FORM 4

UNITED STATES SECURITIES AND EXCHANGE COMMISSION

| Washington, D | .C. 20549 |
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| Check this box if no longer subject |
|-------------------------------------|
| to Section 16. Form 4 or Form 5 |
| obligations may continue. See |
| Instruction 1(b). |

STATEMENT OF CHANGES IN BENEFICIAL OWNERSHIP

| OMB APPROVAL | | | | | | | |
|--------------------------|--|--|--|--|--|--|--|
| OMB Number: 3235-028 | | | | | | | |
| Estimated average burden | | | | | | | |
| hours per response: | | | | | | | |

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* Meeker David P | | | | | 2. Issuer Name and Ticker or Trading Symbol RHYTHM PHARMACEUTICALS, INC. [RYTM] | | | | | | | | Check X | | | 10% O | | wner | |
|------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------|---------------------|---------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------|--------------------------------------------|----------------------------------------------------------------|-----------------------------------------------------------------------|----------------------------------------------------------------------------------------------------|--------------------|---------------|----------------------------------------|----------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------|---------------------------------------|-----------------------------------------------------|------------|
| (Last) 222 BER | (Fir | st) (MTREET, 12TH F | Middle) | t. | | 3. Date of Earliest Transaction (Month/Day/Year) 03/19/2024 | | | | | | | | X | Officer (give title below) Presiden | | Other (spe below) | | вреспу |
| (Street) BOSTON | | | | | | 4. If Amendment, Date of Original Filed (Month/Day/Year) | | | | | | | | Indiv ne) X | vidual or Joint/Group Filing (Check Applicable Form filed by One Reporting Person Form filed by More than One Reporting Person | | | | |
| (City) | (Sta | ate) (2 | Zip) | Rule 10b5-1(c) Transaction Indication 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. | | | | | | | | | | nded to | | | | | |
| | | Table | I - No | on-Deriva | tive S | Secui | rities | Acc | quired | l, Dis | sposed of | f, or E | Benefici | ially | Own | ed | | | |
| 1. Title of Security (Instr. 3) 2. Transaction Date (Month/Day/ | | | | | /Year) Execu | | Deemed ution Date, / th/Day/Year) | | 3. Transaction Code (Instr. 8) 4. Securities Disposed Of | | | | d 5) | 5. Amount of Securities Beneficially Owned Following Reported | | 6. Ownership Form: Direct (D) or Indirect (I) (Instr. 4) | | 7. Nature of Indirect Beneficial Ownership | |
| | | | | | | | | | Code | v | Amount | (A) or (D) | Price | Trai | | nsaction(s) tr. 3 and 4) | | | (Instr. 4) |
| Common Stock 03/19/20 | | | | | 2024 | | | | S ⁽¹⁾ 45,4 | | 45,494 | D | \$39.2 | 22(2) | | 174,605 | | 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) | Derivative Conversion Date Execution Date, Gecurity or Exercise (Month/Day/Year) if any | | | 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) | | Der Sec | rice of ivative urity tr. 5) | 9. Number derivative Securities Beneficially Owned Following Reported Transaction (Instr. 4) | y | 10. Ownership Form: Direct (D) or Indirect (I) (Instr. 4) | Beneficial Ownership (Instr. 4) | | |
| | | | | | Code | v | (A) | (D) | Date Exerci | sable | Expiration Date | Title | Amount or Number of Shares | | | | | | |

Explanation of Responses:

- 1. The sale reported in this Form 4 was effected pursuant to Rule 10b5-1 instruction adopted prior to February 27, 2023 solely with the intent to cover withholding taxes in connection with the vesting of certain previously reported restricted stock units.
- 2. The price reported in Column 4 is a weighted average price. These shares were sold in multiple transactions at per share prices ranging from \$39.04 to \$39.22. 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.

/s/ Hunter Smith, Attorney-in-Fact for David P. Meeker

03/19/2024

** 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.