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Announcement of Positive Results from the Phase 3 Clinical Trials of Parkinson's Disease Drug Candidate ND0612

Mitsubishi Tanabe Pharma Corporation (Head Office: Chuo-ku, Osaka; Representative Director: Hiroaki Ueno; hereinafter, “MTPC”), a member of the Mitsubishi Chemical Group, announced today that its wholly owned subsidiary, NeuroDerm Ltd. (Head Office: Rehovot, Israel; CEO: Kengo Isshiki) has released the positive top-line results that meet its key endpoints from the phase 3 clinical trials of ND0612 (BouNDless Trial, hereinafter, “the trial”), a Parkinson's disease drug candidate on January 9, 2023.

The trial was a global, multi-center, randomized, double-blind double-dummy study (DBDD) for Parkinson's disease patients experiencing motor fluctuations. Patients were randomized to either the optimized doses of ND0612 plus supplemental oral LD/CD or the optimized doses of oral LD/CD alone for a 12-week DBDD period. ND0612 demonstrated superiority over oral LD/CD, with a statistically significant difference ($p<0.0001$) of 1.72 hours in “Good ON” time ("ON" time without troublesome dyskinesia). The trial also demonstrated positive and clinically meaningful results for the key and other secondary endpoints of “OFF” time ($p<0.0001$); the MDS-Unified Parkinson's Disease Rating Scale Part II score (MDS-UPDRS motor experiences of daily living sub-score) ($p<0.0001$); the Patient Global Impression of Change (PGIC) ($p<0.0001$); and the Clinical Global Impression of Improvement (CGI-I) ($p<0.0001$). The systemic safety profile of ND0612 was consistent with the well-established safety profile of oral LD/CD. Among adverse events (AEs, ≥5%), infusion site reactions were more frequently reported in the ND0612 group compared to oral LD/CD and were mostly non-serious and mild to moderate in severity, while ‘on and off phenomenon’ and fall were less frequently reported in the ND0612 group compared to oral LD/CD. 6.3% of patients randomized to ND0612 discontinued the trial due to any reason – including 5.5% due to AEs, compared to 6.1% and 3.1%, respectively, of patients randomized to oral LD/CD. The detailed results of the trial will be presented at upcoming medical meetings.

With Parkinson's disease progression, adjustments in oral therapy becomes less and less effective in managing motor complications and highly invasive surgical treatments are considered. These results have confirmed that the development of ND0612, a continuous 24 hours/day subcutaneous infusion of liquid LD/CD that can offer a more reliable, sustained relief from motor fluctuations, will contribute to the treatment of patients with Parkinson's disease experiencing motor fluctuations.

ND0612 is anticipated to submit to regulatory authorities in the United States this year and later in the European Union. MTPC Group is focusing on the R&D of central nervous system disease area and further continuing to create new options for all facing neurodegenerative diseases.

NeuroDerm press release (January 9, 2023)
NeuroDerm Announces Highly Positive Results from the Pivotal Phase III BouNDless Trial Evaluating ND0612 in Parkinson's Disease Patients with Motor Fluctuations

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■About Parkinson's Disease

Parkinson's disease affects more than ten million patients worldwide.[1] It is caused by decreasing dopamine signaling in the brain as dopaminergic brain cells die off.[2] The major motor symptoms include akinesia (or bradykinesia) with reduced movement, the three major symptoms of tremor (tremor of the hands and feet) and (muscle) rigidity (stiffness), as well as postural retention disorders.[3] It is also known that Parkinson's disease is associated with non-motor symptoms such as sleep disorder, mental/cognitive/behavioral disorder, autonomic nerve disorder, and sensory disorder.[3] Although there is no fundamental treatment method, levodopa, which shows antiparkinsonian effect by compensating for decreased dopamine, is used as a therapeutic drug.[3] Levodopa is the most important replacement therapy for Parkinson's disease, administered together with a levodopa degradation inhibitor (usually carbidopa). Oral levodopa intake leads to fluctuating plasma concentrations, with high peaks and low troughs that contribute to the progressive emergence of disabling clinical oscillations over the day in the motor function of many people with Parkinson's disease.[5]

■About ND0612

ND0612 is the first liquid formulations of levodopa and carbidopa to be administered subcutaneously to conveniently achieve steady state levodopa plasma levels. There is an ongoing unmet need for treatment innovation for people with Parkinson's disease, as oral levodopa/carbidopa treatments yield a variable and unfavorable pharmacokinetic profile to maintain a stable clinical response. ND0612 is a drug-device combination therapy – a 24 hours/day, continuous subcutaneous infusion of liquid levodopa/carbidopa designed to reduce motor fluctuations in patients with Parkinson's disease and avoid invasive treatment by improving the drugs' pharmacokinetic and maintain stable and continuous therapeutic levodopa plasma concentrations.

■About NeuroDerm, Ltd.

NeuroDerm is a wholly owned subsidiary of MTPC, based in Israel, inspired to reduce disease burden and improve the quality of life of patients and their families through innovative drug-device combination therapies and technologies. Mitsubishi Tanabe Pharma wholly owned NeuroDerm in October 2017 to expand its pipeline in the key R&D disease area, central nervous system. For additional information, please visit NeuroDerm's website at www.neuroderm.com

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