UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

FORM 10-Q

(Mark One)

☒ **QUARTERLY REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

For the quarterly period ended September 30, 2024

or

☐ **TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

For the transition period from _____ to _____

Commission file number: 001-36199

PULMATRIX, INC.
(Exact name of registrant as specified in its charter)

Delaware	**46-1821392**
(State or other jurisdiction of incorporation or organization)	**(I.R.S. Employer Identification No.)**
945 Concord Street, Suite 1217 Framingham, MA	**01701**
(Address of principal executive offices)	**(Zip Code)**

(888) 355-4440
Registrant's telephone number, including area code

N/A
(Former name, former address and former fiscal year, if changed since last report)

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes ☒ No ☐

Indicate by check mark whether the registrant has submitted electronically every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T during the preceding 12 months (or for such shorter period that the registrant was required to submit such files). Yes ☒ No ☐

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, a smaller reporting company or an emerging growth company. See the definitions of "large accelerated filer," "accelerated filer", "smaller reporting company" and "emerging growth company" in Rule 12b-2 of the Exchange Act. (Check one):

Large accelerated filer	☐	Accelerated filer	☐
Non-accelerated filer	☒	Smaller reporting company	☒
		Emerging growth company	☐

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act. ☐

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act). Yes ☐ No ☒

Securities registered pursuant to Section 12(b) of the Exchange Act:

Title of each Class	Trading Symbol(s)	Name of each exchange on which registered
Common Stock, par value $0.0001 per share	**PULM**	**The NASDAQ Stock Market LLC**

As of November 4, 2024, the registrant had 3,652,285 shares of common stock outstanding.

PULMATRIX, INC.
FORM 10-Q
FOR THE QUARTERLY PERIOD ENDED SEPTEMBER 30, 2024
TABLE OF CONTENTS

Page No.

PART I—FINANCIAL INFORMATION

Item 1. Condensed Consolidated Financial Statements.

PULMATRIX, INC.
Consolidated Balance Sheets
(in thousands, except share and per share data)

	September 30, 2024 (unaudited)	December 31, 2023
Assets		
Current assets:		
Cash and cash equivalents	$ 10,782	$ 19,173
Accounts receivable	23	928
Prepaid expenses and other current assets	641	742
Total current assets	11,446	20,843
Property and equipment, net	-	1,158
Operating lease right-of-use asset	-	10,309
Long-term restricted cash	10	1,472
Other long-term assets	54	176
Total assets	$ 11,510	$ 33,958
Liabilities and stockholders' equity		
Current liabilities:		
Accounts payable	$ 373	$ 1,915
Accrued expenses and other current liabilities	217	947
Operating lease liability	-	429
Deferred revenue	-	618
Total current liabilities	590	3,909
Deferred revenue, net of current portion	-	3,727
Operating lease liability, net of current portion	-	8,327
Total liabilities	590	15,963
Commitments and contingencies (Note 10)		
Stockholders' equity:		
Preferred Stock, $0.0001 par value — 500,000 shares authorized; 6,746 shares designated Series A convertible preferred stock; no shares issued and outstanding at September 30, 2024 and December 31, 2023	-	-
Common stock, $0.0001 par value — 200,000,000 shares authorized; 3,652,285 shares issued and outstanding at September 30, 2024 and December 31, 2023	-	-
Additional paid-in capital	306,090	305,592
Accumulated deficit	(295,170)	(287,597)
Total stockholders' equity	10,920	17,995
Total liabilities and stockholders' equity	$ 11,510	$ 33,958

The accompanying footnotes are an integral part of these condensed consolidated financial statements.

PULMATRIX, INC.
Consolidated Statements of Operations
(in thousands, except share and per share data)
(unaudited)

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2024	2023	2024	2023
Revenues	$ 366	$ 1,753	$ 7,803	$ 5,096

Operating expenses:				
Research and development	814	3,963	7,160	12,002
General and administrative	2,209	1,729	5,836	5,609
Loss on MannKind Transaction	-	-	2,618	-
Total operating expenses	3,023	5,692	15,614	17,611
Loss from operations	(2,657)	(3,939)	(7,811)	(12,515)
Other income (expense):				
Interest income	101	217	394	675
Other expense, net	(31)	(52)	(156)	(198)
Total other income, net	70	165	238	477
Net loss	$ (2,587)	$ (3,774)	$ (7,573)	$ (12,038)
Net loss per share attributable to common stockholders – basic and diluted	$ (0.71)	$ (1.03)	$ (2.07)	$ (3.30)
Weighted average common shares outstanding – basic and diluted	3,652,285	3,652,285	3,652,285	3,651,785

The accompanying footnotes are an integral part of these condensed consolidated financial statements.

PULMATRIX, INC.
Consolidated Statements of Stockholders' Equity
(in thousands, except share data)
(unaudited)

	Preferred Stock		Common Stock		Additional Paid-in	Accumulated	Total Stockholders'
	Shares	Amount	Shares	Amount	Capital	Deficit	Equity
Balance — January 1, 2024	-	$ -	3,652,285	$ -	$ 305,592	$ (287,597)	$ 17,995
Stock-based compensation	-	-	-	-	198	-	198
Net income	-	-	-	-	-	825	825
Balance — March 31, 2024	-	$ -	3,652,285	$ -	$ 305,790	$ (286,772)	$ 19,018
Stock-based compensation	-	-	-	-	103	-	103
Net loss	-	-	-	-	-	(5,811)	(5,811)
Balance — June 30, 2024	-	$ -	3,652,285	$ -	$ 305,893	$ (292,583)	$ 13,310
Stock-based compensation	-	-	-	-	197	-	197
Net loss	-	-	-	-	-	(2,587)	(2,587)
Balance — September 30, 2024	-	$ -	3,652,285	$ -	$ 306,090	$ (295,170)	$ 10,920

	Preferred Stock		Common Stock		Additional Paid-in	Accumulated	Total Stockholders'
	Shares	Amount	Shares	Amount	Capital	Deficit	Equity
Balance — January 1, 2023	-	$ -	3,639,185	$ -	$ 304,585	$ (273,476)	$ 31,109
Issuance of common stock, net of issuance costs	-	-	13,100	-	53	-	53
Stock-based compensation	-	-	-	-	296	-	296
Net loss	-	-	-	-	-	(4,448)	(4,448)
Balance — March 31, 2023	-	$ -	3,652,285	$ -	$ 304,934	$ (277,924)	$ 27,010
Stock-based compensation	-	-	-	-	255	-	255
Net loss	-	-	-	-	-	(3,816)	(3,816)
Balance — June 30, 2023	-	$ -	3,652,285	$ -	$ 305,189	$ (281,740)	$ 23,449
Stock-based compensation	-	-	-	-	206	-	206
Net loss	-	-	-	-	-	(3,774)	(3,774)
Balance — September 30, 2023	-	$ -	3,652,285	$ -	$ 305,395	$ (285,514)	$ 19,881

The accompanying footnotes are an integral part of these condensed consolidated financial statements.

PULMATRIX, INC.
Consolidated Statements of Cash Flows
(in thousands)
(unaudited)

	Nine Months Ended September 30,	
	2024	2023
Cash flows from operating activities:		
Net loss	$ (7,573)	$ (12,038)
Adjustments to reconcile net loss to net cash used in operating activities:		
Depreciation and amortization	106	96
Amortization of operating lease right-of-use asset	329	1,171
Stock-based compensation	498	757
Loss on disposals	2,618	8
Changes in operating assets and liabilities:		
Accounts receivable	905	457
Prepaid expenses and other current assets	101	169
Other long-term assets	122	172
Accounts payable	(1,542)	(481)
Accrued expenses and other current liabilities	(341)	233

Operating lease liability	(333)	(3,383)
Deferred revenue	(4,345)	(1,135)
Net cash used in operating activities	(9,455)	(13,974)
Cash flows from investing activities:		
Purchases of property and equipment	(398)	(371)
Net cash used in investing activities	(398)	(371)
Cash flows from financing activities:		
Proceeds from issuance of common stock, net of issuance costs	-	53
Net cash provided by financing activities	-	53
Net decrease in cash, cash equivalents and restricted cash	(9,853)	(14,292)
Cash, cash equivalents and restricted cash — beginning of period	20,645	37,253
Cash, cash equivalents and restricted cash — end of period	$ 10,792	$ 22,961
Reconciliation of cash, cash equivalents and restricted cash to the consolidated balance sheets:		
Cash and cash equivalents	$ 10,782	$ 21,336
Restricted cash	-	153
Long-term restricted cash	10	1,472
Total cash, cash equivalents and restricted cash	$ 10,792	$ 22,961
Supplemental disclosures of non-cash investing and financing information:		
Reduction of operating lease right-of-use asset and lease liability upon lease modification	$ 8,423	$ -
Purchases of property and equipment not yet paid	$ -	$ 664
Operating lease right-of-use asset obtained in exchange for operating lease obligation	$ -	$ 9,323

The accompanying footnotes are an integral part of these condensed consolidated financial statements.

PULMATRIX, INC.
Notes to Condensed Consolidated Financial Statements (Unaudited)
(in thousands, except share and per share data)

1. Organization

Pulmatrix, Inc. (the "Company") was incorporated in 2013 as a Delaware corporation. The Company is a clinical-stage biopharmaceutical company focused on the development of a novel class of inhaled therapeutic products. The Company's proprietary dry powder delivery platform, iSPERSE™, is engineered to deliver small, dense particles with highly efficient dispersibility and delivery to the airways, which can be used with an array of dry powder inhaler technologies and can be formulated with a variety of drug substances. The Company has developed a pipeline of iSPERSE™-based therapeutic candidates targeted at prevention and treatment of a range of central nervous system, respiratory and other diseases with important unmet medical needs.

