NeuroSense Investor Relations

NeuroSense Recaps Positive 2023 Achievements Including Statistically Significant Slowing of Disease Progression in Phase 2b ALS Trial of PrimeC and Highlights Anticipated 2024 Catalysts

End of Phase 2 meeting with the FDA and EMA expected in Q2 2024 and several biomarker study results anticipated as early as Q1 2024, as the Company advances partnership discussions

CAMBRIDGE, Mass., Jan. 9, 2024 /PRNewswire/ -- NeuroSense Therapeutics Ltd. (NASDAQ: NRSN) ("NeuroSense"), a company developing treatments for severe neurodegenerative diseases, shares a review of important clinical achievements in 2023 and provides a road map for anticipated catalysts in 2024.

Statistically Significant Reduction in ALS Disease Progression in Phase 2b PARADIGM Trial

Top-line results in the Phase 2b PARADIGM trial of PrimeC revealed a statistically significant slowing of disease progression in ALS patients, compared to placebo. The study demonstrated a 37.4% (p=0.03) difference in the FDA-approved ALS functional rating scale revised (ALSFRS-R), compared to placebo, and a strong safety profile. These data highlight a novel approach to treating ALS, with potential implications in other neurodegenerative conditions. PrimeC is a unique fixed-dose combination of ciprofloxacin and celecoxib, which may utilize complementary and synergistic mechanisms to preserve motor neuron health in ALS.

Jeffrey Rosenfeld, MD, PhD, Professor of Neurology at Loma Linda University and member of NeuroSense's Scientific Advisory Board, stated that the magnitude of this apparent improvement is especially noteworthy considering the natural history of ongoing disease progression. Furthermore, Prof. Rosenfeld commented that the most exciting aspects of these data include not only the statistical differences in ALSFRS-R score at the specified timepoints, but also that the improved trajectory of the ALSFRS-R decline was evident from the earliest timepoint, throughout the entire study period. "These data provide an exciting justification and indication for a pivotal Phase 3 trial. The complexity of ALS pathology warrants a multi-drug therapeutic strategy and it is especially gratifying to see this combination therapy advance. The pending data on biomarkers of neurodegeneration will also be of great interest, as we continue to better understand the benefits of PrimeC and promote this approach."

"The clinical efficacy seen in the topline PARADIGM trial results demonstrate PrimeC's potential to render a significant and meaningful clinical benefit to people living with ALS, as any slowing of progression of this incurable disease is meaningful from both a clinical and patient perspective. This is perhaps one of the most significant outcomes seen to date. We believe that these data in conjunction with hopefully correlative neurofilament readouts this month could lead to a strategic partnership and an expedited regulatory pathway for PrimeC towards the market," stated Alon Ben-Noon, NeuroSense's CEO.

In line with the Phase 2b findings, an independent study performed at the Ichida Stem Cell Lab at University of Southern California in 2023, showed PrimeC performed among the best in improving motor neuron survival when compared to two FDA approved ALS drugs as well as several other ALS drugs in development in an *in vitro* study utilizing induced pluripotent stem cells (iPSCs).

Primary Biomarker Endpoints Anticipated in 2024
NeuroSense expects to report results from a strategic collaboration with Biogen in the second half of January, evaluating the impact of PrimeC on neurofilament levels in participants enrolled in PARADIGM. Upon receipt of results, Biogen has the right of first refusal to co-develop/commercialize PrimeC for the treatment of ALS for a limited time. The Company also expects to report primary endpoints of ALS hallmark biomarkers, TDP-43 and ProstaglandinJ2, to evaluate PrimeC's biological activity and target engagement, in the first half of 2024.

Next Steps in PrimeC Development Pathway

The FDA has confirmed NeuroSense's chemistry, manufacturing, and controls (CMC) development plans, in advance of an expected Phase 3 pivotal trial and potential subsequent marketing approval. The Company expects End of Phase 2 meetings to be scheduled with the FDA and the European Medicines Agency for Q2 2024.

Further advancing its platform combination drug therapy platform, in 2023 NeuroSense also reported positive biomarker results in Parkinson's and Alzheimer's Disease (AD). The Company recently commenced enrollment in RoAD, its Phase 2, randomized, prospective double-blind, single-center, placebo-controlled study to evaluate safety, tolerability, target engagement, and efficacy of PrimeC in patients with mild to moderate AD.

Finally, driven by the significant milestones achieved during the year, NeuroSense has entered into advanced

discussions with fundamental biotech VCs and several big pharma companies focused on CNS therapeutics, to explore potential strategic partnerships and business opportunities.

"I thank our devoted team, invaluable collaborators, and the inspiring ALS community for their dedication and support in reaching this crucial milestone in 2023 and positioning the Company for success in 2024. We remain, as always, committed to the development of improved approaches to treat serious neurological disorders. These efforts are not just about advancing medical science; they are about improving patient's lives. Our focus continues to be on delivering optimal value to our shareholders and stakeholders and making a meaningful difference in the healthcare landscape," added Ben-Noon.

