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

FORM 8-K

**CURRENT REPORT
Pursuant to Section 13 or 15(d)
of the Securities Exchange Act of 1934**

Date of Report (Date of earliest event reported): November 13, 2019

Kadmon Holdings, Inc.

(Exact name of registrant as specified in its charter)

Delaware
(State or other jurisdiction
of incorporation)

001-37841
(Commission
File Number)

27-3576929
(I.R.S. Employer
Identification No.)

450 East 29th Street
New York, NY

(Address of principal executive offices)

10016
(Zip Code)

Registrant's telephone number, including area code (833) 900-5366

N/A
(Former name or former address, if changed since last report)

Check the appropriate box below if the Form 8-K filing is intended to simultaneously satisfy the filing obligation of the registrant under any of the following provisions (see General Instruction A.2. below):

- Written communications pursuant to Rule 425 under the Securities Act (17 CFR 230.425)
- Soliciting material pursuant to Rule 14a-12 under the Exchange Act (17 CFR 240.14a-12)
- Pre-commencement communications pursuant to Rule 14d-2(b) under the Exchange Act (17 CFR 240.14d-2(b))
- Pre-commencement communications pursuant to Rule 13e-4(c) under the Exchange Act (17 CFR 240.13e-4(c))

Securities registered pursuant to Section 12(b) of the Act:

Title of each class	Trading Symbol(s)	Name of each exchange on which registered
Common stock, par value \$0.001 per share	KDMN	The New York Stock Exchange

Indicate by check mark whether the registrant is an emerging growth company as defined in as defined in Rule 405 of the Securities Act of 1933 (§230.405 of this chapter) or Rule 12b-2 of the Securities Exchange Act of 1934 (§240.12b-2 of this chapter). 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 13(a) of the Exchange Act.

Item 8.01 Other Events

On November 13, 2019, Kadmon Holdings, Inc. (the “Company”) entered into an underwriting agreement (the “Underwriting Agreement”) with Jefferies LLC and Cantor Fitzgerald & Co., as representatives of the underwriters, relating to an underwritten offering (the “Offering”) of 26,000,000 shares of its common stock, par value \$0.001 per share (the “Shares”), at an offering price of \$3.40 per share. In addition, the Underwriting Agreement provides the underwriters in the Offering a 30-day option to purchase up to an additional 3,900,000 shares of common stock from the Company (the “Underwriters’ Option”).

The closing of the Offering is expected to take place on November 18, 2019, subject to the satisfaction of customary closing conditions. The Company estimates that the net proceeds from the Offering will be approximately \$82.6 million, or approximately \$95.1 million if the Underwriters’ Option is exercised in full, after deducting underwriting discounts and commissions and estimated offering expenses payable by the Company.

The Shares are being offered and sold pursuant to the Company’s existing shelf registration statement on Form S-3 (Registration No. 333-233766), which was declared effective by the Securities and Exchange Commission on September 24, 2019 (the “Registration Statement”), and a related prospectus supplement and an accompanying prospectus.

The Underwriting Agreement contains customary representations, warranties and covenants by the Company, customary conditions to closing, indemnification obligations of the Company and the underwriters, including for liabilities under the Securities Act of 1933, as amended, other obligations of the parties and termination provisions. The representations, warranties and covenants contained in the Underwriting Agreement were made only for purposes of such agreement and as of specific dates, were solely for the benefit of the parties to such agreement, and may be subject to limitations agreed upon by the contracting parties.

A copy of the legal opinion of Covington & Burling LLP relating to the Shares issued in the Offering is filed as Exhibit 5.1 to this Current Report and is hereby incorporated by reference into the Registration Statement.

The foregoing summary of the terms of the Underwriting Agreement is subject to, and qualified in its entirety by, such document, which is filed as Exhibit 1.1 to this Current Report and is incorporated by reference herein.

Forward-Looking Statements

This Current Report contains forward-looking statements. All statements other than statements of historical facts contained in this Current Report may be forward-looking statements. Such statements include, but are not limited to the Company’s contemplated issuance of securities, the amount of proceeds from the Offering and the closing of the Offering. In some cases, you can identify forward-looking statements by terms such as “may,” “will,” “expects,” “plans,” “intends,” “believes” or “estimates” or the negative of these terms or other similar expressions. Forward-looking statements involve known and unknown risks, uncertainties and other important factors that may cause our actual results, performance or achievements to be materially different from any future results, performance or achievements expressed or implied by the forward-looking statements. For example, there are risks associated with the underwriters’ fulfilling their obligations to purchase the Shares and the Company’s ability to satisfy its conditions to close the Offering. Risk factors that may cause actual results to differ are discussed in the Company’s SEC filings, including its Annual Report on Form 10-K for the year ended December 31, 2018 and subsequent Quarterly Reports on Form 10-Q. All forward-looking statements are qualified in their entirety by this cautionary statement. The Company is providing this information as of the date of this Current Report and does not undertake any obligation to update any forward-looking statements contained herein as a result of new information, future events or otherwise.

Item 9.01 Financial Statements and Exhibits.

(d) Exhibits

<u>Exhibit No.</u>	<u>Description</u>
1.1	<u>Underwriting Agreement, dated November 13, 2019, by and among Kadmon Holdings, Inc., Jefferies LLC and Cantor Fitzgerald & Co., as representatives of the underwriters listed therein.</u>
5.1	<u>Opinion of Covington & Burling LLP.</u>
23.1	<u>Consent of Covington & Burling LLP (included in Exhibit 5.1).</u>

SIGNATURE

Pursuant to the requirements of the Securities Exchange Act of 1934, the Registrant has duly caused this report to be signed on its behalf by the undersigned hereunto duly authorized.

Date: November 14, 2019

Kadmon Holdings, Inc.

/s/ Harlan W. Waksal

Harlan W. Waksal

President and Chief Executive Officer

Kadmon Holdings, Inc.

26,000,000 Shares of Common Stock (\$0.001 par value)

Underwriting Agreement

New York, New York
November 13, 2019

Jefferies LLC
Cantor Fitzgerald & Co.

As Representatives of the several Underwriters,

c/o Jefferies LLC
520 Madison Avenue
New York, New York 10022

c/o Cantor Fitzgerald & Co.
499 Park Avenue
New York, New York 10022

Ladies and Gentlemen:

Kadmon Holdings, Inc., a Delaware corporation (the “*Issuer*”), proposes to issue and sell to the several underwriters named in Schedule I hereto (the “*Underwriters*”), for whom Jefferies LLC (“*Jefferies*”) and Cantor Fitzgerald & Co. (“*Cantor*”) and, together with Jefferies, the “*Representatives*”) are acting as representatives, 26,000,000 shares (the “*Firm Shares*”) of common stock, \$0.001 par value (“*Common Stock*”), of the Issuer. The Issuer also proposes to grant to the Underwriters an option to purchase up to 3,900,000 additional shares of Common Stock (the “*Option Shares*”) and together with the Firm Shares, the “*Shares*” or the “*Securities*”).

