

Member FINRA/SIPC

Toll Free: 561-391-5555 ♦ www.DawsonJames.com ♦ 1 North Federal Highway - Suite 500 ♦ Boca Raton, FL 33432

March 19, 2018

**Pulmatrix (Nasdaq/PULM)**

**Robert M. Wasserman**  
Senior Research Analyst  
561-208-2905  
rwasserman@dawsonjames.com

**BUY** **Focusing on Pulmazole in 2018**

*Pulmatrix is a clinical stage biopharmaceutical company developing inhaled therapies for the treatment of pulmonary diseases using iSPERSE inhaled dry powder technology*

**Investment Highlights**

1) **Pulmatrix is focusing on its internal R&D candidates for 2018, most notably Pulmazole (inhaled formulation of itraconazole, formerly PUR1900),** for which the Company started the single dose escalation phase of its Phase 1/1b trial for fungal infections (allergic bronchopulmonary aspergillosis, or ABPA) in severe asthma and cystic fibrosis patients in February 2018. Pulmatrix expects to complete enrollment in the trial, based in the UK, and publish results in mid-year 2018, and also begin a Phase 2a portion of the trial in Q4/2018, with potential Phase 2a data available by the end of 2019. Itraconazole, marketed as Sporanox by Janssen (JNJ, Not Rated), is a widely-prescribed \$2.3 billion drug (US and European markets) usually taken in oral form. Pulmatrix is targeting its iSPERSE inhaled technology, for which it has already received the US FDA’s QIDP “fast track” designation in several indications, as a breakthrough in rapid delivery of the drug to the lungs, with both efficacy and safety benefits over the older oral version of itraconazole.

2) **Pulmatrix is also making progress with its partnered clinical programs, most notably PUR0200 for chronic obstructive pulmonary disease, or COPD.** The Company signed a new agreement last September with UK-based Vectura Limited (VEC, Not Rated) to develop PUR0200 (iSPERSE reformulation of Spiriva Handihaler) for COPD in the US market; and along those lines a technology access fee of \$1 million is due from Vectura after certain development criteria is reached, which is expected to be triggered in H2/2018. Subsequently, Vectura is required to begin its own development of the product and pay royalties on future product sales or other revenues. Pulmatrix is also actively working on its PUR1800, a narrow spectrum kinase inhibitor (NSKI) licensed last year from RespiVert, a subsidiary of Janssen Biotech. The Company expects to complete manufacturing development work and 28-day good laboratory practice (GLP) inhalation toxicology studies this year on PUR1800 in preparation for the initiation in 2019 of a Phase 2a anti-

