

**STATEMENT OF CHANGES IN BENEFICIAL OWNERSHIP**

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

| OMB APPROVAL                                 |           |
|--|-----------|
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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).

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.

|   |   |   |
|---|---|---|
| 1. Name and Address of Reporting Person*<br><u>Lee Jennifer Kayden</u><br><br>(Last) (First) (Middle)<br>C/O RHYTHM PHARMACEUTICALS, INC.<br>222 BERKELEY STREET, 12TH FLOOR<br><br>(Street)<br>BOSTON MA 02116<br><br>(City) (State) (Zip) | 2. Issuer Name and Ticker or Trading Symbol<br><u>RHYTHM PHARMACEUTICALS, INC.</u> [RYTM] | 5. Relationship of Reporting Person(s) to Issuer (Check all applicable)<br>Director 10% Owner<br><input checked="" type="checkbox"/> Officer (give title below) Other (specify below)<br>EVP, Head of North America |
|   | 3. Date of Earliest Transaction (Month/Day/Year)<br>11/11/2024                            |   |
| 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                    | 11/11/2024                           |  | M                              |   | 20,622  | A          | \$6.8                    | 27,474  | D  |   |
| Common Stock                    | 11/11/2024                           |  | M                              |   | 28,717  | A          | \$24.29                  | 56,191  | D  |   |
| Common Stock                    | 11/11/2024                           |  | M                              |   | 11,642  | A          | \$30.66                  | 67,833  | D  |   |
| Common Stock                    | 11/11/2024                           |  | S <sup>(1)</sup>               |   | 38,051  | D          | \$65.6763 <sup>(2)</sup> | 29,782  | D  |   |
| Common Stock                    | 11/11/2024                           |  | S <sup>(1)</sup>               |   | 17,540  | D          | \$66.9484 <sup>(3)</sup> | 12,242  | D  |   |
| Common Stock                    | 11/11/2024                           |  | S <sup>(1)</sup>               |   | 11,070  | D          | \$67.5585 <sup>(4)</sup> | 1,172   | D  |   |
| Common Stock                    | 11/11/2024                           |  | S <sup>(1)</sup>               |   | 200   | D          | \$68.43                  | 972   | 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)                | \$6.8  | 11/11/2024                           |  | M                              |   |  | 20,622 | (5)  | 02/08/2032      | Common Stock  | 20,622                                     | \$0  | 25,790  | D  |       |
| Stock Option (Right to Buy)                | \$24.29  | 11/11/2024                           |  | M                              |   |  | 28,717 | (6)  | 11/09/2030      | Common Stock  | 28,717                                     | \$0  | 71,283  | D  |       |
| Stock Option (Right to Buy)                | \$30.66  | 11/11/2024                           |  | M                              |   |  | 11,642 | (7)  | 02/10/2031      | Common Stock  | 11,642                                     | \$0  | 37,108  | 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 August 8, 2024.
- The price reported in Column 4 is a weighted average price. The securities were sold in multiple transactions at prices ranging from \$65.18 to \$66.1799 per common stock. 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 price reported in Column 4 is a weighted average price. The securities were sold in multiple transactions at prices ranging from \$66.33 to \$67.3299 per common stock. 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 price reported in Column 4 is a weighted average price. The securities were sold in multiple transactions at prices ranging from \$67.33 to \$68.3299 per common stock. 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 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.
- The stock options were granted on November 9, 2020. The options are fully vested.

7. The stock options were granted on February 11, 2021. 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 Jennifer      11/13/2024  
Lee

\*\* 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/ Jennifer Kayden Lee  
Jennifer Kayden Lee

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