1. Representations and Warranties. The Issuer represents and warrants to, and agrees with, each Underwriter as set forth below:

The Issuer has prepared and filed with the Securities and Exchange Commission (the “*SEC*”) a shelf registration statement on Form S-3 (File No. 333-233766), including a base prospectus (the “*Base Prospectus*”) to be used in connection with the public offering and sale of the Securities. Such registration statement, as amended, including the financial statements and exhibits thereto, in the form in which it became effective under the Securities Act of 1933, as amended, and the rules and regulations promulgated thereunder (collectively, the “*Securities Act*”), including all documents incorporated or deemed to be incorporated by reference therein and any information deemed to be a part thereof at the time of effectiveness pursuant to Rule 430B under the Securities Act, is called the “*Registration Statement*.” The Issuer has not received, and has no notice of, any order of the SEC preventing or suspending the use of the Registration Statement, or threatening or instituting proceedings for that purpose. The preliminary prospectus supplement dated November 13, 2019, describing the Securities and the offering thereof (the “*Preliminary Prospectus Supplement*”), together with the Base Prospectus, and any other prospectus supplement to the Base Prospectus in preliminary form that describes the Securities and the offering thereof and is used prior to the filing of the Prospectus (as defined below), together with the Base Prospectus, is called a “*Preliminary Prospectus*.” As used herein, the term “*Prospectus*” shall mean the final prospectus supplement to the Base Prospectus that describes the Securities and the offering thereof, together with the Base Prospectus, in the form first used by the

Underwriters to confirm sales of the Securities or in the form first made available to the Underwriters by the Issuer to meet requests of purchasers pursuant to Rule 173 under the Securities Act. References herein to any Preliminary Prospectus or the Prospectus shall refer to both the prospectus supplement and the Base Prospectus components of such prospectus. As used herein "**Execution Time**" is the date this underwriting agreement (this "**Underwriting Agreement**") is executed and delivered by the parties hereto. The Issuer and the transactions contemplated by this Underwriting Agreement meet the requirements for, and comply with the applicable conditions set forth in, Form S-3 (including General Instructions I.A and I.B thereto) under the Securities Act. The Registration Statement, at the Execution Time, meets the requirements set forth in Rule 415(a)(1)(x). The initial Effective Date of the Registration Statement was not earlier than the date three years before the Execution Time.

All references in this Underwriting Agreement to the Registration Statement, the Base Prospectus, any Preliminary Prospectus or the Prospectus shall include the documents incorporated or deemed to be incorporated by reference therein. All references in this Underwriting Agreement to financial statements and other information "contained," "included" or "stated" in, or "part of" the Registration Statement, the Base Prospectus, any Preliminary Prospectus or the Prospectus, and all other references of like import, shall be deemed to mean and include all such financial statements and other information which is or is deemed to be incorporated by reference in the Registration Statement, the Base Prospectus, any Preliminary Prospectus or the Prospectus, as the case may be. All references in this Underwriting Agreement to amendments or supplements to the Registration Statement, the Base Prospectus, any Preliminary Prospectus or the Prospectus shall be deemed to mean and include the filing of any document under the Securities Exchange Act of 1934, as amended, and the rules and regulations promulgated thereunder (collectively, the "**Exchange Act**"), that is or is deemed to be incorporated by reference in the Registration Statement, the Base Prospectus, any Preliminary Prospectus or the Prospectus, as the case may be. All references in this Underwriting Agreement to the Registration Statement, the Base Prospectus, any Preliminary Prospectus or the Prospectus, any amendments or supplements to any of the foregoing, or any free writing prospectus, shall include any copy thereof filed with the SEC pursuant to its Electronic Data Gathering, Analysis and Retrieval system;

On each date and time that the Registration Statement and any post-effective amendment or amendments thereto became or becomes effective (the "**Effective Date**"), the Registration Statement did, and when the Prospectus is first filed in accordance with Rule 424(b) under the Securities Act and on the Closing Date (as defined herein) and on any date on which Option Shares (as defined herein) are purchased, if such date is not the Closing Date (a "**settlement date**"), the Prospectus (and any supplement thereto) will, comply in all material respects with the applicable requirements of the Securities Act and the Exchange Act; on each Effective Date and at the Execution Time, the Registration Statement did not and will not contain any untrue statement of a material fact or omit to state any material fact required to be stated therein or necessary to make the statements therein not misleading; and on the date of any filing pursuant to Rule 424(b) and on the Closing Date and any settlement date, the Prospectus (together with any supplement thereto) will not include any untrue statement of a material fact or omit to state a material fact necessary in order to make the statements therein, in the light of the circumstances under which they were made, not misleading; provided, however, that the Issuer makes no representations or warranties as to the information contained in or omitted from the Registration Statement, or the Prospectus (or any supplement thereto) in reliance upon and in conformity with information furnished in writing to the Issuer by or on behalf of any Underwriter through the Representatives specifically for inclusion in the Registration Statement or the Prospectus (or any supplement thereto), it being understood and agreed that the only such information furnished by or on behalf of any Underwriter consists of the information described as such in Section 8(b) hereof;

The "**Disclosure Package**" shall mean (i) the Base Prospectus, (ii) the Preliminary Prospectus used most recently prior to the Execution Time, (iii) the public offering price, the number of Firm Shares and the number of Option Shares identified on Schedule I, (iv) any issuer free writing prospectus, as defined in Rule 433 under the Securities Act (the "**Issuer Free Writing Prospectuses**"), if any, identified in Schedule II hereto, and (v) any other free writing prospectus, as defined in Rule 405 under the Securities Act (a "**Free Writing Prospectus**") that the parties hereto shall hereafter expressly agree in writing to treat as part of the Disclosure Package. The (i) Disclosure Package, (ii) any electronic road show, when taken together as a whole with the Disclosure Package, and (iii) any individual Written Testing-the-Waters Communication, when taken together as a whole with the Disclosure Package, does not contain any untrue statement of a material fact or omit to state any material fact necessary in order to make the statements therein, in the light of the circumstances under which they were made, not misleading. The preceding sentence does not apply to statements in or omissions from the Disclosure Package based upon and in conformity with written information furnished to the Issuer by or on behalf of any Underwriter specifically for use

therein, it being understood and agreed that the only such information furnished by or on behalf of any Underwriter consists of the information described as such in Section 8(b) hereof;

The Registration Statement, the Disclosure Package, the Prospectus or any amendment or supplement thereto, and the documents incorporated by reference in the Registration Statement, the Disclosure Package, the Prospectus or any amendment or supplement thereto, when such documents were or are filed with the SEC under the Securities Act or the Exchange Act or became or become effective under the Securities Act, as the case may be, conformed or will conform in all material respects with the requirements of the Securities Act and the Exchange Act, as applicable;

(i) At the time of filing the Registration Statement and (ii) as of the Execution Time (with such date being used as the determination date for purposes of this clause (ii)), the Issuer was not and is not an ineligible issuer, as defined in Rule 405 under the Securities Act (an “*Ineligible Issuer*”), without taking account of any determination by the SEC pursuant to Rule 405 that it is not necessary that the Issuer be considered an Ineligible Issuer;

From the time of initial filing of the Registration Statement with the SEC (or, if earlier, the first date on which the Issuer engaged directly or through any person authorized to act on its behalf in any Testing-the-Waters Communication) through the Execution Time, the Issuer has been and is an “emerging growth company,” as defined in Section 2(a) of the Securities Act (an “*Emerging Growth Company*”);

The Issuer (i) has not alone engaged in any Testing-the-Waters Communication other than Testing-the-Waters Communications with the consent of the Representatives with entities that are qualified institutional buyers within the meaning of Rule 144A under the Securities Act or institutions that are accredited investors within the meaning of Rule 501 under the Securities Act and (ii) has not authorized anyone other than the Representatives to engage in Testing-the-Waters Communications. The Issuer reconfirms that the Representatives have been authorized to act on its behalf in undertaking Testing-the-Waters Communications. The Issuer has not distributed any Written Testing-the-Waters Communications other than those listed on Schedule III hereto. “*Testing-the-Waters Communication*” means any oral or written communication with potential investors undertaken in reliance on Section 5(d) of the Securities Act; “*Written Testing-the-Waters Communication*” means any Testing-the-Waters Communication that is a written communication within the meaning of Rule 405 under the Securities Act;

