

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

SCHEDULE 13G

UNDER THE SECURITIES EXCHANGE ACT OF 1934
(Amendment No.)*

Unicycive Therapeutics, Inc.
(Name of Issuer)

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

90466Y103
(CUSIP Number)

July 11, 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).

| | | |
|--|--|---|
| 1. | NAMES OF REPORTING PERSONS Vivo Opportunity Fund Holdings, L.P. | |
| 2. | CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP (a) <input type="checkbox"/> (b) <input checked="" type="checkbox"/> | |
| 3. | SEC USE ONLY | |
| 4. | CITIZENSHIP OR PLACE OF ORGANIZATION Delaware | |
| NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH | 5. | SOLE VOTING POWER 59,961,729 (1)(2) |
| | 6. | SHARED VOTING POWER 0 |
| | 7. | SOLE DISPOSITIVE POWER 59,961,729 (1)(2) |
| | 8. | SHARED DISPOSITIVE POWER 0 |
| 9. | AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON 59,961,729 (1)(2) | |
| 10. | CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (9) EXCLUDES CERTAIN SHARES <input type="checkbox"/> | |
| 11. | PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW 9 9.99% (2) | |
| 12. | TYPE OF REPORTING PERSON PN | |

- (1) Represents (i) 3,470,152 shares of common stock, par value \$0.001 per share (the "**Common Stock**") of Unicycive Therapeutics, Inc. (the "**Issuer**"), (ii) 13,429,000 shares of Common Stock issuable upon conversion of 13,429,000 shares of Series A-2 Convertible Preferred Stock, par value \$0.001 per share (the "**Series A-2 Preferred Stock**") convertible within 60 days of this Statement, (iii) 12,802,388 shares of Common Stock issuable upon conversion of 12,802,388 shares of Series A-3 Convertible Preferred Stock, par value \$0.001 per share (the "**Series A-3 Preferred Stock**") underlying Tranche A Warrants that are exercisable within 60 days of this Statement, (iv) 11,638,534 shares of Common Stock issuable upon conversion of 11,638,534 shares of Series A-4 Convertible Preferred Stock, par value \$0.001 per share (the "**Series A-4 Preferred Stock**") underlying Tranche B Warrants that are exercisable within 60 days of this Statement, and (v) 18,621,655 shares of Common Stock issuable upon conversion of 18,621,655 shares of Series A-5 Convertible Preferred Stock, par value \$0.001 per share (the "**Series A-5 Preferred Stock**") underlying Tranche C Warrants that are exercisable within 60 days of this Statement. The shares of Common Stock, Series A-2 Preferred Stock, Tranche A Warrants, Tranche B Warrants and Tranche C Warrants were received by Vivo Opportunity Fund Holdings, L.P. upon the automatic conversion of 8,077 shares of Series A-1 Convertible Preferred Stock, par value \$0.001 per share (the "**Series A-1 Preferred Stock**") on July 11, 2023. All securities are held of record by Vivo Opportunity Fund Holdings, L.P. Vivo Opportunity, LLC is the general partner of Vivo Opportunity Fund Holdings, L.P.
- (2) The Series A-2 Preferred Stock, Series A-3 Preferred Stock, Series A-4 Preferred Stock and Series A-5 Preferred Stock contain provisions preventing such Series A-2 Preferred Stock, Series A-3 Preferred Stock, Series A-4 Preferred Stock and Series A-5 Preferred Stock from being converted if such conversion would result in the holder obtaining greater than 9.99% of the Issuer's voting securities. However, the amounts reported in rows 5, 7 and 9 herein represent the number of shares of Common Stock that would be issuable upon conversion of the Series A-2 Preferred Stock, Series A-3 Preferred Stock, Series A-4 Preferred Stock and Series A-5 Preferred Stock in full, and do not give effect to the blocking provisions.

