
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

SCHEDULE 13G

UNDER THE SECURITIES EXCHANGE ACT OF 1934

Zentalis Pharmaceuticals, Inc.

(Name of Issuer)

Common Stock, \$0.001 par value per share

(Title of Class of Securities)

98943L107

(CUSIP Number)

12/18/2025

(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)

SCHEDULE 13G

CUSIP No. 98943L107

Names of Reporting Persons

1

5AM Opportunities II (GP), LLC

Check the appropriate box if a member of a Group (see instructions)

2

(a)

(b)

3

Sec Use Only

Citizenship or Place of Organization

4

DELAWARE

Number of Shares 5 Sole Voting Power

Beneficially	0.00
Owned by	Shared Voting Power
Each	6
Reporting	3,947,913.00
Person	Sole Dispositive Power
With:	7
	0.00
	Shared Dispositive
	8 Power
	3,947,913.00
	Aggregate Amount Beneficially Owned by Each Reporting Person
9	3,947,913.00
	Check box if the aggregate amount in row (9) excludes certain shares (See Instructions)
10	<input type="checkbox"/>
	Percent of class represented by amount in row (9)
11	5.2 %
	Type of Reporting Person (See Instructions)
12	OO

SCHEDULE 13G

CUSIP No. 98943L107

	Names of Reporting Persons
1	5AM Opportunities II, L.P.
	Check the appropriate box if a member of a Group (see instructions)
2	<input type="checkbox"/> (a)
	<input checked="" type="checkbox"/> (b)
3	Sec Use Only
	Citizenship or Place of Organization
4	DELAWARE
	Sole Voting Power
	5
	0.00
Number of	Shared Voting Power
Shares	6
Beneficially	3,947,913.00
Owned by	Sole Dispositive Power
Each	7
Reporting	0.00
Person	Shared Dispositive
With:	8 Power
	3,947,913.00
	Aggregate Amount Beneficially Owned by Each Reporting Person
9	3,947,913.00
	Check box if the aggregate amount in row (9) excludes certain shares (See Instructions)
10	<input type="checkbox"/>
11	Percent of class represented by amount in row (9)

5.2 %

Type of Reporting Person (See Instructions)

12

PN

SCHEDULE 13G

CUSIP No. 98943L107

Names of Reporting Persons

1

5AM Opportunities (GP), LLC

Check the appropriate box if a member of a Group (see instructions)

2

(a)

(b)

3

Sec Use Only

Citizenship or Place of Organization

4

DELAWARE

Sole Voting Power

5

0.00

Number of
Shares
Beneficially
Owned by
Each
Reporting
Person
With:

Shared Voting Power

6

890,658.00

Sole Dispositive Power

7

0.00

Shared Dispositive

8

Power

890,658.00

Aggregate Amount Beneficially Owned by Each Reporting Person

9

890,658.00

Check box if the aggregate amount in row (9) excludes certain shares (See Instructions)

10

Percent of class represented by amount in row (9)

11

1.2 %

Type of Reporting Person (See Instructions)

12

OO

SCHEDULE 13G

CUSIP No. 98943L107

Names of Reporting Persons

1

5AM Opportunities Master Fund L.P.

2

Check the appropriate box if a member of a Group (see instructions)

(a)

(b)

3 Sec Use Only
Citizenship or Place of Organization

4 CAYMAN ISLANDS

Sole Voting Power

5

0.00

Number of Shares Beneficially Owned by Each Reporting Person With:

Shared Voting Power

6

890,658.00

Sole Dispositive Power

7

0.00

Shared Dispositive

8

Power

890,658.00

Aggregate Amount Beneficially Owned by Each Reporting Person

9

890,658.00

Check box if the aggregate amount in row (9) excludes certain shares (See Instructions)

10

Percent of class represented by amount in row (9)

11

1.2 %

Type of Reporting Person (See Instructions)

12

PN

SCHEDULE 13G

CUSIP No. 98943L107

Names of Reporting Persons

1

Andrew J. Schwab

Check the appropriate box if a member of a Group (see instructions)

2

(a)

(b)

3 Sec Use Only

Citizenship or Place of Organization

4

UNITED STATES

Number of Shares Beneficially Owned by Each Reporting Person With:

5

0.00

Shared Voting Power

6

4,838,571.00

Sole Dispositive Power

7

0.00

8 Shared Dispositive Power

4,838,571.00

Aggregate Amount Beneficially Owned by Each Reporting Person

9

4,838,571.00

Check box if the aggregate amount in row (9) excludes certain shares (See Instructions)

10

Percent of class represented by amount in row (9)

11

6.4 %

Type of Reporting Person (See Instructions)

