

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

**AMENDMENT NO. 1  
TO  
FORM S-3  
REGISTRATION STATEMENT  
UNDER  
THE SECURITIES ACT OF 1933**

**Annovis Bio, Inc.**

(Exact name of registrant as specified in its charter)

**Delaware**  
(State or other jurisdiction of  
incorporation or organization)

**26-2540421**  
(I.R.S. Employer  
Identification Number)

**101 Lindenwood Drive, Suite 225  
Malvern, PA 19355  
(484) 875-3192**

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

**Maria Maccacchini, Ph.D.  
President and Chief Executive Officer  
Annovis Bio, Inc.**

**101 Lindenwood Drive, Suite 225  
Malvern, PA 19355(484) 875-3192**

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

**Copies to:  
Mitchell S. Nussbaum, Esq.  
Joan S. Guilfoyle, Esq.  
Loeb & Loeb LLP  
345 Park Avenue  
New York, NY 10154  
(212) 407-4000**

**Approximate date of commencement of proposed sale to the public: From time to time after the effective date of this Registration Statement.**

If the only securities being registered on this Form are being offered pursuant to dividend or interest reinvestment plans, please check the following box.

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, other than securities offered only in connection with dividend or interest reinvestment plans, 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.

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 registration statement pursuant to General Instruction I.D. or a post-effective amendment thereto that shall become effective upon filing with the Commission pursuant to Rule 462(e) under the Securities Act, check the following box.

If this Form is a post-effective amendment to a registration statement filed pursuant to General Instruction I.D. filed to register additional securities or additional classes of securities pursuant to Rule 413(b) under the Securities Act, check the following box.

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	<input type="checkbox"/>	Accelerated filer	<input type="checkbox"/>
Non-accelerated filer	<input checked="" type="checkbox"/>	Smaller Reporting Company	<input checked="" type="checkbox"/>
		Emerging Growth Company	<input checked="" type="checkbox"/>

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.

**The registrant hereby amends this registration statement on such date or dates as may be necessary to delay its effective date until the registrant shall file a further amendment that specifically states that this registration statement shall thereafter become effective in accordance with Section 8(a) of the Securities Act, or until this registration statement shall become effective on such date as the Securities and Exchange Commission, acting pursuant to said Section 8(a), may determine.**

**PART II**  
**INFORMATION NOT REQUIRED IN THE PROSPECTUS**

**Item 14. Other Expenses of Issuance and Distribution**

The following table sets forth the estimated costs and expenses, other than underwriting discounts and commissions, payable by the registrant in connection with the offering of the securities being registered. All the amounts shown are estimates, except for the Securities and Exchange Commission (the “SEC”) registration fee. The amounts do not include the costs of preparing any prospectus supplements, NYSE listing fees, FINRA filing fees, trustee fees, transfer agent fees or other expenses relating to the sale and distribution of particular securities registered under this registration statement, as those costs and expenses cannot be estimated at this time.

	<b>Amount to be paid</b>
SEC registration fee	\$9,848
FINRA filing fee	(1)
Printing expenses	(1)
Accounting fees and expenses	(1)
Legal fees and expenses	(1)
Miscellaneous	(1)
Total	(1)

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- (1) These fees and expenses depend on the securities offered and the number of issuances and, accordingly, cannot be estimated at this time.

**Item 15. Indemnification of Directors and Officers.**

Section 102 of the General Corporation Law of the State of Delaware permits a corporation to eliminate the personal liability of directors of a corporation to the corporation or its stockholders for monetary damages for a breach of fiduciary duty as a director, except where the director breached his duty of loyalty, failed to act in good faith, engaged in intentional misconduct or knowingly violated a law, authorized the payment of a dividend or approved a stock repurchase in violation of Delaware corporate law or obtained an improper personal benefit. Our amended and restated certificate of incorporation provides that no director of ours shall be personally liable to us or our stockholders for monetary damages for any breach of fiduciary duty as a director, notwithstanding any provision of law imposing such liability, except to the extent that the General Corporation Law of the State of Delaware prohibits the elimination or limitation of liability of directors for breaches of fiduciary duty.

