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

SCHEDULE 13D

Under the Securities Exchange Act of 1934

ZYNERBA PHARMACEUTICALS, INC.

(Name of Issuer)

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

**98986X109
(CUSIP Number)**

**Christian Ulrich
General Counsel and Corporate Secretary
Harmony Biosciences Holdings, Inc.
630 W. Germantown Pike, Suite 215
Plymouth Meeting, PA 19462
(484) 539-9800**

**With a copy to:
William Intner
Hogan Lovells US LLP
100 International Drive
Baltimore, MD 21202
(410) 659-2700**

**and to:
Peter Cohen-Millstein
Hogan Lovells US LLP
390 Madison Avenue
New York, NY 10017
(212) 918-3000**

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

**August 14, 2023
(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 .

Note: Schedules filed in paper format shall include a signed original and five copies of the schedule, including all exhibits. See § 240.13d-7(b) 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).

SCHEDULE 13D

CUSIP No. 98986X109

1	NAMES OF REPORTING PERSONS Harmony Biosciences Holdings, Inc.	
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	SOURCE OF FUNDS (SEE INSTRUCTIONS) WC	
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 Delaware	
NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH	7	SOLE VOTING POWER 0
	8	SHARED VOTING POWER 7,592,498 (1)
	9	SOLE DISPOSITIVE POWER 0
	10	SHARED DISPOSITIVE POWER 0
11	AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON 7,592,498 (1)	
12	CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (11) EXCLUDES CERTAIN SHARES (SEE INSTRUCTIONS) <input type="checkbox"/>	
13	PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (11) 13.13% (2)	
14	TYPE OF REPORTING PERSON (SEE INSTRUCTIONS) CO	

(1) The reported amount reflects shares that may be deemed to be beneficially owned by the Reporting Persons as a result of certain voting rights pursuant to the Tender and Support Agreement described in Item 4 below.

(2) Based upon the sum of 53,939,431 shares of the Issuer's common stock outstanding as of August 23, 2023.

SCHEDULE 13D

CUSIP No. 98986X109

1	NAMES OF REPORTING PERSONS Xylophone Acquisition Corp.	
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	SOURCE OF FUNDS (SEE INSTRUCTIONS) 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 Delaware	
NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH	7	SOLE VOTING POWER 0
	8	SHARED VOTING POWER 7,592,498 (1)
	9	SOLE DISPOSITIVE POWER 0
	10	SHARED DISPOSITIVE POWER 0
11	AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON 7,592,498 (1)	
12	CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (11) EXCLUDES CERTAIN SHARES (SEE INSTRUCTIONS) <input type="checkbox"/>	
13	PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (11) 13.13% (2)	
14	TYPE OF REPORTING PERSON (SEE INSTRUCTIONS) CO	

(1) The reported amount reflects shares that may be deemed to be beneficially owned by the Reporting Persons as a result of certain voting rights pursuant to the Tender and Support Agreement described in Item 4 below.

(2) Based upon the sum of 53,939,431 shares of the Issuer's common stock outstanding as of August 23, 2023.

Item 1. Security and Issuer

This Schedule 13D (the "Statement") relates to the common stock, par value \$0.001 per share, of Zynerba Pharmaceuticals, Inc., a Delaware corporation (the "Issuer"). The Issuer's principal executive offices are located at 80 W. Lancaster Avenue, Suite 300, Devon, PA 19333.

Item 2. Identity and Background

This Statement is being filed on behalf of each of the following persons:

- Harmony Biosciences Holdings, Inc., a company incorporated under the laws of the State of Delaware, with its principal business address at 630 W. Germantown Pike, Suite 215, Plymouth Meeting, PA 19462 ("Harmony")
- Xylophone Acquisition Corp., a company incorporated under the laws of the State of Delaware, with its principal business address at 630 W. Germantown Pike, Suite 215, Plymouth Meeting, PA 19462 ("Merger Sub") and, together with Harmony, the "Reporting Persons")

Harmony is a commercial-stage pharmaceutical company focused on developing and commercializing innovative therapies for patients living with rare neurological diseases as well as patients living with other neurological diseases who have unmet medical needs. Merger Sub is a wholly owned subsidiary of Harmony and was formed for the purpose of the transactions described in Item 4 below.

The directors and executive officers of the Reporting Persons are set forth on Schedule I, attached hereto. Schedule I sets forth the following information with respect to each such person:

(a) name;

(b) business address; and

(c) position with the Reporting Persons and present principal occupation or employment and, for persons not employed by the Reporting Persons, the name, principal business and address of any corporation or other organization in which such employment is conducted.