2. Summary of Significant Accounting Policies and Recent Accounting Standards

Basis of Presentation

The condensed consolidated financial statements of the Company included herein have been prepared pursuant to the rules and regulations of the Securities and Exchange Commission (the "SEC"). Certain information and footnote disclosures normally included in financial statements prepared in accordance with generally accepted accounting principles in the United States of America ("U.S. GAAP") have been condensed or omitted from this report, as is permitted by such rules and regulations. Accordingly, these condensed consolidated financial statements should be read in conjunction with the consolidated financial statements and notes thereto included in the Company's Annual Report on Form 10-K for the fiscal year ended December 31, 2023, filed with the SEC on March 28, 2024 (the "Annual Report").

The financial information as of September 30, 2024, and for the three and nine months ended September 30, 2024 and 2023, is unaudited. In the opinion of management, all adjustments (including those which are normal and recurring) considered necessary for a fair presentation of the interim financial information have been included. The balance sheet data as of December 31, 2023 was derived from audited consolidated financial statements. The results of the Company's operations for any interim periods are not necessarily indicative of the results that may be expected for any other interim period or for a full fiscal year.

Based on its current operating plan, the Company believes that its cash and cash equivalents as of September 30, 2024, will be adequate to fund its currently anticipated operating expenses for at least twelve months from the date these condensed consolidated financial statements are issued. The Company will need to secure additional funding in the future, from one or more equity or debt financings, collaborations, or other sources, in order to carry out all of the Company's planned research and development activities and regulatory activities; commercialize product candidates; or conduct any substantial, additional development requirements requested by the FDA. Additional funding may not be available to the Company on acceptable terms, or at all. If the Company is unable to secure additional capital, it will be required to significantly decrease the amount of planned expenditures and may be required to cease operations. In addition, any disruption in the capital markets could make any financing more challenging, and there can be no assurance that Pulmatrix will be able to obtain such financing on commercially reasonable terms or at all. Curtailment of operations would cause significant delays in the Company's efforts to develop and introduce its products to market, which is critical to the realization of its business plan and the future operations of the Company.

Use of Estimates

In preparing the condensed consolidated financial statements in conformity with U.S. GAAP, management is required to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the condensed consolidated financial statements, as well as the reported amounts of expenses during the reporting period. Due to inherent uncertainty involved in making estimates, actual results may differ from these estimates. On an ongoing basis, the Company evaluates its estimates and assumptions. The most significant estimates and assumptions in the Company's condensed consolidated financial statements have included, but are not limited to, estimates of future expected costs in order to derive and recognize revenue and estimates related to clinical trial accruals and upfront deposits.

Concentrations of Credit Risk

Cash is a financial instrument that potentially subjects the Company to concentrations of credit risk. For all periods presented, substantially all of the Company's cash was deposited in accounts at a single financial institution that management believes is creditworthy, and the Company has not incurred any losses to date. The Company is exposed to credit risk in the event of default by this financial institution for amounts in excess of the Federal Deposit Insurance Corporation insured limits.

For the three and nine months ended September 30, 2024, revenue from two customers accounted for 100% of revenue recognized in the accompanying condensed consolidated financial statements. For the three and nine months ended September 30, 2023, revenue from one customer accounted for 100% of revenue recognized in the accompanying condensed consolidated financial statements. As of September 30, 2024 and December 31, 2023, one customer accounted for 100% of accounts receivable.

Summary of Significant Accounting Policies

The Company's significant accounting policies are described in Note 2, *Summary of Significant Accounting Policies and Recent Accounting Standards* , in the Annual Report. During the nine months ended September 30, 2024, the Company did not make any changes to its significant accounting policies.

Recent Accounting Pronouncements

From time to time, new accounting pronouncements are issued by the Financial Accounting Standards Board ("FASB") or other standard setting bodies that are adopted by the Company as of the specified effective date. The Company did not adopt any new accounting pronouncements during the nine months ended September 30, 2024 that had a material effect on its condensed consolidated financial statements.

In November 2023, the FASB issued Accounting Standard Update 2023-07, *Segment Reporting (Topic 280): Improvements to Reportable Segment Disclosures* ("ASU 2023-07"). The guidance in ASU 2023-07 expands prior reportable segment disclosure requirements by requiring entities to disclose significant segment expenses that are regularly provided to the Chief Operating Decision Maker ("CODM") and details of how the CODM uses financial reporting to assess their segment's performance. The guidance is effective for fiscal years beginning after December 15, 2023, and interim periods within fiscal years beginning after December 15, 2024, with early adoption permitted. The standard is required to be applied retrospectively upon adoption. The Company is currently evaluating the impact that the adoption of ASU 2023-07 may have on its condensed consolidated financial statements.

In December 2023, the FASB issued Accounting Standard Update 2023-09, *Income Taxes (Topic 740): Improvements to Income Tax Disclosures* ("ASU 2023-09"). The guidance in ASU 2023-09 improves the transparency of income tax disclosures by greater disaggregation of information in the rate reconciliation and income taxes paid disaggregated by jurisdiction. The standard becomes effective for the annual period beginning on January 1, 2025, with early adoption permitted. The Company is currently evaluating the impact that the adoption of ASU 2023-09 may have on its consolidated financial statements.

As of September 30, 2024, there are no other new, or existing recently issued, accounting pronouncements that are of significance, or potential significance, that impact the Company's condensed consolidated financial statements.

3. Prepaid Expenses and Other Current Assets

Prepaid expenses and other current assets consisted of the following:

	September 30, 2024	December 31, 2023
Insurance	$ 317	$ 232
Clinical and consulting	72	30
Software and hosting costs	60	108
Other	192	372
Total prepaid expenses and other current assets	$ 641	$ 742

4. Property and Equipment, Net

The Company's Property and equipment, net, were included in the disposal group as part of the MannKind Transaction (as defined in Note 6, *Significant Agreements*). The Company recorded a full write-down of its net property and equipment balance during the three months ended June 30, 2024 and completed the disposal during the three months ended September 30, 2024:

	September 30, 2024	December 31, 2023
Laboratory equipment	$ -	$ 1,656
Office furniture and equipment	-	401
Computer equipment	-	237
Capital in progress	-	600
	-	2,894
Less accumulated depreciation and amortization	-	(1,736)
Property and equipment, net	$ -	$ 1,158

Depreciation and amortization expense for the nine months ended September 30, 2024 and 2023 was $ 106 and $96, respectively.

5. Accrued Expenses and Other Current Liabilities

Accrued expenses and other current liabilities consisted of the following:

	September 30, 2024	December 31, 2023
Legal and patents	$ 112	$ 42
Wages and incentives	37	70
Clinical and consulting	12	347
Accrued purchases of property and equipment	-	389
Other	56	99
Total accrued expenses and other current liabilities	$ 217	$ 947

6. Significant Agreements

Development and Commercialization Agreement with Cipla Technologies LLC ("Cipla")

On April 15, 2019, the Company entered into a Development and Commercialization Agreement (the "Cipla Agreement") with Cipla for the co-development and commercialization, on a worldwide exclusive basis, of PUR1900, the Company's inhaled iSPERSE™ drug delivery system (the "Product") enabled formulation of the antifungal drug itraconazole, which is only available as an oral drug, for the treatment of all pulmonary indications, including allergic bronchopulmonary aspergillosis ("ABPA") in patients with asthma. The Company entered into an amendment to the Cipla Agreement on November 8, 2021 (the "Second Amendment") and a subsequent amendment on January 6, 2024 (the "Third Amendment"). All references to the Cipla Agreement herein refer to the Cipla Agreement, as amended.

The Company received a non-refundable upfront payment of $22.0 million (the "Upfront Payment") under the Cipla Agreement. Upon receipt of the Upfront Payment, the Company irrevocably assigned to Cipla the following assets, solely to the extent that each covers the Product in connection with any treatment, prevention, and/or diagnosis of diseases of the pulmonary system ("Pulmonary Indications"): all existing and future technologies, current and future drug master files, dossiers, third-party contracts, regulatory filings, regulatory materials and regulatory approvals, patents, and intellectual property rights, as well as any other associated rights and assets directly related to the Product, specifically in relation to Pulmonary Indications (collectively, the "Assigned Assets"), excluding most specifically the Company's iSPERSE ™ technology. A portion of the Upfront Payment was deposited by the Company into a bank account, along with an equal amount from the Company, and was dedicated to the development of the Product (the "Initial Development Funding"). The Initial Development Funding was depleted during the year ended December 31, 2021, at which point the Company and Cipla each became responsible for a portion of the development costs actually incurred as described below (the "Co-Development Phase").

Pursuant to the Second Amendment, the Company and Cipla were each responsible for 60% and 40%, respectively, of the Company's overhead costs and the time spent by the Company's employees and consultants on development of the Product ("Direct Costs"). The Company shared all other development costs with Cipla that were not Direct Costs, such as the cost of clinical research organizations, manufacturing costs and other third-party costs, on a 50/50 basis.

Pursuant to the Third Amendment, the Company and Cipla agreed that, during the period commencing on January 6, 2024 and ending July 30, 2024 (the "Wind Down Period"), the Company would complete all Phase 2b activities, assign or license all patents to Cipla and their registration with the appropriate authorities in regions other than the United States, complete a physical and demonstrable technology transfer and secure all data from the Phase 2b study for inclusion in the safety database. The Company shared costs with Cipla during the Wind Down Period in the same proportions in effect with the Second Amendment discussed above, but subject to a maximum reimbursement amount by Cipla as approved by the joint steering committee. The Company completed all Phase 2b activities by the end of the Wind Down Period. The Company is in the process of settling certain final bills with its PUR1900 contractors, which together comprise an immaterial balance recorded within accounts payable as of September 30, 2024.