About ALS

Amyotrophic lateral sclerosis ("ALS") is an incurable neurodegenerative disease that causes complete paralysis and death within 2-5 years from diagnosis. Every year, more than 5,000 patients are diagnosed with ALS in the U.S. alone, with an annual disease burden of $1 billion. The number of patients with ALS is expected to grow by 24% by 2040 in the U.S. and EU.

About PrimeC

PrimeC, NeuroSense's lead drug candidate, is a novel extended-release oral formulation composed of a unique fixed-dose combination of two FDA-approved drugs: ciprofloxacin and celecoxib. PrimeC is designed to synergistically target several key mechanisms of ALS that contribute to motor neuron degeneration, inflammation, iron accumulation and impaired ribonucleic acid ("RNA") regulation to potentially inhibit the progression of ALS. NeuroSense completed the 6-month double blind portion of PARADIGM, a prospective, multinational, randomized, double-blind, placebo-controlled Phase 2b ALS (NCT05357950) clinical trial, which met its safety and tolerability endpoints, as well as showing a statistically significant slowing of disease progression in the pre-specified Per Protocol (PP) population. Additional data from the Phase 2b study are expected H1 2024. PrimeC was granted Orphan Drug Designation by the U.S. Food and Drug Administration and the European Medicines Agency.

About NeuroSense

NeuroSense Therapeutics, Ltd. is a clinical-stage biotechnology company focused on discovering and developing treatments for patients suffering from debilitating neurodegenerative diseases. NeuroSense believes that these diseases, which include amyotrophic lateral sclerosis (ALS), Alzheimer's disease and Parkinson's disease, among others, represent one of the most significant unmet medical needs of our time, with limited effective therapeutic options available for patients to date. Due to the complexity of neurodegenerative diseases and based on strong scientific research on a large panel of related biomarkers, NeuroSense's strategy is to develop combined therapies targeting multiple pathways associated with these diseases.

For additional information, we invite you to visit our website and follow us on LinkedIn and Twitter.

Forward-Looking Statements

This press release contains "forward-looking statements" that are subject to substantial risks and uncertainties. All statements, other than statements of historical fact, contained in this press release are forward-looking statements. Forward-looking statements contained in this press release may be identified by the use of words such as "anticipate," "believe," "contemplate," "could," "estimate," "expect," "intend," "seek," "may," "might," "plan," "potential," "predict," "project," "target," "aim," "should," "will" "would," or the negative of these words or other similar expressions, although not all forward-looking statements contain these words. Forward-looking statements are based on NeuroSense Therapeutics' current expectations and are subject to inherent uncertainties, risks and assumptions that are difficult to predict and include statements regarding PrimeC as a potential treatment for people with ALS, the timing for release of additional results from PARADIGM clinical trial, and other regulatory milestones, the timing for release of results from the Company's strategic collaboration with Biogen, the timing for reporting primary endpoints of ALS hallmark biomarkers to evaluate PrimeC's biological activity and target engagement, the timing of meetings to be scheduled with the FDA and the European Medicines Agency, the timing of a Phase 2 trial for Alzheimer's disease and patient enrollment regarding a Phase 3 pivotal ALS trial of PrimeC. Further, certain forward-looking statements are based on assumptions as to future events that may not prove to be accurate. The future events and trends may not occur and actual results could differ materially and adversely from those anticipated or implied in the forward looking statements. These risks include unexpected R&D costs or operating expenses, a delay in the reporting of additional results from PARADIGM clinical trial or the ALS hallmark biomarkers, a delay in the reporting of results from the Company's strategic collaboration with Biogen, the timing of expected regulatory and business milestones, risks associated with meetings with the FDA and the European Medicines Agency to determine the best path forward following the results from PARADIGM clinical trial, including a delay in any such meetings, a delay in patient enrollment for a Phase 2 trial for Alzheimer's disease or its planned Phase 3 pivotal ALS trial of

PrimeC; the inability to enter into a strategic partnership; the potential for PrimeC to safely and effectively target ALS; preclinical and clinical data for PrimeC; the uncertainty regarding outcomes and the timing of current and future clinical trials; timing for reporting data; the development and commercial potential of any product candidates of the company; and other risks and uncertainties set forth in NeuroSense's filings with the Securities and Exchange Commission (SEC). You should not rely on these statements as representing our views in the future. More information about the risks and uncertainties affecting the Company is contained under the heading "Risk Factors" in the Annual Report on Form 20-F filed with the Securities and Exchange Commission on March 22, 2023 and the Company's subsequent filings with the SEC. Forward-looking statements contained in this announcement are made as of this date, and NeuroSense Therapeutics Ltd. undertakes no duty to update such information except as required under applicable law.

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https://neurosense.investorroom.com/2024-01-09-NeuroSense-Recaps-Positive-2023-Achievements-Including-Statistically-Significant-Slowing-of-Disease-Progression-in-Phase-2b-ALS-Trial-of-PrimeC-and-Highlights-Anticipated-2024-Catalysts