Each Issuer Free Writing Prospectus does not include any information that conflicts with the information contained in the Registration Statement, including any document incorporated by reference therein that has not been superseded or modified. The foregoing sentence does not apply to statements in or omissions from any Issuer Free Writing Prospectus based upon and in conformity with written information furnished to the Issuer by any Underwriter specifically for use therein, it being understood and agreed that the only such information furnished by or on behalf of any Underwriter consists of the information described as such in Section 8(b) hereof;

The Issuer is duly incorporated, validly existing and in good standing under the laws of Delaware with full corporate power and authority to own or lease, as the case may be, and to operate its properties and conduct its business as described in the Disclosure Package and the Prospectus, and is duly qualified to do business as a foreign corporation and is in good standing under the laws of each jurisdiction which requires such qualification, except where the failure to so qualify or have such power or authority would not reasonably be expected to (i) have, individually or in the aggregate, a material adverse effect on the condition (financial or otherwise), prospects, earnings, business or properties of the Issuer and its subsidiaries, taken as a whole, whether or not arising from transactions in the ordinary course of business, or (ii) impair in any material respect the ability of the Issuer to perform its obligations under this Underwriting Agreement or to consummate any transactions contemplated hereby (any such effect as described in clauses (i) or (ii), a “*Material Adverse Effect*”);

The Issuer has the requisite power and authority to execute and deliver this Underwriting Agreement and to perform its obligations hereunder; and all action required to be taken for the due and proper authorization, execution and delivery by it of this Underwriting Agreement and the consummation by it of the transactions contemplated hereby has been duly and validly taken;

Each of the Issuer's subsidiaries (for the purpose of this Underwriting Agreement, as defined in Rule 405 under the Securities Act) has been duly incorporated, organized or formed, as the case may be, and is validly existing and in good standing under the laws of the jurisdiction of its incorporation, organization or formation with full power and authority to own or lease, as the case may be, and to operate its properties and conduct its business as described in the Disclosure Package and the Prospectus, and is duly qualified to do business as a foreign entity and is in good standing under the laws of each jurisdiction which requires such qualification, except where the failure to so qualify or have such power or authority would not reasonably be expected to have a Material Adverse Effect;

All of the outstanding shares of capital stock, limited liability company interests, limited company interests or other equity ownership interests issued by each subsidiary of the Issuer have been duly and validly authorized and issued, are fully paid and non-assessable (to the extent applicable under the laws of the relevant jurisdiction) and, except as otherwise set forth in the Disclosure Package and the Prospectus, are owned by the Issuer either directly or through wholly owned subsidiaries free and clear of any perfected security interest or any other security interests, claims, liens or encumbrances;

There is no franchise, contract or other document of a character required to be described in the Registration Statement or Prospectus, or to be filed as an exhibit thereto, which is not described or filed as required;

The statements in the Preliminary Prospectus and the Prospectus under the heading "Material U.S. Federal Income Tax Considerations for Non-U.S. Holders" insofar as such statements summarize legal matters, are accurate and fair summaries of such legal matters;

This Underwriting Agreement has been duly authorized, executed and delivered by the Issuer;

The Issuer is not and, after giving effect to the offering and sale of the Securities and the application of the proceeds thereof as described in the Disclosure Package and the Prospectus, will not be an "*investment company*" as defined in the Investment Company Act of 1940, as amended;

No consent, approval, authorization, filing with or order of any court or governmental agency or body is required in connection with the transactions contemplated herein, except such as have been obtained under the Securities Act, pursuant to the rules and regulations of the Financial Industry Regulatory Authority, Inc. ("*FINRA*") and such as may be required under the blue sky laws of any jurisdiction in connection with the purchase and distribution of the Securities by the Underwriters in the manner contemplated herein and in the Disclosure Package and the Prospectus;

Neither the issue and sale of the Shares by the Issuer nor the consummation of any other of the transactions herein contemplated nor the fulfillment of the terms of this Underwriting Agreement will conflict with, result in a breach or violation of, or imposition of any lien, charge or encumbrance upon any property or assets of the Issuer or any of its subsidiaries pursuant to, (i) the charter or bylaws of the Issuer or other comparable organizational documents of any of its subsidiaries, (ii) the terms of any indenture, contract, lease, mortgage, deed of trust, note agreement, loan agreement or other agreement, obligation, condition, covenant or instrument to which the Issuer or any of its subsidiaries is a party or bound or to which its or their property is subject, or (iii) any statute, law, rule, regulation, judgment, order or decree applicable to the Issuer or any of its subsidiaries of any court, regulatory body, administrative agency, governmental body, arbitrator or other authority having jurisdiction over the Issuer or any of its subsidiaries or any of its or their properties; except, in the case of clauses (ii) and (iii) above, for any such conflict, breach, violation or imposition that would not reasonably be expected to, individually or in the aggregate, have a Material Adverse Effect;

Except as disclosed in the Registration Statement, the Disclosure Package or the Prospectus and as has been duly waived or satisfied, (i) no person, as such term is defined in Rule 1-02 of Regulation S-X promulgated under the Securities Act (each, a "*Person*"), has the right, contractual or otherwise, to cause the Issuer to issue or sell to such Person any Common Stock or shares of any other capital stock or other securities of the Issuer, (ii) no Person has any preemptive rights, resale rights, rights of first refusal, rights of co-sale or any other rights (whether pursuant to a "poison pill" provision or otherwise) to purchase any of the Securities or shares of any other

capital stock or other securities of the Issuer, (iii) no Person has the right to act as an underwriter or as a financial advisor to the Issuer in connection with the offer and sale of the Securities, and (iv) no Person has the right, contractual or otherwise, to require the Issuer to register under the Securities Act any Common Stock or shares of any other capital stock or other securities of the Issuer, or to include any such shares or other securities in the Registration Statement or the offering contemplated thereby, whether as a result of the filing or effectiveness of the Registration Statement or the sale of the Securities as contemplated thereby or otherwise;

The consolidated historical financial statements of the Issuer and its consolidated subsidiaries included or incorporated by reference in the Disclosure Package, the Prospectus and the Registration Statement present fairly the financial condition, results of operations and cash flows of the Issuer as of the dates and for the periods indicated, comply in all material respects as to form with the applicable accounting requirements of Regulation S-X under the Securities Act and have been prepared in conformity with generally accepted accounting principles applied on a consistent basis throughout the periods involved (except as otherwise noted therein). The interactive data in eXtensible Business Reporting Language included or incorporated by reference in the Disclosure Package, the Prospectus and the Registration Statement fairly presents the information called for in all material respects and has been prepared in accordance with the SEC's rules and guidelines applicable thereto;

No action, suit or proceeding by or before any court or governmental agency, authority or body or any arbitrator involving the Issuer or any of its subsidiaries or its or their property is pending or, to the knowledge of the Issuer, threatened, that would reasonably be expected to have a Material Adverse Effect, except as set forth in or contemplated by the Disclosure Package and the Prospectus;

Each of the Issuer and each of its subsidiaries owns or leases all such properties as are necessary for the conduct of its operations as presently conducted;

Neither the Issuer nor any subsidiary is in violation or default of (i) any provision of its charter or bylaws (or other comparable organizational document), (ii) the terms of any indenture, contract, lease, mortgage, deed of trust, note agreement, loan agreement or other agreement, obligation, condition, covenant or instrument to which it is a party or bound or to which its property is subject, or (iii) any statute, law, rule, regulation, judgment, order or decree of any court, regulatory body, administrative agency, governmental body, arbitrator or other authority having jurisdiction over the Issuer or such subsidiary or any of its properties, as applicable, except, in the case of clauses (ii) and (iii) above, for any such violation or default that would not reasonably be expected to, individually or in the aggregate, have a Material Adverse Effect;

