

SCHEDULE 13G

UNDER THE SECURITIES EXCHANGE ACT OF 1934  
INITIAL FILING

RHYTHM PHARMACEUTICALS INC  
(NAME OF ISSUER)  
COMMON STOCK  
(TITLE OF CLASS OF SECURITIES)  
76243J105  
(CUSIP NUMBER)  
12/31/2022  
(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).

CUSIP NO: 76243J105 13G PAGE 2 OF 7 PAGES

1. NAME OF REPORTING PERSON: STATE STREET CORPORATION  
I.R.S. IDENTIFICATION NO. OF THE ABOVE PERSON: 04-2456637
2. CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP  
NOT APPLICABLE
3. SEC USE ONLY
4. CITIZENSHIP OR PLACE OF ORGANIZATION  
BOSTON, MASSACHUSETTS
5. SOLE VOTING POWER  
0 SHARES
6. SHARED VOTING POWER  
3,137,350
7. SOLE DISPOSITIVE POWER  
0 SHARES
8. SHARED DISPOSITIVE POWER  
3,180,698
9. AGGREGATED AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON  
3,180,698
10. CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (9) EXCLUDES CERTAIN SHARES  
NOT APPLICABLE
11. PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW 9  
5.64%
12. TYPE OF REPORTING PERSON  
HC

CUSIP NO: 76243J105 13G PAGE 3 OF 7 PAGES

1. NAME OF REPORTING PERSON: SSGA FUNDS MANAGEMENT, INC.  
I.R.S. IDENTIFICATION NO. OF THE ABOVE PERSON: 04-3555193

2. CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP  
NOT APPLICABLE
3. SEC USE ONLY
4. CITIZENSHIP OR PLACE OF ORGANIZATION  
BOSTON, MASSACHUSETTS
5. SOLE VOTING POWER  
0 SHARES
6. SHARED VOTING POWER  
2,933,387
7. SOLE DISPOSITIVE POWER  
0 SHARES
8. SHARED DISPOSITIVE POWER  
2,933,387
9. AGGREGATED AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON  
2,933,387
10. CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (9) EXCLUDES CERTAIN SHARES  
NOT APPLICABLE
11. PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW 9  
5.21%
12. TYPE OF REPORTING PERSON  
IA

CUSIP NO: 76243J105 13G PAGE 4 OF 7 PAGES

ITEM 1.

- (A) NAME OF ISSUER  
RHYTHM PHARMACEUTICALS INC
- (B) ADDRESS OF ISSUER'S PRINCIPAL EXECUTIVE OFFICES  
500 BOYLSTON STREET 11TH FLOOR BOSTON MA 02116 UNITED STATES

ITEM 2.

- (A) NAME OF PERSON FILING  
STATE STREET CORPORATION  
SSGA FUNDS MANAGEMENT, INC.
- (B) ADDRESS OF PRINCIPAL BUSINESS OFFICE OR, IF NONE,  
RESIDENCE  
STATE STREET FINANCIAL CENTER  
1 LINCOLN STREET  
BOSTON, MA 02111  
(FOR ALL REPORTING PERSONS)
- (C) CITIZENSHIP: SEE ITEM 4 (CITIZENSHIP OR PLACE OF  
ORGANIZATION) OF COVER PAGES
- (D) TITLE OF CLASS OF SECURITIES  
COMMON STOCK
- (E) CUSIP NUMBER:  
76243J105

ITEM 3.

IF THIS STATEMENT IS FILED PURSUANT TO RULE 13D-1(B), OR 13D-2(B)  
OR (C), CHECK WHETHER THE PERSON FILING IS A:  
SEE ITEM 12(TYPE OF REPORTING PERSON) OF THE COVER PAGE  
FOR EACH REPORTING PERSON AND THE TABLE BELOW, WHICH EXPLAINS  
THE MEANING OF THE TWO LETTER SYMBOLS APPEARING IN ITEM 12 OF  
THE COVER PAGES.

SYMBOL	CATEGORY
BK	BANK AS DEFINED IN SECTION 3(A) (6) OF THE ACT.
IC	INSURANCE COMPANY AS DEFINED IN SECTION 3 (A) (19) OF THE ACT
IC	INVESTMENT COMPANY REGISTERED UNDER SECTION 8 OF THE INVESTMENT COMPANY ACT OF 1940.
IA	AN INVESTMENT ADVISOR IN ACCORDANCE WITH RULE 13D-1(B) (1) (II) (E).
EP	AN EMPLOYEE BENEFIT PLAN OR ENDOWMENT FUND IN

HC ACCORDANCE WITH RULE 13D-1(B) (1) (II) (F) .  
A PARENT HOLDING COMPANY OR CONTROL PERSON IN  
ACCORDANCE WITH RULE 13D-1(B)(1)(II) (G).  
SA A SAVINGS ASSOCIATIONS AS DEFINED IN SECTION 3(B)  
OF THE FEDERAL DEPOSIT INSURANCE ACT (12 U.S.C. 1813).  
CP 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.

