
SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, D.C. 20549

SCHEDULE 13D
(Amendment No.)

(Rule 13d-101)

Under the Securities Exchange Act of 1934

TALPHERA, INC.
(Name of Issuer)

Common Stock, par value \$0.001 per share
(Title of Class of Securities)

00444T209
(CUSIP NUMBER)

Taki Vasilakis
130 Main St. 2nd Floor
New Canaan, CT 06840
(203) 308-4440

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

January 17, 2024
(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 which is the subject of this Schedule 13D, and is filing this schedule because of Rule 13d-1(e), 13d-1(f) or 13d-1(g) check the following box .

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, as amended (the "Act"), or otherwise subject to the liabilities of that section of the Act but shall be subject to all other provisions of the Act.

1	NAME OF REPORTING PERSONS I.R.S. IDENTIFICATION NOS. OF ABOVE PERSONS (ENTITIES ONLY)	
	Nantahala Capital Management, LLC	
2	CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP* (a) <input type="checkbox"/> (b) <input type="checkbox"/>	
3	SEC USE ONLY	
4	SOURCE OF FUNDS* AF	
5	CHECK BOX IF DISCLOSURE OF LEGAL PROCEEDINGS IS REQUIRED PURSUANT TO ITEM 2(d) or 2(e) <input type="checkbox"/>	
6	CITIZENSHIP OR PLACE OF ORGANIZATION Massachusetts	
NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH	7	SOLE VOTING POWER 0
	8	SHARED VOTING POWER 1,992,519
	9	SOLE DISPOSITIVE POWER 0
	10	SHARED DISPOSITIVE POWER 1,992,519
11	AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON 1,992,519	
12	CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (11) EXCLUDES CERTAIN SHARES* <input type="checkbox"/>	
13	PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (11) 11.8%	
14	TYPE OF REPORTING PERSON* IA, OO	

CUSIP No. 00444T209

13D

1	NAME OF REPORTING PERSONS I.R.S. IDENTIFICATION NOS. OF ABOVE PERSONS (ENTITIES ONLY)	
	Wilmot B. Harkey	
2	CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP* (a) <input type="checkbox"/> (b) <input type="checkbox"/>	
3	SEC USE ONLY	
4	SOURCE OF FUNDS* AF	
5	CHECK BOX IF DISCLOSURE OF LEGAL PROCEEDINGS IS REQUIRED PURSUANT TO ITEM 2(d) or 2(e) <input type="checkbox"/>	
6	CITIZENSHIP OR PLACE OF ORGANIZATION United States	
NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH	7	SOLE VOTING POWER 0
	8	SHARED VOTING POWER 1,992,519
	9	SOLE DISPOSITIVE POWER 0
	10	SHARED DISPOSITIVE POWER 1,992,519
11	AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON 1,992,519	
12	CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (11) EXCLUDES CERTAIN SHARES* <input type="checkbox"/>	
13	PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (11) 11.8%	
14	TYPE OF REPORTING PERSON* HC, IN	

CUSIP No. 00444T209

13D

1	NAME OF REPORTING PERSONS I.R.S. IDENTIFICATION NOS. OF ABOVE PERSONS (ENTITIES ONLY)	
	Daniel Mack	
2	CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP* (a) <input type="checkbox"/> (b) <input type="checkbox"/>	
3	SEC USE ONLY	
4	SOURCE OF FUNDS* AF	
5	CHECK BOX IF DISCLOSURE OF LEGAL PROCEEDINGS IS REQUIRED PURSUANT TO ITEM 2(d) or 2(e) <input type="checkbox"/>	
6	CITIZENSHIP OR PLACE OF ORGANIZATION United States	
NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH	7	SOLE VOTING POWER 0
	8	SHARED VOTING POWER 1,992,519
	9	SOLE DISPOSITIVE POWER 0
	10	SHARED DISPOSITIVE POWER 1,992,519
11	AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON 1,992,519	
12	CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (11) EXCLUDES CERTAIN SHARES* <input type="checkbox"/>	
13	PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (11) 11.8%	
14	TYPE OF REPORTING PERSON* HC, IN	

SCHEDULE 13D

This Schedule 13D (this "Schedule 13D") is being filed on behalf of Nantahala Capital Management, LLC, a Massachusetts limited liability company ("Nantahala"), Mr. Wilmot B. Harkey and Mr. Daniel Mack, the principals of Nantahala (collectively, the "Reporting Persons"), relating to Common Stock, par value \$0.001 per share (the "Common Stock"), of Talphera, Inc., a Delaware corporation (the "Issuer").