Section 145 of the General Corporation Law of the State of Delaware provides that a corporation has the power to indemnify a director, officer, employee, or agent of the corporation, or a person serving at the request of the corporation for another corporation, partnership, joint venture, trust or other enterprise in related capacities against expenses (including attorneys’ fees), judgments, fines and amounts paid in settlement actually and reasonably incurred by the person in connection with an action, suit or proceeding to which he was or is a party or is threatened to be made a party to any threatened, ending or completed action, suit or proceeding by reason of such position, if such person acted in good faith and in a manner he reasonably believed to be in or not opposed to the best interests of the corporation, and, in any criminal action or proceeding, had no reasonable cause to believe his conduct was unlawful, except that, in the case of actions brought by or in the right of the corporation, no indemnification shall be made with respect to any claim, issue or matter as to which such person shall have been adjudged to be liable to the corporation unless and only to the extent that the Court of Chancery or other adjudicating court determines that, despite the adjudication of liability but in view of all of the circumstances of the case, such person is fairly and reasonably entitled to indemnity for such expenses which the Court of Chancery or such other court shall deem proper.

Our amended and restated certificate of incorporation provides that we will indemnify each person who was or is a party or threatened to be made a party to any threatened, pending or completed action, suit or proceeding (other than an action by or in the right of us) by reason of the fact that he or she is or was, or has agreed to become, a director or officer, or is or was serving, or has agreed to serve, at our request as a director, officer, partner, employee or trustee of, or in a similar capacity with, another corporation, partnership, joint venture, trust or other enterprise (all such persons being referred to as an “Indemnitee”), or by reason of any action alleged to have been taken or omitted in such capacity, against all expenses (including attorneys’ fees), judgments, fines and amounts paid in settlement actually and reasonably incurred in connection with such action, suit or proceeding and any appeal therefrom, if such Indemnitee acted in good faith and in a manner he or she reasonably believed to be in, or not opposed to, our best interests, and, with respect to any criminal action or proceeding, he or she had no reasonable cause to believe his or her conduct was unlawful. Our amended and restated certificate of incorporation provides that we will indemnify any Indemnitee who was or is a party to an action or suit by or in the right of us to procure a judgment in our favor by reason of the fact that the Indemnitee is or was, or has agreed to become, a director or officer, or is or was serving, or has agreed to serve, at our request as a director, officer, partner, employee or trustee of, or in a similar capacity with, another corporation, partnership, joint venture, trust or other enterprise, or by reason of any action alleged to have been taken or omitted in such capacity, against all expenses (including attorneys’ fees) and, to the extent permitted by law, amounts paid in settlement actually and reasonably incurred in connection with such action, suit or proceeding, and any appeal therefrom, if the Indemnitee acted in good faith and in a manner he or she reasonably believed to be in, or not opposed to, our best interests, except that no indemnification shall be made with respect to any claim, issue or matter as to which such person shall have been adjudged to be liable to us, unless a court determines that, despite such adjudication but in view of all of the circumstances, he or she is entitled to indemnification of such expenses. Notwithstanding the foregoing, to the extent that any Indemnitee has been successful, on the merits or otherwise, he or she will be indemnified by us against all expenses (including attorneys’ fees) actually and reasonably incurred in connection therewith. Expenses must be advanced to an Indemnitee under certain circumstances.

We have provided contractual indemnification rights to each of our directors and officers. These indemnification rights may require us, among other things, to indemnify our directors and officers for some expenses, including attorneys’ fees, judgments, fines and settlement amounts incurred by a director or officer in any action or proceeding arising out of his or her service as one of our directors or officers, or any of our subsidiaries or any other company or enterprise to which the person provides services at our request.

We maintain an insurance policy that covers certain liabilities of directors and officers of our corporation arising out of claims based on acts or omissions in their capacities as directors or officers.

In any underwriting agreement we enter into in connection with the sale of common stock being registered hereby, the underwriters will agree to indemnify, under certain conditions, us, our directors, our officers and persons who control us within the meaning of the Securities Act of 1933, as amended, against certain liabilities.