Accounting Treatment

The Company originally concluded that because both it and Cipla are active participants in the arrangement and are exposed to the significant risks and rewards of the collaboration, the Company's collaboration with Cipla is within the scope of Accounting Standards Codification ("ASC") 808, *Collaborative Arrangements* ("ASC 808"). The Company concluded that Cipla is a customer since they contracted with the Company to obtain research and development services and a license to the Assigned Assets, each of which is an output of the Company's ordinary activities, in exchange for consideration. Therefore, the Company has applied the guidance in ASC 606, *Revenue from Contracts with Customers* ("ASC 606") to account for the research and development services and a license within the contract. The Company determined that the research and development services and license to the Assigned Assets are considered highly interdependent and highly interrelated and therefore are considered a single combined performance obligation because Cipla cannot benefit from the license without the performance by the Company of the research and development services. Such research and development services are highly specialized and proprietary to the Company and therefore not available to Cipla from any other third party.

The Company initially determined the total transaction price to be $ 22.0 million – comprised of $12.0 million for research and development services for the Product and $10.0 million for the irrevocable license to the Assigned Assets. Any consideration related to the Co-Development Phase was not initially included in the transaction price as such amounts were subject to the variable consideration constraint. Additionally, the Company has fully constrained any transaction price that might be realized upon commercialization.

Revenue is recognized for the Cipla Agreement as the research and development services are provided using an input method, according to the ratio of costs incurred to the total costs expected to be incurred in the future to satisfy the Company's obligations. In management's judgment, this input method is the best measure of the transfer of control of the combined performance obligation. The amounts received that have not yet been recognized as revenue are recorded in deferred revenue on the Company's consolidated balance sheets, with amounts expected to be recognized in the next 12 months recorded as current.

The Company concluded that the Third Amendment is a contract modification that should be accounted for as part of the existing contract. During the three and nine months ended September 30, 2024, the Company recognized $0.3 million and $6.9 million, respectively, in revenue related to the research and development services and irrevocable license to the Assigned Assets in the Company's consolidated statements of operations, as compared to $1.8 million and $5.1 million, respectively, recognized during the three and nine months ended September 30, 2023. The revenue recognized during the nine months ended September 30, 2024 was primarily associated with the cumulative catch-up recorded in the three months ended March 31, 2024, from the contract modification, that had been included in deferred revenue at the beginning of the period. As of September 30, 2024, all of the Company's performance obligations have been satisfied.

Agreements with MannKind Corporation ("MannKind")

On May 28, 2024, the Company executed certain agreements with MannKind and the Company's landlord (collectively, the "MannKind Transaction"), all of which closed during July 2024. The agreements with MannKind included a Bill of Sale and Assignment Agreement (the "Bill of Sale") with respect to the assignment of the Company's rental facility at 36 Crosby Drive, Bedford, Massachusetts (the "Bedford Facility") to MannKind along with the transfer of all leasehold improvements, laboratory equipment and other related personal property. In connection with the assignment of the Bedford Facility, the Company, MannKind and Cobalt Propco 2020, LLC (the "Landlord") entered into an Amendment to Lease and Consent to Assignment of Lease (the "Lease Assignment Agreement") pursuant to that certain Lease Agreement, dated as of January 7, 2022 (the "Lease Agreement"), by and between the Company and the Landlord. Pursuant to the Lease Assignment Agreement, MannKind assumed all of the Company's obligations under the Lease Agreement, including all rent and other payments.

In connection with these transactions, the Company and MannKind entered into an Intellectual Property Cross License Agreement (the "Cross License Agreement"). Pursuant to the Cross License Agreement, the Company granted to MannKind (i) an exclusive license to develop, use, manufacture,

market, offer and sell iSPERSE formulations of Clofazimine, (ii) an exclusive license to develop, use, manufacture, market, offer and sell formulations of iSPERSE with one more active pharmaceutical ingredients for the treatment of nontuberculous mycobacteria lung disease in humans, (iii) an exclusive license to develop, use, manufacture, market, offer and sell iSPERSE formulations of insulin, (iv) a non-exclusive license to develop, use, manufacture, market, offer and sell formulations of iSPERSE with one more active pharmaceutical ingredients for the treatment of endocrine disease in humans, and (v) a non-exclusive license to develop, use, manufacture, market, offer and sell formulations of iSPERSE with one more active pharmaceutical ingredients for the treatment of interstitial lung diseases (including IPF, PPF and other related lung diseases) in humans (collectively, the "Out-License").

Additionally, pursuant to the Cross License Agreement, MannKind granted to the Company (i) the exclusive right to develop, use, manufacture, market, offer and sell its single-use disposable dry powder inhaler (including all modifications or improvement thereto made by or on behalf of the Company, the "Cricket Device") for the inhaled delivery of dihydroergotamine in any formulation whatsoever, including the Company's PUR3100 treatment of acute migraine and (ii) a non-exclusive license to develop, use, manufacture, market, offer and sell the Cricket Device for the inhaled delivery of one more active pharmaceutical ingredients formulated with iSPERSE for the treatment of neurological disease in humans (collectively, the "In-License").

Additionally, pursuant to the Master Services Agreement, by and between the Company and MannKind, MannKind shall provide certain development services to the Company, including but not limited to, activities to develop a dry powder formulation of the active pharmaceutical ingredient that the Company provides to MannKind for oral inhalation using iSPERSE.

To maintain continuity of iSPERSE platform knowledge, MannKind hired certain members of the Company's research and development staff in July 2024.

Accounting Treatment

The Company determined that the MannKind Transaction represents a combined agreement for accounting purposes, as the individual components have the same overall commercial objectives and the consideration under each component is dependent on the other components.

The consideration due to the Company in the MannKind Transaction consists solely of the non-cash consideration in the form of the In-License. The fair value of the non-cash consideration received should be allocated to the other components of the MannKind Transaction to determine the consideration received for the other components. The Company determined that the fair value of the In-License is immaterial given that adequate alternative inhaler devices are already available on the market (and indeed, the Company has already established use of another third-party inhalation device in their PUR3100 Phase 1 trial that performed well as a DHE delivery device as reported in a peer-reviewed publication), and considering optional purchases of Cricket Devices are at market prices. Accordingly, the consideration allocated to other components of the MannKind Transaction was immaterial.

During the three months ended June 30, 2024, the Company accounted for the Lease Assignment Agreement upon execution as a lease modification that reduced the lease term to the assignment date in July 2024. Accordingly, the Company remeasured its operating lease liability as of the modification date to reflect the decrease in fixed lease payments, with the amount of the remeasurement, $8.4 million, adjusted by a corresponding reduction to the right-of-use asset.

The Company determined that its operating lease right-of-use asset and property and equipment subject to the Bill of Sale represented a disposal group that became held for sale during the second quarter of 2024 and remained classified as held for sale as of June 30, 2024. The Company recorded a full write-down of the disposal group's carrying value as of June 30, 2024, in the amount of $2.6 million. Upon the closing of the MannKind Transaction in July 2024, the disposal group was disposed.

Concurrent with the closing of the MannKind Transaction, the Company terminated and MannKind hired the majority of the Company's research and development employees, representing approximately two-thirds of the Company's workforce at the time. The Company agreed to provide termination benefits to these employees, which has been fully paid as of September 30, 2024.

7. Common Stock

In May 2021, the Company entered into an At-The-Market Sales Agreement (the "Sales Agreement") with H.C. Wainwright and Co., LLC ("HCW") to act as the Company's sales agent with respect to the issuance and sale of up to $20.0 million of the Company's shares of common stock, from time to time in an at-the-market public offering (the "ATM Offering"). Upon filing of the Annual Report, the Company continued to be subject to General Instruction I.B.6 of Form S-3, pursuant to which in no event will the Company sell its common stock in a registered primary offering using Form S-3 with a value exceeding more than one-third of its public float in any 12 calendar month period so long as its public float remains below $75,000,000. Therefore, the amount that may be able to be raised using the ATM Offering will be significantly less than $20,000,000, until such time as the Company's public float held by non-affiliates exceeds $75,000,000.

Sales of common stock under the Sales Agreement are made pursuant to an effective shelf registration statement on Form S-3, which was filed with the SEC on May 17, 2024, and subsequently declared effective on May 30, 2024 (File No. 333-279491), and a related prospectus. HCW acts as the Company's sales agent on a commercially reasonable efforts basis, consistent with its normal trading and sales practices and applicable state and federal laws, rules and regulations and the rules of The Nasdaq Capital Market ("Nasdaq"). If expressly authorized by the Company, HCW may also sell the Company's common stock in privately negotiated transactions. There is no specific date on which the ATM Offering will end, there are no minimum sale requirements and there are no arrangements to place any of the proceeds of the ATM Offering in an escrow, trust or similar account. HCW is entitled to compensation at a fixed commission rate of 3.0% of the gross proceeds from the sale of the Company's common stock pursuant to the Sales Agreement.

During the nine months ended September 30, 2024, no shares of the Company's common stock were sold under the Sales Agreement.