(d) - (e) During the last five years, neither the Reporting Persons nor, to the knowledge of the Reporting Persons, any person named in Schedule I have been (i) convicted in a criminal proceeding (excluding traffic violations or similar misdemeanors) or (ii) a party to a civil proceeding of a judicial or administrative body of competent jurisdiction, as a result of which, he, she or it was or is 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.

Item 3. Source and Amount of Funds or Other Consideration

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

The Supporting Agreements described in Item 4 were entered into by the Supporting Stockholders as an inducement for the Reporting Persons to enter into the Merger Agreement (as defined below). The Supporting Stockholder Shares (as defined below) have not yet been purchased by Merger Sub and no payments were made by or on behalf of the Reporting Persons to the Supporting Stockholders in connection with the execution of the Supporting Stockholder Agreements.

The total amount of funds required by the Reporting Persons to consummate the Offer (as defined below) and purchase all of the outstanding Shares in the Offer and provide funding in connection with the transactions contemplated by the Merger Agreement (as defined below) is approximately \$60 million, plus related fees and expenses. In addition, the Reporting Persons will need approximately \$140 million to pay the maximum aggregate amount that holders of contingent value rights may be entitled to receive if and when the milestones contemplated thereby are achieved. The Reporting Persons expect to fund these payments out of cash on hand.

Item 4. Purpose of Transaction

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

This statement is being filed in connection with the Merger Agreement (defined below) and the Tender and Support Agreements (defined below). The purpose of the Tender and Support Agreements is to facilitate the consummation of the transactions contemplated by the Merger Agreement.

Merger Agreement

On August 14, 2023, the Reporting Persons entered into an Agreement and Plan of Merger (the “Merger Agreement”) with the Issuer. Pursuant to the Merger Agreement, and upon the terms and subject to the conditions therein, Merger Sub will commence a tender offer (the “Offer”) to acquire all of the issued and outstanding shares of common stock, par value \$0.001 per share, of Issuer (“Issuer Common Stock”), for (i) \$1.1059 per share of Issuer Common Stock (the “Common Cash Amount”), in cash, subject to any applicable withholding of taxes and without interest, plus (ii) one contingent value right (each, a “CVR”) per share of Issuer Common Stock (the “Common CVR Amount”), which represents the right to receive up to approximately \$2.5444 per share of Issuer Common Stock in the form of one or more potential contingent payments, in cash, subject to any applicable withholding of taxes and without interest, upon the achievement of certain milestones as set forth in, and subject to and in accordance with the terms and conditions of, the CVR Agreement (as defined below) (the Common Cash Amount plus the Common CVR Amount, collectively, or any different amount per share paid pursuant to the Offer to the extent permitted by the Merger Agreement, being the “Offer Price”). The Offer will initially expire at 5:00 p.m. (New York City time) on the date that is 21 business days following the commencement of the Offer, subject to extension under certain circumstances.

Merger Sub’s obligation to accept for payment shares of Issuer Common Stock validly tendered (and not validly withdrawn) pursuant to the Offer is subject to the satisfaction or waiver of certain conditions set forth in the Merger Agreement, including that (i) the number of shares of Issuer Common Stock that have been validly tendered in accordance with the terms of the Offer and not validly withdrawn prior to the expiration of the Offer, when considered together with all other shares of Issuer Common Stock (if any) beneficially owned by the Reporting Persons and its controlled affiliates, represent at least one share more than 50% of the total number of outstanding shares of Issuer Common Stock at the time of the expiration of the Offer (excluding any shares of Issuer Common Stock tendered pursuant to guaranteed delivery procedures that have not yet been “received” (as such term is defined in Section 251(h)(6)(f) of the DGCL)), (ii) there is no governmental entity of competent and applicable jurisdiction having enacted, issued, promulgated, enforced or entered any order or law that is in effect and restrains, enjoins or otherwise prohibits or makes illegal consummation of the Offer or the Merger, (iii) the representations and warranties of Issuer contained in the Merger Agreement are accurate, subject to customary thresholds and exceptions, (iv) Issuer has performed or complied with in all material respects its obligations or covenants required to be performed or complied with under the Merger Agreement, (v) there has not been nor will there be a continuing Company Material Adverse Effect (as defined in the Merger Agreement) and (vi) other customary conditions set forth in Annex I of the Merger Agreement have been satisfied.