**Item 16. Exhibits.**

Exhibit Number	Description of Exhibit
1.1*	Form of Underwriting Agreement
4.1	<a href="#">Specimen Certificate evidencing shares of the Registrant’s Common Stock. (Incorporated by reference to Exhibit 4.1 to Amendment No. 3 to Form S-1 filed September 20, 2019)</a>
4.2*	Form of warrant agreement and any warrant certificate, if any.
4.3*	Form of Preferred Stock Certificate, if any
4.4*	Certificate of designation for preferred stock, if any.
4.5**	<a href="#">Form of indenture, to be entered into between registrant and a trustee acceptable to the registrant, if any.</a>

Exhibit Number	Description of Exhibit
4.6*	Form of Debt Securities, if any
4.7*	Form of Unit Agreement, if any
5.1	<a href="#">Opinion of Loeb &amp; Loeb LLP regarding the legality of securities being registered</a>
23.1**	<a href="#">Consent of WithumSmith+Brown, PC</a>
23.2	<a href="#">Consent of Loeb &amp; Loeb LLP (included in Exhibit 5.1)</a>
24.1**	<a href="#">Power of Attorney (included in signature page to registration statement)</a>
25.1***	Statement of Eligibility on Form T-1 under the Trust Indenture Act of 1939, as amended, of a trustee acceptable to the registrant, as trustee under the Indenture with respect to senior debt securities.
107**	<a href="#">Fee Table</a>

\* To be filed, if necessary, subsequent to the effectiveness of this registration statement by an amendment to this registration statement or incorporated by reference pursuant to a Current Report on Form 8-K in connection with an offering of securities.

\*\* Previously filed.

\*\*\* To the extent applicable, to be filed under Form 305B2.

#### Item 17. Undertakings.

(a) The undersigned registrant 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 the 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 the registration statement. Notwithstanding the foregoing, any increase or decrease in volume of securities offered (if the total dollar value of securities offered would not exceed that which was registered) and any deviation from the low or high end of the estimated maximum offering range may be reflected in the form of prospectus filed with the SEC pursuant to Rule 424(b) if, in the aggregate, the changes in volume and price represent no more than a 20% change in the maximum aggregate offering price set forth in the "Calculation of Registration Fee" table in the effective registration statement; and
- (iii) To include any material information with respect to the plan of distribution not previously disclosed in the registration statement or any material change to such information in the registration statement;

*provided, however*, that paragraphs (i), (ii) and (iii) do not apply if the registration statement is on Form S-3 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 SEC by the registrant pursuant to Section 13 or Section 15(d) of the Exchange Act that are incorporated by reference in the registration statement or is contained in a form of prospectus filed pursuant to Rule 424(b) that is part of the registration statement.

(2) That, for the purpose of determining any liability under the Securities Act, 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;

(4) That, for the purpose of determining liability under the Securities Act to any purchaser:

- (i) Each prospectus filed by the registrant pursuant to Rule 424(b)(3) shall be deemed to be part of the registration statement as of the date the filed prospectus was deemed part of and included in the registration statement; and
- (ii) Each prospectus required to be filed pursuant to Rule 424(b)(2), (b)(5) or (b)(7) as part of a registration statement in reliance on Rule 430B relating to an offering made pursuant to Rule 415(a)(1)(i), (vii) or (x) for the purpose of providing the information required by Section 10(a) of the Securities Act shall be deemed to be part of and included in the registration statement as of the earlier of the date such form of prospectus is first used after effectiveness or the date of the first contract of sale of securities in the offering described in the prospectus. As provided in Rule 430B, for liability purposes of the issuer and any person that is at that date an underwriter, such date shall be deemed to be a new effective date of the registration statement relating to the securities in the registration statement to which the prospectus relates, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof. Provided, however, that no statement made in a registration statement or prospectus that is part of the registration statement or made in a document incorporated or deemed incorporated by reference into the registration statement or prospectus that is part of the registration statement will, as to a purchaser with a time of contract of sale prior to such effective date, supersede or modify any statement that was made in the registration statement or prospectus that was part of the registration statement or made in any such document immediately prior to such effective date; and

(5) That, for the purpose of determining liability of the registrant under the Securities Act to any purchaser in the initial distribution of the securities, the undersigned registrant undertakes that in a primary offering of securities of the undersigned registrant pursuant to this registration statement, regardless of the underwriting method used to sell the securities to the purchaser, if the securities are offered or sold to such purchaser by means of any of the following communications, the undersigned registrant will be a seller to the purchaser and will be considered to offer or sell such securities to such purchaser:

- (i) Any preliminary prospectus or prospectus of the undersigned registrant relating to the offering required to be filed pursuant to Rule 424;
- (ii) Any free writing prospectus relating to the offering prepared by or on behalf of the undersigned registrant or used or referred to by the undersigned registrant;
- (iii) The portion of any other free writing prospectus relating to the offering containing material information about the undersigned registrant or its securities provided by or on behalf of the undersigned registrant; and
- (iv) Any other communication that is an offer in the offering made by the undersigned registrant to the purchaser.