**Current Price** **\$1.24**

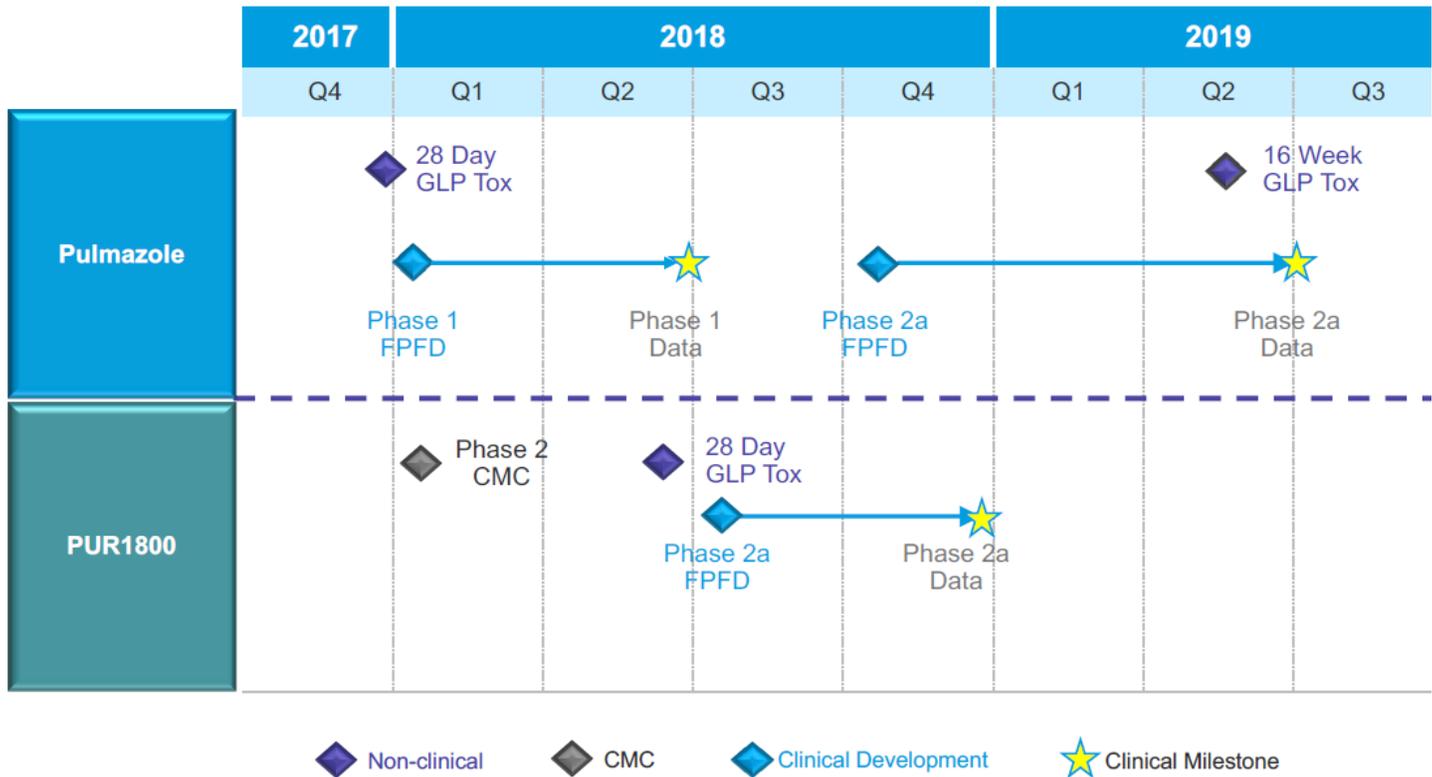
**Price Target** **\$4.00**

Estimates	F2016A	F2017A	F2018E
Revenues(\$000s)	\$835	\$335	\$1,000
EPS	(\$1.88)	(\$0.93)	(\$0.60)

Stock Data	
52-Week Range	\$1.10-\$4.59
Shares Outstanding (million)	21.0
Market Capitalization (\$mill)	\$26.0
Enterprise Value (\$mill)	\$25.7
Debt to Capital (12/17)	24.1%
Book Value/Share (12/17)	\$0.48
Price/Book	2.6 x
Average Trading Volume (3-Month)	387,000
Insider Ownership	1.4%
Institutional Ownership	31.7%
Short interest (million)	1.8
Dividend / Yield	\$0.00/0.0%



inflammatory efficacy study in acute exacerbations in COPD. In addition, Pulmatrix is also pursuing a development partner for PUR0200 and potential combination products using the technology for the European market, and the Company also has obtained rights to a second novel drug candidate through the RespiVert license agreement, PUR5700, also a narrow spectrum kinase inhibitor, with the potential of Phase 1 clinical trials initiated as early as 2019 in Idiopathic Pulmonary Fibrosis (IPF) patients. The chart below outlines Pulmatrix’s key pipeline programs and potential milestones in 2018-2019:



3) Pulmatrix recently reported financial results for its Q4/2017 quarter and 2017 year as a whole, including revenues of \$335,000 for 2017 as compared to revenues of \$835,000 in 2016 and a net loss of \$18.1 million or (\$0.93) per share versus a net loss of \$27.8 million or (\$1.88) per share in the prior year period. Operating expenses were held in check at Pulmatrix in 2017, with research and development costs at \$10.2 million versus \$10.1 million in 2016 and general and administrative expenses down slightly at \$7.6 million versus \$8.0 million in 2016. Operating cash burn was approximately \$14.5 million in 2017 for Pulmatrix, and at the end of December the Company held \$3.55 million in cash on hand. For 2018E, we are estimating that the Company will post a net loss of \$18.1 million for the year, similar to losses in 2017, or (\$0.60) per share. In 2017, the Company raised approximately \$16 million from equity offerings and at-the-market sales, and barring the signing of one or more development or commercial partnerships this year Pulmatrix will most likely need to pursue the same approximate type and volume of financing activities in 2018.

