



Aptinyx to Present Preclinical Data for NMDA Receptor Modulators in Neurologic Disorders at Neuroscience 2017

Evanston, Ill., November 14, 2017 – Aptinyx Inc., a clinical-stage biopharmaceutical company developing transformative therapies for challenging neurologic disorders, today announced the presentation of results from several studies of novel N-methyl-D-aspartate (NMDA) receptor modulators in models of neuropathic pain, post-traumatic stress disorder (PTSD), cognition and traumatic brain injury at Neuroscience 2017, the annual meeting of the [Society for Neuroscience](#), November 11-15, 2017 in Washington, D.C.

“These data demonstrate the diversity of Aptinyx’s drug discovery programs and continue to illustrate the broad applicability of modulating NMDA receptors in treating neurologic disorders,” said Joseph Moskal, Ph.D., chief scientific officer of Aptinyx.

Presentation Details

Enhancement of synaptic plasticity by NYX-2925: Sleep cycle EEG studies in rats (Poster #72.14 / KK18)

- Presenter: Jeffrey S. Burgdorf, director of discovery science at Aptinyx
- Presentation Date & Time: Saturday, November 11, 2017 – 1:00 – 5:00 p.m. ET
- Summary: Brain activity in sleep deprived rats dosed with NYX-2925 demonstrated significantly facilitated slow wave sleep, suggesting NYX-2925 has the potential to improve sleep quality and decrease symptoms of sleep disruption caused by sleep deprivation.

NYX-2925, a novel NMDA receptor modulator, reversed cognitive impairment induced by either aging or scopolamine (Poster #129.01 / P8)

- Presenter: Amanda Gross, senior research scientist at Aptinyx
- Presentation Date & Time: Sunday, November 12, 2017 – 8:00 – 12:00 p.m. ET
- Summary: Results from two models of cognitive impairment suggest that NYX-2925 has therapeutic potential for treating cognition deficient-related disorders.

The NMDA receptor modulator NYX-2925 demonstrates therapeutic potential in preclinical models for the treatment of neuropathic pain (Poster #374.19 / D34)

- Presenter: Nayereh Ghoreishi-Haack, senior researcher at Aptinyx
- Presentation Date & Time: Monday, November 13, 2017 – 1:00 – 5:00 p.m. ET
- Summary: NYX-2925 produces a rapid-acting effect within one hour of dosing that is both NMDA and AMPA receptor dependent and long-lasting, up to one week after

dosing, in chronic constriction injury and streptozotocin-induced diabetic neuropathy pain models.

NYX-2925 regulates tau dynamics in rat cortical tissues (Poster #395.11 / DD11)

- Presenter: Luisa P. Cacheaux, research scientist at Aptinyx and Katherine Leaderbrand, Aptinyx scholar
- Presentation Date & Time: Monday, November 13, 2017 – 1:00 – 5:00 p.m. ET
- Summary: Within 24 hours of dosing, NYX-2925 improves learning deficits associated with traumatic brain injury in a rat model by targeting NMDA receptor-associated modulation of tau phosphorylation – a process in which disruption of normal events results in neurodegenerative dysfunction.

Enhancement of synaptic plasticity by NYX-2925: The role of receptor trafficking and intracellular signaling (Poster #428.23 / UU61)

- Presenter: Roger A. Kroes, senior director discovery science at Aptinyx
- Presentation Date & Time: Monday, November 13, 2017 – 1:00 – 5:00 p.m. ET
- Summary: The rapid-acting effects of NYX-2925 observed within 24 hours of dosing in an animal model, suggest cognitive-enhancing effects of NYX-2925 are driven in part by the modulation of glutamatergic receptor trafficking and insertion of NMDA and AMPA receptors into the postsynaptic density complex to enhance synaptic plasticity.

NYX-783: A novel small molecule NMDA receptor modulator with therapeutic potential for the treatment of post-traumatic stress disorder (Poster #429.02 / UU65)

- Presenter: Elizabeth Colechio, research scientist at Aptinyx
- Presentation Date & Time: Monday, November 13, 2017 – 1:00 p.m. – 5:00 p.m. ET
- Summary: NYX-783 has therapeutic potential for the treatment of PTSD demonstrated by a drug-administration induced enhancement of signaling pathways associated with synaptic plasticity and efficacy in animal models related to PTSD.

NYX-2925 promotes GluN2B-PSD95 colocalization and LTP in rat hippocampal neurons (Poster #558.14 / C31)

- Presenter: M. Scott Bowers, senior research scientist at Aptinyx
- Presentation Date & Time: Tuesday, November 14, 2017 – 1:00 – 5:00 p.m. ET
- Summary: NYX-2925 facilitates synaptic plasticity in part by increasing synaptic NMDA receptor subtype 2B. Thus, the biological effects of NYX-2925 result not only from directly modulating the NMDA receptor, but also regulating the trafficking of receptors into and out of the synapse.

Aptinyx's chemistry and discovery platform has generated numerous small-molecule modulators of the NMDA receptor, including lead drug candidates NYX-2925 and NYX-783. In studies to date, these molecules have demonstrated high oral bioavailability, diverse NMDA receptor subtype binding profiles, and differentiated efficacy across preclinical models of various nervous system conditions. The company's compounds are designed to enhance synaptic plasticity – or strengthen the network for neural cell communication – a clinically validated mechanism with

therapeutic potential in multiple challenging neurologic disorders.

Aptinyx is currently conducting a Phase 2 study of NYX-2925 in patients with neuropathic pain associated with diabetic peripheral neuropathy (DPN), as well as an exploratory study in patients with fibromyalgia. The U.S. Food and Drug Administration has granted Fast Track designation to the development of NYX-2925 for neuropathic pain associated with DPN.

About Aptinyx

Aptinyx Inc. is a clinical-stage biopharmaceutical company discovering and developing transformative therapies for challenging disorders of the brain and nervous system. Aptinyx has a proven 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. Drugs that modulate NMDA receptors in this distinct way have both robust efficacy and exceptionally favorable safety. The company's lead drug candidate, NYX-2925, is in Phase 2 clinical development as a therapy for neuropathic pain, an area of significant unmet need. Aptinyx is also advancing additional compounds from its proprietary chemistry 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.

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