(b) The undersigned registrant hereby undertakes that, for purposes of determining any liability under the Securities Act, each filing of the registrant's annual report pursuant to Section 13(a) of the Exchange Act that is incorporated by reference in this 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.

(h) Insofar as indemnification for liabilities arising under the Securities Act may be permitted to directors, officers and controlling persons of the registrant pursuant to the foregoing provisions, or otherwise, the registrant has been advised that in the opinion of the SEC such indemnification is against public policy as expressed in the Securities Act and is, therefore, unenforceable. In the event that a claim for

indemnification against such liabilities (other than the payment by the registrant of expenses incurred or paid by a director, officer or controlling person of the registrant 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 registrant 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 Securities Act and will be governed by the final adjudication of such issue.

(j) If and when applicable, the undersigned registrant hereby undertakes to file an application for the purpose of determining the eligibility of the trustee to act under subsection (a) of Section 310 of the Trust Indenture Act in accordance with the rules and regulations prescribed by the Securities and Exchange Commission under Section 305(b)(2) of the Act.





345 Park Avenue  
New York, NY 10154-1895

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February 12, 2024

Annovis Bio, Inc.  
101 Lindenwood Drive, Suite 225  
Malvern, PA 19355

Ladies and Gentlemen:

We have acted as securities counsel for Annovis Bio, Inc., a Delaware corporation (the "**Company**"), in connection with the preparation and filing by the Company of a registration statement on Form S-3 (including the prospectus constituting part thereof (the "**Prospectus**")) to which this opinion letter has been filed as an exhibit (the "**Registration Statement**"), relating to the offer and sale by the Company from time to time, pursuant to Rule 415 under the Securities Act of 1933, as amended (the "**Securities Act**"), of (i) shares of common stock, \$0.0001 par value per share (the "**Common Stock**"), (ii) shares of preferred stock, \$0.0001 par value per share (the "**Preferred Stock**"), (iii) debt securities of the Company (the "**Debt Securities**"), (iv) warrants to purchase Common Stock, Preferred Stock and/or Debt Securities (the "**Warrants**"), and (v) units comprised of one or more of the securities described in the Prospectus (the "**Units**"). The Common Stock, Preferred Stock, Debt Securities, Warrants and Units are collectively referred to herein as the "**Securities**." The Securities being registered for sale by the Company are for a maximum aggregate offering price of \$250,000,000. The Securities may be offered and sold from time to time pursuant to Rule 415 under the Securities Act, at which time it is contemplated that the Prospectus included in the Registration Statement will be supplemented by one or more Prospectus Supplements.

In rendering our opinions set forth below, we have reviewed such corporate documents and records of the Company, such certificates of public officials and such other matters as we have deemed necessary or appropriate for purposes of this opinion letter. As to facts material to the opinions expressed herein, we have relied upon oral and written statements and representations of officers and other representatives of the Company. We also have assumed (a) the authenticity of all documents submitted to us as originals; (b) the conformity to the originals of all documents submitted to us as copies; (c) the genuineness of all signatures; (d) the legal capacity of natural persons; and (e) the truth, accuracy and completeness of the information, factual matters, representations and warranties contained in all of such documents.

Based upon such examination, and subject to the further assumptions, qualifications and limitations contained herein, it is our opinion that:

1. The Common Stock to be sold by the Company, including any Common Stock duly issued upon (i) the exchange or conversion of any shares of Preferred Stock that are exchangeable for or convertible into Common Stock, (ii) the exchange or conversion of Debt Securities that are exchangeable for or convertible into Common Stock, (iii) the exercise of any duly issued Warrants exercisable for or relating to Common Stock, or (iv) separation of any Units (to the extent such Units include Common Stock), upon issuance and delivery of certificates (or book-entry notation if uncertificated) for such Common Stock against payment therefor as set forth in the Registration Statement, Prospectus or a Prospectus Supplement will be validly issued, fully paid and non-assessable.