This Schedule 13D relates to Common Stock of the Issuer beneficially owned by Nantahala through the accounts of certain private funds and managed accounts (collectively, the "Nantahala Investors"). Nantahala serves as the investment adviser to the Nantahala Investors. Mr. Harkey and Mr. Mack are the principals of Nantahala.

Item 1. Security and Issuer

Issuer:

Talphera, Inc. (f/k/a AcelRx Pharmaceuticals, Inc.)

Address:

1850 Gateway Drive, Suite 175
San Mateo, CA 94404

Securities acquired:

Common Stock, par value \$0.001 per share

Item 2. Identity and Background

(a) This Schedule 13D is jointly filed by Nantahala, Mr. Harkey and Mr. Mack. Because Nantahala is the investment adviser to the Nantahala Investors, with exclusive authority to exercise voting and investment power on their behalf in respect of the Common Stock, and Mr. Harkey and Mr. Mack are the principals and managing members of Nantahala, the Reporting Persons may be deemed, pursuant to Rule 13d-3 of the Securities Exchange Act of 1934, as amended (the "Act"), to be the beneficial owners of all of the shares of Common Stock held by, or underlying rights held by, the Nantahala Investors. The Reporting Persons are filing this Schedule 13D jointly, solely pursuant to Rule 13d-1(k)(1), and expressly disclaim that they form any "group" under Section 13(d)(3) of the Act. In addition, Qianqian Zhong is the Chief Financial Officer and Taki Vasilakis is the Chief Compliance Officer (each of Ms. Zhong and Mr. Vasilakis, an "Other Officer" and collectively, the "Other Officers") of Nantahala.

(b) The principal place of business for each of the Reporting Persons and the Other Officers is 130 Main St. 2nd Floor, New Canaan, CT 06840.

(c) The principal occupation of Mr. Harkey is serving as a principal of Nantahala. The principal occupation of Mr. Mack is serving as a principal of Nantahala. The principal business of Nantahala is acting as the investment adviser to the Nantahala Investors. The principal occupations of the Other Officers are the Nantahala positions set forth above.

(d) During the last five years, none of the Reporting Persons or Other Officers has been convicted in a criminal proceeding (excluding traffic violations or similar misdemeanors).

(e) During the last five years, none of the Reporting Persons or Other Officers has been a party to a civil proceeding of a judicial or administrative body of competent jurisdiction and, as a result of such proceeding, were or are subject to a judgment, decree or final order enjoining future violations of, or prohibiting or mandating activities subject to, federal or state securities laws or finding any violation with respect to such laws.

(f) Nantahala is organized under the laws of the State of Massachusetts. Mr. Harkey is a citizen of the United States of America. Mr. Mack is a citizen of the United States of America. Ms. Zhong is a citizen of China. Mr. Vasilakis is a citizen of the United States of America.

Item 3. Source and Amount of Funds

On January 22, 2024, in a private transaction (the “2024 Initial Purchase”) with the Issuer pursuant to a Securities Purchase Agreement (the “SPA”) entered into on January 17, 2024, the Nantahala Investors acquired pre-funded warrants (the “Pre-Funded Warrants”) to purchase 6,168,832 shares of Common Stock at an exercise price of \$0.001 per share, subject to the Conversion Limit described in Item 6. The Nantahala Investors paid \$0.769 per Pre-Funded Warrant using cash on hand. On January 15, 2024, the Reporting Persons were deemed to have acquired beneficial ownership of 755,000 shares of Common Stock underlying certain European-style call options (the “Call Options”) held by certain Nantahala Investors, which by their terms can be exercised to acquire such number of shares of Common Stock on March 15, 2024 at \$5.00 per share of Common Stock. The Call Options were acquired on September 26, 2023, simultaneously with the Nantahala Investors selling European-style put options (the “Put Options” and, together with the Call Options, the “Options”) which if assigned would obligate them to buy an equal number of shares of Common Stock automatically on March 15, 2024 at \$5.00 per share of Common Stock. The Nantahala Investors paid \$1,321,250 to acquire the Call Options, using a portion of the premium received for selling the Put Options. In July 2023, the Nantahala Investors acquired warrants (the “2023 Warrants”) from the Issuer to purchase 5,162,649 shares of Common Stock (the “2023 Purchase”). The 2023 Warrants included 2,205,883 Series A warrants and 2,205,883 Series B warrants, each exercisable initially for \$1.11 per share of Common Stock (but see Item 4, below, regarding the amendment of such exercise price), and 750,883 pre-funded warrants exercisable for \$0.001 per share of Common Stock. During 2023 the Nantahala Investors also acquired the 1,237,519 shares of Common Stock included in the beneficial ownership total described herein.