Following the consummation of the Offer, upon the terms and conditions set forth in the Merger Agreement and in accordance with the DGCL, Merger Sub will merge with and into Issuer (the “Merger”), with Issuer continuing as the surviving corporation (the “Surviving Corporation”) in the Merger. The Merger will be governed by and effected under Section 251(h) of the DGCL, with no stockholder vote required to consummate the Merger.

Pursuant to the Merger, each issued and outstanding share of Issuer Common Stock (other than shares of Issuer Common Stock (a) held in the treasury of Issuer, (b) that as of the commencement of the Offer were owned by the Reporting Persons, (c) irrevocably accepted for payment in the Offer, or (d) held by holders who is entitled to demand and properly demands appraisal of such shares pursuant to, and who complies in all respects with, Section 262 of the General Corporation Law of the State of Delaware, and, as of the effective time of the merger, has neither effectively withdrawn nor lost his, or, or its rights to such appraisal and payment (collectively, the “Excluded Shares”)) will be automatically cancelled and converted into the right to receive an amount in cash and CVR equal to the Offer Price.

In addition, immediately prior to the effective time of the Merger (the “Effective Time”), by virtue of, and as a condition to, the Merger and without any action on the part of any holder thereof:

- Each option to purchase Issuer Common Stock (“Company Option”), whether vested or unvested, that has a per share exercise price that is less than the Common Cash Amount that is outstanding and unexercised immediately prior to the Effective Time will be cancelled and automatically converted into the right to receive for each share of Issuer Common Stock underlying such Company Option, without interest and subject to deduction for any required withholding under applicable tax law, (A) an amount in cash from the Reporting Persons or the Surviving Corporation equal to the excess of the Common Cash Amount over the per share exercise price of such Company Option and (B) one CVR;
- Each Company Option that has a per share exercise price that is equal to or greater than the Common Cash Amount but less than \$2.71, whether vested or unvested, that is outstanding and unexercised immediately prior to the Effective Time will be cancelled and automatically converted into the right to receive for each share of Issuer Common Stock underlying such qualifying Company Option, without interest and subject to deduction for any required withholding under applicable tax law, upon the occurrence of any Milestone Payment (as defined in the CVR Agreement) a cash payment, if any, equal to (A) the amount, if any, by which (i) the Common Cash Amount plus the applicable Milestone Payment *plus* any Milestone Payment that was previously paid that exceeds (ii) the per share exercise price of such Company Option, *minus* (B) the gross amount of Milestone Payments previously paid with respect to such share of Issuer Common Stock underlying such Company Option;
- Each Company Option that has a per share exercise price equal to or greater than \$2.71 will be cancelled at the Effective Time without any consideration payable therefor (whether in the form of cash or a CVR or otherwise); and
- Each restricted stock award of Issuer subject to vesting conditions based solely on continued employment or service to Issuer and its subsidiary (“Company Restricted Stock Award”) that is outstanding immediately prior to the Effective Time, whether vested or unvested, will be cancelled and automatically converted into the right to receive for each share of Issuer Common Stock subject to such Company Restricted Stock Award, without interest and subject to deduction for any required withholding under applicable tax law, (i) an amount in cash from the Reporting Persons or the Surviving Corporation equal to the Common Cash Amount and (ii) one CVR.

The foregoing description of the Merger Agreement is not complete and is qualified in its entirety by reference to the Merger Agreement, which is listed as Exhibit 99.1 hereto and incorporated by reference to Exhibit 2.1 to Harmony’s Current Report on Form 8-K filed with the SEC on August 14, 2023.

Tender and Support Agreements

On August 14, 2023, in connection with the execution of the Merger Agreement, the directors and executive officers of Issuer, other than Kenneth Jones (the “Supporting Stockholders”), entered into Tender and Support Agreements with the Reporting Persons (the “Support Agreements”). Under the terms of the Support Agreements, each Supporting Stockholder has agreed, among other things, to tender, pursuant to the Offer, his or her shares of Issuer Common Stock in the Offer (“Supporting Stockholder Shares”), vote his or her Supporting Stockholder Shares, if applicable, and, subject to certain exceptions, not to transfer any of his or her Supporting Stockholder Shares. The Support Agreements will terminate upon termination of the Merger Agreement and certain other specified events.