Los Angeles New York Chicago Nashville Washington, DC San Francisco Beijing Hong Kong [www.loeb.com](http://www.loeb.com)  
A limited liability partnership including professional corporations





2. The Preferred Stock, including any Preferred Stock duly issued upon the exchange or conversion of any shares of Preferred Stock that are exchangeable for or convertible into another series of Preferred Stock, upon issuance and delivery of certificates (or book-entry notation if uncertificated) for such Preferred Stock against payment therefor as set forth in the Registration Statement, Prospectus or a Prospectus Supplement, will be validly issued, fully paid and non-assessable.

3. The Debt Securities, upon issuance and delivery of certificates (or book-entry notation if uncertificated) for such Securities against payment therefor as set forth in the Registration Statement, Prospectus or a Prospectus Supplement, will constitute valid and binding obligations of the Company.

4. The Warrants, upon issuance and delivery of certificates (or book-entry notation if uncertificated) for such Securities against payment therefor as set forth in the Registration Statement, Prospectus or a Prospectus Supplement, will constitute valid and binding obligations of the Company.

5. The Units, upon issuance and delivery of certificates (or book-entry notation if uncertificated) for such Securities against payment therefor as set forth in the Registration Statement, Prospectus or a Prospectus Supplement, will constitute valid and binding obligations of the Company.

In rendering the foregoing opinions, we have assumed that: (i) the Registration Statement, and any amendments thereto, shall have become effective under the Securities Act and will remain effective at the time of issuance of any Securities thereunder; (ii) a Prospectus Supplement describing each class or series of Securities offered pursuant to the Registration Statement will be timely filed with the Securities and Exchange Commission (the "**Commission**"); (iii) the definitive terms of each class or series of Securities shall have been established in accordance with resolutions (each, a "**Board Action**") duly adopted by the Board of Directors or an authorized committee thereof (the "**Board**"), the Company's Amended and Restated Certificate of Incorporation (the "**Certificate**"), and applicable law; (iv) the Company will issue and deliver the Securities identified in any applicable Prospectus Supplement, in each case, in the manner contemplated by the Registration Statement, the Prospectus, the applicable Prospectus Supplement and any applicable underwriting or placement agreement; (v) the total number of shares of Common Stock and Preferred Stock issuable (including upon conversion, exchange or exercise of any other Security) will not exceed the total number of shares of Common Stock and Preferred Stock, as the case may be, that the Company is then authorized to issue under its Certificate; (vi) the Board Action authorizing the Company to issue, offer and sell the Securities, at the prices set forth in the Registration Statement, Prospectus or a Prospectus Supplement, will have been adopted by the Board and will be in full force and effect at all times at which the Securities are offered or sold by the Company; and (vii) all Securities will be issued in compliance with applicable federal and state securities laws.

With respect to Securities consisting of Preferred Stock (or any series thereof), we have further assumed that an appropriate Certificate of Designations establishing the designations, preferences, rights and other terms of such series of Preferred Stock being issued and delivered shall have been duly approved by the Board and filed with and accepted for record by the Secretary of State of the State of Delaware.

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With respect to any Securities consisting of Debt Securities, we have further assumed that: (i) such Debt Securities shall have been issued pursuant to an indenture approved by us (individually, and as supplemented from time to time, an “**Indenture**”) between the Company and a trustee to be identified in the applicable Prospectus Supplement (the “**Trustee**”); (ii) such Indenture shall have been duly authorized, executed and delivered on behalf of the Company; (iii) such Indenture shall be governed by the laws of the State of New York; (iv) all terms of such Debt Securities not provided for in such Indenture shall have been established in accordance with the provisions of the Indenture and reflected in appropriate documentation approved by us and, if applicable, executed and delivered by the Company and the Trustee; (v) such Debt Securities shall have been duly executed, authenticated, issued and delivered in accordance with the provisions of such Indenture; (vi) such Debt Securities, as executed and delivered, do not violate any law applicable to the Company or result in a default under or breach of any agreement or instrument binding upon the Company; and (vii) such Debt Securities, as executed and delivered, comply with all requirements and restrictions, if any, applicable to the Company, whether imposed by any court or governmental or regulatory body having jurisdiction over the Company.

