UNITED STATES SECURITIES AND EXCHANGE COMMISSION

WASHINGTON, DC 20549

FORM S-8

REGISTRATION STATEMENT UNDER THE SECURITIES ACT OF 1933

MUSTANG BIO, INC.

(Exact name of registrant as specified in its charter)

Delaware (State or other jurisdiction of incorporation or

organization)

47-3828760 (IRS Employer Identification No.)

377 Plantation Street
Worcester, Massachusetts 01605
(Address, including zip code, of Principal Executive Offices)

Mustang Bio, Inc. 2019 Employee Stock Purchase Plan (Full title of the plan)

Manuel Litchman, M.D.

Chief Executive Officer and President
377 Plantation Street

Worcester, Massachusetts 01605
(781) 652-4500

(Name, address and telephone number of agent for service)

Copy to:
Mark McElreath
Alston & Bird LLP
90 Park Avenue
New York, New York 10016-1387
(212) 210-9595

| • | 2 | ted filer," "smaller reporting company," and "emerging grow | | 2 22 |
|-------------------------|-------|---|-------------|------|
| Act: | . g , | | r. J | |
| Large accelerated filer | | Accelerated filer | | |
| Non-accelerated filer | X | Smaller reporting company | \boxtimes | |
| | | Emerging growth company | \boxtimes | |

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 13(a) of the Exchange Act.

CALCULATION OF REGISTRATION FEE

| | | Proposed | Proposed | |
|----------------------------------|----------------|----------------|-----------------|------------------|
| | | maximum | maximum | |
| Title of securities | Amount to | offering price | aggregate | Amount of |
| to be registered | be registered | per share | offering price | registration fee |
| Common Stock, \$0.0001 par value | 400,000 (1)(2) | \$ 3.09(3) | \$ 1,234,000(3) | \$ 134.63 |

- (1) Consists of 400,000 shares reserved for issuance under the Mustang Bio, Inc. 2019 Employee Stock Purchase Plan (the "Plan").
- (2) Pursuant to Rule 416(a) under the Securities Act of 1933, as amended (the "Securities Act"), this Registration Statement also covers any additional shares of Mustang Bio, Inc. (the "Registrant") common stock that become issuable under the Plan by reason of any stock dividend, stock split, recapitalization or other similar transaction that results in an increase in the number of outstanding shares of the Registrant's common stock.
- (3) Estimated in accordance with Rule 457(c) and (h) under the Securities Act solely for the purpose of calculating the registration fee based upon the average of the high and low prices of the Registrant's common stock on the NASDAQ Global Market on Tuesday March 30, 2021.

- (a) The documents constituting Part I of this registration statement on Form S-8 (this "Registration Statement") will be delivered to participants in the Plan as specified by Rule 428(b)(1) under the Securities Act. These documents and the documents incorporated by reference in this Registration Statement pursuant to Item 3 of Part II of this form, taken together, constitute a prospectus that meets the requirements of Section 10(a) of the Securities Act.
- (b) Upon written or oral request, Mustang Bio, Inc. (the "Company") will provide, without charge, the documents incorporated by reference in Item 3 of Part II of this Registration Statement. The documents are incorporated by reference in the Section 10(a) prospectus. The Company will also provide, without charge, upon written or oral request, other documents required to be delivered to employees pursuant to Rule 428(b). Requests for the above mentioned information should be directed to Brian Achenbach, the Company's Senior Vice President of Finance and Corporate Controller, at the address and telephone number on the cover of this Registration Statement.

PART II INFORMATION REQUIRED IN THE REGISTRATION STATEMENT

Item 3. Incorporation of Documents by Reference.

The following documents, filed by the Company with the Securities and Exchange Commission (the "Commission") pursuant to the Securities Exchange Act of 1934, as amended (the "Exchange Act"), are incorporated herein by reference and deemed to be a part hereof (excluding any portions of such documents that are deemed to be "furnished" but not "filed" for purposes of the Exchange Act):

- a) Our Annual Report on Form 10-K for the fiscal year ended December 31, 2020;
- b) The description of the Company's Common Stock contained in the Form 10-12G/A filed with the Commission on October 18, 2016, and any amendment or report filed for the purpose of updating such description; and
- c) The description of the Common Stock as included under the caption "Description of Registrant's Securities to be Registered" in the Company's Registration Statement on Form 10-12G, as amended, originally filed with the Commission on July 28, 2016, and the Company's Registration Statement on Form 8-A12B filed with the Commission on August 21, 2017, and any amendment or report filed for the purpose of further updating such description.