BDO USA, LLP, who have certified certain financial statements of the Issuer and its consolidated subsidiaries and delivered their report with respect to the audited consolidated financial statements included in the Disclosure Package and the Prospectus, are independent public accountants with respect to the Issuer within the meaning of the Securities Act and the applicable published rules and regulations thereunder;

The Issuer and each of its subsidiaries have filed all tax returns that are required to be filed or have requested extensions thereof (except in any case in which the failure so to file would not reasonably be expected to have a Material Adverse Effect) and have paid all taxes required to be paid by any of them and any other assessment, fine or penalty levied against any of them, to the extent that any of the foregoing is due and payable, except, in each case, for any such tax, assessment, fine or penalty that is currently being contested in good faith or as would not reasonably be expected to have a Material Adverse Effect. Except for (i) tax deficiencies that the Issuer or its subsidiaries are contesting in good faith and by appropriate proceedings or (ii) tax deficiencies that, individually or in the aggregate, would not reasonably be expected to cause a Material Adverse Effect, no tax deficiency has been asserted against the Issuer or any of its subsidiaries;

No labor dispute with the employees of the Issuer or any of its subsidiaries exists or, to the Issuer's knowledge, is threatened or imminent, and the Issuer is not aware of any existing, threatened or imminent labor disturbance by the employees of any of its or its subsidiaries' principal suppliers, contractors or customers, that would reasonably be expected to have a Material Adverse Effect;

The Issuer and each of its subsidiaries are insured by insurers of recognized financial responsibility against such losses and risks and in such amounts as the Issuer reasonably believes are adequate and

customary in the businesses in which they are engaged; all policies of insurance insuring the Issuer or any of its subsidiaries or their respective businesses, assets, employees, officers and directors are in full force and effect, except to the extent any lapse of such policies, individually or in the aggregate, would not reasonably be expected to cause a Material Adverse Effect; the Issuer and its subsidiaries are in compliance with the terms of such policies and instruments in all material respects except to the extent any non-compliance would not reasonably be expected to cause a Material Adverse Effect; and, except as disclosed in the Disclosure Package, there are no claims by the Issuer or any of its subsidiaries under any such policy or instrument as to which any insurance company is denying liability or defending under a reservation of rights clause, except to the extent any claim would not reasonably be expected to cause a Material Adverse Effect. Neither the Issuer nor any such subsidiary has been refused any insurance coverage sought or applied for; and neither the Issuer nor any such subsidiary has any reason to believe that it will not be able to renew its existing insurance coverage as and when such coverage expires or to obtain similar coverage from similar insurers as may be necessary to continue its business at a cost that would not reasonably be expected to have a Material Adverse Effect;

No subsidiary of the Issuer is currently prohibited, directly or indirectly, from paying any dividends to the Issuer, from making any other distribution on such subsidiary's capital stock, from repaying to the Issuer any loans or advances to such subsidiary from the Issuer or from transferring any of such subsidiary's property or assets to the Issuer or any other subsidiary of the Issuer, except as described in or contemplated by the Disclosure Package and the Prospectus;

The Issuer and each of its subsidiaries possess all licenses, certificates, permits, approvals, clearances, registrations, exemptions, consents and other authorizations issued by all applicable authorities necessary to conduct their respective businesses ("**Permits**"), and such Permits are valid and in full force and effect, except where the failure to possess or invalidity of such Permits, individually or in the aggregate, would not reasonably be expected to have a Material Adverse Effect. Neither the Issuer nor any such subsidiary has received, or has any reason to believe that it will receive, any notice of proceedings relating to the revocation or modification of, or non-compliance with, any such Permit which, individually or in the aggregate, if the subject of an unfavorable decision, ruling or finding, would reasonably be expected to have a Material Adverse Effect;

The Issuer and each of its subsidiaries maintain a system of internal accounting controls sufficient to provide reasonable assurances that (i) transactions are executed in accordance with management's general or specific authorizations; (ii) transactions are recorded as necessary to permit preparation of financial statements in conformity with generally accepted accounting principles and to maintain accountability for assets; (iii) access to assets is permitted only in accordance with management's general or specific authorization; and (iv) the recorded accountability for assets is compared with the existing assets at reasonable intervals and appropriate action is taken with respect to any differences. Except as disclosed in the Disclosure Package and the Prospectus, the Issuer and its subsidiaries are not aware of any past or present material weakness in their internal controls over financial reporting;

The Issuer and its subsidiaries maintain "disclosure controls and procedures" (as such term is defined in Rule 13a-15(e) under the Exchange Act and, except as disclosed in the Disclosure Package and the Prospectus, such controls and procedures are effective;

The Issuer has not taken, directly or indirectly, any action designed to or that would constitute or that might reasonably be expected to cause or result in, under the Exchange Act or otherwise, stabilization or manipulation of the price of any security of the Issuer to facilitate the sale or resale of the Shares;

The Issuer and its subsidiaries are (i) in compliance with any and all applicable foreign, federal, state and local laws and regulations relating to the protection of human health and safety, the environment or hazardous or toxic substances or wastes, pollutants or contaminants ("**Environmental Laws**"), (ii) have received and are in compliance with all permits, licenses or other approvals required of them under applicable Environmental Laws to conduct their respective businesses and (iii) have not received notice of any actual or potential liability under any environmental law, except where such non-compliance with Environmental Laws, failure to receive required permits, licenses or other approvals, or liability would not reasonably be expected to, individually or in the aggregate, have a Material Adverse Effect. Except as set forth in the Disclosure Package and the Prospectus, neither the Issuer nor any of its subsidiaries has been named as a "potentially responsible party" under the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, as amended;

In the ordinary course of its business, the Issuer periodically reviews the effect of Environmental Laws on the business, operations and properties of the Issuer and its subsidiaries, in the course of which it identifies and evaluates associated costs and liabilities (including, without limitation, any capital or operating expenditures required for clean-up, closure of properties or compliance with Environmental Laws, or any permit, license or approval, any related constraints on operating activities and any potential liabilities to third parties). On the basis of such review, the Issuer has reasonably concluded that such associated costs and liabilities would not reasonably be expected to, individually or in the aggregate, have a Material Adverse Effect;

Each Plan (as defined below) has been maintained and administered by the Issuer and its subsidiaries in compliance in all material respects with the terms of such Plan and the applicable requirements of ERISA (as defined below), the Code (as defined below) and any other applicable laws. None of the following events has occurred or exists: (i) a failure to fulfill the obligations, if any, under the minimum funding standards of Section 302 of the United States Employee Retirement Income Security Act of 1974, as amended (“*ERISA*”), and the regulations and published interpretations thereunder with respect to a Plan, determined without regard to any waiver of such obligations or extension of any amortization period; (ii) an audit or investigation by the Internal Revenue Service, the U.S. Department of Labor, the Pension Benefit Guaranty Corporation or any other federal or state governmental agency or any foreign regulatory agency with respect to the employment or compensation of employees by any of the Issuer or any of its subsidiaries that would reasonably be expected to have a Material Adverse Effect; (iii) any breach of any contractual obligation, or any violation of law or applicable qualification standards, with respect to the employment or compensation of employees by the Issuer or any of its subsidiaries that would reasonably be expected to have a Material Adverse Effect. None of the following events has occurred or is reasonably likely to occur: (i) a material increase in the aggregate amount of contributions required to be made to all Plans in the current fiscal year of the Issuer and its subsidiaries compared to the amount of such contributions made in the most recently completed fiscal year of the Issuer and its subsidiaries; (ii) a material increase in the “accumulated post-retirement benefit obligations” (within the meaning of Statement of Financial Accounting Standards 106) of the Issuer and its subsidiaries compared to the amount of such obligations in the most recently completed fiscal year of the Issuer and its subsidiaries; (iii) any event or condition giving rise to a liability with respect to a “multiemployer plan” (as defined in Section 3(37) of ERISA) or a Plan that is subject to Title IV of ERISA that would reasonably be expected to have a Material Adverse Effect; or (iv) the filing of a claim by one or more employees or former employees of the Issuer or any of its subsidiaries related to their employment that would reasonably be expected to have a Material Adverse Effect. Each Plan that is intended to be qualified under Section 401(a) of the Code is so qualified and nothing has occurred, whether by action or failure to act, which would reasonably be expected to cause the loss of such qualification. For purposes of this paragraph, the term “*Plan*” means a plan (within the meaning of Section 3(3) of ERISA) established or maintained by the Issuer, its subsidiaries or their ERISA Affiliates. For purposes of this paragraph, “*ERISA Affiliate*” means, with respect to the Issuer or any of its subsidiaries, any member of any group of organizations described in Sections 414(b), (c), (m) or (o) of the Internal Revenue Code of 1986, as amended, and the regulations and published interpretations thereunder (the “*Code*”) of which the Issuer or such subsidiary is a member;