Item 4. Purpose of the Transaction

The Nantahala Investors made the 2023 investments described above in Item 3 based on the Reporting Persons’ belief that the Common Stock was undervalued and represented an attractive investment opportunity.

Subsequently, the Reporting Persons participated in discussions regarding the Issuer’s capital needs. Following the course of those discussions, in connection with discussions concerning entering into the SPA and undertaking the 2024 Initial Purchase, the Reporting Persons considered participation on the Issuer’s board. In the SPA, the Issuer agreed to certain director designation rights in favor of Nantahala, and Abhinav Jain, a Nantahala analyst, joined the Issuer’s board upon the closing of the 2024 Initial Purchase.

In the SPA, the Nantahala Investors committed to make an initial investment of \$4.75 million and a further \$9.5 million equity investment in the Issuer (the “Commitment”) upon its announcement of the achievement of certain milestones. Such additional equity investment would also be made in the form of Pre-Funded Warrants.

The Issuer also agreed to reduce the exercise price applicable to the Series A and Series B 2023 Warrants held by the Nantahala Investors to \$0.77 per share of Common Stock.

The Reporting Persons expect to participate in discussions with the Issuer’s management and board and their advisers, either singly or together with other shareholders and interested parties, regarding the Issuer’s business, governance, financial condition, operations, prospects, expected results, and strategic alternatives. Among other topics, those discussions are expected to address, without limitation, the issuer’s near-term capitalization needs, including the role of the Reporting Persons and others in potential Issuer financing transactions, and may further address potential extraordinary corporate transactions, dispositions of some or all of the Issuer’s assets, transitions within the board or management, changes in the Issuer’s capitalization, and the Issuer’s continuation as a public company and maintenance of its stock exchange listing.

No Reporting Person has any present plan or proposal which would relate to or result in any of the matters set forth in subparagraphs (a) - (j) of Item 4 of Schedule 13D except as set forth herein or such as would occur upon or in connection with completion of, or following, any of the actions discussed herein. The Reporting Persons intend to review their investment in the Issuer on a continuing basis. Depending on various factors including, without limitation, the Issuer's financial position and investment strategy, the price levels of the Common Stock, conditions in the securities markets and general economic and industry conditions, the Reporting Persons may in the future take such actions with respect to their investment in the Issuer as they deem appropriate including, without limitation, engaging in communications with management and the Issuer's board, engaging in discussions with shareholders of the Issuer and others about the Issuer and the Nantahala Investors' investment, making proposals to the Issuer concerning changes to the capitalization, ownership structure, board structure (including board composition) or operations of the Issuer, purchasing additional shares of Common Stock, or changing their intention with respect to any and all matters referred to in Item 4.

Item 5. Interest in Securities of the Issuer

(a) The aggregate percentage of Common Stock beneficially owned by the Reporting Persons is based upon 16,952,269 shares of Common Stock outstanding, which is the total number of shares of Common Stock outstanding as of November 3, 2023, as reported in the Issuer's 10-Q filed with the Securities and Exchange Commission (the "SEC") on November 14, 2023. The Pre-Funded Warrants (including any additional Pre-Funded Warrants acquired pursuant to the Commitment) and 2023 Warrants are subject to a contractual prohibition on any exercise if the Reporting Persons or certain related persons beneficially would then beneficially own more than 9.99% of the number of shares of Common Stock outstanding. Accordingly, shares of Common Stock underlying such warrants are not now beneficially owned by the Reporting Persons.

Nantahala, as the investment adviser of the Nantahala Investors, may be deemed to beneficially own 1,992,519 shares of Common Stock, or 11.8% of the shares of Common Stock outstanding, consisting of 1,237,519 shares of Common Stock held by the Nantahala Investors and 755,000 shares of Common Stock underlying the Call Options held by the Nantahala Investors. Each of Mr. Harkey and Mr. Mack, as principals of Nantahala, may also be deemed to beneficially own the same shares of Common Stock.

(b) Nantahala, Mr. Harkey and Mr. Mack have the shared power to vote and dispose of the Common Stock reported in this Schedule 13D.

(c) Except as disclosed in Item 3, there have been no transactions in the shares of Common Stock during the past sixty (60) days by the Reporting Persons or the Other Officers, other than stock market sales of 922 shares of Common Stock on December 7, 2023 at a price of \$0.7797 per share, 2,519 shares of Common Stock on December 8, 2023 at a price of \$0.7571 per share, and 2,102 shares of Common Stock on December 11, 2023 at a price of \$0.7254 per share.