8. Warrants

There were no warrants issued or exercised during the nine months ended September 30, 2024. During the nine months ended September 30, 2024, warrants to purchase up to 227,120 shares of common stock at a weighted average exercise price of $ 39.03 per share expired. The following represents a summary of the warrants outstanding and exercisable at September 30, 2024, all of which are equity-classified:

Issue Date	Adjusted Exercise Price	Expiration Date	Number of Shares Underlying Warrants	
			Outstanding	Exercisable
December 17, 2021	$ 14.99	December 15, 2026	36,538	36,538
December 17, 2021	$ 13.99	December 17, 2026	281,047	281,047

February 16, 2021	$	49.99	February 11, 2026	65,003	65,003
August 7, 2020	$	35.99	July 14, 2025	90,743	90,743
August 7, 2020	$	44.99	July 14, 2025	10,939	10,939
July 23, 2020	$	35.99	July 14, 2025	77,502	77,502
July 13, 2020	$	44.99	July 14, 2025	21,846	21,846
July 13, 2020	$	35.99	July 14, 2025	334,800	334,800
June 15, 2015	$	1,509.99	Five years after milestone achievement	15,955	-
Total				934,373	918,418

9. Stock-based Compensation

The Company sponsors the Pulmatrix, Inc. Amended and Restated 2013 Employee, Director and Consultant Equity Incentive Plan (the "Incentive Plan"). As of September 30, 2024, the Incentive Plan provided for the grant of up to 818,936 shares of the Company's common stock, of which 564,209 shares remained available for future grant. In addition, the Company sponsors two legacy plans under which no additional awards may be granted. As of September 30, 2024, the two legacy plans have a total of 8 options outstanding, all of which are fully vested and for which common stock will be issued upon exercise.

The following table summarizes stock option activity during the nine months ended September 30, 2024:

	Number of Options	Weighted-Average Exercise Price	Weighted-Average Remaining Contractual Term (Years)	Aggregate Intrinsic Value
Outstanding — January 1, 2024	344,306	$ 20.92	7.54	$ -
Forfeited or expired	(93,409)	$ 5.54		
Outstanding — September 30, 2024	250,897	$ 26.65	6.39	$ -
Exercisable — September 30, 2024	241,413	$ 27.45	6.32	$ -

Subsequent to September 30, 2024, but before the date these condensed consolidated financial statements were issued, options to purchase up to 216,851 shares of common stock at a weighted average exercise price of $ 26.04 per share expired.

No stock options were granted during the nine months ended September 30, 2024. The Company records stock-based compensation expense related to stock options based on their grant-date fair value. As of September 30, 2024, there was an immaterial amount of unrecognized stock-based compensation expense related to unvested stock options granted under the Company's stock award plans.

The following table presents total stock-based compensation expense for the three and nine months ended September 30, 2024 and 2023:

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2024	2023	2024	2023
Research and development	$ 3	$ 57	148	188
General and administrative	194	149	350	569
Total stock-based compensation expense	$ 197	$ 206	498	757

10. Commitments and Contingencies

Research and Development Activities

The Company contracts with various other organizations to conduct research and development activities, including clinical trials. The scope of the services under contracts for research and development activities may be modified and the contracts, subject to certain conditions, may generally be cancelled by the Company upon written notice. In some instances, the contracts, subject to certain conditions, may be cancelled by the third party. As of September 30, 2024, the Company had no material noncancellable commitments not expected to be reimbursed under the Cipla Agreement.

Legal Proceedings

In the ordinary course of its business, the Company may be involved in various legal proceedings involving contractual and employment relationships, patent or other intellectual property rights, and a variety of other matters. The Company is not aware of any pending legal proceedings that would reasonably be expected to have a material impact on the Company's financial position or results of operations.

11. Leases

New Corporate Headquarters

The Company has limited leasing activities as a lessee which are primarily related to its corporate headquarters, which were relocated during the third quarter of 2023 and again during the third quarter of 2024.

In June 2024, the Company entered into a short-term lease agreement for its new headquarters at 945 Concord Street, Framingham, Massachusetts. No lease liability or right-of-use asset has been recorded for this short-term lease, and the short-term lease cost associated with this lease is immaterial.

Previous Headquarters

On May 28, 2024, as part of the MannKind Transaction (see further discussion in Note 6, *Significant Agreements*), the Company and the Landlord executed the Lease Assignment Agreement to assign the Lease Agreement to MannKind in July 2024. The Company accounted for the Lease Assignment Agreement as a lease modification that reduced the lease term to the assignment date in July 2024. Accordingly, during the three months ended June 30, 2024, the Company remeasured its lease liability as of the modification date to reflect the decrease in fixed lease payments, with the amount of the remeasurement, $8.4 million, adjusted by a corresponding reduction to the right-of-use asset.

Following the closing of the MannKind Transaction, $1.4 million of restricted cash was released in August 2024, which had been held in a depository account at a financial institution to collateralize a conditional stand-by letter of credit related to the Lease Agreement.

The components of lease expense for the Company for the three and nine months ended September 30, 2024 and 2023 were as follows:

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2024	2023	2024	2023
Lease cost				
Fixed lease cost	$ -	$ 553	$ 678	$ 1,349
Variable lease cost	8	203	214	484
Total lease cost	$ 8	$ 756	$ 892	$ 1,833
Other information				
Cash paid for amounts included in the measurement of lease liabilities	$ 24	$ 2,699	$ 681	$ 3,562
Weighted-average remaining lease term			-	10.2 years
Weighted-average discount rate			-	11.00%

12. Income Taxes

The Company had no income tax expense due to operating losses incurred for the three and nine months ended September 30, 2024 and 2023.

Management of the Company evaluated the positive and negative evidence bearing upon the realizability of its deferred tax assets and determined that it is more likely than not that the Company will not recognize the benefits of the deferred tax assets. As a result, a full valuation allowance was recorded as of September 30, 2024 and December 31, 2023.

The Company applies ASC 740, *Income Taxes*, for the financial statement recognition, measurement, presentation, and disclosure of uncertain tax positions taken or expected to be taken in income tax returns. Unrecognized tax benefits represent tax positions for which reserves have been established. A full valuation allowance has been provided against the Company's deferred tax assets, so that the effect of the unrecognized tax benefits is to reduce the gross amount of the deferred tax asset and the corresponding valuation allowance. The Company has no material uncertain tax positions as of September 30, 2024 and December 31, 2023.

13. Net Loss Per Share

Basic net loss per share is calculated by dividing net loss by the weighted-average number of common shares outstanding during the period. Diluted net loss per share is calculated by dividing the weighted-average number common shares outstanding during the period, after taking into consideration any potentially dilutive effects from outstanding stock options or warrants.

Basic and diluted net loss per share were the same for the three and nine months ended September 30, 2024 and 2023, as the effect of potentially dilutive securities would have been anti-dilutive.

The following potentially dilutive securities outstanding have been excluded from the computation of diluted weighted-average shares outstanding, because such securities had an anti-dilutive impact:

	Three and Nine Months Ended September 30,	
	2024	2023
Options to purchase common stock	250,897	364,975
Warrants to purchase common stock	934,373	1,161,493
Total options and warrants to purchase common stock	1,185,270	1,526,468

14. Subsequent Events

The Company has completed an evaluation of all subsequent events after the balance sheet date of September 30, 2024 through the date the condensed consolidated financial statements were issued to ensure that the condensed consolidated financial statements include appropriate disclosure of events both recognized in the condensed consolidated financial statements as of September 30, 2024, and events which occurred subsequently but were not recognized in the condensed consolidated financial statements. The Company has concluded that no subsequent events have occurred that require disclosure, except as disclosed within the condensed consolidated financial statements.

Item 2. Management's Discussion and Analysis of Financial Condition and Results of Operations.

Management's Discussion and Analysis of Financial Condition and Results of Operations is intended to provide a reader of our financial statements with a narrative from the perspective of our management on our financial condition, results of operations, liquidity, and certain other factors that may affect our future results. The information set forth below should be read in conjunction with the condensed consolidated financial statements and the notes thereto included elsewhere in this Quarterly Report on Form 10-Q as well as the audited consolidated financial statements and the notes thereto contained in our Annual Report on Form 10-K filed with the SEC on March 28, 2024. Unless stated otherwise, references in this Quarterly Report on Form 10-Q to "us," "we," "our," or our "Company" and similar terms refer to Pulmatrix, Inc., a Delaware corporation and its subsidiaries.

Forward-Looking Statements

This Quarterly Report on Form 10-Q contains forward-looking statements. All statements other than statements of historical fact contained herein,

including statements regarding our business plans or strategies, projected or anticipated benefits or other consequences of our plans or strategies, projected or anticipated benefits from acquisitions to be made by us, or projections involving anticipated revenues, earnings, or other aspects of our operating results, are forward-looking statements. Words such as “anticipates,” “assumes,” “believes,” “can,” “could,” “estimates,” “expects,” “forecasts,” “guides,” “intends,” “is confident that,” “may,” “plans,” “seeks,” “projects,” “targets,” and “would,” and their opposites and similar expressions, as well as statements in future tense, are intended to identify forward-looking statements. Forward-looking statements should not be read as a guarantee of future performance or results and may not be accurate indications of when such performance or results will actually be achieved. Forward-looking statements are based on information we have when those statements are made or our management’s good faith belief as of that time with respect to future events and are subject to risks and uncertainties that could cause actual performance or results to differ materially from those expressed in or suggested by the forward-looking statements. Important factors that could cause such differences include, but are not limited to:

- our history of recurring losses and negative cash flows from operating activities, significant future commitments and the uncertainty regarding the adequacy of our liquidity to pursue or complete our business objectives;
- our inability to carry out research, development and commercialization plans;
- our inability to manufacture our product candidates on a commercial scale on our own or in collaborations with third parties;
- our inability to complete preclinical testing and clinical trials as anticipated;
- our collaborators’ inability to successfully carry out their contractual duties;
- termination of certain license agreements;
- our ability to adequately protect and enforce rights to intellectual property, or defend against claims of infringement by others;
- difficulties in obtaining financing on commercially reasonable terms, or at all;
- intense competition in our industry, with competitors having substantially greater financial, technological, research and development, regulatory and clinical, manufacturing, marketing and sales, distribution, personnel and resources than we do;
- entry of new competitors and products and potential technological obsolescence of our products;
- adverse market and economic conditions;
- our ability to maintain compliance with Nasdaq’s listing standards;
- loss of one or more key executives or scientists; and
- difficulties in securing regulatory approval to market our product candidates.

