Algernon Pharmaceuticals' NP-120 (Ifenprodil) Outperforms Merck's Phase 3 Drug MK-7264 (Gefapixant) in an Acute Cough Study by 110%

VANCOUVER, British Columbia, Dec. 05, 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 (Ifenprodil), its repurposed lead candidate for the treatment of idiopathic pulmonary fibrosis (IPF), showed dramatic superiority over **Gefapixant**, Merck's lead phase 3 trial drug, in a well accepted acute cough *in-vivo* animal study.

Pharmidex, a contract research organization (CRO) and a global leader in respiratory research conducted the *in-vivo* cough study using the guinea pig citric acid challenge model. Data from this recent study demonstrated that at clinically relevant doses:

- **Ifenprodil** (1.5 mg/kg) showed a reduction of 42% in mean cough frequency vs untreated control ($p < 0.01$).
- Gefapixant (3.5 mg/kg) showed a 20% reduction in mean cough frequency vs untreated control ($p < 0.05$).
- **Ifenprodil** (59.8 seconds) and Gefapixant (49.7 seconds) both showed a non-statistically significant delay in the onset of the first cough when compared to control (34.2 seconds).

Additional Information:

- Unlike Gefapixant, **Ifenprodil** has no known taste disturbance, which is similar to Bellus Health's Phase 2 asset BLU-5937. **Note:** Bellus Health Inc. has reported that BLU-5937 had comparable efficacy to Merck's MK-7264 (Gefapixant) in a guinea pig cough inhibition study that they conducted.
- The Company previously reported that Ifenprodil was anti-fibrotic in a bleomycin mouse model of IPF, outperforming both Pirfenidone and Nintedanib.
- Ifenprodil, an approved NMDA Glu2B subunit inhibitor, represents a potential novel "first-in-class" treatment for both chronic cough and IPF.
- Algernon has filed several patent applications protecting their intellectual property rights with respect to NP-120 (Ifenprodil).
- The data from this study will be presented by Dr. Mark Williams, CSO of Algernon at the 12th Annual LD Micro Main Event Conference which will be held on December 10th -12th, 2019 at the Luxe Sunset Hotel in Los Angeles, CA.

“To have identified a drug that may reduce fibrosis in IPF patients that also treats cough would be a significant discovery”, said Dr. Martin Kolb, Professor, Division of Respirology, Department of Medicine at McMaster University. “People that suffer from this terrible disease need new treatment options to extend their lives post diagnosis and reduce their suffering.”

“We were very pleased to see these results”, said Christopher J. Moreau, CEO of Algernon Pharmaceuticals. “NP-120 (Ifenprodil) has shown a number of positive therapeutic effects across a number of different conditions in multiple animal studies. As a result, it is a prime candidate to advance into our first phase 2 clinical trial.”

About Chronic Cough

A chronic (persistent) cough is a cough lasting eight weeks or longer in adults, or four weeks in children. Chronic cough can interrupt sleep, cause exhaustion and in severe cases can cause serious vomiting, light-headedness and rib fractures.

A dry, non-productive cough is a very common symptom of IPF. At least 70% - 85% of patients with IPF have a dry cough, which can often get worse on exertion.

According to IndustryARC™ the cough remedies market size is estimated to be $1.40B, in 2018, growing at a CAGR of 6.64% during 2019-2024. Pleasant taste and easy intake of oral syrups are among the key factors driving the global cough remedies market. Some traditional cough remedies include drinking honey, bromelain and bacterial microbes. Further, some new generation cough remedies include corticosteroids, bronchodilators and antibiotics.

Currently there is no regulatory approved treatment for this condition.

About NP-120 (Ifenprodil)

NP-120 (Ifenprodil) is an N-methyl-d-aspartate (NMDA) 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 Cerocal) 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.

About Algernon Pharmaceuticals Inc.

Algernon Pharmaceuticals is a clinical stage pharmaceutical development company focused on advancing its lead compounds for non–alcoholic steatohepatitis (NASH), chronic kidney disease (CKD), inflammatory bowel disease (IBD) and idiopathic pulmonary fibrosis (IPF).

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