Registration No. 333-250010

UNITED STATES SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

POST-EFFECTIVE AMENDMENT NO. 1

TO

FORM S-1

REGISTRATION STATEMENT UNDER

THE SECURITIES ACT OF 1933

KEROS THERAPEUTICS. 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)

81-1173868 (I.R.S. Employer Identification No.)

99 Hayden Avenue, Suite 120, Building E Lexington, Massachusetts 02421 Tel: (617) 314-6297

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

Jasbir Seehra **Chief Executive Officer** Keros Therapeutics, Inc. 99 Hayden Avenue, Suite 120, Building E Lexington, Massachusetts 02421 Tel: (617) 314-6297

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

Copies to:

Marc A. Recht Ryan S. Sansom Brandon Fenn Cooley LLP 500 Boylston Street Boston, Massachusetts 02116 (617) 937-2300

Esther Cho Head of Legal Keros Therapeutics, Inc. 99 Hayden Avenue, Suite 120, Building Lexington, Massachusetts 02421 (617) 314-6297

Peter N. Handrinos Nathan Ajiashvili Latham & Watkins LLP 200 Clarendon Street ew York, New York 02116 (617) 948-6000 New

Approximate date of commencement of proposed sale to the public: As soon as practicable after the effective date of this registration statement. 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.

If this Form is filed to register additional securities for an offering pursuant to Rule 462(b) under the Securities Act, please 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(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. X (333-250010)

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, 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 \times Non-Accelerated Filer

Accelerated Filer X Smaller Reporting Company X 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 the Securities Act.

This post-effective amendment shall become effective upon filing in accordance with Rule 462(d) promulgated under the Securities Act of 1933, as amended.

EXPLANATORY NOTE

This Post-Effective Amendment No. 1 (this "Amendment") relates to the Registrant's Registration Statement on Form S-1 (File No. 333-250010), as amended, declared effective on November 12, 2020 by the Securities and Exchange Commission. The Registrant is filing this Amendment for the sole purpose of replacing Exhibit 5.1 to the Registration Statement. This Amendment does not modify any provision of Part I or Part II of the Registration Statement other than Item 16(a) of Part II as set forth below.

EXHIBIT INDEX

Exhibit Number	Description
5.1	Opinion of Cooley LLP
23.2	Consent of Cooley LLP (included in Exhibit 5.1).
24.1	Power of Attorney (included on the signature page of the Registration Statement on Form S-1 (File No. 333-250010), filed with the Commission on November 10, 2020 and incorporated herein by reference).

SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, as amended, the Registrant has duly caused this Post-Effective Amendment No. 1 to the Registration Statement to be signed on its behalf by the undersigned, thereunto duly authorized in Lexington, Massachusetts, on the 12th day of November, 2020.

KEROS THERAPEUTICS, INC.

By: /s/ Jasbir Seehra

Name: Jasbir Seehra, Ph.D. Title: Chief Executive Officer

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 and on the dates indicated.

Name	Position	Date
/s/ Jasbir Seehra Jasbir Seehra, Ph.D.	_ Chief Executive Officer and Director (Principal Executive Officer)	November 12, 2020
/s/ Keith Regnante Keith Regnante	Chief Financial Officer (Principal Financial and Accounting Officer)	November 12, 2020
* Nima Farzan	Director	November 12, 2020
* Carl Gordon, Ph.D., C.F.A.	- Director	November 12, 2020
* Tomer Kariv	– Director	November 12, 2020
* Julius Knowles	– Director	November 12, 2020
* Alon Lazarus, Ph.D.	- Director	November 12, 2020
* Ran Nussbaum	– Director	November 12, 2020
By: /s/ Jasbir Seehra	_	

Jasbir Seehra, Ph.D. *Attorney-in-Fact*

Marc A. Recht T: +1 617 937 2316 mrecht@cooley.com

November 12, 2020

Keros Therapeutics, Inc. 99 Hayden Avenue Bldg. E, Suite 120 Lexington, MA 02421

Ladies and Gentlemen:

We have acted as counsel to Keros Therapeutics, Inc., a Delaware corporation (the "*Company*"), in connection with the filing by the Company of a Registration Statement on Form S-1 (No. 333-250010) (the "*Initial Registration Statement*") with the Securities and Exchange Commission, including a related prospectus included in the Initial Registration Statement (the "*Prospectus*"), and a Registration Statement on Form S-1 related thereto filed pursuant to Rule 462(b) promulgated under the Securities Act of 1933, as amended (the "*462(b) Registration Statement*" and, together with the Initial Registration Statement, the "*Registration Statements*"), covering an underwritten public offering of up to 2,990,000 shares of the Company's common stock, par value \$0.0001 ("*Shares*") (including up to 390,000 Shares that may be sold by the Company upon exercise of an option to purchase additional shares to be granted to the underwriters).

In connection with this opinion, we have examined and relied upon (a) the Registration Statements and Prospectus, (b) the Company's Amended and Restated Certificate of Incorporation and Amended and Restated Bylaws, each as currently in effect, and (c) originals or copies certified to our satisfaction of such records, documents, certificates, memoranda and other instruments as in our judgment are necessary or appropriate to enable us to render the opinion expressed below. We have undertaken no independent verification with respect to such matters.

We have assumed the genuineness or all signatures, the authenticity of all documents submitted to us as originals, the conformity to originals of all documents submitted to us as copies thereof, the accuracy, completeness and authenticity of certificates of public officials and the due authorization, execution and delivery of all documents by all persons other than the Company where authorization, execution and delivery are a prerequisite to the effectiveness thereof. As to certain factual matters, we have relied upon a certificate of an officer of the Company and have not independently verified such matters.

Our opinion is expressed only with respect to the General Corporation Law of the State of Delaware. We express no opinion to the extent that any other laws are applicable to the subject matter hereof and express no opinion and provide no assurance as to compliance with any federal or state securities law, rule or regulation.

On the basis of the foregoing, and in reliance thereon, we are of the opinion that the Shares, when sold and issued against payment therefor as described in the Registration Statements and the Prospectus, will be validly issued, fully paid and non-assessable.

Cooley LLP 500 Boylston Street Boston, MA 02116-3736 Phone: (617) 937-2300 Fax: (617) 937-2400



Keros Therapeutics, Inc. November 12, 2020 Page 2

We consent to the reference to our firm under the caption "Legal Matters" in the Prospectus included in the Initial Registration Statement and to the filing of this opinion as an exhibit to the amendment to the Initial Registration Statement filed pursuant to Rule 462(d).

Sincerely

Cooley LLP

By: /s/ Marc A. Recht Marc A. Recht

> Cooley LLP 500 Boylston Street Boston, MA 02116-3736 Phone: (617) 937-2300 Fax: (617) 937-2400