For a more detailed discussion of these and other risks that may affect our business and that could cause our actual results to differ from those projected in these forward-looking statements, see the risk factors and uncertainties described under the heading “Risk Factors” in Part II, Item 1A of this Quarterly Report on Form 10-Q and in Part I, Item 1A of our Annual Report on Form 10-K. The forward-looking statements contained in this Quarterly Report on Form 10-Q are expressly qualified in their entirety by this cautionary statement. We do not undertake any obligation to update any forward-looking statement to reflect events or circumstances after the date on which any such statement is made or to reflect the occurrence of unanticipated events, except as required by law.

“iSPERSE™” is one of our trademarks used in this Quarterly Report on Form 10-Q. Other trademarks appearing in this report are the property of their respective holders. Solely for convenience, these and other trademarks, trade names and service marks referred to in this report appear without the ®, TM and SM symbols, but those references are not intended to indicate, in any way, we or the owners of such trademarks will not assert, to the fullest extent under applicable law, their rights to these trademarks and trade names.

Overview

Business

We are a clinical-stage biopharmaceutical company focused on the development of novel inhaled therapeutic products intended to prevent and treat respiratory and other diseases with important unmet medical needs using our patented iSPERSE™ technology. Our proprietary product pipeline includes treatments for central nervous system (“CNS”) disorders such as acute migraine and serious lung diseases such as Chronic Obstructive Pulmonary Disease (“COPD”) and allergic bronchopulmonary aspergillosis (“ABPA”). Our product candidates are based on our proprietary engineered dry powder delivery platform, iSPERSE™, which seeks to improve therapeutic delivery to the lungs by optimizing pharmacokinetics and reducing systemic side effects to improve patient outcomes.

We design and develop inhaled therapeutic products based on our proprietary dry powder delivery technology, iSPERSE ™, which enables delivery of small or large molecule drugs to the lungs by inhalation for local or systemic applications. The iSPERSE™ powders are engineered to be small, dense particles with highly efficient dispersibility and delivery to airways. iSPERSE™ powders can be used with an array of dry powder inhaler technologies and can be formulated with a broad range of drug substances including small molecules and biologics. We believe the iSPERSE™ dry powder technology offers enhanced drug loading and delivery efficiency that outperforms traditional lactose-blend inhaled dry powder therapies.

Our goal is to develop breakthrough therapeutic products that are safe, convenient, and more effective than the existing therapeutic products for respiratory and other diseases where iSPERSE™ properties are advantageous.

Our current pipeline of clinical assets is aligned to this goal as we develop iSPERSE ™-based therapeutic candidates which target the prevention and treatment of a range of diseases, including CNS disorders and pulmonary diseases. These therapeutic candidates include PUR3100 for the treatment of acute migraine, PUR1800 for the treatment of acute exacerbations of chronic obstructive pulmonary disease (“AECOPD”), and PUR1900 for the treatment of ABPA in patients with asthma and in patients with cystic fibrosis (“CF”). Each program is enabled by its unique iSPERSE ™ formulation designed to achieve specific therapeutic objectives.

Contingent on securing additional funding, we intend to capitalize on our iSPERSE ™ technology platform and our expertise in inhaled therapeutics to identify new product candidates for the prevention and treatment of diseases, including those with considerable unmet medical needs, and to build our product pipeline beyond our existing candidates. In order to advance clinical trials for our therapeutic candidates and leverage the iSPERSE™ platform to

enable delivery of partnered compounds, we intend to form strategic alliances with third parties, including pharmaceutical and biotechnology companies or academic or private research institutes.

Contingent on securing additional funding, we expect to continue to incur substantial expenses and operating losses for at least the next several years based on our drug development plans and in connection with our ongoing activities, as we:

- *Pursue further clinical studies for PUR3100, an orally inhaled dihydroergotamine ("DHE") including a Phase 2 clinical study for the treatment of acute migraine, contingent on securing financing or partnership arrangements. We received Food and Drug Administration ("FDA") acceptance of our Investigational New Drug Application ("IND") and a "study may proceed" letter in September 2023, positioning PUR3100 as Phase 2-ready for potential financing or partnership discussions.*

  We developed PUR3100, an iSPERSE™ formulation of DHE in 2020. We completed good laboratory practice ("GLP") toxicology studies in 2021 and 2022. In 2022, we completed a Phase 1 study designed as a double-blinded trial to assess the safety, tolerability, and pharmacokinetics of three dose levels of single doses of inhaled PUR3100 with intravenous ("IV") placebo, as compared to IV DHE (DHE mesylate injection) with inhaled placebo.

  On January 4, 2023, we announced the Phase 1 topline results, indicating that PUR3100 was safe and tolerated with fewer gastrointestinal side effects in all doses compared to IV DHE. PUR3100 showed a five-minute T_{max} and C_{max} within the targeted therapeutic range for all three doses tested. The Phase 1 study data was presented at the American Headache Society 65th Annual Meeting in June 2023. In May 2024, we announced a peer-reviewed publication of Phase 1 clinical results in the publication *Headache: The Journal of Head and Face Pain* .

  In September 2023, we announced the FDA's acceptance of an IND application for PUR3100 and receipt of a "study may proceed" letter for a Phase 2 study. The IND includes a Phase 2 clinical protocol where safety and preliminary efficacy of PUR3100 will be investigated in patients with acute migraine.

  Based on the rapid systemic exposure in the therapeutic range and the improved side effect profile relative to IV dosing, we believe the PUR3100 formulation of DHE may differentiate from approved DHE products or those in development. If effectiveness is demonstrated, PUR3100 may offer the convenience of being self-administered with a pharmacokinetic profile that may potentially provide rapid onset of action.

- *Pursue partnership or other alternatives to monetize or advance PUR1800, focusing on the development of an orally inhaled kinase inhibitor for treatment of AECOPD.*

  We completed preclinical safety studies for PUR1800, our iSPERSE™ formulation of RV1162, in 2018 and advanced our formulation and process development efforts to support clinical testing in stable moderate-severe COPD patients. We completed a Phase 1b safety, tolerability, and pharmacokinetics clinical study of PUR1800 for subjects with stable moderate-severe COPD and received topline data from the Phase 1b clinical study in the first quarter of 2022. We analyzed data from the completed Phase 1b clinical study of PUR1800 for AECOPD and presented study results at the American Academy of Allergy, Asthma & Immunology (AAAAI) conference in the first quarter of 2023. The results indicated PUR1800 was safe and well tolerated with no observed safety signals. The topline data, along with the results from chronic toxicology studies, support the continued development of PUR1800 for the treatment of AECOPD and other inflammatory respiratory diseases.

- *Capitalize on our proprietary iSPERSE™ technology and our expertise in inhaled therapeutics and particle engineering to identify new product candidates for prevention and treatment of diseases, including those with important unmet medical needs*.

  To add additional inhaled therapeutics to our development pipeline and facilitate additional collaborations, we are leveraging our iSPERSE™ technology and our expertise in inhaled therapeutics and particle engineering to identify potential product candidates.

- *Invest in protecting and expanding our intellectual property portfolio and file for additional patents to strengthen our intellectual property rights.*

  The status of our patent portfolio changes frequently in the ordinary course of patent prosecution. As of September 30, 2024, our patent portfolio related to iSPERSE™ included approximately 147 granted patents, 18 of which are granted US patents, with expiration dates from 2024 to 2037, and approximately 51 additional pending patent applications in the US and other jurisdictions. Our in-licensed portfolio related to kinase inhibitors included approximately 280 granted patents, 33 of which are granted US patents, with expiration dates from 2029 to 2035, and approximately 18 additional pending patent applications in the US and other jurisdictions. We have national phase applications pending in Australia, Brazil, Canada, China, Europe, Israel, India, Japan, Korea, Mexico, New Zealand, Russia, and the United States that cover certain formulations and methods of use relevant to our PUR3100 program.

- *Seek partnerships and license agreements to support the product development and commercialization of our product candidates.*

  In order to advance our clinical programs, we may seek partners or licensees in areas of pharmaceutical and clinical development.

- *Position the Company to be able to consider strategic alternatives.*

  Continue our cost saving measures which have included the wind down of the Phase 2b study for PUR1900 and the assignment of our long-term lease of our Bedford facility pursuant to those certain agreements by and between us, MannKind Corporation ("MannKind") and Cobalt Propco 2020, LLC (the "MannKind Transaction") to conserve our cash resources as we consider strategic alternatives for the Company.

Therapeutic Candidates

PUR3100

In 2020, we developed PUR3100, the iSPERSE™ formulation of DHE, for the treatment of acute migraine. Currently DHE is only available as subcutaneous, intravenous infusion or intranasal delivery. If approved for commercialization, PUR3100 has the opportunity to be the first orally inhaled DHE treatment for acute migraine and be an alternative to other acute therapies. Given the oral inhaled route of delivery, PUR3100 is anticipated to provide relief from the rapid onset of migraine symptoms and provide a favorable tolerability profile.

A total of three 14-day GLP toxicology studies have been completed with PUR3100 to support single-dose clinical studies. We are planning to conduct a chronic toxicology study to support long-term dosing. Based on discussions with the FDA, this would complete the non-clinical requirements to support a new drug application ("NDA").

Our interactions with the FDA have indicated that, in addition to the planned Phase 2 and Phase 3 studies, long-term safety should be assessed in a minimum of one hundred patients for six months of dosing and fifty patients for twelve months of dosing. The FDA also confirmed that it will be necessary to perform a safety study administering PUR3100 to otherwise healthy patients with asthma before an NDA is submitted.