## Conclusion/Stock Valuation

With both near-term (2018) and longer-term (2019 and beyond) clinical milestones approaching, and a recently successful cost-control effort, both growth- and value-oriented investors may find PULM shares attractive. With a current market capitalization of just over \$26 million, PULM shares trade at a significant discount to our eight-stock group of other innovative drug delivery/specialty pharma companies, and therefore we are maintaining our BUY rating and 12-18 month price target of \$4 per share on PULM shares. (For a complete description of our stock valuation analysis on PULM shares please refer to our Company Update dated September 27, 2017)

## Risk Factors

**In addition to normal economic and market risk factors that impact most equities and the common risks shared by Pulmatrix with other companies in the industry, we believe an investment in PULM involves the following risks:**

- **Reliance on key management** – At present, PULM relies on several key members of its management team who either founded the Company or have been in key executive positions for an extended period of time. Should one or more of these key executives leave the Company, PULM could find it difficult to replace their long-standing knowledge of operations and industry expertise.
- **Reliance on partnerships** – To date, PULM has signed certain partnerships and agreements for its therapeutic technologies and products. Thus, in the future certain factors related to product commercialization and new product development may be determined by third parties and out of the control of Company management.
- **Limited stock liquidity** – Trading volume in PULM stock is comparatively light and these shares have a relatively limited history of trading on major US stock exchanges compared with other healthcare stocks. As such, news regarding PULM, its target market, partners and/or competitors could lead to significant volatility in the stock price.
- **Competitive Markets** – The Company competes in its target respiratory product market with a number of companies, many of which are considerably larger than the Company. There can be no assurance that the Company will be able to successfully compete and launch new products into these competitive markets in the future.
- **FDA and regulatory risks** – PULM is subject to regulatory review for its ongoing research and development activities, principally the US Food and Drug Administration’s application processes and those of other international regulatory health agencies. In addition, the quality assurance and manufacture of the Company’s therapeutic products are subject to ongoing oversight and regulation, and any negative correspondence from the FDA or other regulatory agencies could have an adverse effect on the ongoing operations of the Company.
- **Lack of historic profitability** - PULM has not achieved operating profitability on an annual basis for several years, and according to our forecasts may not be expected to do so in the near future. Although the Company maintains adequate cash reserves at the present time, there can be no assurance the Company will not need to raise additional working capital in the future should operating losses continue.
- **Need to defend patents and other intellectual property** – PULM currently holds a number of US and International patents on its products and related technologies, some of which expire in the near future. The Company may be required to defend its patents in the US and overseas in the future, and there can be no assurance these defenses will be successful.

Robert M. Wasserman

**Pulmatrix**  
**Consolidated Statements of Income**  
**(in \$000s, except EPS)**

<b>FYE December</b>	<b><u>2015</u></b>	<b><u>2016</u></b>	<b><u>2017</u></b>	<b><u>2018E</u></b>
Revenues	\$1,201	\$835	\$335	\$1,000
Operating Expenses				
Research and development	7,187	10,152	10,243	10,500
General and administrative	17,032	8,015	7,567	8,000
One-time and Other	<u>0</u>	<u>7,534</u>	<u>0</u>	<u>100</u>
Total operating expenses	<u>24,219</u>	<u>25,701</u>	<u>17,810</u>	<u>18,600</u>
Income (loss) from operations	(23,018)	(24,866)	(17,475)	(17,600)
Other expense, net	<u>(3,149)</u>	<u>(5,936)</u>	<u>(581)</u>	<u>(500)</u>
Net income (loss) before tax	(26,167)	(30,802)	(18,056)	(18,100)
Income taxes (benefit)	<u>0</u>	<u>(2,959)</u>	<u>0</u>	<u>0</u>
Net income (loss) after tax	(26,167)	(27,843)	(18,056)	(18,100)
Basic and diluted income (loss) per share	<u>(\$3.23)</u>	<u>(\$1.88)</u>	<u>(\$0.93)</u>	<u>(\$0.60)</u>
Basic and diluted shares outstanding	8,090	14,815	19,372	30,000
Key ratios:				
Tax rate		-9.6%	0.0%	0.0%
Non-cash items	\$12,811	\$14,229	\$3,200	\$3,400
Cash Flow/share	(\$1.65)	(\$0.92)	(\$0.77)	(\$0.49)

**Balance Sheets**  
**(\$000s)**

<i>Assets:</i>	<b><u>12/31/16</u></b>	<b><u>12/31/17</u></b>
Cash and equivalents	\$4,182.0	\$3,550.0
Prepaid & other current assets	<u>577.0</u>	<u>696.0</u>
Total current	4,759.0	4,246.0
Property & equip., net	786.0	614.0
Long-term restricted cash	204.0	204.0
Goodwill and other assets	<u>10,914.0</u>	<u>10,914.0</u>
<b>TOTAL ASSETS</b>	<b>16,663.0</b>	<b>15,978.0</b>
<i>Liabilities:</i>		
Loan payable, net	2,586.0	3,221.0
Accounts payable	747.0	457.0
Accrued expenses	<u>1,317.0</u>	<u>2,162.0</u>
Total current	4,650.0	5,840.0
Loan payable, net	3,217.0	0.0
Derivative liability	35.0	1.0
Stockholders' equity (deficit)	<u>8,761.0</u>	<u>10,137.0</u>
<b>TOTAL LIAB &amp; EQ</b>	<b>16,663.0</b>	<b>15,978.0</b>

