NEWS RELEASE

Aptinyx Presents Preclinical Data on NYX-783 in Models of PTSD at 2022 Society of Biological Psychiatry Annual Meeting

4/29/2022

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 data from preclinical studies of NYX-783 in models of post-traumatic stress disorder (PTSD) at the Society of Biological Psychiatry (SOBP) Annual Meeting, being held April 28 – April 30, 2022 in New Orleans, Louisiana. The company is participating in a symposium discussing the role of NMDA receptor function in relation to prefrontal cortex activity in PTSD.

“The data presented in today’s symposium highlight the potential of NMDA receptor modulation in key brain regions as a novel treatment approach for PTSD,” said Harald Murck, M.D., Ph.D., Vice President of Clinical and Medical Affairs at Aptinyx. “Activation of NMDA receptors in the prefrontal cortex is understood to contribute to addressing the underlying glutamatergic dysfunction associated with PTSD. The approach provides an opportunity for a new class of therapeutics. NYX-783, an NMDA receptor positive allosteric modulator, demonstrates an ability to build long-lasting fear-inhibitory memories in PTSD-relevant models, ultimately leading to a stabilization of fear extinction. We look forward to continuing the development of NYX-783 in our ongoing Phase 2b study of PTSD to help advance new therapies for the millions of people living with post-traumatic stress disorder.”

A full publication of the preclinical data from NYX-783 in PTSD was recently **published** in the journal, Molecular Psychiatry.

Symposium Title: “The Role of NMDA Receptor Function in Relation to Prefrontal Cortex Activity in Posttraumatic Stress Disorder” Harald Murck, M.D., Ph.D., (Chair), Chadi Abdallah, M.D., (Presenter), Adriana Feder, M.D., (Presenter), Eva Maria Fritz, Ph.D., (Presenter), Amanda Barth, Ph.D. (Presenter)

SYMPOSIUM DETAILS

Symposium Session: Friday, April 29, 2022: 1:30 PM - 3:30 PM ET (Grand Salon C)

Speakers and presentations:

- Symposium Chair – Harald Murck, M.D., Ph.D. (Aptinyx)
- "Reduced Prefrontal Synaptic Strength in Posttraumatic Stress Disorder (PTSD)" – Chadi Abdallah, M.D. (Baylor College of Medicine)
- "Neural Circuitry Mechanisms of Response to Ketamine in PTSD: Preliminary Findings" – Adriana Feder, M.D. (Icahn School of Medicine at Mount Sinai)
- "Neurobiological and Physiological Correlates of PTSD-Related Symptoms in Animal Models" –Eva Maria Fritz, Ph.D., (University of Innsbruck)
- "NYX-783, a Novel Positive Allosteric Modulator of the N-Methyl D-Aspartate Receptor, Increases NMDAR-Mediated Signaling in the Infralimbic Prefrontal Cortex to Facilitate Extinction Learning in PTSD-Relevant Rodent Models" – Amanda Barth, Ph.D. (Aptinyx)

About Post-Traumatic Stress Disorder

Approximately fifteen million adults in the United States suffer from PTSD in a given year, 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 in treating PTSD, 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, positive allosteric modulator of NMDA receptors currently in Phase 2b development for the treatment of post-traumatic stress disorder (PTSD). In preclinical studies of NYX-783, particularly strong results were observed in psychiatric models, models of fear extinction, and models of substance abuse. In a Phase 1 clinical study of NYX-783, ample 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. In an exploratory Phase 2a study in patients with PTSD, patients receiving a 50 mg dose level of NYX-783 showed meaningful symptom improvements and rates of response. 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 fibromyalgia, 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.

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