

SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

SCHEDULE 13D

INFORMATION TO BE INCLUDED IN STATEMENTS FILED PURSUANT
TO RULE 13d-1(a) AND AMENDMENTS THERETO FILED PURSUANT TO
RULE 13d-2(a)

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

Q32 Bio Inc.
(Name of Issuer)

Common stock, par value \$0.0001 per share
(Title of Class of Securities)

746964105
(CUSIP Number)

Anders Hove
Acorn Bioventures, L.P.
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New York, NY 10170
(212) 299-4777

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Schulte Roth & Zabel LLP
919 Third Avenue
New York, NY 10022
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(Name, Address and Telephone Number of Person
Authorized to Receive Notices and Communications)

March 25, 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 that is the subject of this Schedule 13D, and is filing this schedule because of Rule 13d-1(e), Rule 13d-1(f) or Rule 13d-1(g), check the following box. []

(Page 1 of 11 Pages)

* 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	NAME OF REPORTING PERSON Acorn Bioventures, 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	SOURCE OF FUNDS WC	
5	CHECK BOX IF DISCLOSURE OF LEGAL PROCEEDING IS REQUIRED PURSUANT TO ITEMS 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 803,425
	9	SOLE DISPOSITIVE POWER -0-
	10	SHARED DISPOSITIVE POWER 803,425
11	AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH PERSON 803,425	
12	CHECK IF THE AGGREGATE AMOUNT IN ROW (11) EXCLUDES CERTAIN SHARES <input type="checkbox"/>	
13	PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (11) 6.7%	
14	TYPE OF REPORTING PERSON PN	

1	NAME OF REPORTING PERSON Acorn Capital Advisors, GP, 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	SOURCE OF FUNDS AF	
5	CHECK BOX IF DISCLOSURE OF LEGAL PROCEEDING IS REQUIRED PURSUANT TO ITEMS 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 803,425
	9	SOLE DISPOSITIVE POWER -0-
	10	SHARED DISPOSITIVE POWER 803,425
11	AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH PERSON 803,425	
12	CHECK IF THE AGGREGATE AMOUNT IN ROW (11) EXCLUDES CERTAIN SHARES <input type="checkbox"/>	
13	PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (11) 6.7%	
14	TYPE OF REPORTING PERSON OO	

1	NAME OF REPORTING PERSON Anders Hove	
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 AF	
5	CHECK BOX IF DISCLOSURE OF LEGAL PROCEEDING IS REQUIRED PURSUANT TO ITEMS 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 803,425
	9	SOLE DISPOSITIVE POWER -0-
	10	SHARED DISPOSITIVE POWER 803,425
11	AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH PERSON 803,425	
12	CHECK IF THE AGGREGATE AMOUNT IN ROW (11) EXCLUDES CERTAIN SHARES <input type="checkbox"/>	
13	PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (11) 6.7%	
14	TYPE OF REPORTING PERSON IN	

Item 1. SECURITY AND ISSUER:

This statement on Schedule 13D (the "Schedule 13D") relates to the shares of the common stock, par value \$0.0001 per share (the "Common Stock"), of Q32 Bio Inc., a Delaware corporation (the "Issuer"). The Issuer's principal executive offices are located at 830 Winter Street, Waltham, MA 02451.

Item 2. IDENTITY AND BACKGROUND:

(a) This statement is filed by:

- (i) Acorn Bioventures, L.P., a Delaware limited partnership ("Acorn");
- (ii) Acorn Capital Advisors, GP, LLC, a Delaware limited liability company ("Acorn GP"), the sole general partner of Acorn; and
- (iii) Anders Hove ("Mr. Hove"), the manager of Acorn GP.

Each of Acorn, Acorn GP and Mr. Hove are sometimes individually referred to herein as a "Reporting Person" and collectively as the "Reporting Persons."

- (b) The principal business address of each of the Reporting Persons is 420 Lexington Avenue, Suite 2626, New York, New York 10170.
- (c) The principal business of each of the Reporting Persons is investing in public and private biotechnology companies.
- (d) During the last five years, none of the Reporting Persons has been convicted in a criminal proceeding (excluding traffic violations or similar misdemeanors).
- (e) During the last five years, none of the Reporting Persons has been a party to a civil proceeding of a judicial or administrative body of competent jurisdiction and, as a result of such proceeding, 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.
- (f) Acorn is a Delaware limited partnership. Acorn GP is a Delaware limited liability company. Mr. Hove is a United States citizen.

Item 3. SOURCE AND AMOUNT OF FUNDS OR OTHER CONSIDERATION:

The Reporting Persons' response to Item 4 is incorporated by reference into this Item 3.

