pulmatrix

OVERVIEW: We are a clinical stage biopharmaceutical company developing inhaled therapies for the treatment of pulmonary diseases using our patented inhaled dry powder technology, iSPERSE™. Our proprietary product pipeline is focused on advancing treatments for rare diseases, including Pulmazole, an inhaled anti-fungal for treatement of fungal infections for patients with lung disease. In addition, we are pursuing opportunities in major pulmonary diseases like chronic obstructive pulmonary disease (COPD) and idiopathic pulmonary fibrosis (IPF), including PUR0200 a Phase 2 clinical stage branded generic version of the COPD drug Spiriva® HandiHaler® and most recently with the addition of a portfolio of novel inhaled narrow spectrum kinase inhibitors anti-inflammatories (PUR1800 and PUR5700) from RespiVert, a wholly ownded subsidiary of Janssen Biotech, Inc.

NASDAQ: PULM

PUR0200: Bronchodilator for COPD

PUR0200 is a once-daily, inhalable iSPERSE™ reformulation of tiotropium bromide for COPD patients. PUR0200 is under development as a substitutable product for Spiriva® HandiHaler® in the European Union (EU) and as a branded alternative to Spiriva HandiHaler in the US.

In Europe, development follows the hybrid pathway for orally inhaled products based on PK bioequivalence with a targeted pivotal trial in 2018. In the US, PUR0200 is following a 505(b)(2) path.

Pulmazole: Inhaled Anti-Fungal for Asthma and CF

Pulmazole is a proprietary inhaled anti-fungal compound being developed to treat fungal infections for patients with lung disease like severe asthma and cystic fibrosis.

Pulmazole is an iSPERSE™ formulation of Itraconazole, an oral antifungal approved for treatment of pulmonary fungal infections. Pulmazole iSPERSE™ formulation allows for a high therapeutic dose delivery directly to the lung while minimizing the systemic side effects and drug to drug interactions that are common among oral Itraconazole and other oral azoles therapies.

A phase 1/1b clinical study was completed in July 2018, and results demonstrated Pulmazole was safe and tolerable. With Pulmazole, we were able to achieve significantly higher lung exposure and lower plasma exposure than oral Sporanox.

Patients with severe asthma and CF are afflicted with ABPA, a complex hypersensitivity reaction that occurs in response to colonization of the airways with *Aspergillus fumigatus*. It is estimated that 2.5% of asthmatics and nearly 15% of patients with cystic fibrosis CF suffer from ABPA, which is associated with severe exacerbations and poor long term outcomes. PUR1900 is the first inhaled 505(b)(2) anti-fungal product candidate, targeting the high unmet medical need for severe asthma and CF.

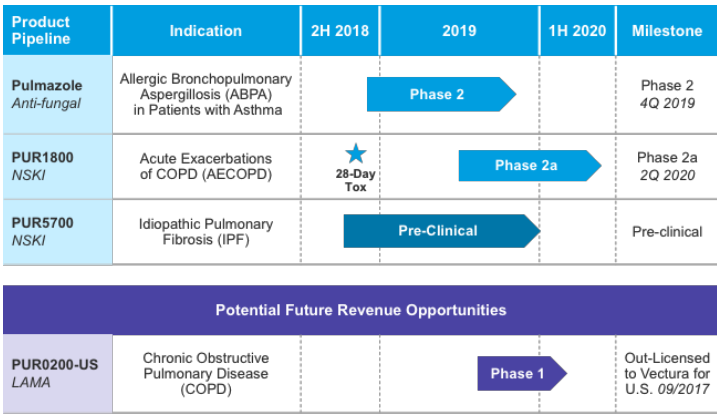
PUR1800: Inhaled Narrow-Spectrum Kinase Inhibitor

PUR1800 is a narrow-spectrum kinase inhibitor (NSKI) recently in-licensed from Respivert, a subsidiary of Janssen Pharmaceuticals. NSKIs inhibit steroid resistant inflammatory processes induced by a variety of stimuli including cytokines, pathogens and free radical stressors such as cigarette smoke. PUR1800 has completed a Phase 2a clinical trial in COPD patients and will be reformulated into an iSPERSE formulation that can be used as a treatment for acute exacerbations of COPD (AECOPD). Acute exacerbations cause significant morbidity and mortality in COPD and are currently poorly managed with existing therapies.

PUR5700: Inhaled Narrow-Spectrum Kinase Inhibitor

PUR5700 is a second NSKI in preclinical development. Preclinical data demonstrate the potential of PUR5700 as a novel anti-inflammatory for IPF that could also have therapeutic potential in COPD to prevent or treat AECOPD and to treat severe asthma.

Development Pipeline



iSPERSE™ Technology Platform

Our iSPERSE™ technology is able to solve significant limitations of other inhaled technologies available today, such as nebulizers, metered dose inhalers, and conventional lactose blend dry powder inhalers. iSPERSE™ particles are engineered to be small, dense, and easily dispersible upon inhalation, thereby delivering the drugs more efficiently to the airways. Importantly, unlike other traditional inhalation technologies, iSPERSE™ is also flow rate independent, which should provide reliable dose delivery across patient populations regardless of the status of patient lung function.

iSPERSE™ has been shown to enable a broad range of potential inhaled therapies that lactose blend dry powders can't support. The iSPERSE™ technology is applicable across a broad range of therapeutic approaches; small molecules including multi-drug combos, peptides, proteins, and antibodies can all be formulated in iSPERSE™. Therefore Pulmatrix can consider a myriad of in- and out-license opportunities to add to our pipeline.

Management & Board of Directors

Robert Clarke, PhD, CEO, Director

Dave Hava, PhD, CSO

William Duke, CPA, CFO

Ted Raad, MBA, CBO

Mark Iwicki, Kala Pharmaceuticals, Chairman

Terry McGuire, Polaris Partners, Director

Steve Gillis, PhD, ARCH Venture Partners, Director

Michael Higgins, former Ironwood CFO, Director

Matthew Sherman, M.D., former Acceleron Pharma, Inc., CMO, Director

Forward – Looking Statements: Certain statements in this document that are forward-looking and not statements of historical fact are forward-looking statements within the meaning of the safe harbor provisions of the Private Securities Litigation Reform Act of 1995. Pulmatrix cautions that such statements involve risks and uncertainties that could cause actual results to differ materially from projected results. A discussion of these and other factors, including risks and uncertainties with respect to Pulmatrix, is set forth in our annual report on Form 10-K filed by Pulmatrix with the Securities and Exchange Commission on March 13, 2018, as may be supplemented or amended by the Company's Quarterly Reports on Form 10-Q. Pulmatrix disclaims any intention or obligation to revise any forward-looking statements, whether as a result of new information, future events or otherwise, except as required by law.