There is and has been no failure on the part of the Issuer or any of the Issuer’s directors or officers, in their capacities as such, to comply in all material respects with all applicable provision of the Sarbanes-Oxley Act of 2002 (the “*Sarbanes-Oxley Act*”) and the rules and regulations promulgated in connection therewith, including Section 402 related to loans and Sections 302 and 906 related to certifications;

Neither the Issuer nor any of its subsidiaries nor, to the knowledge of the Issuer, any director, officer, agent, affiliate, employee or other person acting on behalf of the Issuer or any of its subsidiaries has, in the course of its actions for, or on behalf of, the Issuer or any of its subsidiaries (i) used any corporate funds for any unlawful contribution, gift, entertainment or other unlawful expenses relating to political activity; (ii) made or taken any act in furtherance of an offer, promise, or authorization of any direct or indirect unlawful payment or benefit to any foreign or domestic government official or employee, including of any government-owned or controlled entity or public international organization, or any political party, party official, or candidate for political office; (iii) violated or is in violation of any provision of the U.S. Foreign Corrupt Practices Act of 1977, as amended (the “*FCPA*”), the UK Bribery Act 2010, or any other applicable anti-bribery or anti-corruption law; or (iv) made, offered, authorized, requested, or taken an act in furtherance of any unlawful bribe, rebate, payoff, influence payment, kickback or other unlawful payment or benefit. The Issuer and its subsidiaries and, to the knowledge of the Issuer, the Issuer’s affiliates have conducted their respective businesses in compliance with the FCPA and have instituted and maintain policies

and procedures designed to ensure, and which are reasonably expected to continue to ensure, continued compliance therewith.

The operations of the Issuer and its subsidiaries are and have been conducted at all times in compliance with applicable financial recordkeeping and reporting requirements of the Currency and Foreign Transactions Reporting Act of 1970, as amended, the money laundering statutes of all applicable jurisdictions, the rules and regulations thereunder and any related or similar applicable rules, regulations or guidelines, issued, administered or enforced by any governmental agency (collectively, the “**Money Laundering Laws**”) and no action, suit or proceeding by or before any court or governmental agency, authority or body or any arbitrator involving the Issuer or any of its subsidiaries with respect to the Money Laundering Laws is pending or, to the knowledge of the Issuer, threatened;

Neither the Issuer nor any of its subsidiaries, nor, to the knowledge of the Issuer, any director, officer, agent, employee or affiliate of the Issuer or any of its subsidiaries, is currently the subject or the target of any U.S. sanctions administered by the Office of Foreign Assets Control of the U.S. Department of the Treasury or the U.S. Department of State, the United Nations Security Council, the European Union, Her Majesty’s Treasury of the United Kingdom or other relevant sanctions authority (collectively, “**Sanctions**”); nor is the Issuer or any of its subsidiaries located, organized or resident in a country or territory that is the subject or the target of Sanctions, including, without limitation, Crimea, Cuba, Iran, North Korea, and Syria; and the Issuer will not directly or indirectly use the proceeds of the offering of the Securities, or lend, contribute or otherwise make available such proceeds to any subsidiary, or any joint venture partner or other person or entity, for the purpose of financing the activities of or business with any person, or in any country or territory, that at the time of such financing, is the subject or the target of Sanctions or in any other manner that will result in a violation by any person (including any person participating in the transaction whether as underwriter, advisor, investor or otherwise) of applicable Sanctions. For the past five years, the Issuer and its subsidiaries have not knowingly engaged in and are not now knowingly engaged in any dealings or transactions with any person that at the time of the dealing or transaction is or was the subject or the target of Sanctions or with any Sanctioned Country.

[Reserved.]

The subsidiaries listed on Schedule IV attached hereto are the only significant subsidiaries of the Issuer as defined by Rule 1-02 of Regulation S-X (the “**Subsidiaries**”);

Except as would not reasonably be expected, individually or in the aggregate, to have a Material Adverse Effect, (a) the Issuer and its subsidiaries own, possess, license or have other rights to use, on reasonable terms, all patents, patent applications, trade and service marks, trade and service mark registrations, trade names, copyrights, licenses, inventions, trade secrets, technology, know-how and other intellectual property (collectively, the “**Intellectual Property**”) necessary for the conduct of the Issuer’s business as now conducted or as proposed in the Disclosure Package and Prospectus to be conducted, (b) the Intellectual Property owned by the Issuer and its subsidiaries, and to the knowledge of the Issuer, the Intellectual Property licensed to the Issuer and its subsidiaries, has not been adjudged invalid or unenforceable, in whole or in part and (c) except as disclosed in the Registration Statement, the Disclosure Package or the Prospectus, there are no unreleased liens or security interests which have been filed against the Intellectual Property. Except as set forth in the Disclosure Package and the Prospectus under the caption “Item 1. Business—Our Intellectual Property,” or as would not be reasonably expected, individually or in the aggregate, to have a Material Adverse Effect, (i) to the knowledge of the Issuer, there are no rights of third parties to any Intellectual Property owned by the Issuer; (ii) to the knowledge of the Issuer, there is no infringement by third parties of any such Intellectual Property; (iii) there is no pending or, to the knowledge of the Issuer, threatened action, suit, proceeding or claim by others challenging the Issuer’s rights in or to any such Intellectual Property, and the Issuer is unaware of any facts which would form a reasonable basis for any such claim; (iv) there is no pending or, to the knowledge of the Issuer, threatened action, suit, proceeding or claim by others challenging the validity or scope of any such Intellectual Property, and the Issuer is unaware of any facts which would form a reasonable basis for any such claim; (v) there is no pending or, to the knowledge of the Issuer, threatened action, suit, proceeding or claim by others that the Issuer infringes or otherwise violates any patent, trademark, copyright, trade secret or other proprietary rights of others, and the Issuer is unaware of any other fact which would form a reasonable basis for any such claim; (vi) to the knowledge of the Issuer, there is no U.S. patent or published U.S. patent application which contains claims that dominate or may dominate any Intellectual Property described in

the Disclosure Package and the Prospectus as being owned by or licensed to the Issuer or that interferes with the issued or pending claims of any such Intellectual Property; (vii) there is no prior art of which the Issuer is aware that may render any U.S. patent held by the Issuer invalid or any U.S. patent application held by the Issuer un-patentable which has not been disclosed to the U.S. Patent and Trademark Office; and (viii) to the knowledge of the Issuer, no employee of the Issuer or any of its subsidiaries is in or has ever been in violation of any term of any employment contract, patent disclosure agreement, invention assignment agreement, non-competition agreement, non-solicitation agreement, nondisclosure agreement or any restrictive covenant to or with a former employer where the basis of such violation relates to such employee's employment with the Issuer or any of its subsidiaries or actions undertaken by the employee while employed with the Issuer or any of its subsidiaries. Except as would not reasonably be expected, individually or in the aggregate, to have a Material Adverse Effect, the Issuer and its subsidiaries have disclosed to the U.S. Patent and Trademark Office ("**USPTO**") all information, of which the Issuer is aware, relevant to the patentability of its inventions in accordance with 37 C.F.R. Section 1.56, and have not made any misrepresentation or concealed any information from the USPTO in any of the patents or patent applications owned or licensed to the Issuer or its subsidiaries, or in connection with the prosecution thereof, in violation of 37 C.F.R. Section 1.56;

