Registration No. 333-

UNITED STATES SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

FORM S-8 REGISTRATION STATEMENT

UNDER
THE SECURITIES ACT OF 1933

Zentalis Pharmaceuticals, Inc.

(Exact name of Registrant as specified in its charter)

Delaware

(State or other jurisdiction of Incorporation or organization)

82-3607803

(I.R.S. Employer Identification No.)

1359 Broadway, Suite 801 New York, New York 10018 (212) 433-3791 (Address of principal executive offices) (Zip code)

Zentalis Pharmaceuticals, Inc. 2022 Employment Inducement Incentive Award Plan Zentalis Pharmaceuticals, Inc. 2020 Incentive Award Plan

(Full titles of the plans)

Andrea Paul
Chief Legal Officer and Corporate Secretary
Zentalis Pharmaceuticals, Inc.
1359 Broadway, Suite 801
New York, New York 10018
(212) 433-3791

(Name and address of agent for service) (Telephone number, including area code, of agent for service)

With copies to:

Cheston J. Larson Nathan Ajiashvili Jenna Cooper Latham & Watkins LLP 1271 Avenue of the Americas New York, NY 10020 (212) 906-1200

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, a smaller reporting company, or an emerging growth company. See the definitions of "large accelerated filer," "accelerated filer," "smaller reporting company" and "emerging growth company" in Rule 12b-2 of the Exchange Act.

celerated filer	\boxtimes	Accelerated filer	
elerated filer		Smaller reporting company	
		Emerging growth company	

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 7(a)(2)(B) of Securities Act.

EXPLANATORY NOTE

This Registration Statement registers the offer and sale of 1,775,000 shares of common stock of Zentalis Pharmaceuticals, Inc. (the "Company") for issuance under the Zentalis Pharmaceuticals, Inc. 2022 Employment Inducement Incentive Award Plan (as amended and/or restated from time to time, the "Inducement Plan"), and an additional 5,000,000 shares of common stock of the Company for issuance under the Zentalis Pharmaceuticals, Inc. 2020 Incentive Award Plan (as amended and/or restated from time to time, the "2020 Plan") pursuant to its terms. In accordance with Instruction E to Form S-8, the contents of the previously filed Form S-8 Registration Statement No. 333-237593 relating to shares of common stock issuable pursuant to the 2020 Plan and the previously filed Form S-8 Registration Statement No. 333-266702 relating to shares of common stock issuable pursuant to the 2020 Plan and the Inducement Plan are hereby incorporated herein by reference.

INCORPORATION BY REFERENCE OF CONTENTS OF REGISTRATION STATEMENTS ON FORM S-8

The contents of the Registration Statements on Form S-8 (File Nos. <u>333-237593</u> and <u>333-266702</u>), including any amendments thereto, filed with the Securities and Exchange Commission, relating to the 2020 Plan and the Inducement Plan, are incorporated herein by reference.

Item 8. Exhibits

		Incorporated by Reference				
Exhibit Number	Description	Form	Exhibit	Date Filed	File Number	Filed Herewith
4.1	Certificate of Incorporation of Zentalis Pharmaceuticals, Inc.	S-8	4.1	04/07/2020	333-237593	
4.2	Certificate of Amendment to Certificate of Incorporation of Zentalis Pharmaceuticals, Inc., dated June 16, 2023	8-K	3.1	06/16/2023	001-39263	
3	Amended and Restated Bylaws of Zentalis Pharmaceuticals, Inc.	8-K	3.1	02/15/2024	001-39263	
4	Specimen of Common Stock Certificate evidencing the shares of common stock	S-1	4.2	03/06/2020	333-236959	
5.1	Opinion of Latham & Watkins LLP					X
10.1	Zentalis Pharmaceuticals, Inc. 2022 Employment Inducement Incentive Award Plan, as amended	10-K	10.6.1	02/27/2024	001-39263	
10.2	Form of Option Agreement pursuant to the Zentalis Pharmaceuticals, Inc. 2022 Employment Inducement Incentive Award Plan.	8-K	10.2	07/22/2022	001-39263	
10.3	Form of RSU Agreement pursuant to the Zentalis Pharmaceuticals, Inc. 2022 Employment Inducement Incentive Award Plan.	8-K	10.3	07/22/2022	001-39263	
10.4	Zentalis Pharmaceuticals, Inc. 2020 Incentive Award Plan and forms of stock option agreement and restricted stock unit agreement thereunder Zentalis	S-1/A	10.2	03/30/2020	333-236959	
10.5	Amendment No. 1 to the Zentalis Pharmaceuticals, Inc. 2020 Incentive Award Plan	10-Q	10.3	05/17/2021	001-39263	
23.1	Consent of Independent Registered Public Accounting Firm					X
23.2	Consent of Latham & Watkins LLP (included in Exhibit 5.1) hereto					X
24.1	Power of Attorney (see signature page)					X
107.1	Filing Fee Table					X

SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, the registrant certifies that it has reasonable grounds to believe that it meets all of the requirements for filing on Form S-8 and has duly caused this registration statement to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of New York, New York, on February 29, 2024.

