UNITED STATES SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

SCHEDULE 13D/A

Under the Securities Exchange Act of 1934 (Amendment. No. 4)

APPLIED THERAPEUTICS, INC.

(Name of Issuer)

COMMON STOCK, PAR VALUE \$0.0001 PER SHARE

(Title of Class of Securities)

03828A 101

(CUSIP Number)

Shoshana Shendelman Applied Therapeutics, Inc. 545 Fifth Avenue, Suite 1400 New York, New York 10017 Telephone: (212) 220-9226

(Name, Address and Telephone Number of Person Authorized to Receive Notices and Communications)

January 25, 2022

(Date of Event Which Requires Filing of this Statement)

If the filing person has previously filed a statement on Schedule 13G to report the acquisition that is the subject of this Schedule 13D, and is filing this schedule because of \$ 240.13d-1(e), 240.13d-1(f) or 240.13d-1(g), check the following box \Box .

Note: Schedules filed in paper format shall include a signed original and five copies of the schedule, including all exhibits. See §240.13d-7 for other parties to whom copies are to be sent.

* 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 disclosures provided in a prior cover page.

The information required on 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).

| 1. | Names of Reporting Persons |
|----|----------------------------|
| | Shoshana Shendelman |

- 2. Check the Appropriate Box if a Member of a Group (See Instructions) (a) (b) 3. SEC Use Only 4. Source of Funds (See Instructions) PF 5. Check if Disclosure of Legal Proceedings Is Required Pursuant to Items 2(d) or 2(e) 6. Citizenship or Place of Organization United States of America 7. Sole Voting Power 4,690,462(1) Number of 8. Shared Voting Power Beneficially 2,492,094(2) Owned by 9. Sole Dispositive Power Reporting 4,690,462(1) Shared Dispositive Power 10. 2,492,094(2) 11. Aggregate Amount Beneficially Owned by Each Reporting Person 7,182,556 12. Check if the Aggregate Amount in Row (11) Excludes Certain Shares (See Instructions) 13. Percent of Class Represented by Amount in Row (11) 25.0%(3) Type of Reporting Person (See Instructions) 14.
 - IN

Shares

Each

Person With:

(1) Includes (a) 88,397 shares held by Clearpoint Strategy Group LLC, of which Dr. Shendelman is the sole owner, (b) 1,750,000 shares held by Sycamore 2020 GRAT, over which Dr. Shendelman holds sole voting and dispositive power over such shares as the Investment Advisor, and (c) 2,487,779 shares of Common Stock underlying outstanding options that are immediately exercisable or will be immediately exercisable within 60 days of January 28, 2022.

(2) Represents (a) 1,492,094 shares held by Sycamore Family I LLC, of which Dr. Shendelman's spouse, Vladimir Shendelman, is the sole manager, (b) 290,280 shares held by Ginko Family LLC, of which Dr. Shendelman is the sole manager and (c) 709,720 shares held by Vladimir Shendelman.

(3) Based upon 26,215,514 shares of Common Stock outstanding as of December 31, 2021. See also footnote 1 above.

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| 1. | Names of Reporting Persons Sycamore Family I LLC | | |
|--|--|---|--|
| 2. | (a) | the Appropriate Box if a Member of a Group (See Instructions) | |
| | (b) | | |
| 3. | SEC Use Only | | |
| 4. | Source of Funds (See Instructions) NA | | |
| 5. | Check if Disclosure of Legal Proceedings Is Required Pursuant to Items 2(d) or 2(e) | | |
| 6. | Citizenship or Place of Organization Delaware | | |
| Number of Shares Beneficially Owned by Each Reporting Person | 7. | Sole Voting Power 0 | |
| | 8. | Shared Voting Power 1,492,094 | |
| | 9. | Sole Dispositive Power 0 | |
| With: | 10. | Shared Dispositive Power 1,492,094 | |
| 11. | Aggregate Amount Beneficially Owned by Each Reporting Person 1,492,094 | | |
| 12. | Check if the Aggregate Amount in Row (11) Excludes Certain Shares (See Instructions) | | |
| 13. | Percent of Class Represented by Amount in Row (11) 5.7%(4) | | |
| 14. | Type of Reporting Person (See Instructions) OO | | |

(4) Based upon 26,215,514 shares of Common Stock outstanding as of December 31, 2021.

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Explanatory Note

This Amendment No. 4 (this "Amendment") to Schedule 13D relates to the common stock, par value \$0.0001 per share ("Common Stock"), of Applied Therapeutics, Inc., a Delaware corporation (the "Issuer"), and amends the initial statement on Schedule 13D filed on May 29, 2019 (the "Original Schedule 13D") as amended by that certain Amendment No. 1 filed on June 1, 2020 ("Amendment No. 1"), that certain Amendment No. 2 filed on August 14, 2020 ("Amendment No. 2") and that certain Amendment No. 3 filed on April 16, 2021 ("Amendment No. 3" and, together with the Original Schedule 13D, Amendment No. 1 and Amendment No. 2, the "Schedule 13D"). Capitalized terms used but not defined in this Amendment shall have the same meanings ascribed to them in the Schedule 13D. This Amendment amends the disclosures in the text of Items 4 and 5 to update information about the Reporting Persons.

Item 3. Source and Amount of Funds and Other Consideration.

The information contained in Item 3 of the Schedule 13D is hereby amended and supplemented to include the following:

On September 13 and 14, 2021, Dr. Shendelman purchased 701 and 9,300 shares of Common Stock, respectively, on the open market for an aggregate purchase price of \$145,037.48 (the "*Share Purchases*"). Dr. Shendelman purchased all of these shares using her personal funds.

Item 4. Purpose of Transaction.

The information contained in Item 4 of the Schedule 13D is hereby amended and supplemented to include the following:

As a result of the Share Purchases and options to purchase shares of Common Stock vesting from 61 days following the date of Amendment No. 3 through 60 days from the date of this Amendment, Dr. Shendelman has acquired beneficial ownership of more than 1% of the outstanding shares of Common Stock since the date of Amendment No. 3.

The information set forth in Item 3 of this Amendment is incorporated into this Item 4 by reference.

Item 5. Interest in Securities of the Issuer

The information contained in Item 5 of the Schedule 13D is hereby amended and restated in its entirety as follows:

The information below is based on 26,215,514 shares of Common Stock outstanding as of December 31, 2021.

(a) See rows (11) and (13) of the cover pages to this Schedule 13D for the aggregate number of shares of Common Stock and percentages of the shares of Common Stock beneficially owned by each Reporting Person.

The securities beneficially owned by Dr. Shendelman include 2,487,779 shares of Common Stock underlying outstanding options that are immediately exercisable or will be immediately exercisable within 60 days of January 28, 2022.

(b) See rows (7) through (10) of the cover pages to this Schedule 13D for the number of shares of Common Stock as to which each Reporting Person has the sole or shared power to vote or direct the vote and sole or shared power to dispose or to direct the disposition.

(c) Not applicable.

(d) Except as described in this statement, no person has the power to direct the receipt of dividends on or the proceeds of sales of, the shares of Common Stock owned by the Reporting Persons.

(e) Not applicable.



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.

Dated: January 28, 2022

/s/ Shoshana Shendelman Shoshana Shendelman

Sycamore Family I LLC

By: /s/ Vladimir Shendelman

Name: Vladimir Shendelman Title: Manager