CUSIP NO: 76243J105 13G PAGE 5 OF 7 PAGES

- ITEM 4. OWNERSHIP  
THE INFORMATION SET FORTH IN ROWS 5 THROUGH 11 OF THE COVER PAGE  
HERETO FOR EACH OF THE REPORTING PERSONS IS INCORPORATED  
HEREIN BY REFERENCE.
- ITEM 5. OWNERSHIP OF FIVE PERCENT OR LESS OF CLASS  
NOT APPLICABLE
- ITEM 6. OWNERSHIP OF MORE THAN FIVE PERCENT ON BEHALF OF ANOTHER PERSON  
NOT APPLICABLE
- ITEM 7. IDENTIFICATION AND CLASSIFICATION OF THE SUBSIDIARY WHICH  
ACQUIRED THE SECURITY BEING REPORTED ON BY THE PARENT HOLDING  
COMPANY OR CONTROL PERSON  
SEE EXHIBIT 1 ATTACHED HERETO
- ITEM 8. IDENTIFICATION AND CLASSIFICATION OF MEMBERS OF THE GROUP  
NOT APPLICABLE
- ITEM 9. NOTICE OF DISSOLUTION OF GROUP  
NOT APPLICABLE

CUSIP NO: 76243J105 13G PAGE 6 OF 7 PAGES

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 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.

SIGNATURES

AFTER REASONABLE INQUIRY AND TO THE BEST OF HIS KNOWLEDGE AND  
BELIEF, EACH OF THE UNDERSIGNED CERTIFIES THAT THE INFORMATION SET FORTH  
IN THIS STATEMENT IS TRUE, COMPLETE AND CORRECT.

STATE STREET CORPORATION

ELIZABETH SCHAEFER

SENIOR VICE PRESIDENT, DEPUTY CONTROLLER

SSGA FUNDS MANAGEMENT, INC.

JACLYN COLLIER  
CHIEF COMPLIANCE OFFICER

EXHIBIT 1

THE FOLLOWING TABLE LISTS THE IDENTITY AND ITEM 3 CLASSIFICATION OF EACH SUBSIDIARY OF STATE STREET CORPORATION, THE PARENT HOLDING COMPANY, THAT BENEFICIALLY OWNS THE ISSUER'S SECURITIES. PLEASE REFER TO ITEM 3 OF THE ATTACHED SCHEDULE 13G FOR A DESCRIPTION OF EACH OF THE TWO-LETTER SYMBOLS REPRESENTING THE ITEM 3 CLASSIFICATION BELOW.

SUBSIDIARY	ITEM 3 CLASSIFICATION
SSGA FUNDS MANAGEMENT, INC.	IA
STATE STREET GLOBAL ADVISORS EUROPE LIMITED	IA
STATE STREET GLOBAL ADVISORS LIMITED	IA
STATE STREET GLOBAL ADVISORS TRUST COMPANY	IA

NOTE: ALL OF THE LEGAL ENTITIES ABOVE ARE DIRECT OR INDIRECT SUBSIDIARIES OF STATE STREET CORPORATION.

CUSIP NO: 76243J105 13G PAGE 7 OF 7 PAGES

JOINT FILING AGREEMENT

IN ACCORDANCE WITH RULE 13D-1(K)(1) UNDER THE SECURITIES EXCHANGE ACT OF 1934, AS AMENDED (THE EXCHANGE ACT), EACH UNDERSIGNED ENTITY (EACH A COMPANY) HEREBY AGREES TO ANY AND ALL JOINT FILINGS REQUIRED TO BE MADE ON THE COMPANY'S BEHALF ON SCHEDULE 13G (INCLUDING AMENDMENTS THERETO) UNDER THE EXCHANGE ACT, WITH RESPECT TO SECURITIES WHICH MAY BE DEEMED TO BE BENEFICIALLY OWNED BY THE COMPANY UNDER THE EXCHANGE ACT, AND THAT THIS AGREEMENT BE INCLUDED AS AN EXHIBIT TO ANY SUCH JOINT FILING. THIS AGREEMENT MAY BE EXECUTED IN ANY NUMBER OF COUNTERPARTS ALL OF WHICH TAKEN TOGETHER SHALL CONSTITUTE ONE AND THE SAME INSTRUMENT.

IN WITNESS WHEREOF, EACH COMPANY HEREBY EXECUTES THIS AGREEMENT EFFECTIVE AS OF THE DATE SET FORTH BELOW.

STATE STREET CORPORATION

ELIZABETH SCHAEFER  
SENIOR VICE PRESIDENT, DEPUTY CONTROLLER

SSGA FUNDS MANAGEMENT, INC.

JACLYN COLLIER  
CHIEF COMPLIANCE OFFICER

