February 8, 2021

Algernon Pharmaceuticals Signs Agreement with Charles River Laboratories for DMT Preclinical Studies

VANCOUVER, British Columbia, Feb. 08, 2021 (GLOBE NEWSWIRE) -- Algernon Pharmaceuticals Inc. (CSE: AGN) (FRANKFURT: AGW) (OTCQB: AGNPF) (the "Company" or "Algernon") a clinical stage pharmaceutical development company is pleased to announce that is has signed an agreement with Charles River Laboratories for preclinical studies of AP-188 ("N,N-Dimethyltryptamine or DMT") for the Company's stroke clinical research program. Algernon's preclinical study of DMT will be conducted at the Charles River research facility in Finland.

Charles River Laboratories, Inc. is an American corporation specializing in a variety of preclinical and clinical laboratory services for the pharmaceutical, medical device and biotechnology industries. It also supplies assorted biomedical products and research and development outsourcing services for use in the pharmaceutical industry.

Algernon recently established a clinical research program for the treatment of stroke focused on DMT, a known psychedelic compound that is part of the tryptamine family. The Company plans to be the first company globally to pursue DMT for stroke in humans and is planning to begin a clinical trial as soon as possible in 2021.

The Company's decision to investigate DMT, called "The Spirit Molecule," and move it into human trials for stroke, is based on multiple independent, positive preclinical studies demonstrating that DMT helps promote neurogenesis as well as structural and functional neural plasticity. These are key factors involved in the brain's ability to form and reorganize synaptic connections, which are needed for healing following a brain injury.

Unlike other companies recently researching psychedelic drugs, Algernon will be focusing on a sub-hallucinogenic, or microdose of DMT provided by continuous intravenous administration. By pursuing a continuous active microdose, the goal will be to provide patients with the therapeutic benefits of DMT, without having a psychedelic experience. This is an important element when considering treating a patient who has just suffered a stroke, wherein medications that cause a hallucinogenic response would cause unwanted confusion and stress.

"The Company is very pleased to have retained Charles River Labs, a trusted vendor that we have worked with before on other research projects," said Christopher J. Moreau, CEO of Algernon Pharmaceuticals. "They have all of the necessary permits and licenses to handle DMT which will allow us to move quickly with our research program. They are a recognized world leader for pre-clinical neurological studies."

DMT Background

N,N-Dimethyltryptamine, or DMT, is a hallucinogenic tryptamine drug producing effects similar to those of other psychedelics like LSD, ketamine, psilocybin and psilocin. DMT occurs naturally in many plant species and animals and has been used in religious ceremonies as a traditional spiritual medicine by indigenous people in the Amazonian basin. DMT can also be synthesised in a laboratory.

At higher doses, DMT has a rapid onset, intense psychedelic effects, and a relatively short duration of action with an estimated half-life of less than fifteen minutes. Like other hallucinogens in the tryptamine family, DMT binds to serotonin receptors to produce euphoria and psychedelic effects. Because the effects of DMT do not last very long, it has been referred to in some circles as the "businessman's trip".

Named the "Spirit Molecule" by Dr. Rick Strassman, an American clinical associate professor of psychiatry and DMT research pioneer, and Algernon consultant, DMT has been shown to induce neuroplasticity in a number of key preclinical studies. DMT is believed to activate pathways involved with forming neuron connections and has been shown in studies to increase the number of dendritic spines on cortical neurons. Dendritic spines form synapses (connections) with other neurons and are a major site of molecular activity in the brain.

While Dr. Strassman's Phase 1 bolus intravenous human study identified the sub-hallucinogenic dose of DMT in humans, another preclinical animal study demonstrated this same dose level still retains the neuroplastic effect seen in higher hallucinogenic doses.

Algernon will be investigating an intravenous sub-hallucinogenic dose of DMT in its research and clinical studies.

DMT – Building the Case for Stroke

Data from a study published in *Experimental Neurology*, in May 2020 showed that in a rat model of cerebral ischemia-reperfusion injury, DMT reduced the infarct (dead cells) volume and improved functional recovery.

Key Findings:

- Animals treated with DMT displayed lower lesion volumes than control animals measured by MRI 24 hours following the occlusion. ($p = 0.0373$)

- Animals in the DMT group improved motor function more quickly and to a greater extent than the control group; The differences became significant on the 4^{th} day ($p = 0.0325$) and persisted throughout a 30-day follow-up.

- mRNA expression of brain-derived neurotrophic factor (BDNF) was upregulated in both the peri-infarct cortex ($p = 0.0273$) and contralateral cortex ($p = 0.0048$) as well as in serum ($p < 0.0001$). BDNF is a key facilitator of neuroplasticity.

The full study can be viewed at the following link:

https://www.sciencedirect.com/science/article/abs/pii/S0014488620300765?via%3Dihub

About Algernon Pharmaceuticals Inc.

Algernon is a drug re-purposing company that investigates safe, already approved drugs, including naturally occurring compounds, 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.

CONTACT INFORMATION

Christopher J. Moreau
CEO
Algernon Pharmaceuticals Inc.
604.398.4175 ext 701
info@algernonpharmaceuticals.com
investors@algernonpharmaceuticals.com
www.algernonpharmaceuticals.com

Neither the Canadian Securities Exchange nor its Market Regulator (as that term is defined in the policies of the Canadian Securities Exchange) accepts responsibility for the adequacy or accuracy of this release.

CAUTIONARY DISCLAIMER STATEMENT: No Securities Exchange has reviewed nor accepts responsibility for the adequacy or accuracy of the content of this news release. This news release contains forward-looking statements relating to product development, licensing, commercialization and regulatory compliance issues and other statements that are not historical facts. Forward-looking statements are often identified by terms such as "will", "may", "should", "anticipate", "expects" and similar expressions. All statements other than statements of historical fact, included in this release are forward-looking statements that involve risks and uncertainties. There can be no assurance that such statements will prove to be accurate and actual results and future events could differ materially from those anticipated in such statements. Important factors that could cause actual results to differ materially from the Company's expectations include the failure to satisfy the conditions of the relevant securities exchange(s) and other risks detailed from time to time in the filings made by the Company with securities regulations. The reader is cautioned that assumptions used in the preparation of any forward-looking information may prove to be incorrect. Events or circumstances may cause actual results to differ materially from those predicted, as a result of numerous known and unknown risks, uncertainties, and other factors, many of which are beyond the control of the Company. The reader is cautioned not to place undue reliance on any forward-looking information. Such information, although considered reasonable by management at the time of preparation, may prove to be incorrect and actual results may differ materially from those anticipated. Forward-looking statements contained in this news release are expressly qualified by this cautionary statement. The forward-looking statements contained in this news release are made as of the date of this news release and the Company will update or revise publicly any of the included forward-looking statements as expressly required by applicable law.

Source: Algernon Pharmaceuticals