To the extent that the obligations of the Company under an Indenture may be dependent on such matters, we further have assumed for purposes of this opinion that the Trustee under each Indenture (i) is duly organized, validly existing and in good standing under the laws of its jurisdiction of organization; (ii) is duly qualified to engage in activities contemplated by such Indenture; (iii) has duly authorized, executed and delivered such Indenture, and such Indenture constitutes the legally valid and binding obligation of such Trustee, enforceable against such Trustee in accordance with its terms; (iv) is in compliance, with respect to acting as a trustee under such Indenture, with all applicable laws and regulations; and (v) has the requisite organizational and legal power and authority to perform its obligations under such Indenture.

With respect to any Securities consisting of Warrants, we have further assumed that (i) such Warrants shall have been issued pursuant to a warrant agreement approved by us (individually, a “**Warrant Agreement**”) between the Company and a warrant agent to be identified in the applicable Prospectus Supplement (the “**Warrant Agent**”); (ii) such Warrant Agreement shall have been duly authorized, executed and delivered on behalf of the Company; (iii) such Warrant Agreement shall be governed by the laws of the State of New York; (iv) all terms of such shall have been established in accordance with the provisions of such Warrant Agreement(s); (v) such Warrants shall have been duly executed, issued and delivered in accordance with the provisions of such Warrant Agreement(s); (vi) such Warrants and the related Warrant Agreement(s), as executed and delivered, do not violate any law applicable to the Company or result in a default under or breach of any agreement or instrument binding upon the Company; and (vii) such Warrants and the related Warrant Agreement(s), as executed and delivered, comply with all requirements and restrictions, if any, applicable to the Company, in any case whether imposed by any court or governmental or regulatory body having jurisdiction over the Company.

To the extent that the obligations of the Company under any Warrants or Warrant Agreement may be dependent on such matters, we further have assumed for purposes of this opinion that the Warrant Agent under each Warrant Agreement (i) is duly organized, validly existing and in good standing under the laws of its jurisdiction of organization; (ii) is duly qualified to engage in the activities contemplated by such Warrant Agreement; (iii) has duly authorized, executed and delivered such Warrant Agreement, and such Warrant Agreement constitutes the legally valid and binding obligation of such Warrant Agent, enforceable against such Warrant Agent in accordance with its terms; (iv) is in compliance, with respect to acting as a Warrant Agent under such Warrant Agreement, with all applicable laws and regulations; and (v) has the requisite organizational and legal power and authority to perform its obligations under such Warrant Agreement.

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The opinions set forth in paragraphs 3 and 4 above are subject to the following exceptions, limitations and qualifications: (i) the effect of bankruptcy, insolvency, reorganization, arrangement, moratorium, fraudulent conveyance, fraudulent transfer and other similar laws relating to or affecting the rights of creditors, (ii) the effect of general principles of equity (including, without limitation, concepts of materiality, reasonableness, good faith and fair dealing and the possible unavailability of specific performance, injunctive relief and other equitable remedies), regardless of whether considered in a proceeding at law or in equity, and (iii) the effect of public policy considerations that may limit the rights of the parties to obtain further remedies, and (iv) that we express no opinion regarding provisions relating to choice of law, choice of venue, jurisdiction or waivers of jury trial, or any waiver of any usury defense.

This opinion letter is rendered as of the date hereof, and we disclaim any undertaking to advise you of any subsequent changes in the facts stated or assumed herein or any subsequent changes in applicable law that may come to our attention, and we have assumed that no change in the facts stated or assumed herein or in applicable law after the date hereof will affect adversely our ability to render an opinion letter after the date hereof (i) containing the same legal conclusions set forth herein and (ii) subject only to such (or fewer) assumptions, limitations and qualifications as are contained herein.

We express no opinion herein as to the law of any state or jurisdiction other than the laws of the State of New York, the General Corporation Law of the State of Delaware and the federal laws of the United States of America. We are not rendering any opinion as to compliance with any federal or state antifraud law, rule, or regulation relating to securities, or to the sale or issuance thereof.

We hereby consent to the filing of this opinion letter with the Commission as Exhibit 5.1 to the Registration Statement in accordance with the requirements of Item 601(b)(5) of Regulation S-K under the Securities Act and to the reference to our firm therein and in the Prospectus and any Prospectus Supplement under the caption "Legal Matters." In giving such consent, we do not thereby admit that this firm is 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.

Sincerely yours,

/s/ Loeb & Loeb LLP  
Loeb & Loeb LLP

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