

OMB APPROVAL	
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**STATEMENT OF CHANGES IN BENEFICIAL OWNERSHIP**

Check this box if no longer subject to Section 16. Form 4 or Form 5 obligations may continue. See Instruction 1(b).

Filed pursuant to Section 16(a) of the Securities Exchange Act of 1934 or Section 30(h) of the Investment Company Act of 1940

1. Name and Address of Reporting Person* <u>Smith Hunter C</u>  (Last) (First) (Middle) <u>222 BERKELEY STREET, 12TH FLOOR</u>  (Street) <u>BOSTON MA 02116</u>  (City) (State) (Zip)	2. Issuer Name and Ticker or Trading Symbol <u>RHYTHM PHARMACEUTICALS, INC. [ RYTM ]</u>	5. Relationship of Reporting Person(s) to Issuer (Check all applicable)  Director <span style="float:right">10% Owner</span> <input checked="" type="checkbox"/> Officer (give title below) <span style="float:right">Other (specify below)</span> <p style="text-align:center"><b>Chief Financial Officer</b></p>
	3. Date of Earliest Transaction (Month/Day/Year) <u>12/05/2023</u>	
4. If Amendment, Date of Original Filed (Month/Day/Year)		
Rule 10b5-1(c) Transaction Indication  <input type="checkbox"/> Check this box to indicate that a transaction was made pursuant to a contract, instruction or written plan that is intended to satisfy the affirmative defense conditions of Rule 10b5-1(c). See Instruction 10.		

**Table I - Non-Derivative Securities Acquired, Disposed of, or Beneficially Owned**

1. Title of Security (Instr. 3)	2. Transaction Date (Month/Day/Year)	2A. Deemed Execution Date, if any (Month/Day/Year)	3. Transaction Code (Instr. 8)		4. Securities Acquired (A) or Disposed Of (D) (Instr. 3, 4 and 5)			5. Amount of Securities Beneficially Owned Following Reported Transaction(s) (Instr. 3 and 4)	6. Ownership Form: Direct (D) or Indirect (I) (Instr. 4)	7. Nature of Indirect Beneficial Ownership (Instr. 4)
			Code	V	Amount	(A) or (D)	Price			
Common Stock	12/05/2023		M		7,026	A	\$6.88	68,432	D	
Common Stock	12/05/2023		S <sup>(1)</sup>		7,026	D	\$35.064 <sup>(2)</sup>	61,406	D	
Common Stock	12/06/2023		M		20,000	A	\$6.88	81,406	D	
Common Stock	12/06/2023		S <sup>(1)</sup>		20,000	D	\$40	61,406	D	

**Table II - Derivative Securities Acquired, Disposed of, or Beneficially Owned (e.g., puts, calls, warrants, options, convertible securities)**

1. Title of Derivative Security (Instr. 3)	2. Conversion or Exercise Price of Derivative Security	3. Transaction Date (Month/Day/Year)	3A. Deemed Execution Date, if any (Month/Day/Year)	4. Transaction Code (Instr. 8)		5. Number of Derivative Securities Acquired (A) or Disposed of (D) (Instr. 3, 4 and 5)		6. Date Exercisable and Expiration Date (Month/Day/Year)		7. Title and Amount of Securities Underlying Derivative Security (Instr. 3 and 4)	8. Price of Derivative Security (Instr. 5)	9. Number of derivative Securities Beneficially Owned Following Reported Transaction(s) (Instr. 4)	10. Ownership Form: Direct (D) or Indirect (I) (Instr. 4)	11. Nature of Indirect Beneficial Ownership (Instr. 4)	
				Code	V	(A)	(D)	Date Exercisable	Expiration Date						Title
Stock Option (Right to Buy)	\$6.88	12/05/2023		M			7,026	(3)	08/08/2027	Common Stock	7,026	\$0	131,094	D	
Stock Option (Right to Buy)	\$6.88	12/06/2023		M			20,000	(3)	08/08/2027	Common Stock	20,000	\$0	111,094	D	

**Explanation of Responses:**

- The sale reported in this Form 4 was effected pursuant to a Rule 10b5-1 trading plan adopted by the Reporting Person on December 13, 2022.
- The price reported in Column 4 is a weighted average price. These shares were sold in multiple transactions at per share prices ranging from \$35.00 to \$35.25. The Reporting Person undertakes to provide to the Issuer, any security holder of the Issuer or the staff of the Securities and Exchange Commission, upon request, full information regarding the number of shares sold at each separate price within the range set forth in this footnote.
- The stock options is fully vested.

/s/ Hunter Smith

12/07/2023

\*\* Signature of Reporting Person

Date

Reminder: Report on a separate line for each class of securities beneficially owned directly or indirectly.

\* If the form is filed by more than one reporting person, see Instruction 4 (b)(v).

\*\* Intentional misstatements or omissions of facts constitute Federal Criminal Violations See 18 U.S.C. 1001 and 15 U.S.C. 78ff(a).

Note: File three copies of this Form, one of which must be manually signed. If space is insufficient, see Instruction 6 for procedure.

Persons who respond to the collection of information contained in this form are not required to respond unless the form displays a currently valid OMB Number.