12

IN

SCHEDULE 13G

CUSIP No. 98943L107

Names of Reporting Persons

1

Kush Parmar

Check the appropriate box if a member of a Group (see instructions)

2

(a)

(b)

3

Sec Use Only

Citizenship or Place of Organization

4

DELAWARE

Sole Voting Power

5

0.00

Number of
Shares

Shared Voting Power

6

Beneficially
Owned by

4,838,571.00

Each
Reporting

Sole Dispositive Power

7

Person

0.00

With:

Shared Dispositive

8

Power

4,838,571.00

Aggregate Amount Beneficially Owned by Each Reporting Person

9

4,838,571.00

Check box if the aggregate amount in row (9) excludes certain shares (See Instructions)

10

Percent of class represented by amount in row (9)

11

6.4 %

Type of Reporting Person (See Instructions)

12

IN

SCHEDULE 13G

98943L107

CUSIP No.

Names of Reporting Persons

1

Anna Yaeger

Check the appropriate box if a member of a Group (see instructions)

2

(a)

(b)

3

Sec Use Only

Citizenship or Place of Organization

4

UNITED STATES

Sole Voting Power

5

0.00

Number of
Shares
Beneficially
Owned by
Each
Reporting
Person
With:

Shared Voting Power

6

890,658.00

Sole Dispositive Power

7

0.00

Shared Dispositive

8

Power

890,658.00

Aggregate Amount Beneficially Owned by Each Reporting Person

9

890,658.00

Check box if the aggregate amount in row (9) excludes certain shares (See Instructions)

10

Percent of class represented by amount in row (9)

11

1.2 %

Type of Reporting Person (See Instructions)

12

IN

SCHEDULE 13G

Item 1.

Name of issuer:

(a)

Zentalis Pharmaceuticals, Inc.

Address of issuer's principal executive offices:

(b)

10275 Science Center Drive, Suite 200 , San Diego, CA, 92121.

Item 2.

Name of person filing:

(a)

The names of the persons filing this report (collectively, the "Reporting Persons") are: 5AM Opportunities II (GP), LLC ("Opps II GP") 5AM Opportunities II, L.P. ("Opps II") 5AM Opportunities (GP), LLC ("Opps GP") 5AM Opportunities Master Fund L.P. ("Opps Master") Andrew J. Schwab ("Schwab") Kush Parmar ("Dr. Parmar") Anna Yaeger ("Yaeger") The Reporting Persons expressly disclaim status as a "group" for purposes of this Schedule 13G.

Address or principal business office or, if none, residence:

(b)

c/o 5AM Ventures 4 Embarcadero Center, Suite 3110 San Francisco, CA 94111

(c)

Citizenship:

Title of class of securities:

(d) Common Stock, \$0.001 par value per share
CUSIP No.:

(e) 98943L107

Item 3. If this statement is filed pursuant to §§ 240.13d-1(b) or 240.13d-2(b) or (c), check whether the person filing is a:

- (a) Broker or dealer registered under section 15 of the Act (15 U.S.C. 78o);
- (b) Bank as defined in section 3(a)(6) of the Act (15 U.S.C. 78c);
- (c) Insurance company as defined in section 3(a)(19) of the Act (15 U.S.C. 78c);
- (d) Investment company registered under section 8 of the Investment Company Act of 1940 (15 U.S.C. 80a-8);
- (e) An investment adviser in accordance with § 240.13d-1(b)(1)(ii)(E);
- (f) An employee benefit plan or endowment fund in accordance with § 240.13d-1(b)(1)(ii)(F);
- (g) A parent holding company or control person in accordance with § 240.13d-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 (15 U.S.C. 80a-3);
- (j) A non-U.S. institution in accordance with § 240.13d-1(b)(1)(ii)(J). If filing as a non-U.S. institution in accordance with § 240.13d-1(b)(1)(ii)(J), please specify the type of institution:
- (k) Group, in accordance with Rule 240.13d-1(b)(1)(ii)(K).

Item 4. Ownership

Amount beneficially owned:

(a) Row 9 of each Reporting Person's cover page to this Schedule 13G sets forth the aggregate number of shares of common stock of the Issuer beneficially owned by such Reporting Person and is incorporated by reference. The Reporting Persons' ownership of the Issuer's securities consists of (i) 3,947,913 shares of common stock held directly by Opps II and (ii) 890,658 shares of common stock held directly by Opps Master. Opps II GP is the sole general partner of Opps II and Schwab and Dr. Parmar are the managing members of Opps II GP. Each of Opps II GP, Schwab and Dr. Parmar shares voting and dispositive power over the securities held by Opps II. Opps GP is the sole general partner of Opps Master and Schwab, Dr. Parmar and Yaeger are the managing members of Opps GP. Each of Opps GP, Schwab, Dr. Parmar and Yaeger shares voting and dispositive power over the securities held by Opps Master.