The preclinical tests and clinical trials, and other studies conducted by or on behalf of, or sponsored by, the Issuer or in which the Issuer or its products or product candidates have participated (collectively, "**Studies**") that are described in, or the results of which are referred to in, the Registration Statement, the Disclosure Package or the Prospectus were and, if still pending, are being conducted in all material respects in accordance with the protocols, procedures and controls designed and approved for such Studies and with standard medical and scientific research procedures and applicable laws and regulations, including, without limitation, the Federal Food, Drug, and Cosmetic Act, the Public Health Service Act, and regulations at 21 C.F.R. Parts 50, 54, 56, 58 and 312; each description of the results of such Studies is accurate and complete in all material respects and fairly presents the data derived from such Studies, and the Issuer and its subsidiaries have no knowledge of any other Studies the results of which are materially inconsistent with, or otherwise make misleading, the results described or referred to in the Registration Statement, the Disclosure Package or the Prospectus; the Issuers and its subsidiaries have made all such material filings and obtained all such Permits as may be required by the Food and Drug Administration ("**FDA**") of the U.S. Department of Health and Human Services or any committee thereof or from any other U.S. or foreign government or drug or medical device regulatory agency, or health care facility Institutional Review Board (collectively, the "**Regulatory Agencies**"); and neither the Issuer nor any of its subsidiaries has received any notice of, or correspondence from, any Regulatory Agency that presently require the termination, suspension or material modification of any Studies that are described or referred to in the Registration Statement, the Disclosure Package or the Prospectus or that have been proposed by the Issuer or any of its subsidiaries;

The Issuer and its subsidiaries are, and at all times have been, in compliance in all material respects with all applicable Health Care Laws (as defined below), and have not engaged in activities which are, as applicable, reasonably expected to result in false claims liability, civil penalties, or mandatory or permissive exclusion from Medicare, Medicaid, or any other state health care program or federal health care program. For purposes of this Underwriting Agreement, "**Health Care Laws**" means: (i) the Federal Food, Drug, and Cosmetic Act (21 U.S.C. §§ 301 et seq.); (ii) all applicable federal, state, local and all applicable foreign health care related fraud and abuse laws and regulations, including, without limitation, the U.S. federal Anti-Kickback Statute (42 U.S.C. § 1320a-7b(b)), the U.S. Physician Payments Sunshine Act (42 U.S.C. § 1320a-7h), the U.S. civil False Claims Act (31 U.S.C. §§ 3729 et seq.), the criminal False Claims Law (42 U.S.C. § 1320a-7b(a)), all criminal laws relating to health care fraud and abuse, including but not limited to 18 U.S.C. Sections 286 and 287, and the health care fraud criminal provisions under the U.S. Health Insurance Portability and Accountability Act of 1996 ("**HIPAA**") (42 U.S.C. §§ 1320d et seq.), the exclusion law (42 U.S.C. § 1320a-7) and the civil monetary penalties law (42 U.S.C. § 1320a-7a); (iii) HIPAA, as amended by the Health Information Technology for Economic and Clinical Health Act of 2009 (42 U.S.C. §§ 17921 et seq.); (iv) the Public Health Service Act (42 U.S.C. §§ 201 et seq.) ("**PHS**"); (v) the Medicare statute (Title XVIII of the Social Security Act); (vi) the Medicaid statute (Title XIX of the Social Security Act); (vii) the regulations promulgated pursuant to such laws; (viii) any and all other applicable health care laws and regulations, including, without limitation, the collection and reporting requirements, and the processing of any applicable rebate, chargeback or adjustment, under applicable rules and regulations relating to the Medicaid Drug Rebate Program (42 U.S.C. § 1396r-8) and any state supplemental rebate program, Medicare average sales price reporting (42 U.S.C. § 1395w-3a), PHS, the VA Federal Supply Schedule (38 U.S.C. § 8126) or under any state pharmaceutical assistance program or U.S. Department of Veterans Affairs agreement, and any successor government programs; and (ix) any federal, state and local laws and regulations relating to the manufacturing, development, testing, labeling, marketing or distribution

of pharmaceutical products, kickbacks, referrals, the hiring of employees or acquisition of services or supplies from those who have been excluded from government health care programs, quality, safety, privacy, security, licensure or any other aspect of providing pharmaceutical services and products. Except as disclosed in the Registration Statement, the Disclosure Package or the Prospectus, since January 1, 2015, neither the Issuer nor any of its subsidiaries have received notice of any claim, action, suit, audit, proceeding, hearing, enforcement, investigation, arbitration or other action (“**Actions**”) from any court, arbitrator, Regulatory Agency, any other governmental or regulatory authority, or third party alleging or asserting any liability under, any non-compliance with, or that any product, operation or activity is in violation of any Health Care Laws, and, to the Issuer’s knowledge, no such Action is threatened. To the Issuer’s knowledge, there are no facts or circumstances that would reasonably be expected to give rise to material liability of the Issuer or its subsidiaries under Health Care Laws. The Issuer and its subsidiaries have filed, obtained, maintained, and submitted all material reports, documents, forms, notices, applications, records, claims, submissions and supplements or amendments as required by any Health Care Law or any Permit (“**Filings**”), and all such Filings were materially complete, correct and not misleading on the date filed (or were corrected or supplemented by a subsequent Filing). Neither the Issuer nor any of its subsidiaries is a party to or has any ongoing reporting obligations pursuant to any corporate integrity agreements, deferred prosecution agreements, monitoring agreements, consent decrees, settlement orders, plans of correction or similar agreements with or imposed by any Regulatory Agency or any other governmental or regulatory authority. Additionally, neither the Issuer nor any of its subsidiaries, nor any of their respective employees, officers, directors and agents (while acting in such capacity), has been excluded, suspended or debarred from participation in, or otherwise ineligible to participate in, any U.S. state or federal health care program or human clinical research or is subject to a pending or threatened governmental inquiry, investigation, proceeding, or any other Action that would reasonably be expected to result in debarment, suspension, exclusion or ineligibility. The manufacture of products by or on behalf of the Issuer or its subsidiaries is being conducted in compliance in all material respects with all applicable Health Care Laws, including, without limitation, the FDA’s current good manufacturing practice regulations for products sold in the United States, and the respective counterparts thereof promulgated by governmental authorities in countries outside the United States, as applicable. Except as disclosed in the Registration Statement, the Disclosure Package or the Prospectus, since January 1, 2015, the Issuer and its subsidiaries have not had any product or manufacturing site (whether Issuer- or subsidiary-owned or that of a contract manufacturer for the products) subject to a governmental authority (including the FDA) shutdown or import or export prohibition, nor received any FDA Form 483 or other governmental authority notice of inspectional observations, “warning letters,” “untitled letters,” requests to make changes to the Issuer’s products, processes or operations, or similar correspondence or notice from the FDA or other governmental or regulatory authority alleging or asserting material noncompliance with any applicable Health Care Laws. To the Issuer’s knowledge, neither the FDA nor any other governmental authority is considering such action;