2

| | | | |
|---|--|--------------------------|-------------------|
| 1. | NAMES OF REPORTING PERSONS Vivo Opportunity, LLC | | |
| 2. | CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP (a) <input type="checkbox"/> (b) <input checked="" type="checkbox"/> | | |
| 3. | SEC USE ONLY | | |
| 4. | CITIZENSHIP OR PLACE OF ORGANIZATION Delaware | | |
| NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH | 5. | SOLE VOTING POWER | 59,961,729 (1)(2) |
| | 6. | SHARED VOTING POWER | 0 |
| | 7. | SOLE DISPOSITIVE POWER | 59,961,729 (1)(2) |
| | 8. | SHARED DISPOSITIVE POWER | 0 |
| 9. | AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON 59,961,729 (1)(2) | | |
| 10. | CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (9) EXCLUDES CERTAIN SHARES <input type="checkbox"/> | | |
| 11. | PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW 9 9.99% (2) | | |
| 12. | TYPE OF REPORTING PERSON OO | | |

- (1) Represents (i) 3,470,152 shares of Common Stock of the Issuer, (ii) 13,429,000 shares of Common Stock issuable upon conversion of 13,429,000 shares of Series A-2 Preferred Stock convertible within 60 days of this Statement, (iii) 12,802,388 shares of Common Stock issuable upon conversion of 12,802,388 shares of Series A-3 Preferred Stock underlying Tranche A Warrants that are exercisable within 60 days of this Statement, (iv) 11,638,534 shares of Common Stock issuable upon conversion of 11,638,534 shares of Series A-4 Preferred Stock underlying Tranche B Warrants that are exercisable within 60 days of this Statement, and (v) 18,621,655 shares of Common Stock issuable upon conversion of 18,621,655 shares of Series A-5 Preferred Stock underlying Tranche C Warrants that are exercisable within 60 days of this Statement. The shares of Common Stock, Series A-2 Preferred Stock, Tranche A Warrants, Tranche B Warrants and Tranche C Warrants were received by Vivo Opportunity Fund Holdings, L.P. upon the automatic conversion of 8,077 shares of Series A-1 Preferred Stock on July 11, 2023. All securities are held of record by Vivo Opportunity Fund Holdings, L.P. Vivo Opportunity, LLC is the general partner of Vivo Opportunity Fund Holdings, L.P.
- (2) The Series A-2 Preferred Stock, Series A-3 Preferred Stock, Series A-4 Preferred Stock and Series A-5 Preferred Stock contain provisions preventing such Series A-2 Preferred Stock, Series A-3 Preferred Stock, Series A-4 Preferred Stock and Series A-5 Preferred Stock from being converted if such conversion would result in the holder obtaining greater than 9.99% of the Issuer's voting securities. However, the amounts reported in rows 5, 7 and 9 herein represent the number of shares of Common Stock that would be issuable upon conversion of the Series A-2 Preferred Stock, Series A-3 Preferred Stock, Series A-4 Preferred Stock and Series A-5 Preferred Stock in full, and do not give effect to the blocking provisions.

3

Item 1. Issuer

- (a) Name of Issuer:
Unicycive Therapeutics, Inc. (the "**Issuer**")
- (b) Address of Issuer's Principal Executive Offices:
4300 El Camino Real, Suite 210, Los Alto, CA 94022

Item 2. Filing Person

- (a) – (c) Name of Persons Filing; Address; Citizenship:
- (i) Vivo Opportunity Fund Holdings, L.P., a Delaware limited partnership; and
- (ii) Vivo Opportunity, LLC, a Delaware limited liability company. Vivo Opportunity, LLC is the general partner of Vivo Opportunity Fund Holdings, L.P.

The address of the principal business office of the Reporting Persons is 192 Lytton Avenue, Palo Alto, CA 94301.

- (d) Title of Class of Securities:
Common Stock, par value \$0.001 per share ("**Common Stock**").
- (e) CUSIP Number:
90466Y103

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;
- (b) Bank as defined in Section 3(a)(6) of the Act;
- (c) Insurance company as defined in Section 3(a)(19) of the Act;
- (d) Investment company registered under Section 8 of the Investment Company Act of 1940;
- (e) An investment adviser in accordance with Rule 13d-1(b)(1)(ii)(E);
- (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);
- (h) A savings associations 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;
- (j) A non-U.S. institution in accordance with Rule 240.13d-1(b)(1)(ii)(J);

4

- (k) Group, in accordance with Rule 240.13d-1(b)(1)(ii)(K). If filing as a non-U.S. institution in accordance with Rule 240.13d-1(b)(1)(ii)(J), please specify the type of institution:

If filing as a non-U.S. institution in accordance with §240.13d-1(b)(1)(ii)(J), please specify the type of institution:

Item 4. Ownership.

- (a) and (b) Amount beneficially owned:

The information set forth in rows 5 through 11 of the cover pages is incorporated by reference into this Item 4.