The foregoing description of the Support Agreements does not purport to be complete and is qualified in its entirety by reference to the full text of the form of Support Agreement, which is listed as Exhibit 99.2 hereto and incorporated by reference to Exhibit 99.1 to Harmony’s Current Report on Form 8-K filed with the SEC on August 14, 2023.

The purpose of the Offer is for Harmony to acquire control of the Issuer. The Offer would be the first step in Harmony’s acquisition of the entire equity interest in the Issuer. The Offer is intended to facilitate the acquisition of all issued and outstanding Shares. The purpose of the Merger is to acquire all issued and outstanding Shares not tendered and purchased pursuant to the Offer. If the Offer is consummated, Purchaser intends to complete the Merger as soon as practicable thereafter.

Following the Merger, the Issuer will become a wholly owned subsidiary of Harmony. In addition, Harmony will cause the Shares to be delisted from the Nasdaq Capital Market and deregistered under the Exchange Act.

The Offer referenced in this document has not yet commenced. This document is for informational purposes only and is neither an offer to purchase nor a solicitation of an offer to sell shares of the Issuer, nor is it a substitute for the tender offer materials that the Reporting Persons will file with the SEC upon commencement of the tender offer. At the time the tender offer is commenced, the Reporting Persons will file tender offer materials on Schedule TO, and the Issuer will file a Solicitation/Recommendation Statement on Schedule 14D-9 with the SEC with respect to the tender offer. **HOLDERS OF SHARES OF ISSUER COMMON STOCK ARE URGED TO READ THE TENDER OFFER MATERIALS (INCLUDING AN OFFER TO PURCHASE, A RELATED LETTER OF TRANSMITTAL AND CERTAIN OTHER TENDER OFFER DOCUMENTS) AND THE SOLICITATION/RECOMMENDATION STATEMENT WHEN THEY BECOME AVAILABLE (AS EACH MAY BE AMENDED OR SUPPLEMENTED FROM TIME TO TIME) BECAUSE THEY WILL CONTAIN IMPORTANT INFORMATION THAT HOLDERS OF SHARES OF ISSUER COMMON STOCK SHOULD CONSIDER BEFORE MAKING ANY DECISION REGARDING TENDERING THEIR SHARES.** The Offer to Purchase, the related Letter of Transmittal and certain other tender offer documents, as well as the Solicitation/Recommendation Statement, will be made available to all holders of shares of Issuer at no expense to them. The tender offer materials and the Solicitation/Recommendation Statement will be made available for free at the SEC's website at www.sec.gov. In addition, these materials will be available at no charge on the Enhanced SEC Filings section of the Investor Relations page of Issuer's website at www.zynerba.com and by directing a request to the information agent for the tender offer, whose contact information will be set forth in the Offer to Purchase.

Item 5. Interest in Securities of the Issuer

(a)-(b)

Number of shares of the Issuer's common stock beneficially owned by the Reporting Persons: 7,592,498

Percent of class: 13.13%

The percentage ownership was calculated based upon the sum of 53,939,431 shares of the Issuer's common stock outstanding as of August 23, 2023.

Number of shares of the Issuer's common stock as to which such person has:

- (i) Sole power to vote or to direct the vote: 0 shares
- (ii) Shared power to vote or to direct the vote: 7,592,498 shares
- (iii) Sole power to dispose or to direct the disposition of: 0 shares
- (iv) Shared power to dispose or to direct the disposition of: 0 shares

To the knowledge of the Reporting Persons, none of the individuals listed on Schedule I beneficially owns any of the Issuer's common stock.

(c) Except as reported in this Statement, to the knowledge of the Reporting Persons, neither the Reporting Persons nor any of the individuals listed on Schedule I have effected any transactions in the Issuer's common stock during the past sixty (60) days.

(d) Not applicable.

(e) Not applicable.

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

Except for the information set forth in Items 3 and 4 of this Statement, which are incorporated into this Item 6 by reference, to the knowledge of the Reporting Persons, there are no contracts, arrangements, understandings or relationships (legal or otherwise), including, but not limited to, transfer or voting of any of the Issuer's shares, finder's fees, joint ventures, loan or option arrangements, puts or calls, guarantees of profits, division of profits or loss, or the giving or withholding of proxies, among the persons named in Item 2 or between such persons and any other person, with respect to any securities of Issuer, including any securities pledged or otherwise subject to a contingency the occurrence of which would give another person voting power or investment power over such securities.