Item 4. PURPOSE OF TRANSACTION:

On March 25, 2024, the Issuer completed the transactions contemplated by the Agreement and Plan of Merger, dated as of November 16, 2023, (the "Merger Agreement"), by and among the Issuer, Q32 Bio Operations Inc. (formerly known as Q32 Bio Inc.), a Delaware corporation ("Legacy Q32"), and Kenobi Merger Sub, Inc., a Delaware corporation, and a wholly owned subsidiary of the Issuer ("Merger Sub"), pursuant to which, among other matters, Merger Sub merged with and into Legacy Q32, with Legacy Q32 continuing as a wholly owned subsidiary of the Issuer and the surviving corporation of the merger (the "Merger"). In connection with the closing of the Merger, the Issuer changed its name to Q32 Bio Inc.

On November 16, 2023, in connection with the Merger Agreement, Acorn and other unrelated investors entered into a subscription agreement with Legacy Q32 (the "Subscription Agreement"), pursuant to which Acorn, purchased 3,156,665 shares of common stock of Legacy Q32 at an aggregate purchase price of approximately \$3,784,526, or approximately \$1.1989 per share (the "Pre-Closing Financing"). On March 25, 2024, the Pre-Closing Financing closed immediately prior to the effective time of the Merger.

In addition, immediately prior to the effective time of the Merger, 10,937,926 shares of Legacy Q32's Series B preferred stock held by Acorn were converted into 10,937,926 shares of Legacy Q32's common stock and \$2,655,105 principal amount of convertible promissory notes of Legacy Q32 held by Acorn were converted into an aggregate of approximately 2,638,388 shares of Legacy Q32's common stock.

At the effective time of the Merger, each of the shares of Legacy Q32's common stock was converted into the right to receive 0.0480 shares of the Issuer's Common Stock, after giving effect to a 1-for-18 reverse split of the Issuer's Common Stock. As a result, approximately 16,732,979 shares of Legacy Q32's common stock held by Acorn were converted into 803,425 shares of Common Stock of the Issuer.

Pursuant to the Subscription Agreement, on March 25, 2024, the Issuer and the investors in the Pre-Closing Financing, including Acorn, entered into a registration rights agreement (the "Registration Rights Agreement"). Pursuant to the Registration Rights Agreement, among other things, the Issuer agreed to register for resale certain shares of its Common Stock held by such investors, including shares issued in the Merger in exchange for the shares of Legacy Q32 common stock issued in the Pre-Closing Financing.

Pursuant to the Registration Rights Agreement, the Issuer is obligated to prepare and file a shelf registration statement covering the resale of covered Shares within 45 calendar days following the closing of the Merger, subject to certain exceptions, pursuant to Rule 415 of the Securities Act of 1933, as amended (the “Securities Act”). The Issuer also agreed to use its reasonable best efforts to keep such registration statement continuously effective under the Securities Act until the earlier of the date that all registrable securities covered by such registration statement (i) have been sold, thereunder or pursuant to Rule 144 of the Securities Act or (ii) may be sold without volume or manner-of-sale restrictions pursuant to Rule 144 of the Securities Act and without the requirement for the Issuer to be in compliance with the current public information requirement under Rule 144 of the Securities Act. The Registration Rights Agreement also provides that the Issuer will pay certain expenses of the securityholders and indemnify the applicable securityholders against certain liabilities.

In connection with the closing of the Merger, the Issuer entered into lock-up agreements with certain of its stockholders, directors and executive officers, including Acorn (as defined below), which restrict the transfer of shares of Common Stock owned by such persons for a period of 180 days following the closing date of the Merger, subject to certain limited exceptions (the “Lock-Up Agreement”).

The foregoing descriptions of the Subscription Agreement, Registration Rights Agreement and Lock-Up Agreement do not purport to be complete and are qualified in their entirety by reference to the full texts of the Subscription Agreement, Registration Rights Agreement and Lock-Up Agreement. For further information regarding the Subscription Agreement, Registration Rights Agreement and Lock-Up Agreement reference is made to the texts of the Subscription Agreement, Registration Rights Agreement and Lock-Up Agreement, which have been filed as Exhibit 99.1, Exhibit 99.2 and Exhibit 99.3 hereto, respectively, and incorporated by reference herein.

Isaac Manke, a partner at Acorn (“Mr. Manke”), joined the board of directors (the “Board”) of the Issuer in connection with the completion of the Merger.