The shares reported in this Schedule 13G represent (i) 3,470,152 shares of Common Stock, (ii) 13,429,000 shares of Common Stock issuable upon conversion of 13,429,000 shares of Series A-2 Preferred Stock convertible within 60 days of this Statement, (iii) 12,802,388 shares of Common Stock issuable upon conversion of 12,802,388 shares of Series A-3 Preferred Stock underlying Tranche A Warrants that are exercisable within 60 days of this Statement, (iv) 11,638,534 shares of Common Stock issuable upon conversion of 11,638,534 shares of Series A-4 Preferred Stock underlying Tranche B Warrants that are exercisable within 60 days of this Statement, and (v) 18,621,655 shares of Common Stock issuable upon conversion of 18,621,655 shares of Series A-5 Preferred Stock underlying Tranche C Warrants that are exercisable within 60 days of this Statement. All securities are held of record by Vivo Opportunity Fund Holdings, L.P. Vivo Opportunity, LLC is the general partner of Vivo Opportunity Fund Holdings, L.P.

The Series A-2 Preferred Stock, Series A-3 Preferred Stock, Series A-4 Preferred Stock and Series A-5 Preferred Stock contain provisions preventing such Series A-2 Preferred Stock, Series A-3 Preferred Stock, Series A-4 Preferred Stock and Series A-5 Preferred Stock from being converted if such conversion would result in the holder obtaining greater than 9.99% of the Issuer's voting securities. However, the amounts reported in this Item 4 represent the number of shares of Common Stock that would be issuable upon conversion of the Series A-2 Preferred Stock, Series A-3 Preferred Stock, Series A-4 Preferred Stock and Series A-5 Preferred Stock in full, and do not give effect to the blocking provisions.

- (c) Number of shares as to which such person has:

| Reporting Person | Sole Voting Power | Shared Voting Power | Sole Dispositive Power | Shared Dispositive Power | Percentage of Common Stock Outstanding |
|--------------------------------------|--------------------------|----------------------------|-------------------------------|---------------------------------|---|
| Vivo Opportunity Fund Holdings, L.P. | 59,961,729 | 0 | 59,961,729 | 0 | 9.99%* |
| Vivo Opportunity, LLC | 59,961,729 | 0 | 59,961,729 | 0 | 9.99%* |

* The percent of class was based on 34,750,042 shares of Common Stock of the Issuer outstanding after giving effect to the automatic conversion of all outstanding shares of Series A-1 Preferred Stock on July 11, 2023, as reported by the Issuer to the Reporting Persons, plus the shares of Common Stock underlying Series A-2 Preferred Stock, Series A-3 Preferred Stock, Series A-4 Preferred Stock and Series A-5 Preferred Stock held by Vivo Opportunity Fund Holdings, L.P., after giving effect to the blocking provisions described above, which prevent the Reporting Persons from converting Series A-2 Preferred Stock, Series A-3 Preferred Stock, Series A-4 Preferred Stock and Series A-5 Preferred Stock in excess of 9.99% of the Issuer's voting securities.

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.

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.

Not applicable.

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 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 §240.14a-11.

5

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: July 14, 2023

VIVO OPPORTUNITY FUND HOLDINGS, L.P.,

By: Vivo Opportunity, LLC
 Its: General Partner

/s/ Gaurav Aggarwal

Name: Gaurav Aggarwal
 Title: Managing Member

VIVO OPPORTUNITY, LLC

/s/ Gaurav Aggarwal

Name: Gaurav Aggarwal
 Title: Managing Member

6

EXHIBIT INDEX

Exhibit

99.1 [Joint Filing Statement](#)

7

Joint Filing Agreement

The undersigned acknowledge and agree that the foregoing statement on Schedule 13G is filed on behalf of each of the undersigned and that all subsequent amendments to this statement on Schedule 13G shall be filed on behalf of each of the undersigned without the necessity of filing additional joint filing statements. The undersigned acknowledge that each shall be responsible for the timely filing of such amendments, and for the completeness and accuracy of the information concerning him, her or it contained herein, but shall not be responsible for the completeness and accuracy of the information concerning the other entities or persons, except to the extent that he, she or it knows or has reason to believe that such information is inaccurate.

Date: July 14, 2023

VIVO OPPORTUNITY FUND HOLDINGS, L.P.,

By: Vivo Opportunity, LLC
Its: General Partner

/s/ Gaurav Aggarwal
Name: Gaurav Aggarwal
Title: Managing Member

VIVO OPPORTUNITY, LLC

/s/ Gaurav Aggarwal
Name: Gaurav Aggarwal
Title: Managing Member