On September 26, 2022, we announced the completion of patient dosing in a Phase 1 clinical study, performed in Australia. The study design was a double-dummy, double-blinded trial to assess the safety, tolerability, and pharmacokinetics of three dose levels of single doses of inhaled PUR3100 with IV placebo, as compared to IV DHE (DHE mesylate injection) with inhaled placebo. This study may also provide preliminary comparative bioavailability data to support the use of the 505(b)(2) pathway for marketing authorization. Twenty-six healthy subjects were enrolled and each of the four groups contained at least six subjects.

On January 4, 2023, we announced topline results. We presented the Phase 1 study data at the American Headache Society 65 th Annual Meeting in June 2023. The study showed that PUR3100 achieved peak exposures in the targeted therapeutic range and time to maximum concentration occurred at five minutes after dosing at all dosing levels. The PUR3100 dose groups also showed a lower incidence of nausea and no vomiting compared to observations of nausea and vomiting in the IV administered DHE dose group.

Based on the rapid systemic exposure in the therapeutic range and the improved side effect profile relative to IV dosing, we believe the PUR3100 formulation of DHE may differentiate from approved DHE products or those known to be in development. If effectiveness is demonstrated, PUR3100 may offer the convenience of being self-administered with a pharmacokinetic profile that may potentially provide rapid onset of action.

In September 2023, we announced that the FDA accepted the PUR3100 IND and the receipt of a “study may proceed” letter for the clinical study: “A Phase 2, Multicenter, Randomized, Double-Blind, Placebo-Controlled, Single Event Study to Evaluate the Safety, Tolerability, and Efficacy of PUR3100 (Dihydroergotamine Mesylate Inhalation Powder) in the Acute Treatment of Migraine”. We anticipate that this Phase 2 clinical study will initiate once financing or partnership arrangements have been made.

On May 15, 2024, we announced publication of, “Safety, tolerability, and pharmacokinetics of a single orally inhaled dose of PUR3100, a dry powder formulation of dihydroergotamine versus intravenous dihydroergotamine: A Phase 1 randomized, double-blind study in healthy adults” in the peer-reviewed publication *Headache: The Journal of Head and Face Pain* .

We believe that in this trial, PUR3100 demonstrated the potential for rapid pain relief and improved DHE tolerability versus IV DHE. With a T_{max} of 5 minutes and a C_{max} in the therapeutic window for all doses tested, we believe that PUR3100 has the potential to address an unmet need for acute migraine sufferers and we are pursuing different options to advance PUR3100 into a Phase 2 clinical trial to further investigate its promising profile in treating acute migraine.

The completed Phase 1 study demonstrated optimal pharmacokinetics and improved tolerability of PUR3100 compared to IV DHE. The Phase 1 trial was a randomized, double-dummy, double-blinded design to assesses the safety, tolerability, and pharmacokinetics (PK) of three dose groups treated with inhaled PUR3100 with intravenous (IV) placebo, compared to a single dose of IV DHE (DHE mesylate injection) with inhaled placebo in healthy volunteers. All doses of PUR3100 were generally well tolerated with a lower incidence of nausea (21% vs. 86%), vomiting (0% vs. 29%), and headache (16% vs. 57%) compared to IV DHE. The PK profile of PUR3100 versus IV DHE was characterized by a similar mean time to C_{max} (5 vs. 5.5 min), with reduced AUC0–2h (1120–4320 vs. 6340), and a lower C_{max} (3620–14,400 vs. 45,000). All doses of PUR3100 were associated with mean C_{max} above the minimum level required to achieve efficacy (1000 pg/mL).

Over 39 million patients suffer from migraine in the United States and there is currently no orally inhaled DHE treatment option for patients. PUR3100 is our orally inhaled therapeutic candidate formulation of DHE engineered with iSPERSE™ for the treatment of acute migraine. Pulmatrix is currently looking at opportunities to finance or partner PUR3100 to initiate a potential Phase 2 clinical study.

PUR1800

Reduced responsiveness to corticosteroids represents an important barrier to effective treatment of COPD and AECOPD and provides a clear rationale to seek novel medicines to treat these respiratory diseases. In addition, current treatments generally fail to treat the underlying source of the AECOPD, in particular when a viral or bacterial infection is the cause, which occurs in approximately 80% of exacerbations. RV1162, the active ingredient of PUR1800, is a novel, potent anti-inflammatory that inhibits the phosphorylation of a narrow spectrum of kinases. In pre-clinical studies, RV1162 demonstrated direct anti-inflammatory activity in a model of viral induced respiratory inflammation. RV1162 also demonstrated a reduction in corticosteroid-resistant inflammatory responses in a model of cigarette smoke induced inflammation. These findings suggested that RV1162 has the potential to deliver effective anti-inflammatory outcomes in corticosteroid-resistant patients while also reducing the underlying source of inflammation in an exacerbation, such as a viral and/or bacterial respiratory infection.

Clinical studies conducted by RespiVert/Janssen with RV1162 formulated as a lactose blend for inhalation demonstrated that the molecule was well tolerated for up to 14 days of dosing in patients with COPD. Analysis of sputum collected from patients with COPD treated with RV1162 showed reduced levels of p38 phosphorylation in sputum cells and decreases in the number of neutrophils recovered in sputum after 12 days of dosing. These findings suggest that inhalation of RV1162 may confer anti-inflammatory benefits after a short dosing regimen. Long-term toxicology studies with RV1162 as a lactose blend suggested that this formulation was not suitable for chronic dosing.

Based upon the clinical results generated by RespiVert/Janssen for RV1162 and the anticipated benefits of an iSPERSE ™ formulation of RV1162, we entered into a License, Development and Commercialization Agreement with RespiVert Ltd. (“RespiVert”), a wholly owned subsidiary of Janssen Biotech, Inc. on June 9, 2017. RespiVert granted us an exclusive, royalty-bearing license in a portfolio of narrow spectrum kinase inhibitor compounds (“NSKI”). We subsequently formulated RV1162 into PUR1800 for development as a potential therapy for AECOPD.

We completed a Phase 1b safety, tolerability, and pharmacokinetics of PUR1800 for patients with stable moderate-severe COPD. Topline data was delivered in the first quarter of 2022 and presented at the American Academy of Allergy, Asthma and Immunology conference in the first quarter of 2023.

The clinical study, performed at the Medicines Evaluation Unit in Manchester, UK, was a randomized, three-way crossover double-blind study with 14 days of daily dosing, which included placebo and one of two doses of PUR1800, and included a 28-day follow-up period after each treatment period. A total of 18 adults with stable COPD were enrolled. Safety and tolerability, as well as systemic pharmacokinetics (“PK”) were evaluated.

PUR1800 was well tolerated and there were no observed safety signals. The PK data indicate that PUR1800 results in low and consistent systemic exposure when administered via oral inhalation. The topline data, along with the results from chronic toxicology studies, support the continued development of PUR1800 for the treatment of AECOPD and other inflammatory respiratory diseases. These data will inform the design of a potential

Phase 2 study in the treatment of AECOPD.

PUR1900

PUR1900 is our iSPERSE™ inhaled formulation of itraconazole, an antifungal drug commercially available as an oral drug. We developed PUR1900 for the prevention and treatment of fungal infections and allergic/hypersensitivity reactions to fungus in patients with severe lung disease, including those with asthma and CF.

On April 15, 2019, we entered into the Cipla Agreement with Cipla for the co-development and commercialization, on a worldwide, except for the Cipla Territory defined below, exclusive basis, of PUR1900, our inhaled iSPERSE™ enabled formulation of the antifungal drug itraconazole, which is only available as an oral drug, for the treatment of all pulmonary indications, including ABPA in patients with asthma. We entered into the Second Amendment to the Cipla Agreement on November 8, 2021 and the Third Amendment on January 6, 2024. All references to the Cipla Agreement herein refer to the Cipla Agreement, as amended. The Cipla Agreement will remain in effect in perpetuity, unless otherwise earlier terminated in accordance with its terms.

Pursuant to the Third Amendment, the definition of the "Cipla Territory", has been expanded to include all markets other than the United States.

Pursuant to the Third Amendment, all development and commercialization activities with respect to the Product in all markets other than the United States (the "Cipla Territory") will be conducted exclusively by Cipla at Cipla's sole cost and expense, and Cipla shall be entitled to all profits from the sale of the Product in the Cipla Territory, except that we will receive 2% royalties on any potential future net sales by Cipla outside the United States.

Pursuant to the Third Amendment, we and Cipla stopped patient enrollment for the ongoing Phase 2b clinical study. We agreed that during the period commencing on January 6, 2024 and ending July 30, 2024 (the "Wind Down Period"), we would complete all Phase 2b activities, assign or license all patents to Cipla and their registration with the appropriate authorities in the Cipla Territory, complete a physical and demonstrable technology transfer and secure all data from the Phase 2b study for inclusion in the safety database for the Cipla Territory.

For the duration of the Wind Down Period, we and Cipla were each responsible for 60% and 40%, respectively, of our Direct Costs. We shared all other development costs with Cipla that are not Direct Costs, such as the cost of clinical research organizations, manufacturing costs and other third-party costs, on a 50/50 basis. Reimbursements from Cipla to us for these costs were subject to a maximum reimbursement amount as approved by the joint steering committee.

We completed all Phase 2b wind down activities within the third quarter of 2024. As such, we no longer bear further financial responsibility for the commercialization and development with respect to the Product in the Cipla Territory, with such commercialization and development expenses of the Product in the Cipla Territory to be borne at Cipla's sole cost and expense after January 6, 2024. We will receive 2% royalties on any potential future net sales by Cipla outside the United States. Within the United States, we and Cipla will seek to monetize PUR1900, our inhaled iSPERSE™ formulation of the antifungal drug itraconazole for indications where an orally inhaled antifungal may provide a therapeutic benefit or fulfill an unmet medical need.