The Reporting Persons may have discussions with officers and directors of the Issuer in connection with the Reporting Persons' investment in the Issuer. The topics of these conversations may cover a range of issues, including those relating to the business of the Issuer, management, board composition, investor communications, operations, capital allocation, dividend policy, financial condition, mergers and acquisitions strategy, overall business strategy, executive compensation, and corporate governance matters. The Reporting Persons may also have similar conversations with other stockholders or other interested parties, such as industry analysts, existing or potential strategic partners or competitors, investment professionals and other investors and may exchange information with any such persons or the Issuer pursuant to appropriate confidentiality or similar agreements (which may contain customary standstill provisions). Although the Reporting Persons have no present intention of doing so, they may also take one or more of the actions described in subsections (a) through (j) of Item 4 of Schedule 13D and may discuss or propose such actions with the Issuer's management and the board of directors of the Issuer, other stockholders of the Issuer, and other interested parties, such as those set out above.

The Reporting Persons intend to review their investments in the Issuer on a continuing basis. Depending on various factors, including, without limitation, the Issuer's financial position and strategic direction, the outcome of the discussions and actions referenced above, actions taken by the Issuer's board of directors, price levels of the Common Stock, liquidity requirements and other investment opportunities available to the Reporting Persons, conditions in the securities market and general economic and industry conditions, the Reporting Persons may in the future take actions with respect to their investment position in the Issuer as they deem appropriate, including, without limitation, purchasing additional Common Stock or other instruments that are based upon or relate to the value of the Common Stock or the Issuer in the open market or otherwise, selling some or all of the securities reported herein, and/or engaging in hedging or similar transactions with respect to the Common Stock.

Item 5. INTEREST IN SECURITIES OF THE ISSUER:

- (a) See rows (11) and (13) of the cover pages to this Schedule 13D for the aggregate number of and percentages of the shares of Common Stock beneficially owned by each Reporting Person. The percentages set forth in this Schedule 13D are based upon 11,929,528 shares of Common Stock outstanding as of March 25, 2024, as reported in the Issuer's Current Report on Form 8-K filed with the Securities and Exchange Commission (the "SEC") on March 27, 2024.
- (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) Other than as described in Item 4, no transactions in the shares of Common Stock were effected by the Reporting Persons during the past sixty (60) days.
- (d) No person (other than the Reporting Persons) is known to have the right to receive or the power to direct the receipt of dividends from, or the proceeds from the sale of, the shares of Common Stock reported herein.
- (e) Not applicable.

Item 6. CONTRACTS, ARRANGEMENTS, UNDERSTANDINGS OR RELATIONSHIPS WITH RESPECT TO SECURITIES OF THE ISSUER:

The Reporting Persons' response to Item 4 is incorporated by reference into this Item 6.

Other than as described in this Schedule 13D and the Joint Filing Agreement attached as Exhibit 99.4, hereto, there are no contracts, arrangements, understandings or relationship among the Reporting Persons or between the Reporting Persons and any other person with respect to the securities of the Issuer.

Item 7. MATERIAL TO BE FILED AS EXHIBITS:

- Exhibit 99.1 Subscription Agreement, dated as of November 16, 2023 (incorporated by reference to Exhibit 10.1 to the Issuer's Current Report on Form 8-K filed with the SEC on March 27, 2024).
- Exhibit 99.2 Registration Rights Agreement, dated as of March 25, 2024 (incorporated by reference to Exhibit 10.2 of the Issuer's Current Report on Form 8-K filed with the SEC on March 27, 2024).
- Exhibit 99.3 Form of Lock-Up Agreement (incorporated by reference to Exhibit 10.3 of the Issuer's Current Report on Form 8-K filed with the SEC on March 27, 2024).
- Exhibit 99.4 Joint Filing Agreement Statement as required by Rule 13d-1(k)(1) under the Act.

SIGNATURES

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

Dated: April 4, 2024

ACORN BIOVENTURES, L.P.

By: ACORN CAPITAL ADVISORS, GP, LLC, its General Partner

By: /s/ Anders Hove
Anders Hove, Manager

ACORN CAPITAL ADVISORS, GP, LLC

By: /s/ Anders Hove
Anders Hove, Manager

ANDERS HOVE

/s/ Anders Hove

EXHIBIT 99.4

Joint Filing Agreement

PURSUANT TO RULE 13d-1(k)

The undersigned acknowledge and agree that the foregoing statement on Schedule 13D is filed on behalf of each of the undersigned and that all subsequent amendments to this statement on Schedule 13D may be filed on behalf of each of the undersigned without the necessity of filing additional joint filing agreements. 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 and therein, but shall not be responsible for the completeness and accuracy of the information concerning the others, except to the extent that he, she or it knows that such information is inaccurate.

Dated: April 4, 2024

ACORN BIOVENTURES, L.P.

By: ACORN CAPITAL ADVISORS, GP, LLC, its General Partner

By: /s/ Anders Hove
Anders Hove, Manager

ACORN CAPITAL ADVISORS, GP, LLC

By: /s/ Anders Hove
Anders Hove, Manager

ANDERS HOVE

/s/ Anders Hove