All documents filed by the Company subsequent to the date of this Registration Statement pursuant to Sections 13(a), 13(c), 14 and 15(d) of the Exchange Act, and prior to the filing of a post-effective amendment which indicates that all securities offered hereby have been sold or which deregisters all such securities then remaining unsold, shall be deemed to be incorporated by reference in this Registration Statement and to be a part hereof from the date of filing of such documents.

Any statement contained in a document incorporated or deemed to be incorporated by reference herein shall be deemed to be modified or superseded for purposes of this Registration Statement to the extent that a statement contained herein or in any other subsequently filed document which also is incorporated or deemed to be incorporated by reference herein modifies or supersedes such statement. Any such statement so modified or superseded shall not be deemed, except as so modified or superseded, to constitute a part of this Registration Statement.

Item 4. Description of Securities.

Not applicable.

Item 5. Interests of Named Experts and Counsel.

Not applicable.

Item 6. Indemnification of Directors and Officers.

Under the General Corporation Law of the State of Delaware, or DGCL, a corporation may include provisions in its certificate of incorporation that will relieve its directors of monetary liability for breaches of their fiduciary duty to the corporation, except under certain circumstances, including a breach of the director's duty of loyalty, acts or omissions of the director not in good faith or which involve intentional misconduct or a knowing violation of law, the approval of an improper payment of a dividend or an improper purchase by the corporation of stock or any transaction from which the director derived an improper personal benefit. The Company's Amended and Restated Certificate of Incorporation eliminates the personal liability of directors to the Company or its stockholders for monetary damages for breach of fiduciary duty as a director with certain limited exceptions set forth in the DGCL.

Section 145 of the DGCL grants to corporations the power to indemnify each officer and director against liabilities and expenses incurred by reason of the fact that he or she is or was an officer or director of the corporation if he or she acted in good faith and in a manner he or she reasonably believed to be in or not opposed to the best interests of the corporation and, with respect to any criminal action or proceeding, had no reasonable cause to believe his or her conduct was unlawful. The Company's Amended and Restated Certificate of Incorporation and Bylaws provide for indemnification of each officer and director of the Company to the fullest extent permitted by the DGCL. Section 145 of the DGCL also empowers corporations to purchase and maintain insurance on behalf of any person who is or was an officer or director of the corporation against liability asserted against or incurred by him in any such capacity, whether or not the corporation would have the power to indemnify such officer or director against such liability under the provisions of Section 145 of the DGCL.

Item 7. Exemption from Registration Claimed.

Not applicable.

Item 8. Exhibits.

Exhibit

See the Exhibit Index set forth below.

EXHIBIT INDEX

Description

| 5.1 Opinion of Alston & Bird LLP. | |
|---|-------|
| 23.1 Consent of Alston & Bird LLP (included in Exhibit 5.1). | |
| 23.2 Consent of BDO USA, LLP, Independent Registered Accounting Firm. | |
| Power of Attorney (included on the signature page of this Registration Statement). Mustang Bio, Inc. 2019 Employee Stock Purchase Plan, filed as Exhibit 10.1 to Registrant's Form 10-Q on August 9, 2019 and incorporated herein by references. | ence. |

Item 9. Undertakings.