Source: Dawson James Securities, Inc. estimates; Company documents

**Important Disclosures:**

**Price Chart:**



Price target and ratings changes over the past 3 years:

- Initiated - June 24, 2014 - Buy -Price Target \$12.00
- Update - July 27, 2015 - Buy - Price Target \$15.00
- Update - September 27, 2017 - Buy - Price Target \$4.00

Dawson James Securities, Inc. (the “Firm”) is a member of the Financial Industry Regulatory Authority (“FINRA”) and the Securities Investor Protection Corporation (“SIPC”).

The Firm does not make a market in the securities of the subject company (s). The Firm has NOT engaged in investment banking relationships with PULM in the prior twelve months, as a manager or co-manager of a public offering and has NOT received compensation resulting from those relationships. The Firm may seek compensation for investment banking services in the future from the subject company(s). The Firm has NOT received other compensation from the subject company(s) in the last 12 months for services unrelated to investment banking.

Neither the research analyst(s) whose name appears on this report nor any member of his (their) household is an officer, director or advisory board member of these companies. The Firm and/or its directors and employees may own securities of the company(s) in this report and may increase or decrease holdings in the future. As of February 28, 2018, the Firm as a whole did not beneficially own 1% or more of any class of common equity securities of the subject company (s) of this report. The Firm, its officers, directors, analysts or employees may effect transactions in and have long or short positions in the securities (or options or warrants related to those securities) of the company(s) subject to this report. The Firm may effect transactions as principal or agent in those securities.

Analysts receive no direct compensation in connection with the Firm's investment banking business. All Firm employees, including the analyst(s) responsible for preparing this report, may be eligible to receive non-product or service specific monetary bonus compensation that is based upon various factors, including total revenues of the Firm and its affiliates as well as a portion of the proceeds from a broad pool of investment vehicles consisting of components of the compensation generated by investment banking activities, including but not limited to shares of stock and/or warrants, which may or may not include the securities referenced in this report.

Although the statements in this report have been obtained from and are based upon recognized statistical services, issuer reports or communications, or other sources that the Firm believes to be reliable, we cannot guarantee their accuracy. All opinions and estimates included in this report constitute the analyst's judgment as of the date of this report and are subject to change without notice.

**Information about valuation methods and risks can be found in the “STOCK VALUATION” and “RISK FACTORS” sections of this report.**

The securities of the company discussed in this report may be unsuitable for investors depending on their specific investment objectives and financial position. This report is offered for informational purposes only, and does not constitute an offer or solicitation to buy or sell any securities discussed herein in any jurisdiction where such would be prohibited. Additional information is available upon request.

**Ratings Definitions:**

- 1) **Buy:** the analyst believes the price of the stock will appreciate and produce a total return of at least 20% over the next 12-18 months;
- 2) **Neutral:** the analyst believes the price of the stock is fairly valued for the next 12-18 months;
- 3) **Sell:** the analyst believes the price of the stock will decline by at least 20% over the next 12-18 months and should be sold.

The following chart reflects the range of current research report ratings for all companies followed by the analysts of the Firm. The chart also reflects the research report ratings relating to those companies for which the Firm has performed investment banking services.

Ratings Distribution	Company Coverage		Investment Banking	
	# of Companies	% of Total	# of Companies	% of Totals
Market Outperform (Buy)	15	88%	5	33%
Market Perform (Neutral)	2	12%	0	0%
Market Underperform (Sell)	0	0%	0	0%
<b>Total</b>	<b>17</b>	<b>100%</b>	<b>5</b>	<b>29%</b>

**Analyst Certification:**

The analyst(s) whose name appears on this research report certifies that 1) all of the views expressed in this report accurately reflect his (their) personal views about any and all of the subject securities or issuers discussed; and 2) no part of the research analyst's compensation was, is, or will be directly or indirectly related to the specific recommendations or views expressed by the research analyst in this research report; and 3) all Dawson James employees, including the analyst(s) responsible for preparing this research report, may be eligible to receive non-product or service specific monetary bonus compensation that is based upon various factors, including total revenues of Dawson James and its affiliates as well as a portion of the proceeds from a broad pool of investment vehicles consisting of components of the compensation generated by investment banking activities, including but not limited to shares of stock and/or warrants, which may or may not include the securities referenced in this report.