BrainStorm Cell Therapeutics Receives Refusal to File Letter from FDA for its New Biologics License Application for NurOwn for the treatment of ALS

NEW YORK, Nov. 10, 2022 /PRNewswire/ -- BrainStorm Cell Therapeutics Inc. (NASDAQ: BCLI), a leading developer of cellular therapies for neurodegenerative diseases, today announced that the company has received a refusal to file letter from the U.S. Food and Drug Administration (FDA) regarding the company's New Biologics License Application (BLA) for NurOwn for the treatment of ALS. The FDA has indicated that the company can request a Type A meeting to discuss the content of the refusal to file letter.

"While we are disappointed that the FDA has not accepted our BLA for NurOwn in ALS, we remain committed to NurOwn's advancement as a treatment for this devastating disease. The company intends to request a Type A meeting and looks forward to continued discussions with the FDA," said Chaim Lebovits, Chief Executive Officer of BrainStorm. "We continue to believe that NurOwn's Phase 3 trial represents a significant contribution to ALS therapy and will continue to work tirelessly to address the needs of people living with ALS by advancing science and partnering with researchers around the world."

The three, co-principal investigators of the NurOwn Phase 3 study were Dr. Robert Brown, Director of the Program in Neurotherapeutics at the University of Massachusetts Medical School, Dr. Merit Cudkowicz, Chief of Neurology at Massachusetts General Hospital, Julieanne Dorn Professor of Neurology at Harvard Medical School, Director of the Sean M. Healey & AMG Center for ALS at Massachusetts General Hospital and Dr. Tony Windebank, Professor of Neurology and Judith and James Pape Adams Foundation Professor of Neuroscience at Mayo Clinic.

Drs. Brown, Cudkowicz and Windebank jointly stated, "While the pre-specified primary outcome measure was not met, there were participants with ***beneficial*** clinical effects and overall changes in relevant biomarkers of drug effect. Understanding whether there are people with ALS who might respond better to NurOwn is important given the unmet therapeutic need. As the three co-PIs of the Phase 3 study of NurOwn, we support continued discussions with the FDA on the best path forward."

BrainStorm completed a Phase 3 trial in 200 participants with ALS (Cudkowicz et al., 2022 Muscle and Nerve). In the attempt to examine a real-world population, the study enrolled people with more advanced disease than other late-stage ALS trials. In fact, more than a third of these participants with advanced disease entered the trial with the one or more dimensions of physical function (e.g., dressing/hygiene, cutting food, walking) starting at the lowest possible score of 0 on the ALSFRS-R; thereby preventing the measurement of further deterioration. A pre-specified subgroup of participants, with baseline ALSFRS-R³35, which controls for this "scale effect" showed a trend to a meaningful increase in the clinical response with NurOwn compared to placebo. The secondary endpoint, average ALSFRS-R change from baseline to 28 weeks in this subgroup, was statistically significant (p=0.050, Muscle and Nerve Supplemental File and Muscle and Nerve Erratum). In addition, post-hoc sensitivity analyses were presented last week (21st Annual NEALS Meeting 2022) which also showed a statistical trend towards a clinically meaningful treatment effect with NurOwn across subgroups, and one that is consistent with the pre-specified subgroup of participants with less advanced ALS at baseline. Finally, biomarker data in all trial participants also showed consistent patterns of NurOwn reducing markers of inflammation and neurodegeneration, and increasing neuroprotective and anti-inflammatory markers relative to placebo, further supporting the notion that trial participants taking NurOwn are indeed experiencing a positive biological effect (ALS ONE Research Symposia 2022).

BrainStorm will discuss its corporate strategy and plans to advance NurOwn's development on its third quarter 2022 earnings call, to take place at 8:00 a.m. Eastern Time on Monday, November 14, 2022. Those interested in joining the call can find additional information here.

Phase 3 NurOwn Study Design

The Phase 3 NurOwn trial was a multi-center, placebo-controlled, randomized, double-blind trial designed to evaluate the safety and efficacy of repeat doses of NurOwn in 189 ALS participants. It was conducted at six centers of excellence: University of California Irvine (Dr. Namita Goyal); Cedars-Sinai Medical Center (Dr. Matthew Burford, Dr. Robert Baloh); California Pacific Medical Center (Prof. Robert Miller, Dr. Jonathan Katz); Massachusetts General Hospital (Prof. Merit Cudkowicz, Dr. James Berry); University of Massachusetts Medical School (Prof. Robert Brown) and Mayo Clinic (Prof. Anthony Windebank, Dr. Nathan

Staff). Potential participants with ALS were screened during an 18-week run-in period and those who were rapid progressors (defined as participants with at least a 3-point decrease in ALSFRS-R score during the run-in period) were randomized 1:1 to receive three intrathecal injections (8 weeks between each injection) of NurOwn or placebo. Participants were followed for 28 weeks after treatment. The primary endpoints of the trial were safety assessments and a responder analysis of the rate of decline in ALSFRS-R score over 28 weeks, where response was defined as participants with a 1.25 points/month improvement in the post-treatment versus pre-treatment slope in ALSFRS-R at 28 weeks following the first treatment. Secondary endpoints included the percentage of participants with disease progression halted or improved, ALSFRS-R change from baseline, combined analysis of function and survival, slow vital capacity, tracheostomy-free survival, overall survival and cerebrospinal fluid biomarker measurements. For more information on the trial, visit https://clinicaltrials.gov/ct2/show/NCT03280056.