- (a) The Company hereby undertakes:
 - (1) To file, during any period in which offers or sales are being made, a post-effective amendment to this Registration Statement:
 - (i) To include any prospectus required by Section 10(a)(3) of the Securities Act;
- (ii) To reflect in the prospectus any facts or events arising after the effective date of this Registration Statement (or the most recent post-effective amendment thereof) which, individually or in the aggregate, represent a fundamental change in the information set forth in this Registration Statement; and
- (iii) To include any material information with respect to the plan of distribution not previously disclosed in this Registration Statement or any material change to such information in this Registration Statement;

Provided, however, that paragraphs (a)(1)(i) and (a)(1)(ii) above do not apply if the registration statement is on Form S-8, and the information required to be included in a post-effective amendment by those paragraphs is contained in reports filed with or furnished to the Commission by the Company pursuant to section 13 or section 15(d) of the Securities Exchange Act of 1934 that are incorporated by reference in this Registration Statement.

- (2) That, for the purpose of determining any liability under the Securities Act of 1933, each such post-effective amendment shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial *bona fide* offering thereof.
- (3) To remove from registration by means of a post-effective amendment any of the securities being registered which remain unsold at the termination of the offering.
- (b) The undersigned Company hereby undertakes that, for purposes of determining any liability under the Securities Act of 1933, each filing of the Company's annual report pursuant to Section 13(a) or 15(d) of the Securities Exchange Act of 1934 (and, where applicable, each filing of an employee benefit plan's annual report pursuant to Section 15(d) of the Securities Exchange Act of 1934) that is incorporated by reference in the registration statement shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial *bona fide* offering thereof.
- (c) Insofar as indemnification for liabilities arising under the Securities Act of 1933 may be permitted to directors, officers and controlling persons of the Company pursuant to the foregoing provisions, or otherwise, the Company has been advised that in the opinion of the Securities and Exchange Commission such indemnification is against public policy as expressed in the Act and is, therefore, unenforceable. In the event that a claim for indemnification against such liabilities (other than the payment by the Company of expenses incurred or paid by a director, officer or controlling person of the Company in the successful defense of any action, suit or proceeding) is asserted by such director, officer or controlling person in connection with the securities being registered, the Company will, unless in the opinion of its counsel the matter has been settled by controlling precedent, submit to a court of appropriate jurisdiction the question whether such indemnification by it is against public policy as expressed in the Act and will be governed by the final adjudication of such issue.

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 Worcester, State of Massachusetts, on April 2, 2021.

MUSTANG BIO, INC.

By: /s/ Manuel Litchman, M.D.

Manuel Litchman, M.D.,

President and Chief Executive Officer

POWER OF ATTORNEY

Each person whose signature appears below constitutes and appoints Manuel Litchman, M.D. his or her true and lawful attorney-in-fact and agent, with full power of substitution and resubstitution, for him or her and in his or her name, place and stead, in any and all capacities, to sign any and all amendments (including post-effective amendments) to this Registration Statement, and to file the same, with all exhibits thereto, and other documents in connection therewith, with the Securities and Exchange Commission, granting unto said attorney-in-fact and agent full power and authority to do and perform each and every act and thing requisite and necessary to be done in and about the premises, as fully to all intents and purposes as he or she might or could do in person, hereby ratifying and confirming all that said attorney-in-fact and agent, or his or her 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 | Capacity | Date |
|--|---------------------------------------|---------------|
| /s/ Michael S. Weiss Michael S. Weiss | Executive Chairman of the Board | April 2, 2021 |
| /s/ Manuel Litchman Manuel Litchman, M.D. | President and Chief Executive Officer | April 2, 2021 |
| /s/ Lindsey A. Rosenwald Lindsey A. Rosenwald, M.D. | Director | April 2, 2021 |

| /s/ Neil Herskowitz Neil Herskowitz | Director | April 2, 2021 |
|--|--|---------------|
| /s/ Adam Chill Adam Chill | Director | April 2, 2021 |
| /s/ Michael Zelefsky Michael Zelefsky, M.D. | Director | April 2, 2021 |
| /s/ Brian Achenbach Brian Achenbach | Senior Vice President of Finance & Corporate Controller | April 2, 2021 |

ALSTON & BIRD

90 Park Avenue New York, NY 10016 212-210-9400 | Fax: 212-210-9444

Mark F. McElreath Direct Dial: 212-210-9595 Email: mark.mcelreath@alston.com

April 2, 2021

Mustang Bio, Inc. 377 Plantation Street Worcester, MA 01605

Re: Registration Statement on Form S-8

Ladies and Gentlemen:

