# FORM 4

#### UNITED STATES SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

# STATEMENT OF CHANGES IN BENEFICIAL OWNERSHIP

OMB APPROVAL 3235-0287 OMB Number: Estimated average burden hours per response: 0.5

Check this box if no longer subject to Section 16. Form 4 or Form 5 obligations may continue. See

Instruction 1(b)

Check this box to indicate that a transaction was made pursuant to a contract, instruction or written plan for the purchase or sale of equity securities of the issuer that is intended to satisfy the affirmative defense conditions of Rule 10b5-1(c). See

Instruction 10.

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* Shulman Joseph				suer Name <b>and</b> Ticke IYTHM PHAR TM ]				[ (Chec	ationship of Reportin call applicable) Director Officer (give title	10% (			
(Last) (First) (Middle) 222 BERKELEY STREET, 12TH FLOOR				ate of Earliest Transac 09/2024	ction (M	onth/[	Day/Year)		Officer (give title Other (specify below)  Chief Technical Officer				
(Street) BOSTON (City)	MA (State)		Amendment, Date of 13/2024	Original	Filed	(Month/Day/Y	6. Indi Line)	1 -					
Table I - Non-Deriva  1. Title of Security (Instr. 3)  2. Transa Date (Month/D				2A. Deemed Execution Date,	3. Transa Code (	ction	4. Securities Disposed Of	Acquired	I (A) or	5. Amount of Securities Beneficially Owned Following Reported	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	Transaction(s) (Instr. 3 and 4)		(111501.4)	
Common Stock			02/09/2024		<b>M</b> <sup>(1)</sup>		65,175	Α	\$21.38	70,415	D		
Common Stock 02/09					M <sup>(1)</sup>		3,985	A	\$6.8	74,430	D		

#### Securities Acquired, Disposed of, or Beneficially (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	Amount or Number of Shares				
Stock Option (right to buy)	\$21.38	02/09/2024		M <sup>(1)</sup>			65,175	(2)	07/26/2030	Common Stock	65,175	\$0	10,625	D	
Stock Option (right to buy)	\$6.8	02/09/2024		M <sup>(1)</sup>			3,985	(3)	02/08/2022	Common Stock	3,985	\$0	31,875	D	

#### **Explanation of Responses:**

- 1. This amendment is being filed to correct the number of options exercised in row two of each of Table I and Table II in the originally filed Form 4 on February 13, 2024; and to report the exercise of the options in row two of each of Table I and Table II in this amended Form 4. The originally filed Form 4 reported 69,190 options exercised in row two of each of Table I and Table II which should have been 69,160, the total amount actually exercised.
- 2. The stock options were granted on July 27, 2020. 25% of the shares subject to the option vested and became exercisable on July 27, 2021 and the remaining 75% of the shares subject to the option shall vest and become exercisable in 12 substantially equal installments upon the Reporting Person's completion of each three full months of successive service to the Issuer thereafter.
- 3. The stock options were granted on February 9, 2022. The options vest and become exercisable in 16 substantially equal installments upon the Reporting Person's completion of each three full months of successive service to the Issuer following the grant date.

## Remarks:

Exhibit 24

/s/ Stephen Vander Stoep as Attorney-in-Fact for Joseph

11/13/2024

Shulman \*\* 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.

## **POWER OF ATTORNEY**

KNOW ALL BY THESE PRESENTS, that the undersigned hereby constitutes and appoints each of David Meeker, M.D., Jim Flaherty, Hunter Smith, Christopher German and Stephen Vander Stoep signing singly, as his true and lawful attorney-in-fact to:

- (1) execute for and on behalf of the undersigned, in the undersigned's capacity as a director of Rhythm Pharmaceuticals, Inc. (the "Company"), Forms 3, 4, and 5 in accordance with Section 16(a) of the Securities Exchange Act of 1934 and the rules thereunder and any other forms or reports the undersigned may be required to file in connection with the undersigned's ownership, acquisition, or disposition of securities of the Company;
- (2) do and perform any and all acts for and on behalf of the undersigned which may be necessary or desirable to complete and execute any such Form 3, 4, or 5, or other form or report, and timely file such form or report with the U.S. Securities and Exchange Commission and any stock exchange or similar authority; and
- (3) take any other action of any type whatsoever in connection with the foregoing which, in the opinion of such attorney-in-fact, may be of benefit to, in the best interest of, or legally required by, the undersigned, it being understood that the documents executed by such attorney-in-fact on behalf of the undersigned, pursuant to this Power of Attorney, shall be in such form and shall contain such terms and conditions as such attorney-in-fact may approve in his discretion.

The undersigned hereby grants to each such attorney-in-fact full power and authority to do and perform each and every act and thing whatsoever requisite, necessary, and proper to be done in the exercise of any of the rights and powers herein granted, as fully to all intents and purposes as the undersigned might or could do if personally present, with full power of substitution or revocation, hereby ratifying and confirming all that such attorney-in-fact, or his substitute or substitutes, shall lawfully do or cause to be done by virtue of this Power of Attorney and the rights and powers herein granted. The undersigned acknowledges that no such attorney-in-fact, in serving in such capacity at the request of the undersigned, is hereby assuming any of the undersigned's responsibilities to comply with Section 13 and Section 16 of the Securities Exchange Act of 1934 and the rules thereunder, as amended.

This Power of Attorney shall remain in full force and effect until revoked by the undersigned in a signed writing delivered to the foregoing attorneys-in-fact.

IN WITNESS WHEREOF, the undersigned has caused this Power of Attorney to be executed as of this 25<sup>th</sup> day of September, 2024.

/s/ Joseph Shulman Joseph Shulman