



Pulmatrix Presents Data Demonstrating that iSPERSE(TM) Effectively Delivers Doses of Multi-Drug Formulations Using Novel Inhaled Dry Powder Platform

Proof-of-concept Shown in Preclinical Asthma Models in Presentation at The International Society for Aerosols in Medicine

Lexington, MA, June 20, 2011 -- Pulmatrix, a clinical stage biotechnology company discovering and developing a new class of therapies for the prevention, treatment and control of respiratory diseases, announced that data relating to the preclinical efficacy and multi-drug formulation and delivery capabilities of the company's novel iSPERSE inhaled dry powder drug delivery platform were presented at poster sessions on June 19 and 21, 2011 at The International Society for Aerosols in Medicine (ISAM) in Rotterdam, Netherlands. iSPERSE is a novel dry powder platform that uses certain proprietary cationic salts at tailored ratios to enable delivery of small or large molecule drugs via inhalation for local or systemic applications.

At ISAM, in a poster entitled "A Novel Inhaled Dry Powder Delivery Platform; Efficacy of Fluticasone and Salmeterol During Allergic Asthma", preclinical data on the iSPERSE platform highlighted the potential of this novel technology to support the effective delivery of a two drug iSPERSE formulation that underscores the uniqueness of the platform across a range of patient populations. The iSPERSE platform offers the potential to enable the aerosol delivery of small molecule drugs, drug combinations (including triple drug combinations or higher), and macromolecule drugs (*i.e.*, proteins, peptides, etc.) at therapeutically-relevant doses well in excess of those achievable by traditional dry powder lactose blend technologies.

"These data, as well as other studies we have conducted, clearly underscore the unique and compelling potential of our proprietary iSPERSE platform to create novel dry powder formulations for inhaled drug delivery for local and systemic therapeutic applications," said Michael Lipp, Ph.D., Vice President of Development and Intellectual Property at Pulmatrix. "iSPERSE formulations have been shown to exhibit desirable properties, including high density and high dispersibility, that can lead to reliable inhaled drug dose delivery across a wide range of relevant flow rates. Additionally, the iSPERSE platform can support the inhaled delivery of single or combination drug formulations as well as a greater capacity to accommodate higher drug loadings and larger drug molecules than conventional inhaled technologies."

In the data presented by Pulmatrix at ISAM, two mouse models of allergic asthma, the ovalbumin (OVA) model and house dust mite (HDM) model, were used to show the utility of Pulmatrix's iSPERSE platform using a well-described inhaled combination, a long acting bronchodilator, salmeterol xinafoate (SX), and a corticosteroid, fluticasone propionate (FP). In these studies, animals inhaled FP/SX treatment or placebo by whole body exposure prior to allergen challenge (OVA or HDM). Specific airway resistance was determined by dual chamber plethysmography and was collected at baseline and during methacholine (MCh) challenge following the final iSPERSE-enabled dry powder treatment. Specific airway resistance values were decreased (33% on average) across the range of MCh challenge in both allergen models. To evaluate the effect of the corticosteroid, animals were treated with SX/FP (SX at 2.0% w/w / FP at 13.5% w/w) which resulted in decreased total inflammatory cells marked by reduced eosinophilia assessed by bronchoalveolar lavage. These data highlight the potential efficacy of



iSPERSE as a novel dry powder delivery technology platform, as aerosol delivery of SX/FP demonstrated reduced inflammation and airway hyperreactivity.

With completion of comprehensive proof-of-concept validation of the iSPERSE platform along with extensive initial patent filings, Pulmatrix is now advancing a select number of proprietary iSPERSE drug candidates as well as actively pursuing iSPERSE partnerships with pharmaceutical companies to create novel therapeutics.

About iSPERSE

iSPERSE is a novel inhaled dry powder delivery platform developed by Pulmatrix for use in the delivery of drugs via inhalation for local or systemic applications. iSPERSE uses proprietary cationic salt formulations to create a robust and flexible platform that can accommodate low or high drug loads in highly dispersible particles, yielding drug delivery capabilities not feasible with conventional dry powder technologies that rely on the use of lactose blending or low-density particles. The properties of iSPERSE have meaningful therapeutic and patient benefits, including the potential for single formulations with multiple drugs, effective inhaled drug delivery to patients with normal or impaired lung function, and the use of simple and convenient inhaler devices. iSPERSE offers the potential of a strong safety profile, as, in addition to drug and drug molecules, iSPERSE dry powders comprise exclusively generally regarded as safe (GRAS) salts and small quantities of additional, safe excipients if needed. iSPERSE powders are made via a straightforward, proven one-step spray-drying process capable of high and consistent yields.

About Pulmatrix

Pulmatrix is a clinical stage biotechnology company discovering and developing a new class of therapies for the prevention, treatment and control of respiratory diseases. Pulmatrix's lead proprietary therapies, called inhaled cationic airway lining modulators (iCALM), are a novel approach to prevent and treat acute exacerbations and improve lung function in patients with chronic respiratory diseases. iCALM therapies have broad potential to treat and prevent a wide range of respiratory diseases, including respiratory infections such as influenza; ventilator associated pneumonia (VAP) and respiratory syncytial virus (RSV), as well as progressive or chronic respiratory diseases such as COPD, asthma, and cystic fibrosis. For additional information about the Company, please visit <http://www.pulmatrix.com>.

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