Except as would not reasonably be expected to have a Material Adverse Effect, and except as disclosed in the Registration Statement, the Disclosure Package or the Prospectus, (i) there are have been no recalls, field notifications, field corrections, market withdrawals or replacements, warnings, “dear doctor” letters, investigator notices, safety alerts or other notice of action relating to an alleged lack of safety, efficacy, or regulatory compliance of the products marketed by the Issuer or its subsidiaries (collectively, “**Safety Notices**”) since January 1, 2015, and (ii) to the Issuer’s knowledge, there are no complaints with respect to the products that are currently unresolved. To the Issuer’s knowledge, there are no facts that would be reasonably likely to result in (i) a material Safety Notice with respect to the products, (ii) a material change in labeling of any of the products, or (iii) a termination or suspension of marketing or testing of any of the products;

The Issuer and its subsidiaries’ information technology assets and equipment, computers, systems, networks, hardware, software, websites, applications, and databases (collectively, “**IT Systems**”) are adequate for, and operate and perform in all material respects as required in connection with the operation of the business of the Issuer and its subsidiaries as currently conducted, free and clear of all material bugs, errors, defects, Trojan horses, time bombs, malware and other corruptants. The Issuer and its subsidiaries have implemented and maintained commercially reasonable physical, technical and administrative controls, policies, procedures and safeguards to maintain and protect their material confidential information and the integrity, continuous operation, redundancy and security of all IT Systems and data, including “Personal Data,” used in connection with their businesses. “**Personal Data**” means (i) a natural person’s name, street address, telephone number, e-mail address, photograph, social security number or tax identification number, driver’s license number, passport number, credit card number, bank information, or customer or account number; (ii) any information which would qualify as “personally identifying information” under the Federal Trade Commission Act, as amended; (iii) “personal data” as defined by

the European Union General Data Protection Regulation (“**GDPR**”) (EU 2016/679), if and to the extent GDPR is applicable to the Issuer and its subsidiaries; (iv) any information which would qualify as “protected health information” under the Health Insurance Portability and Accountability Act of 1996, as amended by HIPAA; and (v) any other information that allows the identification of such natural person, or his or her family, or permits the collection or analysis of any data related to an identified person’s health or sexual orientation. There have been no breaches, violations, outages or unauthorized uses of or accesses to same, except for those that have been remedied without material cost or liability to the Issuer. Except as would not reasonably be expected, individually or in the aggregate, to have a Material Adverse Effect, the Issuer and its subsidiaries are presently in compliance with all applicable laws or statutes and all judgments, orders, rules and regulations of any court or arbitrator or governmental or regulatory authority, internal policies and contractual obligations relating to the privacy and security of IT Systems and Personal Data and to the protection of such IT Systems and Personal Data from unauthorized use, access, misappropriation or modification.

The Issuer and its subsidiaries are, and at all prior times were, in compliance in all material respects with all applicable state and federal data privacy and security laws and regulations, including without limitation HIPAA, and, if and to the extent applicable to the Issuer and its subsidiaries, the Issuer and its subsidiaries have taken commercially reasonable actions to prepare to comply with, and since May 25, 2018, have been and currently are in compliance with, GDPR (collectively, the “**Privacy Laws**”). The Issuer and its subsidiaries have in place, comply with, and take appropriate steps reasonably designed to ensure compliance in all material respects with their policies and procedures relating to data privacy and security and the collection, storage, use, disclosure, handling and analysis of Personal Data (the “**Policies**”). The Issuer and its subsidiaries have at all times made all disclosures to users or customers required by applicable laws and regulatory rules or requirements, and none of such disclosures made or contained in any Policy have, to the knowledge of the Issuer, been inaccurate or in violation of any applicable laws and regulatory rules or requirements in any material respect, except for such failures to disclose or inaccurate or improper disclosures as would not reasonably be expected to have a Material Adverse Effect. Neither the Issuer nor any subsidiary: (i) has received notice of any actual or potential liability under or relating to, or actual or potential violation of, any of the Privacy Laws, and has no knowledge of any event or condition that would reasonably be expected to result in any such notice; (ii) is currently conducting or paying for, in whole or in part, any investigation, remediation or other corrective action pursuant to any Privacy Law; or (iii) is a party to any order, decree or agreement that imposes any obligation or liability under any Privacy Law, except in each case, as would not reasonably be expected to have a Material Adverse Effect.

Except as disclosed in the Registration Statement, the Disclosure Package and the Prospectus, the Issuer (i) does not have any material lending or other relationship with any bank or lending affiliate of the Representatives and (ii) does not intend to use any of the proceeds from the sale of the Securities hereunder to repay any outstanding debt owed to any affiliate of the Representatives;

Neither the Issuer nor any of its subsidiaries nor any of its or their properties or assets has any immunity from the jurisdiction of any court or from any legal process (whether through service or notice, attachment prior to judgment, attachment in aid of execution or otherwise) under the laws of Delaware;

Subsequent to the respective dates as of which information is given in the Registration Statement, the Disclosure Package and the Prospectus, there has not been (i) any Material Adverse Effect or the occurrence of any development that the Issuer reasonably expects will result in a Material Adverse Effect, (ii) any transaction which is material to the Issuer and its subsidiaries taken as a whole, (iii) any obligation or liability, direct or contingent (including any off-balance sheet obligations), incurred by the Issuer or any of its subsidiaries, which is material to the Issuer and its subsidiaries taken as a whole, (iv) any material change in the capital stock or outstanding long-term indebtedness of the Issuer or any of its subsidiaries or (v) any dividend or distribution of any kind declared, paid or made on the capital stock of the Issuer or any of its subsidiaries, other than in each case above in the ordinary course of business or as otherwise disclosed in the Registration Statement, the Disclosure Package or the Prospectus (including any document deemed incorporated by reference therein);

The issued and outstanding shares of capital stock of the Issuer have been validly issued, are fully paid and non-assessable and, other than as disclosed in the Registration Statement, the Disclosure Package or the Prospectus, are not subject to any preemptive rights, rights of first refusal or similar rights. The Issuer has an authorized, issued and outstanding capitalization as set forth in the Registration Statement, the Disclosure Package

and the Prospectus as of the dates referred to therein (other than the grant of additional equity awards under the Issuer's existing incentive plans or changes in the number of outstanding shares of Common Stock of the Issuer due to the issuance of shares upon the exercise or conversion of securities exercisable for, or convertible into, Common Stock outstanding on the date hereof) and such authorized capital stock conforms in all material respects to the description thereof set forth in the Registration Statement, the Disclosure Package and the Prospectus. The description of the securities of the Issuer in Registration Statement, the Disclosure Package and the Prospectus is complete and accurate in all material respects. Except as disclosed in or contemplated by the Registration Statement, the Disclosure Package and the Prospectus, as of the date referred to therein, the Issuer does not have outstanding any options to purchase, or any rights or warrants to subscribe for, or any securities or obligations convertible into, or exchangeable for, or any contracts or commitments to issue or sell, any shares of capital stock or other securities;

The Shares have been duly and validly authorized, and, when issued and delivered to and paid for by the Underwriters pursuant to this Underwriting Agreement, will be fully paid and non-assessable, free and clear of any pledge, lien, encumbrance, security interest or other claim, including any statutory or contractual preemptive rights, resale rights, rights of first refusal or other similar rights, and will be registered pursuant to Section 12 of the Exchange Act. The Shares, when issued, will conform in all material respects to the description thereof set forth in or incorporated into the Disclosure Package and the Prospectus;

The Issuer is not a shell company (as defined in Rule 405 under the Securities Act) and has not been a shell company for at least 12 calendar months prior to the date hereof and if it has been a shell company at any time previously, has filed current Form 10 information (as defined in Instruction I.B.6 of Form S-3) with the SEC at least 12 calendar months previously reflecting its status as an entity that is not a shell company;

