NeuroSense Investor Relations

NeuroSense to Present at the ALS and Alzheimer's Disease at AD/PD™ 2023 Advances in Science & Therapy Conference

- ***Biomarkers show potential efficacy***
- ***PrimeC is currently being evaluated for the treatment of ALS in a Phase 2b study with topline results expected in H2 2023***
- ***Phase 2 double-blind proof-of-concept AD study is expected to commence in H1 2023***

CAMBRIDGE, Mass., March 23, 2023 /PRNewswire/ -- NeuroSense Therapeutics Ltd. (Nasdaq: NRSN) ("NeuroSense"), a company developing treatments for severe neurodegenerative diseases, today announced its Vice President of R&D, Dr. Shiran Zimri, will deliver two presentations at the AD/PD™ 2023 Advances in Science & Therapy Conference which takes place March 28 - April 1, 2023 in Gothenburg, Sweden.

Amyotrophic Lateral Sclerosis (ALS) Lecture

Title: *Shifting the paradigm–PrimeC: A potential disease modifying treatment for neurodegenerative disorders driven by novel biomarkers measuring mechanism of action*

Findings: PrimeC has demonstrated efficacy in pre-clinical models of ALS and was shown to be safe and tolerable in a Phase 2a clinical trial, with clinical signals of efficacy and significant changes revealed in ALS-related biomarkers. The synergistic mode of action of PrimeC as a combination therapy in ALS was measured in ALS-related biomarkers in neuronal derived exosomes (NDEs). Significant differences in ALS-related biomarkers were detected in people with ALS when compared to controls. Biomarkers related to inflammation, miRNA regulation, autophagy, and lysosomal trafficking were evaluated. Significant changes were observed in key ALS-related biomarkers following treatment with PrimeC.

PrimeC is currently being evaluated for the treatment of ALS in a Phase 2b study. Topline results are expected in H2 2023.

Alzheimer's Disease (AD) Poster

Title: *Combination of ciprofloxacin/celecoxib as a Novel Therapeutic Strategy for Alzheimer's Disease*

Findings: In order to assess and characterize the relevance of NeuroSense's combination therapy (ciprofloxacin and celecoxib) as a potential treatment for AD, a biomarker discovery study was conducted utilizing NDEs extracted from the plasma of people living with AD vs neurologically healthy controls. Hallmarks of AD were detected, such as increased levels of amyloid β 42, tau phosphorylation, and TDP-43 in people living with AD, when compared to the healthy control group. Elevated levels of TDP-43 suggest potential efficacy of NeuroSense's combination therapy in AD.

A Phase 2 double-blind proof-of-concept AD study is expected to commence in H1 2023.

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 amyotrophic lateral sclerosis (ALS) that contribute to motor neuron degeneration, inflammation, iron accumulation and impaired RNA regulation to potentially inhibit the progression of ALS. NeuroSense completed a Phase 2a clinical study which successfully met its safety and efficacy endpoints including reducing functional and respiratory deterioration and statistically significant changes in ALS-related biological markers indicating PrimeC's biological activity. Through a collaboration with Massachusetts General Hospital in Boston on novel Neuron-Derived Exosomes (NDEs), NeuroSense is working to further determine the biological changes in ALS-related pathologies and the effect of PrimeC on relevant targets. PrimeC was granted Orphan Drug Designation by the U.S. Food and Drug Administration (FDA) and the European Medicines Agency (EMA).

About Alzheimer's Disease

Alzheimer's disease (AD) is the most common form of progressive dementia, affecting 5-10% of the population over 65 years of age, with prevalence estimates increasing exponentially with age (Singh and Fudenberg 1988). Clinically, it is characterized by a progressive deterioration of cognition, predominantly affecting episodic memory, but also resulting in loss of insight, judgment, language, changes in perception, praxis (the ability to

perform day-to-day tasks), behavior, lack of sleep, mood swings, and in late stages, physical functioning (Chouraki and Seshadri 2014). The global AD treatment market is expected to grow to $5 billion in 2022.

About TDP-43

Transactive response DNA binding protein of 43 kDa (TDP-43) is involved in regulation of gene expression. AD patients with TDP-43 pathology have increased severity of cognitive impairment compared to those without TDP-43 pathology. Additionally, the strongest genetic risk factor for AD, apolipoprotein E4 (APOE4), is associated with increased frequency of TDP-43 pathology.[1]

About NDEs

NeuroSense's biomarker study utilized neuronal-derived exosomes (NDEs) extracted from plasma. NDEs are small extracellular vesicles (EVs) generated by neurons that encapsulate a variety of molecules such as proteins, nucleic acids, and metabolites. ExoSORT™ by NeuroDex was used to identify NDEs in this biomarker study. Identification of NDEs and their cargo in body fluids can facilitate the discovery of new biomarkers for prognosis and therapy, as these vesicles can pass the blood-brain barrier (BBB) and provide a depiction of the current physiological status of neurons in the brain.

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 patent applications; the company's PrimeC development program; the potential for PrimeC to safely and effectively target ALS; preclinical and clinical data for PrimeC; the timing of current and future clinical trials; the nature, strategy and focus of the company and further updates with respect thereto; and the development and commercial potential of any product candidates of the company. Further, certain forward-looking statements are based on assumptions as to future events that may not prove to be accurate. 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.

[1] Meneses, A., Koga, S., O'Leary, J. *et al.* TDP-43 Pathology in Alzheimer's Disease. *Mol Neurodegeneration* **16,** 84 (2021). https://doi.org/10.1186/s13024-021-00503-x

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