About NurOwn®

The NurOwn® technology platform (autologous MSC-NTF cells) represents a promising investigational therapeutic approach to targeting disease pathways important in neurodegenerative disorders. MSC-NTF cells are produced from autologous, bone marrow-derived mesenchymal stem cells (MSCs) that have been expanded and differentiated ex vivo. MSCs are converted into MSC-NTF cells by growing them under patented conditions that induce the cells to secrete high levels of neurotrophic factors (NTFs). Autologous MSC-NTF cells are designed to effectively deliver multiple NTFs and immunomodulatory cytokines directly to the site of damage to elicit a desired biological effect and ultimately slow or stabilize disease progression.

About BrainStorm Cell Therapeutics Inc.

BrainStorm Cell Therapeutics Inc. is a leading developer of innovative autologous adult stem cell therapeutics for debilitating neurodegenerative diseases. The Company holds the rights to clinical development and commercialization of the NurOwn® technology platform used to produce autologous MSC-NTF cells through an exclusive, worldwide licensing agreement. Autologous MSC-NTF cells have received Orphan Drug designation status from the U.S. Food and Drug Administration (FDA) and the European Medicines Agency (EMA) for the treatment of amyotrophic lateral sclerosis (ALS). BrainStorm has completed a Phase 3 pivotal trial in ALS (NCT03280056); this trial investigated the safety and efficacy of repeat-administration of autologous MSC-NTF cells and was supported by a grant from the California Institute for Regenerative Medicine (CIRM CLIN2-0989). BrainStorm completed under an investigational new drug application a Phase 2 open-label multicenter trial (NCT03799718) of autologous MSC-NTF cells in progressive MS and was supported by a grant from the National MS Society (NMSS).

Safe-Harbor Statement

Statements in this announcement other than historical data and information, including statements regarding future clinical trial enrollment and data, constitute "forward-looking statements" and involve risks and uncertainties that could cause BrainStorm Cell Therapeutics Inc.'s actual results to differ materially from those stated or implied by such forward-looking statements. Terms and phrases such as "may," "should," "would," "could," "will," "expect," "likely," "believe," "plan," "estimate," "predict," "potential," and similar terms and phrases are intended to identify these forward-looking statements. The potential risks and uncertainties include, without limitation, BrainStorm's need to raise additional capital, BrainStorm's ability to continue as a going concern, prospects for future regulatory approval of BrainStorm's NurOwn® treatment candidate, the success of BrainStorm's product development programs and research, regulatory and personnel issues, development of a global market for our products and services, the ability to secure and maintain research institutions to conduct our clinical trials, the ability to generate significant revenue, the ability of BrainStorm's NurOwn® treatment candidate to achieve broad acceptance as a treatment option for ALS or other neurodegenerative diseases, BrainStorm's ability to manufacture and commercialize the NurOwn® treatment candidate, obtaining patents that provide meaningful protection, competition and market developments, BrainStorm's ability to protect our intellectual property from infringement by third parties, heath reform legislation, demand for our services, currency exchange rates and product liability claims and litigation; the impacts of the COVID-19 pandemic on our clinical trials, supply chain, and operations; and other factors detailed in BrainStorm's annual report on Form 10-K and quarterly reports on Form 10-Q available at http://www.sec.gov. These factors should be considered carefully, and readers should not place undue reliance on BrainStorm's forward-looking statements. The forward-looking statements contained in this press release are based on the beliefs, expectations, and opinions of management as of the date of this press release. We do not assume any obligation to update forward-looking statements to reflect actual results or assumptions if circumstances or management's beliefs, expectations or opinions should change, unless otherwise required by law. Although we believe that the expectations reflected in the forward-looking statements are reasonable, we cannot guarantee future results, levels of activity, performance, or achievements.

CONTACTS

Investor Relations:
John Mullaly
LifeSci Advisors, LLC
Phone: +1 617-429-3548
jmullaly@lifesciadvisors.com

Media:
Lisa Guiterman
lisa.guiterman@gmail.com

Logo - https://mma.prnewswire.com/media/1166536/BrainStorm_Logo.jpg

SOURCE BrainStorm Cell Therapeutics Inc.

Additional assets available online: Photos (1)

https://ir.brainstorm-cell.com/2022-11-10-BrainStorm-Cell-Therapeutics-Receives-Refusal-to-File-Letter-from-FDA-for-its-New-Biologics-License-Application-for-NurOwn-for-the-treatment-of-ALS?ipid=promo-link-block2