ZENTALIS PHARMACEUTICALS, INC.

By: /s/ Kimberly Blackwell, M.D.

/s/ Kimberly Blackwell, M.D Chief Executive Officer

POWER OF ATTORNEY

Each person whose signature appears below hereby constitutes and appoints Kimberly Blackwell, M.D., or Melissa Epperly, or each of them singly, with full power to act without the other, such person's true and lawful attorneys-in-fact and agents, with full power of substitution and re-substitution, for him or her and in his or her name, place and stead, in any and all capacities, to sign this registration statement and any and all amendments, including post-effective amendments to this registration statement, and to file the same, with exhibits and schedules thereto, and other documents in connection therewith, with the Securities and Exchange Commission, granting unto said attorneys-in-fact and agents, and each of them, full power and authority to do and perform each and every act and thing requisite and necessary or desirable to be done in connection therewith as fully to all intents and purposes as he or she might or could do in person, hereby ratifying and confirming all that said attorneys-in-fact and agents, or their substitute or substitutes, may lawfully do or cause to be done by virtue hereof.

Pursuant to the requirements of the Securities Act of 1933, this registration statement has been signed by the following persons in the capacities and on the dates indicated.

Signature	Title	Date	
/s/ Kimberly Blackwell, M.D.	Chief Executive Officer and Director	February 29, 2024	
Kimberly Blackwell, M.D.	(principal executive officer)		
/s/ Melissa Epperly	Chief Financial Officer	February 29, 2024	
Melissa Epperly	(principal financial and accounting officer)		
/s/ David Johnson	Chairperson of the Board	February 29, 2024	
David Johnson			
/s/ Cam Gallagher	President and Director	February 29, 2024	
Cam Gallagher			
/s/ Enoch Kariuki	Director	February 29, 2024	
Enoch Kariuki			
/s/ Jan Skvarka	Director	February 29, 2024	
Jan Skvarka			
/s/ Karan Takhar	Director	February 29, 2024	
Karan Takhar			

CALCULATION OF FILING FEE TABLE

FORM S-8

(Form Type)

Zentalis Pharmaceuticals, Inc.

(Exact Name of Registrant as Specified in its Charter)

Table I: Newly Registered Securities

Plan	Security Type	Security Class Title	Fee Calculation Rule	Amount Registered	Proposed Maximum Offering Price Per Unit	Maximum Aggregate Offering Price	Fee Rate	Amount of Registration Fee
2022 Employment Inducement Incentive Award Plan	Equity	Common stock, par value \$0.001 per share	Rules 457(c) and 457(h)	657,425 (1)(2)	\$13.73 (3)	\$9,026,445.25	\$147.60 per million dollars	\$ 1,332.30
2022 Employment Inducement Incentive Award Plan	Equity	Common stock, par value \$0.001 per share	Rule 457(h)	1,117,575 (1)(4)	\$21.00 (5)	\$23,469,075.00	\$147.60 per million dollars	\$ 3,464.04
2020 Incentive Award Plan, as amended	Equity	Common stock, par value \$0.001 per share	Rules 457(c) and 457(h)	5,000,000 (1)(6)	\$13.73 (3)	\$68,650,000.00	\$147.60 per million dollars	\$ 10,132.74
	Total Offering Amounts				\$101,145,520.25		\$ 14,929.08	
	Total Fee Offsets							\$—
	Net Fee Due							\$ 14,929.08

- (1) In accordance with Rule 416(a) under the Securities Act of 1933, as amended ("Securities Act"), this registration statement shall be deemed to cover any additional securities that may from time to time be offered or issued under the Zentalis Pharmaceuticals, Inc. 2022 Employment Inducement Incentive Award Plan (as amended and/or restated from time to time, the "Inducement Plan") or the Zentalis Pharmaceuticals, Inc. 2020 Incentive Award Plan (as amended and/or restated from time to time, the "2020 Plan") to prevent dilution resulting from stock splits, stock dividends or similar transactions. In addition, pursuant to Rule 416(c) under the Securities Act, this registration statement also covers an indeterminate amount of interests to be offered or sold pursuant to the Inducement Plan and the 2020 Plan.
- (2) Consists of 657,425 shares of common stock that are issuable under the Inducement Plan pursuant to its terms.
- (3) Estimated solely for the purpose of calculating the registration fee pursuant to Rules 457(c) and 457(h) of the Securities Act, and based upon the average of the high and low prices of the common stock as reported on The Nasdaq Global Market on February 22, 2024.
- (4) Consists of 1,117,575 shares of common stock subject to outstanding stock options under the Inducement Plan. To the extent that outstanding stock options or other awards under the Inducement Plan are forfeited or lapse unexercised, the shares of common stock subject to such awards will be available for future issuance under the Inducement Plan.
- (5) Estimated solely for the purpose of calculating the registration fee pursuant to Rule 457(h) of the Securities Act, and based upon the weighted average exercise price of the outstanding stock options granted under the Inducement Plan.
- (6) Consists of 5,000,000 shares of common stock that may become issuable under the 2020 Plan pursuant to its terms.

