

**UNITED STATES
SECURITIES AND EXCHANGE COMMISSION**
Washington, D.C. 20549

**FORM S-1
REGISTRATION STATEMENT
UNDER
THE SECURITIES ACT OF 1933**

Pyxis Oncology, 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)

83-1160910
(I.R.S. Employer
Identification Number)

**35 CambridgePark Drive
Cambridge, Massachusetts 02140
(617) 221-9059**
(Address, including zip code, and telephone number, including area code, of Registrant's principal executive offices)

**Lara Sullivan, M.D.
Chief Executive Officer
Pyxis Oncology, Inc.
35 CambridgePark Drive
Cambridge, Massachusetts 02140
(617) 221-9059**
(Name, address, including zip code, and telephone number, including area code, of agent for service)

Copies to:

**Asher M. Rubin
Frank F. Rahmani
Istvan A. Hajdu
Sidley Austin LLP
555 California Street, Suite 2000
San Francisco, CA 94104
(650) 565-7000**

**Nathan Ajiashvili
Latham & Watkins LLP
1271 Avenue of the Americas
New York, NY 10020
(212) 906-1200**

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.

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. (File No. 333-259627)

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.

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

Accelerated filer

Non-accelerated 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 the Securities Act.

CALCULATION OF REGISTRATION FEE

Title of each Class of Securities to be Registered	Amount to be Registered(1)	Proposed Maximum Offering Price Per Share	Proposed Maximum Aggregate Offering Price(2)	Amount of Registration Fee(3)
Common Stock, par value \$0.001 per share	1,150,000	\$16.00	\$18,400,000	\$1,705.68

- (1) The Registrant is registering 1,150,000 shares of common stock pursuant to this Registration Statement, which includes 150,000 shares which the underwriters have the option to purchase. This does not include the securities that the Registrant previously registered on the Registration Statement on Form S-1, as amended (File No. 333—259627) (“Prior Registration Statement”).
- (2) The registration fee is calculated in accordance with Rule 457(a) under the Securities Act of 1933, as amended (the “Securities Act”).
- (3) The Registrant previously registered 10,925,000 shares of its common stock with an aggregate offering price not to exceed \$174,800,000 on the Prior Registration Statement, which was declared effective by the Securities and Exchange Commission on October 7, 2021. In accordance with Rule 462(b) under the Securities Act, an additional amount of securities having a proposed maximum aggregate offering price of \$18,400,000 are hereby registered, which includes shares that the underwriters have the option to purchase.

The Registration Statement shall become effective upon filing with the Securities and Exchange Commission in accordance with Rule 462(b) promulgated under the Securities Act of 1933, as amended.

EXPLANATORY NOTE AND INCORPORATION BY REFERENCE

This Registration Statement on Form S-1 (this “Registration Statement”) is being filed pursuant to Rule 462(b) under the Securities Act of 1933, as amended, for the sole purpose of increasing the aggregate number of shares of common stock offered by Pyxis Oncology, Inc. (the “Registrant”) by 1,150,000 shares, 150,000 of which are subject to purchase upon exercise of the underwriters’ option to purchase additional shares of the Registrant’s common stock. The additional securities that are being registered for 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 Registration Statement on [Form S-1](#), as amended (File No. 333-259627) (the “Prior Registration Statement”). The information set forth in the Prior Registration Statement and all exhibits thereto are hereby incorporated by reference in this filing.

The required opinion and consents are listed on an Exhibit Index attached hereto and filed herewith.

EXHIBIT INDEX

Exhibit Number	Description
5.1	Opinion of Sidley Austin LLP
23.1	Consent of Sidley Austin LLP (included in Exhibit 5.1)
23.2	Consent of Ernst and Young LLP, independent registered public accounting firm
24.1*	Power of Attorney

* Incorporated by reference to the Registrant's Registration Statement on Form S-1 (File No. 333-259627).

SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, the registrant has duly caused this Registration Statement to be signed on its behalf by the undersigned, thereunto duly authorized, in Cambridge, Massachusetts, on the 7th day of October, 2021.

Pyxis Oncology, Inc.

By: /s/ Lara Sullivan
Lara Sullivan, M.D.
Chief Executive Officer

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
<u>/s/ Lara Sullivan</u> Lara Sullivan, M.D.	Chief Executive Officer; Director (Principal Executive Officer)	October 7, 2021
<u>/s/ Pamela Connealy</u> Pamela Connealy	Chief Financial Officer (Principal Financial and Accounting Officer)	October 7, 2021
<u>*</u> John Flavin	Chairman of the Board of Directors	October 7, 2021
<u>*</u> Mark Chin	Director	October 7, 2021
<u>*</u> Freda Lewis-Hall, M.D.	Director	October 7, 2021
<u>*</u> Thomas Civik	Director	October 7, 2021
<u>*</u> Darren Cline	Director	October 7, 2021

