



Pulmatrix Launches iSPERSE(TM), A Novel Inhaled Dry Powder Drug Delivery Platform

Company Pursues Proprietary and Partnered Inhaled Drug Candidates

Proprietary Formulation and Delivery Platform Enables Inhaled Delivery of High Drug Loads, Large Drug Molecules, and Multiple Drug Combinations

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, today announced the launch of iSPERSE(TM), the company's novel inhaled dry powder drug delivery platform. With completion of comprehensive proof-of-concept validation studies of the platform along with initial patent filings, Pulmatrix is now advancing a select number of proprietary iSPERSE drug formulation candidates as well as actively pursuing iSPERSE partnerships.

The iSPERSE dry powders comprise proprietary cationic salt formulations optimized for inhalation that have the unique properties of small particle size, high density and high dispersibility. These unique attributes give iSPERSE the potential to deliver high drug payloads, low potency drugs, and large drug molecules, such as proteins and peptides. Additionally, iSPERSE's proprietary powders allow for flexible formulation with straightforward manufacturing, supporting the formulation of small and large molecule drugs as well drug combinations, including triple drug combinations or higher. This novel technology avoids the drug-loading, flow rate sensitivity and low efficiency limitations of conventional lactose blending inhalation technologies.

"iSPERSE represents a powerful new proprietary platform to deliver inhaled drugs effectively and safely, enabling the potential for best-in-class and first-in-class local and systemic therapeutic applications," said Michael Lipp, Ph.D., Vice President of Development and Intellectual Property at Pulmatrix.. "Partners of our iSPERSE platform can harness the unique capabilities of iSPERSE to deliver single or combination drug formulations with a greater capacity to accommodate higher drug loadings than conventional inhaled technologies. From novel complex drug formulations to branded generics, Pulmatrix believes there are a number of significant opportunities to create inhaled drug products that meet clear and pressing market needs."

Data relating to the technical specifications and delivery capabilities of the iSPERSE technology are presented at a poster sessions on June 19 and 21, 2011 at The International Society for Aerosols in Medicine (ISAM) in Rotterdam, Netherlands. In particular, Pulmatrix highlighted data on specific iSPERSE applications that have been formulated for a variety of classes and compounds including long-acting bronchodilators, long-acting anticholinergics, corticosteroid and multiple LABA/ICS and LAMA/ICS combinations. The iSPERSE platform enables the delivery of low or high potency drugs to patients across a wide range of inhalation flow rates using existing, simple-to-use, passive dry powder inhalation devices. iSPERSE can enable the delivery of small molecule drugs, drug combinations (including triple drug combinations or higher), and macromolecule drugs at doses well in excess of those achievable by traditional dry powder lactose blend technologies. Manufactured by a proven, one-step spray drying process, iSPERSE powders are small in geometric size and relatively dense, yet are highly dispersible



and relatively flow rate independent with high emitted doses achieved at low flow rates. This flow rate independence provides for reliable dose delivery to patients with both normal and impaired lung function, as well as young children who might require low flow rate dosing not attainable with conventional technologies.

To support the development of its own pipeline as well as the iSPERSE partnering programs, Pulmatrix has developed a complete range of pulmonary drug formulation capabilities that are integral to the successful commercialization of the iSPERSE platform, including:

- Dry powder formulation and manufacturing
- Dry powder physicochemical properties optimization
- Aerosol characterization and method development
- Dry powder inhaler selection and testing
- Preclinical efficacy/safety testing (in vitro/in vivo), and
- Clinical program operation and management.

These capabilities will be offered to iSPERSE partners.

"As we have successfully advanced our product candidates from our core iCALM platform in multiple human clinical trials, we discovered the science and developed the proprietary know-how and insights that form the basis of our second novel platform, iSPERSE," said Robert Connelly, Chief Executive Officer of Pulmatrix. "With two distinct and powerful inhaled drug platforms, we recognize that partnering will meaningfully accelerate our products' ability to bring breakthrough respiratory therapies to patients. Thus, in addition to our own proprietary iSPERSE drug programs, we are pursuing iSPERSE platform partnering opportunities with the goal of attracting several pharmaceutical partners with interest in a range of commercial opportunities for iSPERSE including: novel drugs, drugs not yet formulated for lung delivery, improved delivery of drugs for better efficacy or safety, multi-drug combinations, and branded generic products."

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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