LATHAM & WATKINS LLP

February 29, 2024

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www.lw.com

FIRM / AFFILIATE OFFICES Austin Munich Beijing Boston New York Brussels Orange County Century City Paris Chicago Riyadh Dubai San Diego Düsseldorf San Francisco Frankfurt Seoul Silicon Valley Hamburg Hong Kong Singapore Houston Tel Aviv London Tokyo

Washington, D.C.

Los Angeles

Madrid

Zentalis Pharmaceuticals, Inc. 1359 Broadway, Suite 801 New York, New York 10018

> Registration Statement on Form S-8; 6,775,000 Shares of Common Stock, par value \$0.001 per share Re:

To the addressee set forth above:

We have acted as special counsel to Zentalis Pharmaceuticals, Inc., a Delaware corporation (the "Company"), in connection with the proposed issuance of an aggregate of 6,775,000 shares of common stock, \$0.001 par value per share (the "Shares"), of the Company. pursuant to the Company's 2020 Incentive Award Plan (as amended the "Incentive Plan") and the Company's 2022 Employment Inducement Incentive Award Plan (as amended, the "Inducement Plan"), and together with the Incentive Plan, the "Plans"). The Shares are included in a Registration Statement on Form S-8 under the Securities Act of 1933, as amended (the "Act"), filed with the Securities and Exchange Commission (the "Commission") on February 29, 2024 (the "Registration Statement"). This opinion is being furnished in connection with the requirements of Item 601(b)(5) of Regulation S-K under the Act, and no opinion is expressed herein as to any matter pertaining to the contents of the Registration Statement, other than as expressly stated herein with respect to the issue of the Shares.

As such counsel, we have examined such matters of fact and questions of law as we have considered appropriate for purposes of this letter. With your consent, we have relied upon certificates and other assurances of officers of the Company and others as to factual matters without having independently verified such factual matters. We are opining herein as to the General Corporation Law of the State of Delaware, and we express no opinion with respect to any other laws.

In our examination, we have assumed the genuineness of all signatures, the authenticity of all documents submitted to us as originals and the conformity to authentic original documents of all documents submitted to us as copies.

February 29, 2024 Page 2

LATHAM & WATKINS LLP

Subject to the foregoing and the other matters set forth herein, it is our opinion that, as of the date hereof, when the Shares have been duly registered on the books of the transfer agent and registrar therefor in the name or on behalf of the purchasers, and subject to the Company completing all actions and proceedings required on its part to be taken prior to the issuance of the Shares, and when the Shares have been issued by the Company in the circumstances contemplated by the Plans for legal consideration in excess of par value, assuming in each case that the individual grants or awards under the Plans are duly authorized by all necessary corporate action and duly granted or awarded and exercised in accordance with the requirements of law and the Plans (and the agreements and awards duly adopted thereunder and in accordance therewith), the issuance of the Shares will have been duly authorized by all necessary corporate action of the Company, and the Shares will be validly issued, fully paid and nonassessable. In rendering the foregoing opinion, we have assumed that the Company will comply with all applicable notice requirements regarding uncertificated shares provided in the General Corporation Law of the State of Delaware.

This opinion is for your benefit in connection with the Registration Statement and may be relied upon by you and by persons entitled to rely upon it pursuant to the applicable provisions of the Act. We consent to your filing this opinion as an exhibit to the Registration Statement. In giving such consent, we do not thereby admit that we are in the category of persons whose consent is required under Section 7 of the Act or the rules and regulations of the Commission thereunder.

Sincerely,

/s/ Latham & Watkins LLP

Consent of Independent Registered Public Accounting Firm

We consent to the incorporation by reference in the Registration Statement (Form S-8) pertaining to the Zentalis Pharmaceuticals, Inc. 2022 Employment Inducement Incentive Award Plan and the Zentalis Pharmaceuticals, Inc. 2020 Incentive Award Plan, of our reports dated February 27, 2024, with respect to the consolidated financial statements of Zentalis Pharmaceuticals, Inc. and the effectiveness of internal control over financial reporting of Zentalis Pharmaceuticals, Inc. included in its Annual Report (Form 10-K) for the year ended December 31, 2023, filed with the Securities and Exchange Commission.

/s/ Ernst & Young LLP

San Diego, California

February 29, 2024