Aptinyx Reports Positive Data from Phase 1 Study of Novel NMDA Receptor Modulator, NYX-458, in Healthy Volunteers

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Favorable overall safety, tolerability, and pharmacokinetic profile —no serious adverse events reported across wide dose range

Achieved ample CNS exposure consistent with exposure observed at preclinically efficacious doses

Expect to initiate Phase 2a study in patients with cognitive impairment associated with Parkinson's disease in 2H 2019

EVANSTON, Ill., April 30, 2019 (GLOBE NEWSWIRE) -- Aptinyx Inc. (Nasdaq: APTX), a clinical-stage biopharmaceutical company developing transformative therapies for the treatment of brain and nervous system disorders, today reported positive results from a Phase 1 study of its novel NMDA receptor modulator, NYX-458, in clinical development for the treatment of cognitive impairment associated with Parkinson's disease.

"We are very encouraged by the favorable safety and tolerability profiles we continue to observe with compounds generated from our platform," said Norbert Riedel, Ph.D., president and chief executive officer of Aptinyx. "It is highly atypical that a compound with CNS activity and targeting the NMDA receptor has such a clean safety profile, yet this is now the fourth small molecule from our prolific discovery platform that has demonstrated this type of safety profile in humans. The results from this study are further evidence that our innovative approach to targeting this receptor is one that could provide meaningful advantages over other therapies used to treat CNS disorders. These results, combined with the data we recently presented showing that NYX-458 reverses cognitive deficits in a non-human primate model, suggest that NYX-458 can address a major void in the current treatment paradigm for Parkinson's disease. There is a substantial medical need when it comes to treating the cognitive symptoms of Parkinson's, which often go untreated due to the lack of safe and effective therapeutic options. We look forward to starting a Phase 2 study to characterize the safety and explore the efficacy profile of NYX-458 in patients with cognitive impairment associated with Parkinson's disease during the second half of this year."

In the randomized, placebo-controlled study, which included 62 healthy volunteers, single and multiple ascending oral doses of NYX-458 were evaluated across a 20-fold dose range—10 mg to 200 mg. Across the study, including in a cohort of elderly volunteers, NYX-458 demonstrated a favorable safety and tolerability profile with no serious adverse events reported and no adverse events leading to discontinuation. Only two adverse events—one headache and one case of nausea—in the study were considered possibly related to NYX-458 and both were characterized as mild.

Further, NYX-458 demonstrated a dose-proportional pharmacokinetic profile and no meaningful accumulation was observed with seven daily doses. The highly predictable nature of this pharmacokinetic profile enables accurate dose selection to achieve appropriate therapeutic exposure in clinical development. As evaluated through cerebral spinal fluid drug concentration, NYX-458 demonstrated CNS exposure in line with that observed at preclinically efficacious doses. CSF exposure levels were approximately 15% of the plasma concentration, similar to observations in preclinical studies.

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. 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. Additionally, NYX-458 has been shown to improve cognitive performance across various rodent models of disease. In a Phase 1 clinical study, NYX-458 exhibited a favorable safety and tolerability profile across a wide dose range and achieved CNS exposure in line with exposure observed with 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 associated with Parkinson's disease. 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 the company's product candidates, therapeutic effects of the company's product candidates, expectations regarding the design, implementation, timing, and success of its current and planned clinical studies, and expectations regarding its uses and sufficiency of capital. Risks that contribute to the uncertain nature of the forward-looking statements include: 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; 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; as well as those risks and uncertainties set forth in the company's filings with the Securities and Exchange Commission, including the Company's Annual Report on Form 10-K for the year ended December 31, 2018. 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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