(d) The Nantahala Investors hold the shares of Common Stock reported herein, including more than 5% of the outstanding shares of Common Stock beneficially owned by the Reporting Persons but held by or represented by Call Options held by Blackwell Partners LLC - Series A. No person other than the Nantahala Investors is known to have the right to receive, or the power to direct the receipt of dividends from, or proceeds from the sale of, the Common Stock reported herein.

(e) Not applicable.

Item 6. Contracts, Arrangements, Understandings or Relationships with Respect to Securities of the Issuer

The Issuer and the Nantahala Investors entered into a customary registration rights agreement in connection with entering into the SPA, pursuant to which the Issuer has agreed to file a registration statement under the Securities Act of 1933 (the "Securities Act") with the Securities and Exchange Commission (the "SEC") within 15 days of the 2024 Initial Purchase, covering the resale of the shares of Common Stock to be issued upon exercise of the Pre-Funded Warrants, and to use reasonable best efforts to have the registration statement declared effective as promptly as practical thereafter and in any event no later than 90 days following the 2024 Initial Purchase in the event of a "full review" by the SEC.

In connection with the 2023 Purchase, the Issuer and the Nantahala Investors entered into a registration rights agreement, dated July 17, 2023, pursuant to which the Issuer agreed to customary obligations, on terms substantially similar to those described above, to file a registration statement under the Securities Act with the SEC, covering the resale of the shares of Common Stock to be issued in the 2023 Purchase and pursuant to the exercise of the 2023 Warrants.

Except as disclosed above and in Item 3 and Item 4, there are no contracts, arrangements, understandings, or relationships among the Reporting Persons or Other Officers, or between any of the Reporting Persons or Other Officers and any other person, with respect to the securities of the Issuer.

Item 7. Material to be Filed as Exhibits

- | | |
|--------------|--|
| Exhibit 99.1 | Joint Filing Agreement, dated January 22, 2024 |
| Exhibit 99.2 | Form of Securities Purchase Agreement, dated January 17, 2024, by and among the Issuer and entities affiliated with Nantahala Management, LLC (incorporated by reference to Exhibit 10.1 to the Issuer's 8-K filed with the SEC on January 22, 2024) |
| Exhibit 99.3 | Form of Pre-Funded Warrant (January 2024) (incorporated by reference to Exhibit 10.4 to the Issuer's 8-K filed with the SEC on January 22, 2024) |
| Exhibit 99.4 | Form of Registration Rights Agreement, dated January 17, 2024, by and between the Issuer and certain purchasers (incorporated by reference to Exhibit 10.3 to the Issuer's 8-K filed with the SEC on January 22, 2024) |
| Exhibit 99.5 | Form of Series A common stock warrant (July 2023) (incorporated by reference to Exhibit 10.3 to the Issuer's 8-K filed with the SEC on July 21, 2023) |
| Exhibit 99.6 | Form of Series B common stock warrant (July 2023) (incorporated by reference to Exhibit 10.4 to the Issuer's 8-K filed with the SEC on July 21, 2023) |
| Exhibit 99.7 | Form of Pre-Funded Warrant (July 2023) (incorporated by reference to Exhibit 10.5 to the Issuer's 8-K filed with the SEC on July 21, 2023) |
| Exhibit 99.8 | Form of Registration Rights Agreement, dated July 17, 2023, by and between the Issuer and certain Purchasers (incorporated by reference to Exhibit 10.2 to the Issuer's 8-K filed with the SEC on July 21, 2023) |
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Signatures

After reasonable inquiry and to the best of their knowledge and belief, each of the undersigned certifies that the information set forth in this statement is true, complete and correct.

Dated: January 22, 2024

NANTAHALA CAPITAL MANAGEMENT, LLC

By: /s/ Taki Vasilakis
Taki Vasilakis
Chief Compliance Officer

/s/ Wilmot B. Harkey
Wilmot B. Harkey

/s/ Daniel Mack
Daniel Mack

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 13D (including any and all amendments thereto) with respect to the Common Stock, par value \$0.001 per share, of Talphera, 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 13D.

Date: January 22, 2024

NANTAHALA CAPITAL MANAGEMENT, LLC

By: /s/ Taki Vasilakis
Taki Vasilakis
Chief Compliance Officer

/s/ Wilmot B. Harkey
Wilmot B. Harkey

/s/ Daniel Mack
Daniel Mack
