



Allena Pharmaceuticals and Health Advances Present Analysis of Recurrent Kidney Stone Disease at the Academy of Managed Care Pharmacy Nexus Conference

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NEWTON, MA and WESTON, MA—(October 4, 2016) Allena Pharmaceuticals, Inc., a specialty biopharmaceutical company focused on developing and commercializing innovative, non-systemic, oral protein therapeutics to treat metabolic and orphan diseases, today announced that the company, together with Health Advances, LLC, will present findings from their health economic study of recurrent kidney stone disease in the United States at the Academy of Managed Care Pharmacy Nexus Conference in National Harbor, MD.

"Although kidney stones are common in the United States, the segments of patients suffering from patterns of recurrent kidney stone episodes have not yet been characterized in the epidemiological literature in terms of prevalence and healthcare utilization," said Julia Gaebler, Ph.D., Vice President Health Advances.

Study Summary and Key Findings:

- Published literature, national procedure databases and fee schedules, insurance claims, and clinician interviews were used to create a Markov Model that describes the epidemiology and economics of calcium kidney stone disease.
- Based on this analysis, an estimated 17.8 million patients have been affected by calcium kidney stones, with 3.1 million predicted to experience stone episodes in 2016.
- Recurrent kidney stone disease patients represent 65% of all patients experiencing calcium kidney stones and are responsible for over 80% of the direct medical costs associated with treatment of calcium kidney stones.
- Patients with fast recurring kidney stone episodes represent a fraction of the patient population, but account for disproportionate associated healthcare costs, due to the frequency of episodes and probability of recurrence.
- In total, the 2016 direct medical cost of calcium kidney stones was estimated to be approximately \$23.3 billion, and is expected to grow to \$70 billion by 2035.

"Recurrent kidney stone disease is a significant healthcare problem that impacts patients across demographic groups. Kidney stone patients often experience significant morbidity, intense pain, and a requirement for interventional procedures," said Louis Brenner, M.D., Chief Operating Officer of Allena Pharmaceuticals. "In addition to direct medical costs, recurrent kidney stone disease is responsible for significant indirect medical and intangible costs, including missed days of work, pain and suffering for patients and their families. We are focusing on a new therapeutic paradigm to treat metabolic causes of kidney stones, in an effort to improve patient outcomes, as well as address the high costs associated with this disease," said Dr. Brenner.

About Hyperoxaluria and ALLN-177

Hyperoxaluria is a condition resulting from high oxalate levels in the urine due to either hyper-absorption of oxalate from the diet (secondary) or from overproduction of oxalate by the liver due to a genetic defect (primary). Oxalate is a terminal metabolite that cannot be further degraded by humans and is primarily excreted by the kidneys. Hyperoxaluria can initially cause the development of kidney stones, and may also lead to kidney damage (nephrocalcinosis), chronic kidney disease, end-stage renal disease and dialysis. Calcium oxalate is the most common constituent of kidney stones. There are currently no approved pharmacologic treatments for hyperoxaluria.

ALLN-177 is an orally-administered, recombinant oxalate-degrading enzyme in development for the chronic management of hyperoxaluria and kidney stones (nephrolithiasis). ALLN-177 targets oxalate in the gastrointestinal tract in an effort to reduce the burden of both dietary and endogenously produced oxalate. The U.S. Food and Drug Administration (FDA) has granted Orphan Drug Designation to Allena's investigational therapy oxalate decarboxylase for the treatment of pediatric hyperoxaluria.

About Allena Pharmaceuticals

Allena Pharmaceuticals, Inc. is a specialty biopharmaceutical company focused on developing and commercializing non-systemic protein therapeutics to treat metabolic and orphan diseases. Allena is currently conducting a Phase 2 program for its lead product candidate, ALLN-177, in patients with hyperoxaluria. The company's technological approach enables the design and development of oral protein therapies that remain in the gastrointestinal (GI) tract, where the protein exerts its therapeutic effect by degrading toxic metabolites, without being absorbed into the bloodstream. Led by a proven management team with deep expertise in protein therapeutic design and development, Allena is committed to bringing breakthrough new treatments to patients with unmet medical needs. Based in Newton, MA, the company is supported by a top-tier investor syndicate including Frazier Healthcare, Third Rock Ventures, Bessemer Venture Partners, HBM Partners, Pharmstandard International S.A., Partner Fund Management, Fidelity Management & Research Company, and other investors. For more information, please visit www.allenapharma.com.

About Health Advances

Health Advances is a strategy consulting firm that focuses exclusively on the healthcare industry. The firm is composed of scientists, clinicians, and business professionals who share a passion for supporting commercialization and driving adoption of innovations that improve healthcare. The firm

employs over 140 full-time professionals in four offices and has worked with over 500 companies and investors on over 2,500 assignments, across the entire spectrum of healthcare services, providing fresh perspectives, relevant knowledge, and actionable insights.