Percent of class:

(b) Row 11 of each Reporting Person's cover page to this Schedule 13G sets forth the percentages of the shares of common stock of the Issuer beneficially owned by such Reporting Person and is incorporated by reference. The percentage set forth in each row 11 is based upon the sum of (i) 72,250,779 shares of common stock outstanding as of November 1, 2025, as reported in the Issuer's Quarterly Report on Form 10-Q filed with the Securities and Exchange Commission (the "SEC") on November 10, 2025; and (ii) 3,928,571 shares of common stock issued to the Reporting Persons by the Issuer pursuant to an at-the-market offering by the Issuer on December 18, 2025 (the "ATM Offering"). %

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

(i) Sole power to vote or to direct the vote:

Row 5 of each Reporting Person's cover page to this Schedule 13G sets forth the sole power to vote or to direct the vote of securities of the Issuer beneficially owned by such Reporting Person as of and is incorporated by reference.

(ii) Shared power to vote or to direct the vote:

Row 6 of each Reporting Person's cover page to this Schedule 13G sets forth the shared power to vote or to direct the vote of securities of the Issuer beneficially owned by such Reporting Person as of and is incorporated by reference.

(iii) Sole power to dispose or to direct the disposition of:

Row 7 of each Reporting Person's cover page to this Schedule 13G sets forth the sole power to dispose or to direct the disposition of securities of the Issuer beneficially owned by such Reporting Person as of and is incorporated by reference.

(iv) Shared power to dispose or to direct the disposition of:

Row 8 of each Reporting Person's cover page to this Schedule 13G sets forth the shared power to dispose or to direct the disposition of securities of the Issuer beneficially owned by such Reporting Person as of and is incorporated by reference.

Item 5. Ownership of 5 Percent or Less of a Class.

Item 6. Ownership of more than 5 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. Certifications:

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.

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.

5AM Opportunities II (GP), LLC

Signature: /s/ Andrew J. Schwab
Name/Title: By Andrew J. Schwab, Managing Member
Date: 12/30/2025

5AM Opportunities II, L.P.

Signature: /s/ Andrew J. Schwab
By 5AM Opportunities II (GP), LLC, its General
Name/Title: Partner, By Andrew J. Schwab, Managing
Member
Date: 12/30/2025

5AM Opportunities (GP), LLC

Signature: /s/ Andrew J. Schwab
Name/Title: By Andrew J. Schwab, Managing Member
Date: 12/30/2025

5AM Opportunities Master Fund L.P.

Signature: /s/ Andrew J. Schwab
By 5AM Opportunities II (GP), LLC, its General
Name/Title: Partner, By Andrew J. Schwab, Managing
Member
Date: 12/30/2025

Andrew J. Schwab

Signature: /s/ Andrew J. Schwab
Name/Title: Andrew J. Schwab
Date: 12/30/2025

Kush Parmar

Signature: /s/ Kush Parmar

Name/Title: Kush Parmar

Date: 12/30/2025

Anna Yaeger

Signature: /s/ Anna Yaeger

Name/Title: Anna Yaeger

Date: 12/30/2025

Exhibit Information

Exhibit 99.1 Joint Filing Agreement

JOINT FILING AGREEMENT

The undersigned hereby agree that a single Schedule 13G (or any amendment thereto) relating to the common stock of Zentalis Pharmaceuticals, Inc. shall be filed on behalf of each of the undersigned and that this Joint Filing Agreement shall be filed as an exhibit to such Schedule 13G.

Dated: December 30, 2025

5AM Opportunities II, L.P.

By: 5AM Opportunities II (GP), LLC
its General Partner

By: /s/ Andrew J. Schwab
Name: Andrew J. Schwab
Title: Managing Member

5AM Opportunities II (GP), LLC

By: /s/ Andrew J. Schwab
Name: Andrew J. Schwab
Title: Managing Member

5AM Opportunities Master Fund L.P.

By: 5AM Opportunities (GP), LLC
its General Partner

By: /s/ Andrew J. Schwab
Name: Andrew J. Schwab
Title: Managing Member

5AM Opportunities (GP), LLC

By: /s/ Andrew J. Schwab
Name: Andrew J. Schwab
Title: Managing Member

/s/ Andrew J. Schwab
Andrew J. Schwab

/s/ Dr. Kush Parmar
Dr. Kush Parmar

/s/ Anna Yaeger
Anna Yaeger