Item 7. Materials to Be Filed as Exhibits

Exhibit	Description
99.1	Agreement and Plan of Merger, dated as of August 14, 2023, by and among Harmony Biosciences Holdings, Inc., Xylophone Acquisition Corp. and Zynerba Pharmaceuticals, Inc. (incorporated by references to Exhibit 2.1 to the Form 8-K filed by Harmony Biosciences Holdings, Inc. with the U.S. Securities and Exchange Commission on August 14, 2023)
99.2	Form of Tender and Support Agreement, dated as of August 14, 2023, by and among Harmony Biosciences Holdings, Inc., Xylophone Acquisition Corp. and each Supporting Stockholder (incorporated by references to Exhibit 99.1 to the Form 8-K filed by Harmony Biosciences Holdings, Inc. with the U.S. Securities and Exchange Commission on August 14, 2023)
99.3	Joint Filing Agreement*

* Filed herewith.

SIGNATURE

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

Date: August 24, 2023

HARMONY BIOSCIENCES HOLDINGS, INC.

By: /s/ Sandip Kapadia

Name: Sandip Kapadia

Title: Chief Financial Officer

Date: August 24, 2023

XYLOPHONE ACQUISITION CORP.

By: /s/ Sandip Kapadia

Name: Sandip Kapadia

Title: Chief Executive Officer

Schedule I

Harmony Biosciences Holdings, Inc.

The name and present principal occupation of each of the executive officers and directors of Harmony Biosciences Holdings, Inc. are set forth below. Each of these persons has as their business address 80 W. Lancaster Avenue, Suite 300, Devon, PA 19333 and is a citizen of the United States of America.

Name	Position within Harmony Biosciences Holdings, Inc.	Principal Occupation and, if not employed by Harmony Biosciences Holdings, Inc., Name, Principal Business and Address of Employer
Jeffrey S. Aronin	Director, Executive Chairman	Chairman and Chief Executive Officer of Paragon Biosciences
Antonio Gracias	Director	Chief Executive Officer and Chief Investment Officer of Valor Management LLC
R. Mark Graf	Director	
Jack Bech Nielsen	Director	Managing Partner at Vivo Capital, LLC
Juan A. Sabater	Director	
Gary Sender	Director	
Linda Szyper	Director	
Andreas Wicki, Ph.D.	Director	Chief Executive Officer of HBM Healthcare Investments AG
Jeffrey Dayno, M.D.	Director, Chief Executive Officer	
Sandip Kapadia	Chief Financial Officer	
Jeffery Dierks	Chief Commercial Officer	
Andrew Serafin	Chief Strategy Officer	

Xylophone Acquisition Corp.

The name and present principal occupation of each of the executive officers and directors of Xylophone Acquisition Corp. are set forth below. Each of these persons has as their business address 80 W. Lancaster Avenue, Suite 300, Devon, PA 19333 and is a citizen of the United States of America.

Name	Position within Xylophone Acquisition Corp.	Principal Occupation and, if not employed by Xylophone Acquisition Corp., Name, Principal Business and Address of Employer
Sandip Kapadia	Director, Chief Executive Officer and Chief Financial Officer	Chief Financial Officer of Harmony Biosciences Holdings, Inc.
Christian Ulrich	Director, Secretary	General Counsel of Harmony Biosciences Holdings, Inc.

JOINT FILING AGREEMENT

The undersigned hereby agree that they are filing this statement jointly pursuant to Rule 13d-1(k)(1). Each of them is responsible for the timely filing of such Schedule 13D and any amendments thereto, and for the completeness and accuracy of the information concerning such person contained therein; but none of them is responsible for the completeness or accuracy of the information concerning the other persons making the filing, unless such person knows or has reason to believe that such information is inaccurate.

In accordance with Rule 13d-1(k)(1) promulgated under the Securities Exchange Act of 1934, as amended, the undersigned hereby agree to the joint filing with each other on behalf of each of them of such a statement on Schedule 13D with respect to the common stock of Zynerba Pharmaceuticals, Inc. This Joint Filing Agreement shall be included as an exhibit to such Schedule 13D.

IN WITNESS WHEREOF, the undersigned hereby execute this Joint Filing Agreement as of the 24th day of August, 2023.

Date: August 24, 2023

HARMONY BIOSCIENCES HOLDINGS, INC.

By: /s/ Sandip Kapadia

Name: Sandip Kapadia

Title: Chief Financial Officer

Date: August 24, 2023

XYLOPHONE ACQUISITION CORP.

By: /s/ Sandip Kapadia

Name: Sandip Kapadia

Title: Chief Executive Officer
