NEWS RELEASE

Aptinyx Presents Additional Positive Data from Phase 2 Exploratory Study of NYX-783 in PTSD at Society of Biological Psychiatry Annual Meeting

4/29/2021

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 presented additional data from its exploratory Phase 2 study of NYX-783 in patients with post-traumatic stress disorder (PTSD) at the Society of Biological Psychiatry (SOBP) Annual Meeting being held virtually April 29 - May 1, 2021.

The Phase 2 study evaluated NYX-783 in 153 patients with PTSD. The study consisted of two four-week treatment stages comparing once-daily oral dosing of NYX-783—10mg or 50mg—to placebo. This initial exploratory study was powered based on clinical, and not statistical, considerations to detect signals of efficacy. Nonetheless, statistically significant separation from placebo (using a one-sided $p<0.1$, based on the prespecified statistical analysis plan for this exploratory study) was observed on some measures. The prespecified combined analysis of stages 1 and 2 revealed a numerical benefit on the CAPS-5 Total score and a statistically significant benefit on the Arousal and Reactivity symptom cluster score for the 50 mg dose compared to placebo. The results from stage 1, which reflect all patients enrolled in the study, provide the greatest insights into the potential effects of NYX-783 for future studies and, therefore, are the primary focus of the poster being presented at SOBP.

Key highlights of stage 1 data presented at SOBP include the following:

- A significantly greater proportion ($p<0.05$) of patients achieved a Clinically Reliable Change (improvement of ≥13 points on the CAPS-5 Total score) in the 50 mg treatment group compared to placebo.
- Percentage improvement on the CAPS-5 Total score for the NYX-783 50 mg group was significant ($p<0.05$ vs. placebo) when adjusting for variances in patients' time since trauma.
- NYX-783 demonstrated clinically meaningful improvements on the CAPS-5 Total Score and symptom cluster

scores with a favorable safety and tolerability profile.

“The lack of effective pharmacotherapies in PTSD make the results from this study important,” said Murray Stein, MD, MPH, FRCPC, Distinguished Professor of Psychiatry and Public Health and Vice Chair for Clinical Research in Psychiatry at the University of California San Diego and a consultant to Aptinyx. “While there have been numerous attempts to bring new therapies forward in PTSD, it has proven to be a very challenging indication. These results suggest that NYX-783, with its novel NMDA receptor modulatory mechanism, has potential to offer meaningful symptom relief to patients that desperately need better options.”

“The dataset presented today further illustrates the therapeutic potential of NYX-783 for people living with post-traumatic stress disorder,” said Norbert Riedel, Ph.D., chief executive officer of Aptinyx. “We are pleased with the clinical effects demonstrated in this study, including the significant separation observed on clinically reliable change and the significant effects demonstrated when adjusting for time since trauma. We plan to incorporate these learnings into our next, larger study of NYX-783 in PTSD.”

An electronic version of the poster can be found on the Aptinyx **website**.

Poster: “A Randomized, Placebo-Controlled, Double-Blind Study of NYX-783 in Patients with Posttraumatic Stress Disorder,” Lori L. Davis, Murray B. Stein, Lesley M. Arnold, Kathryn King, Kerrin Young, Harald Murck, Rolando Gutierrez-Esteinou
Poster Number: T286
Poster Session: Thursday April 29th, 12:15pm – 1:15pm CT

- Numerical improvement was observed on the CAPS-5 Total Score (50 mg QD group compared to placebo).
- Significantly more subjects demonstrated a Clinically Reliable Change (improvement of ≥13 points on the CAPS-5 Total score) when treated with NYX-783 50 mg compared to placebo, suggesting the effect is driven by NYX-783 rather than test-retest variability or overall variability in PTSD symptoms during the evaluation period.
    - The reliable change index can be interpreted to signify clinically meaningful treatment benefit.
- After correcting for baseline imbalances in time since trauma, percentage improvement on the CAPS-5 Total score was significant ($p<0.05$) (exploratory) [ANCOVA LSM (SE)].
- On the CAPS-5 symptom cluster scores, improvements on Arousal and Reactivity and Negative Cognitions and Mood were significant for the 50 mg QD group (all $p<0.05$).
- Improvement on the HADS-Anxiety scale was statistically significant for the 10 and 50 mg groups.
- NYX-783 was well-tolerated compared to placebo and there were no drug-related serious adverse events.

About Post-Traumatic Stress Disorder

Approximately eight and a half million people in the United States suffer from PTSD, which is characterized by intrusive symptoms, avoidance, negative alteration in cognition and mood, hyperarousal, and/or arousal alterations following the experience of trauma. PTSD can result from various forms of trauma, including combat exposure, car accidents, sexual or other physical assault, abuse, natural disasters, and others. The lifetime prevalence of PTSD is approximately seven percent in the general population but is much higher in populations at risk for exposure to trauma, such as military service members and first responders. In addition to the challenges associated with the direct symptoms, PTSD sufferers have a higher rate of suicide and often struggle with simultaneous addiction, leading to an even greater social and economic burden of the disorder. Available therapeutic options are limited, including only two approved conventional SSRI antidepressants, which have limited efficacy, undesirable side effects, and target only the symptoms of PTSD, not the underlying disorder itself.

About NYX-783

NYX-783 is a novel, oral NMDA receptor modulator currently in development for the treatment of post-traumatic stress disorder (PTSD). In an exploratory Phase 2 clinical study, administration of NYX-783 resulted in clinically meaningful improvements on PTSD symptoms with a favorable tolerability profile. In preclinical studies of NYX-783, robust activity has been observed in psychiatric models, models of fear extinction, and models of substance abuse. In a Phase 1 clinical study of NYX-783, functional central nervous system exposure was observed and the product candidate demonstrated a favorable adverse event and tolerability profile, with no serious adverse effects, across a wide dose range. The U.S. Food and Drug Administration has granted Fast Track designation to the development of NYX-783 for the treatment of PTSD.

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 therapeutic effects of NYX-783 and expectations regarding the design, implementation, timing, and success of the company's planned clinical trials. 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; regulatory developments in the United States and foreign countries; as well as those risks and uncertainties set forth in the company's most recent annual report on Form 10-K and in its other filings and reports with the United States 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.

Source: Aptinyx Inc.

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Investor Contacts:

Nick Smith
Aptinyx Inc.
ir@aptinyx.com
847-871-0377

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