

UNITED STATES  
SECURITIES AND EXCHANGE COMMISSION  
Washington, D.C. 20549

SCHEDULE 13G  
Under the Securities Exchange Act of 1934  
(Amendment No. 2)\*

RHYTHM PHARMACEUTICALS, INC.

-----  
(Name of Issuer)

Common Stock, \$0.001 par value per share

-----  
(Title of Class of Securities)

76243J105

-----  
(CUSIP Number)

December 29, 2023

-----  
(Date of Event Which Requires Filing of this Statement)

Check the appropriate box to designate the rule pursuant to which this Schedule is filed:

Rule 13d-1(b)

Rule 13d-1(c)

Rule 13d-1(d)

\*The remainder of this cover page shall be filled out for a reporting person's initial filing on this form with respect to the subject class of securities, and for any subsequent amendment containing information which would alter the disclosures provided in a prior cover page.

The information required in the remainder of this cover page shall not be deemed to be "filed" for the purpose of Section 18 of the Securities Exchange Act of 1934 ("Act") or otherwise subject to the liabilities of that section of the Act but shall be subject to all other provisions of the Act (however, see the Notes).

Page 1 of 11

-----  
CUSIP No. 76243J105

13G

-----  
1. Name of Reporting Person  
I.R.S. Identification No. of above Person

THE GOLDMAN SACHS GROUP, INC.

-----  
2. Check the Appropriate Box if a Member of a Group

(a)

(b)

-----  
3. SEC Use Only

-----  
4. Citizenship or Place of Organization

Delaware

-----  
5. Sole Voting Power

Number of 0

Shares

-----  
6. Shared Voting Power

Beneficially

4,998,736

Owned by

Each

-----  
7. Sole Dispositive Power

Reporting

0

Person

-----  
8. Shared Dispositive Power

With:

4,998,761

-----  
9. Aggregate Amount Beneficially Owned by Each Reporting Person

4,998,761

-----  
10. Check if the Aggregate Amount in Row (9) Excludes Certain Shares

[ ]

-----  
11. Percent of Class Represented by Amount in Row (9)

8.5 %

-----  
12. Type of Reporting Person

HC-CO

-----  
1. Name of Reporting Person  
I.R.S. Identification No. of above Person

GOLDMAN SACHS & CO. LLC

-----  
2. Check the Appropriate Box if a Member of a Group

(a)

(b)

-----  
3. SEC Use Only

-----  
4. Citizenship or Place of Organization

New York

-----  
5. Sole Voting Power

Number of 0

Shares

-----  
6. Shared Voting Power

Beneficially

4,998,736

Owned by

Each

-----  
7. Sole Dispositive Power

Reporting 0

Person

-----  
8. Shared Dispositive Power

With:

4,998,761

-----  
9. Aggregate Amount Beneficially Owned by Each Reporting Person

4,998,761

-----  
10. Check if the Aggregate Amount in Row (9) Excludes Certain Shares

-----  
11. Percent of Class Represented by Amount in Row (9)

8.5 %

-----  
12. Type of Reporting Person

BD-00-IA

- Item 1(a). Name of Issuer:  
RHYTHM PHARMACEUTICALS, INC.
- Item 1(b). Address of Issuer's Principal Executive Offices:  
222 Berkeley Street  
12th Floor  
Boston, MA 02116
- Item 2(a). Name of Persons Filing:  
  
THE GOLDMAN SACHS GROUP, INC.  
GOLDMAN SACHS & CO. LLC
- Item 2(b). Address of Principal Business Office or, if none, Residence:  
  
The Goldman Sachs Group, Inc.  
200 West Street  
New York, NY 10282  
  
Goldman Sachs & Co. LLC  
200 West Street  
New York, NY 10282
- Item 2(c). Citizenship:  
THE GOLDMAN SACHS GROUP, INC. - Delaware  
GOLDMAN SACHS & CO. LLC - New York
- Item 2(d). Title of Class of Securities:  
Common Stock, \$0.001 par value per share
- Item 2(e). CUSIP Number:  
76243J105
- Item 3. If this statement is filed pursuant to Rules 13d-1(b) or 13d-2(b) or (c), check whether the person filing is a:
- (a).  Broker or dealer registered under Section 15 of the Act (15 U.S.C. 78o).  
Goldman Sachs & Co. LLC
- (b).  Bank as defined in Section 3(a)(6) of the Act (15 U.S.C. 78c).
- (c).  Insurance company as defined in Section 3(a)(19) of the Act (15 U.S.C. 78c).
- (d).  Investment company registered under Section 8 of the Investment Company Act of 1940 (15 U.S.C. 80a-8).
- (e).  An investment adviser in accordance with Rule 13d-1(b)(1)(ii)(E);  
Goldman Sachs & Co. LLC
- (f).  An employee benefit plan or endowment fund in accordance with Rule 13d-1(b)(1)(ii)(F);
- (g).  A parent holding company or control person in accordance with Rule 13d-1(b)(1)(ii)(G);  
The Goldman Sachs Group, Inc.
- (h).  A savings association as defined in Section 3(b) of the Federal Deposit Insurance Act (12 U.S.C. 1813);
- (i).  A church plan that is excluded from the definition of an investment company under Section 3(c)(14) of the Investment Company Act of 1940 (15 U.S.C. 80a-3);
- (j).  A non-U.S. institution in accordance with Rule 13d-1(b)(1)(ii)(J);
- (k).  A group, in accordance with Rule 13d-1(b)(1)(ii)(A) through (K).

