

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

**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*<br><u>TETRAULT LYNN A.</u><br><br>(Last) (First) (Middle)<br><u>222 BERKELEY STREET,</u><br><u>12TH FLOOR</u><br><br>(Street)<br><u>BOSTON MA 02116</u><br><br>(City) (State) (Zip) | 2. Issuer Name and Ticker or Trading Symbol<br><u>RHYTHM PHARMACEUTICALS, INC. [ RYTM ]</u> | 5. Relationship of Reporting Person(s) to Issuer (Check all applicable)<br><input checked="" type="checkbox"/> Director 10% Owner<br>Officer (give title below) Other (specify below) |
|  | 3. Date of Earliest Transaction (Month/Day/Year)<br><u>08/12/2024</u>                       |   |
|  | 4. If Amendment, Date of Original Filed (Month/Day/Year)                                    |   |

**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                    | 08/12/2024                           |  | M                              |   | 10,000  | A          | \$4.15                   | 13,000  | D  |   |
| Common Stock                    | 08/12/2024                           |  | s <sup>(1)</sup>               |   | 9,593   | D          | \$44.6154 <sup>(2)</sup> | 3,407   | D  |   |
| Common Stock                    | 08/12/2024                           |  | s <sup>(1)</sup>               |   | 407   | D          | \$45.3717 <sup>(3)</sup> | 3,000   | 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 |   |  |  |   |  | Amount or Number of Shares |
| Stock Option (right to buy)                | \$4.15   | 08/12/2024                           |  | M                              |   |  | 10,000 | (4)  | 06/07/2032      | Common Stock  | 10,000                                     | \$0.00   | 10,000  | D  |                            |

**Explanation of Responses:**

- The sales reported in the Form 4 were effected pursuant to a Rule 10b5-1 instruction adopted on May 13, 2024.
- The price reported is a weighted average price. The securities were sold in multiple transactions at per share prices ranging from \$44.32 to \$45.19. The Reporting Person undertakes to provide upon request the SEC staff, the Issuer, or any shareholder of the Issuer, full information regarding the number of securities sold at each separate price within the range set forth in this footnote.
- The price reported is a weighted average price. The securities were sold in multiple transactions at per share prices ranging from \$45.35 to \$45.61. The Reporting Person undertakes to provide upon request the SEC staff, the Issuer, or any shareholder of the Issuer, full information regarding the number of securities sold at each separate price within the range set forth in this footnote.
- The option is fully vested and exercisable.

/s/ Hunter Smith, attorney-in-  
fact for Lynn A. Tetrault 08/14/2024  
 \*\* 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.