Financial Overview

Revenues

To date, we have not generated any product sales. The revenues for the three and nine months ended September 30, 2024 and 2023 were primarily generated from the Cipla Agreement as related to our PUR1900 program, for which wind down activities have been completed.

For more discussion on the Cipla Agreement, please see Note 6, *Significant Agreements*, to our condensed consolidated financial statements included in this Quarterly Report on Form 10-Q.

Research and Development Expenses

Research and development expenses consist primarily of costs incurred for the research and development of our preclinical and clinical candidates, and include:

- employee-related expenses, including salaries, benefits and stock-based compensation expense;
- expenses incurred under agreements with contract research organizations ("CROs") or contract manufacturing organizations ("CMOs"), and consultants that conduct our clinical trials and preclinical activities;
- the cost of acquiring, developing and manufacturing clinical trial materials and lab supplies;
- facility, depreciation and other expenses, which include direct and allocated expenses for rent, maintenance of our facility, insurance and other supplies;
- costs associated with preclinical activities and clinical regulatory operations; and
- consulting and professional fees associated with research and development activities

We expense research and development costs to operations as incurred. We recognize costs for certain development activities, such as clinical trials, based on an evaluation of the progress to completion of specific tasks using data such as patient enrollment, clinical site activations or information provided to us by our vendors.

Research and development activities are central to our business model. We have utilized a combination of internal and external efforts to advance product development from early-stage work to clinical trial manufacturing and clinical trial support. External efforts have included work with consultants and substantial work at CROs and CMOs. We have historically supported an internal research and development team and facility for our pipeline and other potential development programs, however following the closing of the MannKind Transaction in the third quarter of 2024, in which the majority of our research and development employees were terminated and our facility lease was assigned to MannKind, we expect to utilize external resources for further development.

To continue development of existing programs or opportunities identified for iSPERSE ™ in any new indications, we will need to secure additional funding and anticipate additional development costs would be incurred. Because of the numerous risks and uncertainties associated with product development, however, we cannot determine with certainty the duration and completion costs of these or other current or future preclinical studies and clinical trials.

The duration, costs and timing of our future clinical trials and development of our product candidates will depend on a variety of factors, including the selected development path and uncertainties associated with clinical and preclinical studies, clinical trial enrollment rates and changing government regulation. In addition, the probability of success for each product candidate will depend on numerous factors, including competition, manufacturing capability and commercial viability.

General and Administrative Expenses

General and administrative expenses consist principally of salaries, benefits and related costs such as stock-based compensation for personnel and consultants in executive, finance, business development, corporate communications and human resource functions, facility costs not otherwise included in research and development expenses, patent filing fees and legal fees. Other general and administrative expenses include travel expenses, expenses related to being a publicly traded company and professional fees for consulting, auditing and tax services.

Following the closing of the MannKind Transaction in the third quarter of 2024, we anticipate that our general and administrative expenses will decrease in the future as they relate to audit, legal, regulatory, and tax-related services associated with maintaining compliance with exchange listing and SEC requirements, director and officer liability insurance, investor relations costs and other costs associated with being a public company.

Critical Accounting Estimates

This management's discussion and analysis of our financial condition and results of operations is based on our condensed consolidated financial statements, which have been prepared in accordance with U.S. GAAP. The preparation of these condensed consolidated financial statements requires us to make estimates and judgments that affect the reported amounts of assets, liabilities, revenues and expenses and the disclosure of contingent assets and liabilities in our condensed consolidated financial statements. We base our estimates on historical experience, known trends and events, and other assumptions that we believe are reasonable under the circumstances, and we evaluate these estimates on an ongoing basis. Actual results may differ from these estimates under different assumptions or conditions.

There were no changes to our critical accounting estimates during the nine months ended September 30, 2024 as compared to those described in Management's Discussion and Analysis of Financial Condition and Results of Operations included in our Annual Report. It is important that the discussion of our operating results that follow be read in conjunction with the critical accounting estimates disclosed in our Annual Report.

Results of Operations

Comparison of the Three Months Ended September 30, 2024 and 2023

The following table sets forth our results of operations for each of the periods set forth below (in thousands):

	Three Months Ended September 30,		
	2024	2023	Change
Revenues	$ 366	1,753	(1,387)
Operating expenses:			
Research and development	814	3,963	(3,149)
General and administrative	2,209	1,729	480
Total operating expenses	3,023	5,692	(2,669)
Loss from operations	(2,657)	(3,939)	1,282
Other income (expense):			
Interest income	101	217	(116)
Other expense, net	(31)	(52)	21
Net loss	$ (2,587)	(3,774)	1,187

Revenues — Revenues were $0.4 million for the three months ended September 30, 2024, as compared to $1.8 million for the three months ended September 30, 2023, a decrease of $1.4 million. The decrease is primarily related to the wind down of the PUR1900 Phase 2b clinical trial, for which we incurred fewer expenses eligible for reimbursement under the Cipla Agreement as compared to the corresponding period in the previous year.

Research and development expenses — Research and development expenses were $0.8 million for the three months ended September 30, 2024, as compared to $4.0 million for the three months ended September 30, 2023, a decrease of approximately $3.2 million. The decrease was primarily due to $1.7 million less employment and other operating cost following the MannKind Transaction, $1.2 million less cost incurred on the PUR1900 program, for which the winding down of the Phase 2b clinical trial was completed during the three months ended September 30, 2024, and $0.3 million less cost incurred on the PUR3100 program.

General and administrative expenses — General and administrative expenses were $2.2 million for the three months ended September 30, 2024, as compared to $1.7 million for the three months ended September 30, 2023, an increase of approximately $0.5 million. The increase was primarily due to $0.6 million of increased employment costs associated with employee terminations, partially offset by $0.1 million of decreased operating costs.

Comparison of the Nine Months Ended September 30, 2024 and 2023

The following table sets forth our results of operations for each of the periods set forth below (in thousands):

	Nine Months Ended September 30,		
	2024	2023	Change
Revenues	$ 7,803	5,096	2,707
Operating expenses:			
Research and development	7,160	12,002	(4,842)
General and administrative	5,836	5,609	227
Loss on MannKind Transaction	2,618	-	2,618
Total operating expenses	15,614	17,611	(1,997)
Loss from operations	(7,811)	(12,515)	4,704

Other income (expense):			
Interest income	394	675	(281)
Other expense, net	(156)	(198)	42
Net loss	$ (7,573)	(12,038)	4,465

Revenues — Revenues were $7.8 million for the nine months ended September 30, 2024, as compared to $5.1 million for the nine months ended September 30, 2023, an increase of $2.7 million. The increase is primarily related to a contract modification of the Cipla Agreement which resulted in a cumulative catch-up adjustment recorded during the three months ended March 31, 2024. The amount of the cumulative catch-up had been included in deferred revenue at the beginning of the period. This increase was partially offset by the Company incurring fewer expenses eligible for reimbursement under the Cipla Agreement as compared to the corresponding period in the previous year.

Research and development expenses — Research and development expenses were $7.2 million for the nine months ended September 30, 2024, as compared to $12.0 million for the nine months ended September 30, 2023, a decrease of approximately $4.8 million. The decrease was primarily due to $2.0 million less cost incurred on the PUR1900 program during the winding down of the Phase 2b clinical trial, $2.0 million less employment and other operating cost following the MannKind Transaction and $0.8 million less cost related to the PUR3100 and PUR1800 programs.

General and administrative expenses — General and administrative expenses were $5.8 million for the nine months ended September 30, 2024, as compared to $5.6 million for the nine months ended September 30, 2023, an increase of approximately $0.2 million. The increase was primarily due to $0.4 million of increased employment costs associated with employee terminations, partially offset by $0.2 million of decreased other operating costs.

Loss on MannKind Transaction — Loss on MannKind Transaction was $2.6 million on certain assets held for sale as of June 30, 2024 and disposed of during the three months ended September 30, 2024, in connection with the MannKind Transaction, as compared with no such loss for the nine months ended September 30, 2023.

Liquidity and Capital Resources

Through September 30, 2024, we incurred an accumulated deficit of $295.2 million, primarily as a result of expenses incurred through a combination of research and development activities related to our various product candidates and general and administrative expenses supporting those activities. We have financed our operations since inception primarily through the sale of preferred and common stock, the issuance of convertible promissory notes, term loans, and collaboration and license agreements. Our total cash and cash equivalents balance as of September 30, 2024 was $10.8 million.

We anticipate that we will continue to incur losses in the foreseeable future due to development costs associated with our iSPERSE ™ pipeline programs, contingent on obtaining financing or partnership to continue such development. We may raise capital through a combination of equity offerings, debt financings, other third-party funding and other collaborations and strategic alliances. We are currently exploring financing or partnership arrangements to develop and initiate a potential Phase 2 clinical study for PUR3100.

We expect that our existing cash and cash equivalents as of September 30, 2024 will enable us to fund our corporate operating expenses for at least the next 12 months following the date of this Quarterly Report on Form 10-Q. We have based our projections of operating capital requirements on assumptions that may prove to be incorrect, and we may use all of our available capital resources sooner than we expect. Because of the numerous risks and uncertainties associated with research, development, achievement of contingent milestones and commercialization of pharmaceutical products, we are unable to estimate the exact amount of our operating capital requirements.

We have no material off-balance sheet arrangements that have or are reasonably likely to have a current or future effect on our financial condition, changes in financial condition, revenues or expenses, results of operations, liquidity, capital expenditures or capital resources that is material to investors.

