

July 16, 2021

Lara Sullivan, M.D.
Chief Executive Officer
Pyxis Oncology, Inc.
35 CambridgePark Drive
Cambridge, MA 02140

Inc.

Statement on Form S-1
2021

Re: Pyxis Oncology,
Draft Registration
Submitted June 21,
CIK No. 0001782223

Dear Dr. Sullivan:

We have reviewed your draft registration statement and have the following comments. In some of our comments, we may ask you to provide us with information so we may better understand your disclosure.

Please respond to this letter by providing the requested information and either submitting an amended draft registration statement or publicly filing your registration statement on EDGAR. If you do not believe our comments apply to your facts and circumstances or do not believe an amendment is appropriate, please tell us why in your response.

After reviewing the information you provide in response to these comments and your amended draft registration statement or filed registration statement, we may have additional comments.

Draft Registration Statement on Form S-1 submitted June 21, 2021

Prospectus Summary
Overview, page 1

1. Please revise this opening paragraph to clarify that your operations are preclinical.
Our Portfolio, page 2

2. We note your product pipeline tables here and in your Business section include "Multiple mAb Programs" that are in the discovery phase. Because you have not identified a product candidate for these programs, it appears premature to include them in a product pipeline table. Please revise or advise.

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Page 2

3. Please balance the disclosure in this section by noting, as disclosed on page 103, that "[d]espite the initial success seen by currently marketed products, licensed ADCs still have limitations that impact dosing, and are associated with significant adverse events."

4. We note your disclosure here and throughout the draft registration statement that your preclinical models for your "next-generation" ADCs have demonstrated "immunogenic cell death," "a validated anti-tumor effect," "significant anti-tumor activity," "potent in-vivo activity," "potent anti-tumor activity," and that your "next-generation" ADCs have potential greater therapeutic index and more potent payloads than

"conventional ADCs." Please revise your disclosure to eliminate any suggestion that your product candidates have been or will ultimately be determined to be safe or effective or to have demonstrated efficacy for purposes of granting marketing approval by the FDA or comparable agency, including comparisons to the current standard of care. In your revised disclosure, please replace all claims or conclusions related to efficacy with a description of the objective data resulting from the preclinical models.

Our Team and History, page 4

5. We note that you identify certain entities as investors in your company; however, they do not appear to be among your principal stockholders as disclosed on page 169. If material, please expand your disclosure to describe the nature of each named entity's investment in you and explain to us why including this information is appropriate. Please also explain in your response your plans to update investors about any changes these entities make with respect to their investments in the company.

Use of Proceeds, page 76

6. We note your disclosure that you intend to use a portion of the net proceeds to fund the development and regulatory activities relating to your product candidates and discovery programs. Please revise your disclosure to allocate the amount of proceeds you expect to use for each of your programs and specify how far in the clinical development of your product candidates you expect to reach with the net proceeds. If any material amounts of other funds are necessary to accomplish the specified purposes for which the proceeds are to be obtained, state the amounts and sources of such other funds needed for each such specified purpose and the sources thereof. Refer to Instruction 3 of Item 504 of Regulation S-K.

7. We note your disclosure that a milestone payment of \$9.6 million will be made to LegoChem upon the earliest to occur of certain events, including the date of pricing or First Name Last Name Lara Sullivan, M.D. offer of the first public offering of your common stock. We also note that such payments Comapany Name Pyxis are not reflected Oncology, Inc. Proceeds section. Please revise to disclose the anticipated in the Use of

July 16, source of such 2021 Page 2 funds or otherwise advise.

First Name Last Name
Lara Sullivan, M.D.
First Name Last Name Lara Sullivan, M.D.
Pyxis Oncology, Inc.
Comapany
July Name Pyxis Oncology, Inc.

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First Name Last Name
Dilution, page 80

8. Your disclosure states that historical net tangible book value excludes preferred stock which is not included within stockholders' equity (deficit). Therefore, it appears that the historical net tangible book value should be a deficit rather than \$6.3 million. Please revise the calculation or advise as to the appropriateness of your calculation.

Business
FACT Platform, page 104

9. We note your disclosure here that, "[r]ecent research has demonstrated

that site-specific conjugation techniques enable enhanced pharmacologic properties and homogenous DAR and improved therapeutic index." Please revise your disclosure to provide your basis for this claim and include additional disclosure on the material details of the "recent research," including, for example only, the sponsor, type of study, and trial design. Pfizer optimized sites for linker-payload conjugation through empirical research, page 105

10. We note your statements here that one of the FACT platform's advantages is "[v]alidated antibody-linker-payload combinations with optimized conjugation sites." Please expand your disclosure here to provide your basis for your belief that the FACT platform is "validated" given your current, preclinical stage of development of your product candidates. Figure 9, page 107

11. We note your statement on the bottom of page 105 that, "the therapeutic index of our highly stable ADCs mitigated toxicity while maximizing PK exposure in vivo." Please revise your Figure 9 to clearly label PYX-201 ADC or otherwise revise and clarify your narrative disclosure to further explain your basis for this claim. In addition, we note other figures, such as Figure 13 and 14, where your product candidates are not clearly labeled. Please clarify your figure labels throughout your registration statement as applicable. Commercialization Plan, page 127

12. We note your disclosure here that you "retain full commercialization rights for all our product candidates, including those obtained through exclusive collaboration agreements." However, we note your disclosure elsewhere that you do not have the rights to PYX-202 in South Korea. Please correct for this inconsistency or otherwise advise.

Lara Sullivan, M.D.
FirstName LastNameLara Sullivan, M.D.
Pyxis Oncology, Inc.
Comapany NamePyxis Oncology, Inc.
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FirstName LastName
Management
Executive Officers, page 149

13. We note several of your executive and director biographies where the principal occupation and employment is unclear during the past five years. Please discuss the principal occupation and employment for the past five years, including the name, and principal business of any corporation or other organization. See Item 401(e) of Regulation S-K. Employment Agreements, Severance and Change in Control Agreements Robert Crane, page 161

14. We note your disclosure that Mr. Crane is entitled to an option upon the closing of an equity offering, non-dilutive collaboration transaction, convertible debt or debt offering resulting in gross proceeds to the Company of at least \$20 million and/or a change of control of the Company. Please clarify your disclosure to state whether or not Mr. Crane is entitled to an option to purchase shares in connection with your proposed initial public offering. Exhibits

15. Please file the joint venture agreement with Alloy Therapeutics, Inc. as an exhibit to your registration statement, or tell us why you believe you are not required to do so. See Item 601(b)(10) of Regulation S-K. You may contact Kristin Lochhead at 202-551-3664 or Vanessa Robertson at 202-551-3649 if you have questions regarding comments on the financial statements and related matters. Please contact Jason Drory at 202-551-8342 or Jeffrey Gabor at 202-551-2544 with any other questions.

Sincerely,

Division of

Office of Life

Corporation Finance

Sciences

cc: Asher M. Rubin, Esq.