*By: /s/ Pamela Connealy
Pamela Connealy
Attorney-in-fact

SIDLEY

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AMERICA • ASIA PACIFIC • EUROPE

October 7, 2021

Pyxis Oncology, Inc.
35 CambridgePark Drive
Cambridge, MA 02140

Re: 1,150,000 shares of common stock, \$0.001 par value per share

Ladies and Gentlemen:

We refer to the Registration Statement on Form S-1, filed by Pyxis Oncology, Inc., a Delaware corporation (the "Company"), with the Securities and Exchange Commission (the "SEC") on the date hereof pursuant to Rule 462(b) (the "Additional Registration Statement") under the Securities Act of 1933, as amended (the "Securities Act"). The Additional Registration Statement relates to the registration under the Securities Act of 1,150,000 shares (including an aggregate of 150,000 shares that may be sold by the Company pursuant to the exercise of the underwriters' option to purchase shares to cover overallocments under the Underwriting Agreement (as defined below)) of common stock, \$0.001 par value per share (the "Additional Shares"), of the Company. The Additional Registration Statement incorporates by reference the Registration Statement on Form S-1, File No. 333-259627, filed by the Company with the SEC under the Securities Act, as amended to the date hereof (as so amended, the "Original Registration Statement"). This opinion letter is in addition to our opinion letter that was filed as Exhibit 5.1 to the Original Registration Statement. The Additional Shares are to be sold by the Company pursuant to an underwriting agreement between the Company and the Underwriters named therein, the form of which has been filed as Exhibit 1.1 to the Original Registration Statement (the "Underwriting Agreement").

This opinion letter is being delivered in accordance with the requirements of Item 601(b)(5) of Regulation S-K under the Securities Act.

We have examined: (i) the Original Registration Statement; (ii) the form of the Amended and Restated Certificate of Incorporation (the "Certificate of Incorporation") of the Company to be filed with the Secretary of State of the State of Delaware prior to the closing of the sale of the shares contemplated by the Original Registration Statement and the Additional Registration Statement, filed as Exhibit 3.1 to the Original Registration Statement; (iii) the form of the Amended and Restated Bylaws (the "Bylaws") of the Company to be effective prior to the closing of the sale of the shares contemplated by the Original Registration Statement and the Additional Registration Statement, filed as Exhibit 3.2 to the Original Registration Statement; (iv) the form of the Underwriting Agreement; (v) the Additional Registration Statement; and (vi) the resolutions adopted by the board of directors and the stockholders of the Company relating to

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the Original Registration Statement and the Additional Registration Statement, the Certificate of Incorporation, the Bylaws and the issuance of the shares by the Company. We have also examined originals, or copies of originals certified to our satisfaction, of such agreements, documents, certificates and statements of the Company and other corporate documents and instruments, and have examined such questions of law, as we have considered relevant and necessary as a basis for this opinion letter. We have assumed the authenticity of all documents submitted to us as originals, the genuineness of all signatures, the legal capacity of all persons and the conformity with the original documents of any copies thereof submitted to us for examination. As to facts relevant to the opinions expressed herein, we have relied without independent investigation or verification upon, and assumed the accuracy and completeness of certificates, letters and oral and written statements and representations of public officials and officers and other representatives of the Company. We have also assumed that the Certificate of Incorporation will be duly filed with the Secretary of State of the State of Delaware prior to the sale of the Additional Shares.

Based on the foregoing, we are of the opinion that the Additional Shares will be validly issued, fully paid and non-assessable when: (i) the Company's board of directors or a duly authorized committee thereof shall have duly adopted final resolutions setting the price of the Additional Shares; and (ii) certificates representing the Additional Shares shall have been duly executed, countersigned and registered and duly delivered to the purchasers thereof against payment of the agreed consideration therefor in an amount not less than the par value thereof or, if any Additional Shares are to be issued in uncertificated form, the Company's books shall reflect the issuance of such Additional Shares to the purchasers thereof against payment of the agreed consideration therefor in an amount not less than the par value thereof, all in accordance with the Underwriting Agreement as executed and delivered by the parties thereto.

This opinion letter is limited to the General Corporation Law of the State of Delaware. We express no opinion as to the laws, rules or regulations of any other jurisdiction, including, without limitation, the federal laws of the United States of America or any state securities or blue sky laws.

We hereby consent to the filing of this opinion letter as an Exhibit to the Additional Registration Statement and to all references to our Firm included in or made a part of the Additional 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 Securities Act.

Very truly yours,

/s/ Sidley Austin LLP

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 June 21, 2021 (except for Note 15(f) as to which the date is October 4, 2021), with respect to the consolidated financial statements of Pyxis Oncology, Inc. included in Amendment No. 3 to the Registration Statement (Form S-1 No. 333-259627) and related Prospectus of Pyxis Oncology, Inc. for the registration of its common stock.

/s/ Ernst & Young LLP

Boston, Massachusetts
October 7, 2021