If filing as a non-U.S. institution in accordance with Rule 13d-1(b)(1)(ii)(J), please specify the type of institution:

- Item 4. Ownership.\*
- (a). Amount beneficially owned:  
See the response(s) to Item 9 on the attached cover page(s).
  - (b). Percent of Class:  
See the response(s) to Item 11 on the attached cover page(s).
  - (c). Number of shares as to which such person has:
    - (i). Sole power to vote or to direct the vote: See the response(s) to Item 5 on the attached cover page(s).
    - (ii). Shared power to vote or to direct the vote: See the response(s) to Item 6 on the attached cover page(s).
    - (iii). Sole power to dispose or to direct the disposition of: See the response(s) to Item 7 on the attached cover page(s).
    - (iv). Shared power to dispose or to direct the disposition of: See the response(s) to Item 8 on the attached cover page(s).
- Item 5. Ownership of Five Percent or Less of a Class.  
Not Applicable
- Item 6. Ownership of More than Five Percent on Behalf of Another Person.
- Clients of the Reporting Person(s) have or may have the right to receive or the power to direct the receipt of dividends from, or the proceeds from the sale of, securities held in their accounts. Clients known to have such right or power with respect to more than 5% of the class of securities to which this report relates are:  
NONE
- Item 7. Identification and Classification of the Subsidiary Which Acquired the Security Being Reported on by the Parent Holding Company.  
See Exhibit (99.2)
- Item 8. Identification and Classification of Members of the Group.  
Not Applicable
- Item 9. Notice of Dissolution of Group.  
Not Applicable
- Item 10. Certification.  
By signing below I certify that, to the best of my knowledge and belief, the securities referred to above were acquired and are held in the ordinary course of business and were not acquired and are not held for the purpose of or with the effect of changing or influencing the control of the issuer of the securities and were not acquired and are not held in connection with or as a participant in any transaction having that purpose or effect, other than activities solely in connection with a nomination under Section 240.14a-11.

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\*In accordance with the Securities and Exchange Commission Release No. 34-39538 (January 12, 1998) (the "Release"), this filing reflects the securities beneficially owned by certain operating units (collectively, the "Goldman Sachs Reporting Units") of The Goldman Sachs Group, Inc. and its subsidiaries and affiliates (collectively, "GSG"). This filing does not reflect securities, if any, beneficially owned by any operating units of GSG whose ownership of securities is disaggregated from that of the Goldman Sachs Reporting Units in accordance with the Release. The Goldman Sachs Reporting Units disclaim beneficial ownership of the securities beneficially owned by (i) any client accounts with respect to which the Goldman Sachs Reporting Units or their employees have voting or investment discretion or both, or with respect to which there are limits on their voting or investment authority or both and (ii) certain investment entities of which the Goldman Sachs Reporting Units act as the general partner, managing general partner or other manager, to the

extent interests in such entities are held by persons other than the Goldman Sachs Reporting Units.

SIGNATURE

After reasonable inquiry and to the best of my knowledge and belief, I certify that the information set forth in this statement is true, complete and correct.

Date: February 01, 2024,

THE GOLDMAN SACHS GROUP, INC.

By:/s/ Kateryna Osmachko

-----  
Name: Kateryna Osmachko  
Title: Attorney-in-fact

GOLDMAN SACHS & CO. LLC

By:/s/ Kateryna Osmachko

-----  
Name: Kateryna Osmachko  
Title: Attorney-in-fact

INDEX TO EXHIBITS

Exhibit No.	Exhibit
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99.1	Joint Filing Agreement
99.2	Item 7 Information
99.3	Power of Attorney, relating to THE GOLDMAN SACHS GROUP, INC.
99.4	Power of Attorney, relating to GOLDMAN SACHS & CO. LLC



JOINT FILING AGREEMENT

In accordance with Rule 13d-1(k)(1) promulgated under the Securities Exchange Act of 1934, the undersigned agree to the joint filing of a Statement on Schedule 13G (including any and all amendments thereto) with respect to the Common Stock, \$0.001 par value per share, of RHYTHM PHARMACEUTICALS, INC. and further agree to the filing of this agreement as an Exhibit thereto. In addition, each party to this Agreement expressly authorizes each other party to this Agreement to file on its behalf any and all amendments to such Statement on Schedule 13G.

Date: February 01, 2024,

THE GOLDMAN SACHS GROUP, INC.

