UNITED STATES SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

FORM S-1 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)

2834 (Primary Standard Industrial Classification Code Number) 82-3607803 (I.R.S. Employer Identification No.)

530 Seventh Avenue, Suite 2201 New York, New York 10018 (212) 433-3791

(Address, including zip code, and telephone number, including area code, of registrant's principal executive offices)

Anthony Y. Sun, M.D. Chief Executive Officer Zentalis Pharmaceuticals, Inc. 530 Seventh Avenue, Suite 2201 New York, New York 10018 (212) 433-3791

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

Copies to:

Cheston Larson
Nathan Ajiashvili
Matthew Bush
Latham & Watkins LLP
885 Third Avenue
New York, New York 10022
(212) 906-1200

Divakar Gupta Richard Segal Alison Haggerty Charles S. Kim Cooley LLP 55 Hudson Yards New York, New York 10001 (212) 479-6000

Approximate date of commencement of proposed sale to the public: As soon as practicable after this Registration Statement becomes effective.

If any of the securities being registered on this Form are to be offered on a delayed or continuous basis pursuant to Rule 415 under the Securities Act of 1933, check the following box. \Box

If this Form is filed to register additional securities for an offering pursuant to Rule 462(b) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering. \boxtimes 333-236959

If this Form is a post-effective amendment filed pursuant to Rule 462(c) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering. \Box

If this Form is a post-effective amendment filed pursuant to Rule 462(d) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering.

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.

Large accelerated filer \Box Accelerated filer

Non-accelerated filer		Smaller reporting company	\times
(Do not check if a smaller reporting company)		Emerging growth company	\boxtimes

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

CALCULATION OF REGISTRATION FEE

	Proposed Maximum	
Title of Each Class of Securities to be Registered	Aggregate Offering Price(1)	Amount of Registration Fee(1)
Common Stock, \$0.001 par value per share	\$31,671,000	\$4,110.90

(1) The registration fee is calculated in accordance with Rule 457(o) under the Securities Act of 1933, as amended (the "Securities Act"), based on the proposed maximum aggregate offering price. The registrant previously registered securities with a proposed maximum aggregate offering price not to exceed \$158,355,000 on a Registration Statement on Form S-1, as amended (File No. 333-236959), which was declared effective by the Securities and Exchange Commission on April 2, 2020. In accordance with Rule 462(b) promulgated under the Securities Act, an additional amount of securities having a proposed maximum aggregate offering price of \$31,671,000 is hereby registered, which includes the additional shares issuable upon the exercise of the underwriters' option to purchase additional shares.

This Registration Statement shall become effective upon filing with the Securities and Exchange Commission in accordance with Rule 462(b) promulgated under the Securities Act.

EXPLANATORY NOTE AND INCORPORATION OF CERTAIN INFORMATION BY REFERENCE

This Registration Statement is being filed with the Securities and Exchange Commission (the "SEC"), pursuant to Rule 462(b) under the Securities Act of 1933, as amended (the "Securities Act"). This Registration Statement relates to the public offering of common stock, par value \$0.001 per share (the "Common Stock"), of Zentalis Pharmaceuticals, Inc. (the "Registrant"), contemplated by the Registration Statement on Form S-1, as amended (File No. 333-236959), initially filed with the SEC by the Registrant on March 6, 2020 (as amended, the "Prior Registration Statement") pursuant to the Securities Act, which was declared effective by the SEC on April 2, 2020. The contents of the Prior Registration Statement, including all amendments and exhibits thereto, are incorporated by reference into this Registration Statement.

The Registrant is filing this Registration Statement for the sole purpose of increasing the aggregate offering price of shares to be offered in the public offering by \$31,671,000, which includes additional shares that the underwriters have the option to purchase. The additional shares of Common Stock that are being registered for issuance and sale are in an amount and at a price that together represent no more than 20% of the maximum aggregate offering price set forth in the Calculation of Registration Fee table contained in the Prior Registration Statement.

The required opinion and consents are listed in Part II, Item 16 of this Registration Statement and filed herewith.

PART II Information Not Required in Prospectus

Item 16. Exhibits

The following documents are filed as exhibits to this Registration Statement, and all other exhibits previously filed as exhibits to the Registrant's Registration Statement on Form S-1, as amended (File No. 333-236959), are incorporated by reference into, and shall be deemed to be a part of, this filing.

Exhibit <u>Number</u>	Description of Exhibit
5.1	Opinion of Latham & Watkins LLP (incorporated by reference to Exhibit 5.1 filed with the Prior Registration Statement filed on March 31, 2020)
23.1	Consent of Independent Registered Public Accounting Firm.
23.2	Consent of Latham & Watkins LLP (included in Exhibit 5.1)
24.1*	Power of Attorney

^{*} Previously filed on the signature page to the Registrant's Registration Statement on Form S-1, as amended (File No 333-236959) filed with the Securities and Exchange Commission on March 6, 2020 and incorporated by reference therein.

SIGNATURES

Pursuant to the requirements of the Securities Act, the registrant has duly caused this Registration Statement to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of New York, State of New York, on this 2nd day of April, 2020.

ZENTALIS PHARMACEUTICALS, INC.

By: /s/ Anthony Y. Sun, M.D.

Anthony Y. Sun, M.D. Chief Executive Officer, President and Chairman

SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, as amended, this Registration Statement has been signed by the following persons in the capacities held on the dates indicated.

Signature	Title	Date
/s/ Anthony Y. Sun, M.D. Anthony Y. Sun, M.D.	Chief Executive Officer, President and Chairman (principal executive officer)	April 2, 2020
/s/ Melissa B. Epperly Melissa B. Epperly	Chief Financial Officer (principal financial and accounting officer)	April 2, 2020
* Cam S. Gallagher	- Director	April 2, 2020
* David E. Goel	- Director	April 2, 2020
* Karan S. Takhar	- Director	April 2, 2020
* David M. Johnson	- Director	April 2, 2020
*By: /s/ Anthony Y. Sun, M.D. Anthony Y. Sun, M.D. Attorney-in-fact		

Consent of Independent Registered Public Accounting Firm

We consent to the incorporation by reference in the Registration Statement on Form S-1 filed pursuant to Rule 462(b) of the Securities Act of 1933 of the reference to our firm under the caption "Experts" and to the incorporation by reference of our report dated March 6, 2020, with respect to the financial statements of Zentalis Pharmaceuticals, LLC included in Amendment No. 1 to the Registration Statement (Form S-1 No. 333-236959) and related Prospectus of Zentalis Pharmaceuticals, LLC for the registration of its common stock.

/s/ Ernst & Young LLP

San Diego, California April 2, 2020