We are acting as counsel to Mustang Bio, Inc., a Delaware corporation (the "Company") in connection with the registration statement (the "Registration Statement") on Form S-8 filed today by the Company with the Securities and Exchange Commission (the "Commission") under the Securities Act of 1933, as amended (the "Securities Act"), covering 400,000 shares of the Company's common stock, \$0.0001 par value per share (the "Shares"), which may be issued by the Company upon the grant, exercise, settlement or purchase of awards pursuant to the Mustang Bio, Inc. 2019 Employee Stock Purchase Plan, as amended (the "Plan"). This opinion is furnished to you at your request in accordance with the requirements of Item 8 of the Commission's Form S-8 and Item 601(b)(5) of Regulation S-K promulgated under the Securities Act.

We have examined the Amended and Restated Certificate of Incorporation of the Company, the Certificates of Amendment of the Amended and Restated Certificate of Incorporation of the Company dated June 14, 2018, September 30, 2019 and December 4, 2020, the Bylaws of the Company, the Plan, records of proceedings of the Board of Directors of the Company (the "Board of Directors"), or committees thereof, and records of proceedings of the stockholders, deemed by us to be relevant to this opinion letter and the Registration Statement. We also have made such further legal and factual examinations and investigations as we deemed necessary for purposes of expressing the opinion set forth herein.

As to certain factual matters relevant to this opinion letter, we have relied conclusively upon originals or copies, certified or otherwise identified to our satisfaction, of such records, agreements, documents and instruments, including certificates or comparable documents of officers of the Company and of public officials, as we have deemed appropriate as a basis for the opinion hereinafter set forth. Except to the extent expressly set forth herein, we have made no independent investigations with regard to matters of fact, and, accordingly, we do not express any opinion as to matters that might have been disclosed by independent verification.

Atlanta | Beijing | Brussels | Charlotte | Dallas | Fort Worth | London | Los Angeles | New York | Research Triangle | San Francisco | Silicon Valley | Washington, D.C.

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Our opinion set forth below is limited to the General Corporation Law of the State of Delaware, applicable provisions of the Constitution of the State of Delaware and reported judicial decisions interpreting such General Corporation Law and Constitution that, in our professional judgment, are normally applicable to transactions of the type contemplated by the Plan, and we do not express any opinion herein concerning any other laws.

This opinion letter is provided for use in connection with the transactions contemplated by the Registration Statement and may not be used, circulated, quoted or otherwise relied upon for any other purpose without our express written consent. The only opinion rendered by us consists of those matters set forth in the sixth paragraph hereof, and no opinion may be implied or inferred beyond the opinion expressly stated. This opinion letter is rendered as of the date hereof and we make no undertaking and expressly disclaim any duty to supplement or update the opinions rendered herein, if, after the date hereof, facts or circumstances come to our attention or changes in the law occur which could affect such opinions. We note specifically that the Shares may be issued from time to time hereafter, and our opinion is limited to the applicable laws, including the related rules and regulations, as in effect on the date hereof.

Based on the foregoing, it is our opinion that the Shares to be issued under the Plan are duly authorized, and, when issued by the Company in accordance with the terms of the Plan, will be validly issued, fully paid and non-assessable.

We consent to the filing of this opinion letter as an exhibit to the Registration Statement. In giving such consent, we do not thereby admit that we are within the category of persons whose consent is required under Section 7 of the Securities Act or the rules and regulations of the Commission thereunder.

ALSTON & BIRD

By: /s/ Mark F. McElreath

Mark F. McElreath

Consent of Independent Registered Public Accounting Firm

Mustang Bio, Inc. Worcester, Massachusetts

We hereby consent to the incorporation by reference in the Prospectus constituting a part of this Registration Statement on Form S-8 of our report dated March 24, 2021, relating to the consolidated financial statements of Mustang Bio, Inc. appearing in the Company's Annual Report on Form 10-K for the year ended December 31, 2020.

/s/ BDO USA, LLP Boston, Massachusetts

April 2, 2021