NEWS RELEASE

Aptinyx Reports Results from Phase 2b Study of NYX-2925 in Painful Diabetic Peripheral Neuropathy

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NYX-2925 did not achieve the primary endpoint of the study

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 results from a Phase 2b clinical study evaluating the effects of NYX-2925 in patients with painful diabetic peripheral neuropathy (DPN). NYX-2925 did not achieve statistically significant separation from placebo on the study's primary endpoint, which assessed the change from baseline in average daily pain on the numeric rating scale (NRS) during week 12.

"We are clearly disappointed that the study did not meet its primary endpoint," said Andy Kidd, M.D., president and chief executive officer of Aptinyx. "We appreciate the contributions of patients, investigators, and the entire team that worked on the study. Unfortunately, the data from this study do not currently point to a path forward in development for painful DPN."

"We continue to believe, however, that NYX-2925 can offer a novel therapeutic approach for fibromyalgia, a disorder fundamentally characterized by abnormal pain processing in the brain. To this end, we look forward to reporting data from our ongoing fibromyalgia Phase 2b study in early to mid Q3. We continue to have confidence in our platform and pipeline and will manage our existing balance sheet to enable readouts across our currently ongoing Phase 2 studies in fibromyalgia, cognitive impairment, and PTSD."

The Phase 2b painful DPN study was a randomized, double-blind, placebo-controlled study designed to evaluate the efficacy and safety of NYX-2925 in 229 patients with advanced painful DPN. Following a screening period, eligible patients were randomized to receive oral doses of NYX-2925 50 mg or placebo once daily over the treatment period. The primary endpoint in the study was the change from baseline in average daily pain as

reported on the zero-to-ten NRS during week 12 of the study. Additional pain endpoints included worst daily pain, pain on walking, and pain interference with sleep.

The primary endpoint of the study was not achieved. Patients receiving NYX-2925 showed an improvement in average daily pain scores, but separation from placebo was not observed. Separation between NYX-2925 and placebo was also not observed on the other pain endpoints. NYX-2925 was well tolerated in the study, with no concerning safety issues observed. Detailed data from the study continue to be evaluated.

About NYX-2925

NYX-2925 is an investigational, novel oral NMDA receptor positive allosteric modulator (PAM) in Phase 2b clinical development for the treatment of chronic pain. In clinical studies, NYX-2925 has demonstrated activity that affects central, supraspinal pain processing, resulting in alleviation of pain and other symptoms associated with specific chronic pain conditions. NYX-2925 has also exhibited a favorable safety and tolerability profile across a wide dose range in clinical studies to date.

About Neuropathic Pain and Painful Diabetic Peripheral Neuropathy

Neuropathic pain, associated with various conditions, affects an estimated 7% to 9% of the U.S. population. Individuals suffering from this condition, regardless of the underlying disorder, are currently treated with a variety of therapies including antidepressants, anticonvulsants, and opioids. These medications offer inadequate efficacy for a large proportion of patients, are often poorly tolerated due to side effects, and in some cases are associated with abuse.

Painful DPN is one of the largest neuropathic pain conditions. An estimated 8.5 million people in the United States suffer from this condition, which develops in 60% to 70% of people with diabetes when chronically high glucose levels damage nerves and impair transmission of information between the central nervous system and other parts of the body. Patients suffering from DPN may also experience sensory loss, leading to difficulties with balance, coordination, and walking.

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-2925, therapeutic effects of the company’s product candidates and discovery platform, expectations regarding the design, implementation, timing, and success of its current and planned clinical studies, and the timing for the company’s receipt and announcement of data from its clinical studies. Risks that contribute to the uncertain nature of the forward-looking statements include: the effect of the COVID-19 pandemic on our business and financial results, including with respect to disruptions to our clinical trials, 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; positive results from a clinical study may not necessarily be predictive of the results of future or ongoing clinical studies; regulatory approval processes of the FDA and comparable foreign regulatory authorities are lengthy, time-consuming, and inherently unpredictable; regulatory developments in the United States and foreign countries; the company’s estimates regarding expenses, future revenue, and capital requirements; the company’s ability to fund operations into mid-2023; as well as those risks and uncertainties set forth in the company’s most recent periodic filings with the Securities and Exchange Commission, including our Annual Report on Form 10-K for the year ended December 31, 2021. 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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