By:/s/ Kateryna Osmachko

-----  
Name: Kateryna Osmachko  
Title: Attorney-in-fact

GOLDMAN SACHS & CO. LLC

By:/s/ Kateryna Osmachko

-----  
Name: Kateryna Osmachko  
Title: Attorney-in-fact

ITEM 7 INFORMATION

The securities being reported on by The Goldman Sachs Group, Inc. ("GS Group"), as a parent holding company, are owned, or may be deemed to be beneficially owned, by Goldman Sachs & Co. LLC ("Goldman Sachs"), a broker or dealer registered under Section 15 of the Act and an investment adviser registered under Section 203 of the Investment Advisers Act of 1940. Goldman Sachs is a subsidiary of GS Group.

## POWER OF ATTORNEY

KNOW ALL PERSONS BY THESE PRESENTS that THE GOLDMAN SACHS GROUP, INC. (the "Company") does hereby make, constitute and appoint each Abhishek V, Kateryna Osmachko, Ameen Soetan, Kshama Mishra, Papa Lette, Sunaina Kapoor, and Andrzej Szyszka, acting individually, its true and lawful attorney, to execute and deliver in its name and on its behalf, whether the Company is acting individually or as representative of others, any and all filings required to be made by the Company pursuant to Rule 13f-1 or Regulation 13D-G under the Securities Exchange Act of 1934, (as amended, the "Act"), which may be required of the Company with respect to securities which may be deemed to be beneficially owned by the Company under the Act, giving and granting unto each said Attorney-in-fact power and authority to act in the premises as fully and to all intents and purposes as the Company might or could do if personally present by one of its authorized signatories, hereby ratifying and confirming all that said Attorney-in-fact shall lawfully do or cause to be done by virtue hereof.

THIS POWER OF ATTORNEY shall remain in full force and effect until December 1, 2024 unless earlier revoked by written instrument, or in the event an Attorney-in-fact ceases to be an employee of The Goldman Sachs Group, Inc. or one of its affiliates or ceases to perform the function in connection with which he or she was appointed Attorney-in-fact prior to December 1, 2024, this Power of Attorney shall cease to have effect in relation to such Attorney-in-fact upon such cessation but shall continue in full force and effect in relation to the remaining Attorneys-in-fact. The Company has the unrestricted right unilaterally to revoke the Power of Attorney.

This Power of Attorney shall be governed by, and construed in accordance with, the laws of the State of New York, without regard to rules of conflicts of law.

This Power of Attorney supersedes the Power of Attorney granted by the Company to Stephanie Snyder, Terry Mosher, Rachel Fraizer, Jamie Minieri, and Terrance Grey on December 1, 2021.

IN WITNESS WHERE OF, the under signed has duly subscribed these presents as of December 1, 2023.

GOLDMAN SACHS & CO. LLC

By: /s/ Milton Millman

\_\_\_\_\_  
Name: Milton Millman  
Title: Authorized Signatory

## POWER OF ATTORNEY

KNOW ALL PERSONS BY THESE PRESENTS that GOLDMAN SACHS & CO. LLC (the "Company") does hereby make, constitute and appoint each Abhishek V, Kateryna Osmachko, Ameen Soetan, Kshama Mishra, Papa Lette, Sunaina Kapoor, and Andrzej Szyszka, acting individually, its true and lawful attorney, to execute and deliver in its name and on its behalf, whether the Company is acting individually or as representative of others, any and all filings required to be made by the Company pursuant to Rule 13f-1 or Regulation 13D-G under the Securities Exchange Act of 1934, (as amended, the "Act"), which may be required of the Company with respect to securities which may be deemed to be beneficially owned by the Company under the Act, giving and granting unto each said Attorney-in-fact power and authority to act in the premises as fully and to all intents and purposes as the Company might or could do if personally present by one of its authorized signatories, hereby ratifying and confirming all that said Attorney-in-fact shall lawfully do or cause to be done by virtue hereof.

THIS POWER OF ATTORNEY shall remain in full force and effect until December 1, 2024 unless earlier revoked by written instrument, or in the event an Attorney-in-fact ceases to be an employee of The Goldman Sachs Group, Inc. or one of its affiliates or ceases to perform the function in connection with which he or she was appointed Attorney-in-fact prior to December 8, 2023, this Power of Attorney shall cease to have effect in relation to such Attorney-in-fact upon such cessation but shall continue in full force and effect in relation to the remaining Attorneys-in-fact. The Company has the unrestricted right unilaterally to revoke the Power of Attorney.

This Power of Attorney shall be governed by, and construed in accordance with, the laws of the State of New York, without regard to rules of conflicts of law.

This Power of Attorney supersedes the Power of Attorney granted by the Company to Stephanie Snyder, Terry Mosher, Rachel Fraizer, Jamie Minieri, and Terrance Grey on December 1, 2021.

IN WITNESS WHEREOF, the undersigned has duly subscribed these presents as of December 1, 2023.

GOLDMAN SACHS & CO. LLC

By: /s/ Milton Millman

\_\_\_\_\_  
Name: Milton Millman  
Title: Authorized Signatory