The following table sets forth the major sources and uses of cash for each of the periods set forth below (in thousands):

	Nine Months Ended September 30,	
	2024	**2023**
Net cash used in operating activities	$ (9,455)	$ (13,974)
Net cash used in investing activities	(398)	(371)
Net cash provided by financing activities	-	53
Net decrease in cash, cash equivalents, and restricted cash	$ (9,853)	$ (14,292)

Net cash used in operating activities

Net cash used in operating activities for the nine months ended September 30, 2024 was $9.5 million, which was primarily the result of $7.6 million of net loss and $5.4 million in cash outflows associated with changes in operating assets and liabilities, partially offset by $3.6 million of net non-cash adjustments.

Net cash used in operating activities for the nine months ended September 30, 2023 was $14.0 million, which was primarily the result of a net loss of $12.0 million and $4.0 million in cash outflows associated with changes in operating assets and liabilities, partially offset by $2.0 million of net non-cash adjustments.

Net cash used in investing activities

Net cash used in investing activities was $0.4 million for both the nine months ended September 30, 2024 and 2023, which was due to purchases of property and equipment.

Net cash provided by financing activities

No cash was provided by financing activities for the nine months ended September 30, 2024. Net cash provided by financing activities for the nine months ended September 30, 2023 resulted from proceeds from the issuance of common stock, net of issuance costs.

Financings

In May 2021, we entered into the Sales Agreement with HCW to act as our sales agent with respect to the issuance and sale of up to $20,000,000 of our shares of common stock, from time to time in an ATM Offering. Upon filing of the Annual Report, we continued to be subject to General Instruction I.B.6 of Form S-3, pursuant to which in no event will we sell our common stock in a registered primary offering using Form S-3 with a value exceeding more than one-third of our public float in any 12 calendar month period so long as our public float remains below $75,000,000. Therefore, the amount we may be able to raise using the ATM Offering will be significantly less than $20,000,000, until such time as our public float held by non-affiliates exceeds

$75,000,000.

Sales of common stock under the Sales Agreement are made pursuant to an effective shelf registration statement on Form S-3, which was filed with the SEC on May 17, 2024, and subsequently declared effective on May 30, 2024 (File No. 333-279491), and a related prospectus. HCW acts as our sales agent on a commercially reasonable efforts basis, consistent with its normal trading and sales practices and applicable state and federal laws, rules and regulations and the rules of Nasdaq. If expressly authorized by us, HCW may also sell our common stock in privately negotiated transactions. There is no specific date on which the ATM Offering will end, there are no minimum sale requirements and there are no arrangements to place any of the proceeds of the ATM Offering in an escrow, trust or similar account. HCW is entitled to compensation at a fixed commission rate of 3.0% of the gross proceeds from the sale of our common stock pursuant to the Sales Agreement.

During the nine months ended September 30, 2024, no shares of our common stock were sold under the Sales Agreement.

Known Trends, Events and Uncertainties

In May 2023, the World Health Organization determined that COVID-19 no longer fit the definition of a public health emergency and the U.S. government announced its plan to let the declaration of a public health emergency associated with COVID-19 expire on May 11, 2023. In addition, ongoing geopolitical conflicts, including between Russia and Ukraine and between Israel and Hamas, and related sanctions and countermeasures, are difficult to predict, and could adversely impact geopolitical and macroeconomic conditions, the global economy, and contribute to increased market volatility, which may in turn adversely affect our business and operations. We may not be able to raise sufficient additional capital and may tailor our drug candidate development program based on the amount of funding we are able to raise in the future. Nevertheless, there is no assurance that these initiatives will be successful.

Other than as discussed above and elsewhere in this report, we are not aware of any trends, events or uncertainties that are likely to have a material effect on our financial condition.

Item 3. Quantitative and Qualitative Disclosures About Market Risk.

Not applicable.

Item 4. Controls and Procedures.

Disclosure Controls and Procedures

Our Principal Executive Officer and Principal Financial Officer, after evaluating the effectiveness of our disclosure controls and procedures (as defined in Rules 13a-15(e) and 15d-15(e) promulgated under the Securities Exchange Act of 1934, as amended (the “Exchange Act”)) as of the end of the period covered by this Quarterly Report on Form 10-Q, have concluded that, based on such evaluation, our disclosure controls and procedures were effective to ensure that information required to be disclosed by us in the reports that we file or submit under the Exchange Act is recorded, processed, summarized and reported, within the time periods specified in the SEC’s rules and forms, and is accumulated and communicated to our management, including our Principal Executive Officer and Principal Financial Officer as appropriate to allow timely decisions regarding required disclosure.

In designing and evaluating our disclosure controls and procedures, our management recognizes that any controls and procedures, no matter how well designed and operated, can provide only reasonable assurance of achieving the desired control objectives, and our management necessarily is required to apply its judgment in evaluating the cost-benefit relationship of possible controls and procedures.

Changes in Internal Controls over Financial Reporting

There were no changes in our internal control over financial reporting that occurred during the quarter ended September 30, 2024 that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

PART II—OTHER INFORMATION

Item 1. Legal Proceedings.

From time to time, we may be involved in litigation that arises through the normal course of business. As of the date of this filing, we are not aware of any material legal proceedings to which we or any of our subsidiaries is a party or to which any of our property is subject, nor are we aware of any such threatened or pending litigation or any such proceedings known to be contemplated by governmental authorities.

We are not aware of any material proceedings in which any of our directors, officers, or affiliates or any registered or beneficial stockholder of more than 5% of our common stock, or any associate of any of the foregoing, is a party adverse to or has a material interest adverse to, us or any of our subsidiaries.

Item 1A. Risk Factors.

Investing in our common stock involves a high degree of risk. You should carefully consider the risks and uncertainties described in Part I, Item 1A under the heading “Risk Factors” in our Annual Report on Form 10-K for the year ended December 31, 2023, in addition to the other information included in this Quarterly Report on Form 10-Q before making an investment decision regarding our common stock. If any of these risks actually occur, our business, financial condition, or operating results would likely suffer, possibly materially, the trading price of our common stock could decline, and you could lose part or all of your investment.

Item 2. Unregistered Sales of Equity Securities and Use of Proceeds.

(a) Unregistered Sales of Equity Securities

None.

(b) Issuer Purchases of Equity Securities.

None.

Item 3. Defaults Upon Senior Securities.

None.

Item 4. Mine Safety Disclosures.

Not applicable.

Item 5. Other Information.

None.

Item 6. Exhibits.

See “Index to Exhibits” following the signature page to this Form 10-Q for a list of exhibits filed or furnished with this Quarterly Report on Form 10-Q.

SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized**.**

PULMATRIX, INC.

Date: November 8, 2024

By: */s/ Peter Ludlum*
Peter Ludlum
Interim Chief Executive Officer and Interim Chief Financial Officer
(Principal Executive, Financial and Accounting Officer)

INDEX TO EXHIBITS

Exhibit Number	Exhibit Description
10.1#	General Release and Severance Agreement, dated as of July 19, 2024, by and between Pulmatrix, Inc. and Teofilo Raad (incorporated by reference to Exhibit 10.1 of Pulmatrix, Inc.’s Current Report on Form 8-K, filed with the SEC on July 19, 2024).
10.2#	Amendment No. 3 to Consulting Agreement, dated as of July 15, 2024, by and between Pulmatrix, Inc. and Danforth Advisors, LLC (incorporated by reference to Exhibit 10.2 of Pulmatrix, Inc.’s Current Report on Form 8-K, filed with the SEC on July 19, 2024).
10.3#	Letter Agreement, dated as of July 15, 2024, by and between Pulmatrix, Inc. and Peter Ludlum (incorporated by reference to Exhibit 10.3 of Pulmatrix, Inc.’s Current Report on Form 8-K, filed with the SEC on July 19, 2024).
31.1*	Certification of the Principal Executive Officer and Principal Financial Officer pursuant to Section 302 of the Sarbanes-Oxley Act of 2002
32.1**	Certification of Principal Executive Officer and Principal Financial Officer pursuant to Section 906 of the Sarbanes-Oxley Act of 2002
101. INS*	Inline XBRL Instance Document
101.SCH*	Inline XBRL Taxonomy Extension Schema Document
101.CAL*	Inline XBRL Taxonomy Extension Calculation Linkbase Document
101.DEF*	Inline XBRL Taxonomy Extension Definition Linkbase Document
101.LAB*	Inline XBRL Taxonomy Extension Labels Linkbase Document
101.PRE*	Inline XBRL Taxonomy Extension Presentation Linkbase Document
104*	Cover Page Interactive Data File (formatted as inline XBRL and contained in Exhibit 101)

* Filed herewith.
** Furnished herewith.
# These exhibits are management contracts or compensatory plans or arrangements.

Exhibit 31.1

CERTIFICATIONS UNDER SECTION 302

I, Peter Ludlum, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q of Pulmatrix, Inc.;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

   a) designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

   b) designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

   c) evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

   d) disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):

   a) all significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

   b) any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: November 8, 2024

/s/ Peter Ludlum
Peter Ludlum
Interim Chief Executive Officer and Interim Chief Financial Officer
(Principal Executive, Financial and Accounting Officer)

Exhibit 32.1

CERTIFICATIONS UNDER SECTION 906

Pursuant to section 906 of the Sarbanes-Oxley Act of 2002 (subsections (a) and (b) of section 1350, chapter 63 of title 18, United States Code), each of the undersigned officers of Pulmatrix, Inc., a Delaware corporation (the "Company"), does hereby certify, to such officer's knowledge and in the capacity of an officer, that:

The Quarterly Report for the quarter ended September 30, 2024 (the "Form 10-Q") of the Company fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934, and the information contained in the Form 10-Q fairly presents, in all material respects, the financial condition and results of operations of the Company as of, and for, the periods presented in the Form 10-Q.

Date: November 8, 2024

By: */s/ Peter Ludlum*

Peter Ludlum
Interim Chief Executive Officer and Interim Chief Financial Officer
(Principal Executive, Financial and Accounting Officer)