NEWS RELEASE

Aptinyx Recommences Phase 2 Study of NYX-458 in Patients with Cognitive Impairment Associated with Parkinson's Disease Dementia and Dementia with Lewy Bodies

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Patient screening has resumed following temporary suspension due to escalation of the COVID-19 pandemic

Data readout from the Phase 2 cognitive impairment study expected in 2H 2022

Three Phase 2 data readouts expected over the next 12 to 18 months across the company's clinical development pipeline

EVANSTON, Ill.--(BUSINESS WIRE)-- Aptinyx Inc. (Nasdaq: APTX), a clinical-stage biopharmaceutical company developing transformative therapies for the treatment of brain and nervous system disorders, today announced that it has recommenced patient screening in a Phase 2 study of NYX-458 in patients with mild cognitive impairment and mild dementia associated with Parkinson's disease and dementia with Lewy bodies. The company anticipates reporting data from this study in the second half of 2022.

"We are pleased to be moving forward in evaluating NYX-458 in patients suffering from cognitive impairment," said Norbert Riedel, Ph.D., chief executive officer of Aptinyx. "Current therapies for these patients often do not deliver meaningful benefits and there is a great need for new therapeutic options. We believe the mechanism of NYX-458 is uniquely suited to address the cognitive deficits experienced by these patients and we look forward to building on the compelling preclinical data we have garnered with NYX-458 to date."

"Misfolded alpha-synuclein deposition can lead to NMDA glutamate receptor dysfunction and contribute to cognitive deficits that characterize patients with Parkinson's disease dementia and dementia with Lewy bodies,"

said Peter LeWitt M.D., Professor of Neurology at Wayne State University School of Medicine. “Modulation of NMDA glutamate receptors to address this underlying disease pathology is a compelling approach to treating the broad spectrum of symptoms associated with cognitive impairment. I look forward to seeing the data from this study, which offers a first step in understanding the potential for NYX-458 as a novel therapeutic option.”

About the Phase 2 Study

The Phase 2 study is a randomized, double-blind, parallel-design, placebo-controlled study to evaluate the safety and potential cognitive benefits of NYX-458 in approximately 100 patients with mild cognitive impairment or mild dementia associated with Parkinson’s disease or prodromal or manifest dementia with Lewy bodies. The study will evaluate daily oral dosing of NYX-458 30 mg compared to placebo over a 12-week period. The study will evaluate the overall safety and tolerability of NYX-458 in patients and the potential cognitive benefits of NYX-458 will be evaluated across multiple neurocognitive endpoints focused on attention, memory, and executive function. Aptinyx anticipates reporting data from this study in the second half of 2022. More information about this study can be found on **clinicaltrials.gov** (**NCT04148391**).

About Cognitive Impairment Associated with Parkinson’s Disease and Dementia with Lewy Bodies

Cognitive impairment associated with Parkinson’s disease and dementia with Lewy bodies is characterized by a broad range of deficits related to attention, memory, and executive function. A common disease pathology—elevated levels of alpha synuclein—is implicated in these conditions. Alpha synuclein has been shown to contribute to a decrease in NMDA receptor expression and activity, leading to a decline in cognitive and functional abilities. It is estimated that approximately 1.4 million people in the United States suffer from cognitive impairment due to Parkinson’s disease or dementia with Lewy Bodies, which together account for 15-25% of newly diagnosed dementia patients. Current treatment options for cognitive impairment associated with Parkinson’s disease and dementia with Lewy bodies are limited, with only one approved treatment for PDD and no treatments approved for DLB.

About NYX-458

NYX-458 is a novel oral NMDA receptor modulator currently in clinical development for the treatment of cognitive impairment associated with Parkinson’s disease and dementia with Lewy bodies. NYX-458 has been shown to reverse cognitive deficits in non-human primates in a model that is highly translatable to Parkinson’s disease in humans. NYX-458 has also been shown to improve cognitive performance across various other preclinical models of neurodegeneration. In a Phase 1 clinical study, NYX-458 exhibited a favorable safety and tolerability profile across a wide dose range and achieved CNS exposures consistent with exposures observed at efficacious preclinical

dose levels.

About Aptinyx

Aptinyx Inc. is a clinical-stage biopharmaceutical company focused on the discovery, development, and commercialization of proprietary synthetic small molecules for the treatment of brain and nervous system disorders. Aptinyx has a platform for discovery of novel compounds that work through a unique mechanism to modulate—rather than block or over-activate—NMDA receptors and enhance synaptic plasticity, the foundation of neural cell communication. The company has three product candidates in clinical development in central nervous system indications, including chronic pain, post-traumatic stress disorder, and cognitive impairment. Aptinyx is also advancing additional compounds from its proprietary discovery platform, which continues to generate a rich and diverse pipeline of small-molecule NMDA receptor modulators with the potential to treat an array of neurologic disorders. For more information, visit **www.aptinyx.com**.

Forward-Looking Statements

Statements contained in this press release regarding matters that are not historical facts are “forward-looking statements” within the meaning of the Private Securities Litigation Reform Act of 1995. Because such statements are subject to risks and uncertainties, actual results may differ materially from those expressed or implied by such forward-looking statements. Such statements include, but are not limited to, statements regarding the company’s business plans and objectives, including future plans or expectations for NYX-458 and potential therapeutic effects of NYX-458, expectations regarding the design, implementation, timing, and success of its Phase 2 study of NYX-458 in patients with cognitive impairment associated with Parkinson’s disease and dementia with Lewy bodies, including with respect to COVID-19 precautionary measures, and the timing for the company’s receipt and announcement of enrollment status and data from its Phase 2 study of NYX-458 in patients with cognitive impairment associated with Parkinson’s disease and dementia with Lewy bodies. Risks that contribute to the uncertain nature of the forward-looking statements include: the effect of COVID-19 on our business and financial results, including with respect to disruptions to our clinical studies, business operations, and ability to raise additional capital; the success, cost, and timing of the company’s product candidate development activities and planned clinical studies; the company’s ability to execute on its strategy; that positive results from a clinical study may not necessarily be predictive of the results of future or ongoing clinical studies; regulatory developments in the United States and foreign countries; the company’s estimates regarding expenses, future revenue, and capital requirements; as well as those risks and uncertainties set forth in the company’s most recent annual report on Form 10-K and subsequent filings with the Securities and Exchange Commission. All forward-looking statements contained in this press release speak only as of the date on which they were made. Aptinyx undertakes no obligation to update such statements to reflect events that occur or circumstances that exist after the date on which they were made.

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