on June 1, 2020 in *Brain, Behaviour, and Immunity*.

The Study identified interactions between the immune system and nerves in the lungs that can cause rapid deterioration in COVID-19 patients. The authors looked at the relative gene abundance in the lungs of COVID-19 patients compared to the lungs of healthy controls. In addition to genes that might be expected to be upregulated, the levels of the gene that expressed the NMDA GluN2B receptor in immune cells were also greatly increased.

In an article written by Stephen Fontenot from The University of Texas at Dallas, Dr. Theodore Price, one of the co-authors of the study, suggested that interrupting the interaction between the NMDA receptor and glutamate, one of the neurotransmitters that NMDA receptors respond to, could lessen the damage caused by the infection.

Ifenprodil is an NMDA receptor antagonist specifically targeting the GluN2B subunit, preventing glutamate signalling. The NMDA receptor is found on many tissues including lung cells, T-cells, and neutrophils.

The Company believes that Ifenprodil may reduce the infiltration of neutrophils and T-cells into the lungs where they can release glutamate and cytokines respectively. The latter can result in the highly problematic cytokine storm that contributes to the loss of lung function and ultimately death as has been reported in COVID-19 infected patients.

In a recent conversation with the Company, Dr. Theodore Price said, "We were really taken aback at the upregulation of NMDA receptors in severe COVID-19 patients. We were even more surprised, when we noted that it was an immune based signal and not neuronal. Based on our findings, we think there is significant opportunity in disrupting NMDA receptor signalling in the lung for reversing pathology in COVID."

"This study provides significant additional data to what we have already identified, suggesting that Ifenprodil may be an effective treatment for COVID-19," said Christopher J. Moreau, CEO of Algernon Pharmaceuticals.

Article link: https://www.utdallas.edu/news/healthmedicine/nerve-cells-lungs-covid-19-2020/

Research study link: https://linkinghub.elsevier.com/retrieve/pii/S088915912030670X

## **Background**

The Company announced on March 06, 2020 that it was going to explore Ifenprodil as a possible treatment for COVID-19 when it discovered an independent research study that showed the drug was active in an animal model for H5N1, the world's most lethal avian flu, with an approximately 60% mortality rate in humans. In the study, Ifenprodil reduced mortality by 40% and reduced acute lung injury and inflammation in the lung tissue.

Coupled with the Company's own animal data showing Ifenprodil's reduction of lung fibrosis in two separate studies, the Company is investigating Ifenprodil to determine if it can reduce the severity and duration of a COVID infection.

The Company is about to begin a multinational Phase 2b/3 human trial for COVID-19 entitled, "A Randomized Open Label Phase 2b/3 Study of the Safety and Efficacy of NP-120 (Ifenprodil) for the Treatment of Hospitalized Patients with Confirmed COVID-19 Disease." Westchester Research Center at Westchester General Hospital in Miami, Florida was recently announced as the first U.S. clinical site participating in the study.

## **About Algernon Pharmaceuticals Inc.**

Algernon is a drug re-purposing company that investigates safe, already approved drugs for new disease applications, moving them efficiently and safely into new human trials, developing new formulations and seeking new regulatory approvals in global markets. Algernon specifically investigates compounds that have never been approved in the U.S. or Europe to avoid off label prescription writing.

Algernon has filed new intellectual property rights globally for NP-120 (Ifenprodil) for the treatment of respiratory diseases and is working to develop a proprietary injectable and slow release formulation.

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