



Afferent Pharmaceuticals Announces Data Supporting Potential Utility of Proprietary P2X3 Antagonists in Regulating Bladder Reflexes

Preclinical Findings Presented at the 2010 Joint Annual Meeting of the International Continence Society and the International Urogynecological Association

Toronto, Canada, August 25, 2010 – Afferent Pharmaceuticals, a clinical-stage biopharmaceutical company developing first-in-class, small molecule compounds that target P2X3 receptors, today announced preclinical *in vivo* results demonstrating that an investigational P2X3 receptor antagonist reduced experimentally induced bladder hyperactivity. P2X3 receptors are preclinically well-validated targets, highly specific to unmyelinated, C fiber afferent nerves that have dense innervations in visceral organs, skin and joints. These small diameter fibers transmit sensations of pain, tissue injury and irritation via mechanisms that include ATP signaling. P2X3-containing fibers have been broadly implicated for treating chronic inflammatory, visceral and neuropathic pain. Results from the study were presented in a poster session at the 2010 Joint Annual Meeting of the International Continence Society and the International Urogynecological Association in Toronto, Canada.

The study, co-authored by Anthony Ford, Ph.D., Founder and Chief Scientific Officer of Afferent Pharmaceuticals, was highlighted in a poster presentation titled, “Selective Blockade of Spinal P2X3 and P2X2/3 Receptors with a Novel and Selective Antagonist, AF-742, Reveals Central Endogenous Purinergic Regulation of Bladder Activity.” According to Dr. Ford, the study showed that selective blockade of P2X3 receptors in the spinal cord significantly decreased the frequency of reflex micturition contractions. Cystometry recordings were used to assess bladder reflex activity and spinal extracellular-signal regulated kinase (ERK) activation, as induced by acute noxious stimulation of the bladder.

“The results of this study indicate that selective P2X3 antagonism may have clinical utility in treating interstitial cystitis/bladder pain syndrome and overactive bladder,” commented Dr. Ford. “Based on these and other promising data, Afferent is planning a clinical trial of its lead P2X3 antagonist, AF-219, in patients with chronic bladder pain syndrome, a prevalent and painful condition with currently limited therapeutic options. Afferent is also planning clinical studies of AF-219 in osteoarthritis and chronic cough patients.”

Dr. Ford added, “A key advantage of targeting P2X3 receptors is that they have limited distribution beyond sensory nerves and no significant expression in the higher centers of the brain. Based on this, we would expect to limit bothersome or serious CNS side effects — effects which substantially limit the utility of many pain and urological treatments.”

Authors of the poster were Timothy K. Y. Kaan, Ping K. Yip, John Grist, Joseph S. Cefalu, Philip A. Nunn, Anthony P.D.W. Ford, Yu Zhong, and Stephen B. McMahon.

About Afferent Pharmaceuticals

Afferent Pharmaceuticals is a clinical-stage biopharmaceutical company developing first-in-class, small molecule compounds that target P2X3 receptors for the treatment of chronic pain and irritative conditions. Validated in numerous preclinical models, P2X3 is highly specific to types of sensory nerves (C fiber afferents) that transmit sensations of pain and irritation via ATP signaling. Afferent’s singular focus and industry-leading position on P2X3 antagonism enables the Company to widely explore this novel mechanism of action and evaluate its utility in a broad range of indications. These indications include chronic pain in the joints and visceral organs and irritative conditions of the lungs and bladder.

Founded in December 2009, Afferent is building on over a decade of research on P2X3 antagonists. The Company currently has compounds in clinical and preclinical studies, in addition to a substantial and diverse library of small molecules that selectively target P2X3 receptors. Afferent’s lead compound, AF-219, is being prepared for entry into Phase 2 clinical testing in patients with osteoarthritis, interstitial cystitis/bladder pain syndrome and chronic cough.

Afferent Pharmaceuticals is located in San Mateo, California. Afferent is financed by the premier investors Domain Associates, New Leaf Venture Partners, Pappas Ventures and Third Rock Ventures.

For more information on the Company, please visit Afferent’s website at www.afferentpharma.com.

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