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Algernon Pharmaceuticals Announces Ifenprodil (NP-120) an NDMA Receptor Antagonist as its Lead Drug That Reduced Fibrosis in a Recent Idiopathic Pulmonary Fibrosis Study by 56%

Potential First-in-Class Treatment

VANCOUVER, British Columbia, July 29, 2019 (GLOBE NEWSWIRE) -- Algernon Pharmaceuticals Inc. (CSE: AGN) (FRANKFURT: AGW) (OTCB: BTHCF) (the “**Company**” or “**Algernon**”), a clinical stage pharmaceutical development company, is pleased to announce that NP-120, its lead compound in its idiopathic pulmonary fibrosis (IPF) research program, is a drug called **Ifenprodil**, an orally delivered small molecule, which was originally developed by Sanofi to treat peripheral circulatory disorders. Algernon conducted two independent studies showing that NP-120 (Ifenprodil) outperformed the world’s leading two treatments for IPF, Nintedanib and Pirfenidone in a recent pre-clinical *in vivo* animal study, reducing fibrosis by 56% with statistical significance.

Since NP-120 (Ifenprodil) is already approved with an established safety history, Algernon intends to move the drug directly into a phase II human trial. The Algernon business model is to repurpose safe, approved, genericized drugs that are not available in the US or Europe, screen them in globally accepted animal models for new diseases, file new intellectual property rights and then move them into an off label phase II trial in the country where they were originally approved. Once a signal is established in a human trial, the company will begin to advance the repurposed drug through a USFDA registration.

“We are very pleased to announce NP-120 (Ifenprodil) as part of a class of compounds that could be beneficial for patients with IPF,” said Christopher J. Moreau, CEO of Algernon Pharmaceuticals. “IPF is a very serious disease and we plan to move NP-120 (Ifenprodil) into a Phase II clinical trial as quickly as possible to establish human efficacy. We also intend to pursue partnering discussions specific to our IPF program and to seek an orphan designation with regulatory authorities.”

About NP-120 (Ifenprodil)

NP-120 (Ifenprodil) is an N-methyl-D-aspartate (NDMA) receptor glutamate receptor antagonist specifically targeting the NMDA-type subunit 2B (Glu2NB). Ifenprodil also exhibits agonist activity for the Sigma-1 receptor, a chaperone protein up-regulated during endoplasmic reticulum stress. The company is currently investigating the mechanism of action as it relates to IPF.

NP-120 (Ifenprodil - brand name Cerocral) was initially developed by Sanofi in the 1990s in

the French and Japanese markets for the treatment of circulatory disorders. Although no longer available in France, the drug is highly genericized and still sold in Japan.

Potential Drug Class Effect

The Company also tested NP-121 (Radiprodil), which possess a similar phenylethanolamine pharmacophore as NP-120 (Ifenprodil), in its initial IPF *in vivo* animal study. In the study, both compounds, at the same dose, reduced fibrosis to a similar extent. This data established an early indication that this could be a potential drug class effect and not unique to NP-120 (Ifenprodil) alone. NP-121 (Radiprodil) was originally developed by Gideon Richter and Forest labs and reached Phase III trials for the treatment of diabetic nephropathy. The French pharmaceutical firm UCB, having acquired the development rights, have been recently testing NP-121 (Radiprodil) for the treatment of drug-resistant infantile spasms. Other compounds targeting the Glu2NB pathway that have been tested in the clinic included EVT-101 (Evotech/Roche) and MK-0657.

Algernon has filed several patent applications protecting their intellectual property rights with respect to both NP-120 (Ifenprodil) and NP-121 (Radiprodil) and other derivatives.

About IPF

Idiopathic pulmonary fibrosis, an orphan disease, is a type of chronic lung condition characterized by a progressive and irreversible decline in lung function and scarring (fibrosis) of the lungs. There is no cure for IPF and there are currently no procedures or medications that can remove the scarring from the lungs.

According to research and consulting firm GlobalData's latest report, the idiopathic pulmonary fibrosis (IPF) market will rise substantially from just over \$900 million in 2015 to \$3.2 billion by 2025, representing a projected compound annual growth rate (CAGR) of 13.6%.

About Algernon Pharmaceuticals Inc.

The Algernon business model is to repurpose safe, approved generic drugs that are not available in the US or Europe, screen them in globally accepted animal models for new diseases, file new intellectual property rights and then move them into off label phase II trials. Once a signal is established in a human trial, the company will begin to advance its drug through a USFDA registration.

The Company is preparing multiple lead compounds for phase II trials for the disease areas of non-alcoholic steatohepatitis (NASH), irritable bowel disease (IBD), chronic kidney disease (CKD) and idiopathic pulmonary fibrosis (IPF).

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Source: Algernon Pharmaceuticals