Neither the Issuer nor any of its subsidiaries (i) is required to register as a "broker" or "dealer" in accordance with the provisions of the Exchange Act or (ii) directly or indirectly through one or more intermediaries, controls or is a "person associated with a member" or "associated person of a member" (within the meaning set forth in the FINRA Manual);

The Common Stock is registered pursuant to Section 12(b) of the Exchange Act and is listed on the New York Stock Exchange (the "**NYSE**"). The Issuer has taken no action designed to terminate, or likely to have the effect of terminating, the registration of the Common Stock under the Exchange Act or delisting the Common Stock from the NYSE, nor has the Issuer received any notification that the SEC or the NYSE is contemplating terminating such registration or listing. To the Issuer's knowledge, it is in material compliance with all applicable listing requirements of NYSE;

No forward-looking statement (within the meaning of Section 27A of the Securities Act and Section 21E of the Exchange Act) (a "**Forward-Looking Statement**") contained in the Registration Statement, the Disclosure Package and the Prospectus has been made or reaffirmed without a reasonable basis or has been disclosed other than in good faith;

Neither the Issuer nor any of its subsidiaries has incurred any liability for any finder's fees, brokerage commissions or similar payments in connection with the transactions herein contemplated, except as may otherwise exist with respect to any Underwriter pursuant to this Underwriting Agreement;

The statistical, demographic and market-related data included in the Registration Statement, the Disclosure Package and the Prospectus are based on or derived from sources that the Issuer believes to be reliable and accurate or represent the Issuer's good faith estimates that are made on the basis of data derived from such sources;

There are no debt or preferred securities issued, or guaranteed, by the Issuer or its subsidiaries that are rated by a "nationally recognized statistical rating organization," as such term is defined in Section 3(a)(62) of the Exchange Act.

Any certificate signed by any officer of the Issuer and delivered to the Representatives or counsel for the Underwriters in connection with the offering of the Securities shall be deemed a representation and warranty by the Issuer, be, as of the date of such certificate, as to the matters covered thereby, to each Underwriter.

2. Purchase and Sale.

Subject to the terms and conditions and in reliance upon the representations and warranties herein set forth, the Issuer agrees to sell to the Underwriters the Firm Shares, and each Underwriter agrees, severally and not jointly, to purchase from the Issuer the respective number of Firm Shares set forth opposite such Underwriter's name in Schedule I hereto. The purchase price per Firm Share to be paid by the several Underwriters to the Issuer shall be \$3.196; and

Subject to the terms and conditions and in reliance upon the representations and warranties herein set forth, the Issuer hereby grants an option to the several Underwriters to purchase, severally and not jointly, up to 3,900,000 Option Shares at the same purchase price per share as the Underwriters shall pay for the Firm Shares, less an amount per share equal to any dividends or distributions declared by the Issuer and payable on the Firm Shares but not payable on the Option Shares. Said option may be exercised in whole or in part at any time on or before the 30th day after the date of the Prospectus upon written notice by the Representatives to the Issuer setting forth the number of Option Shares as to which the several Underwriters are exercising the option and the time, date and place for settlement. The number of Option Shares to be purchased by each Underwriter shall be the same percentage of the total number of Option Shares to be purchased by the several Underwriters as such Underwriter is purchasing of the Firm Shares, subject to such adjustments as you in your absolute discretion shall make to eliminate any fractional shares.

3. Delivery and Payment. Delivery of, and payment for, the Firm Shares and the Option Shares (if the option provided for in Section 2(b) hereof shall have been exercised in full or in part on or before one Business Day immediately preceding the Closing Date) shall be made at 10:00 AM, Eastern Standard Time, on November 18, 2019, or at such time on such later date not more than two Business Days after the foregoing date as the Representatives shall designate, which date and time may be postponed by agreement among the Representatives and the Issuer or as provided in Section 9 hereof (such date and time of delivery and payment for the Securities being herein called the "**Closing Date**"). For purposes herein, "**Business Day**" shall mean any day other than a Saturday, a Sunday or a legal holiday or a day on which banking institutions or trust companies are authorized or obligated by law to close in New York, New York. Delivery of the Securities shall be made to the Representatives for the respective accounts of the several Underwriters against payment by the several Underwriters through the Representatives of the purchase price thereof to or upon the order of the Issuer by wire transfer payable in same-day funds to an account specified by the Issuer. Delivery of the Shares shall be made through the facilities of The Depository Trust Company unless the Representatives shall otherwise instruct.

If the option provided for in Section 2(b) hereof is exercised after the second Business Day immediately preceding the Closing Date, the Issuer will deliver the Option Shares (at the expense of the Issuer) to the Representatives, at 520 Madison Avenue, New York, New York, on the date specified by the Representatives (which shall be within two Business Days after exercise of said option) for the respective accounts of the several Underwriters, against payment by the several Underwriters through the Representatives of the purchase price thereof to or upon the order of the Issuer by wire transfer payable in same-day funds to an account specified by the Issuer. If settlement for the Option Shares occurs after the Closing Date, the Issuer will deliver to the Representatives on the settlement date for the Option Shares, and the obligation of the Underwriters to purchase the Option Shares shall be conditioned upon receipt of, supplemental opinions, certificates and letters confirming as of such date the opinions, certificates and letters delivered on the Closing Date pursuant to Section 6 hereof.

4. Offering by Underwriters. It is understood that the several Underwriters propose to offer the Securities for sale to the public as set forth in the Prospectus.

5. Agreements. The Issuer agrees with the several Underwriters that:

Prior to the termination of the offering of the Securities, the Issuer will not file any amendment of the Registration Statement or supplement to the Prospectus unless the Issuer has furnished you a copy

for your review prior to filing and will not file any such proposed amendment or supplement to which you reasonably object. The Issuer will cause the Prospectus, properly completed, and any supplement thereto to be filed in a form approved by the Representatives with the SEC pursuant to the applicable paragraph of Rule 424(b) under the Securities Act within the time period prescribed and will provide evidence reasonably satisfactory to the Representatives of such timely filing. The Issuer will promptly advise the Representatives (i) when the Prospectus, and any supplement thereto, shall have been filed (if required) with the SEC pursuant to Rule 424(b), (ii) when, prior to termination of the offering of the Securities, any amendment to the Registration Statement shall have been filed or become effective, (iii) of any request by the SEC or its staff for any amendment to the Registration Statement, or for any supplement to the Prospectus or for any additional information, (iv) of the issuance by the SEC of any stop order suspending the effectiveness of the Registration Statement or of any notice objecting to its use or the institution or threatening of any proceeding for that purpose and (v) of the receipt by the Issuer of any notification with respect to the suspension of the qualification of the Securities for sale in any jurisdiction or the institution or threatening of any proceeding for such purpose. The Issuer will use its best efforts to prevent the issuance of any such stop order or the occurrence of any such suspension or objection to the use of the Registration Statement and, upon such issuance, occurrence or notice of objection, to obtain as soon as possible the withdrawal of such stop order or relief from such occurrence or objection, including, if necessary, by filing an amendment to the Registration Statement or a new registration statement and using its reasonable best efforts to have such amendment or new registration statement declared effective as soon as practicable;

If, at any time prior to the filing of the Prospectus pursuant to Rule 424(b) under the Securities Act, any event occurs as a result of which the Disclosure Package would include any untrue statement of a material fact or omit to state any material fact necessary in order to make the statements therein in the light of the circumstances under which they were made at such time not misleading, the Issuer will (i) promptly notify the Representatives so that any use of the Disclosure Package may cease until it is amended or supplemented; (ii) amend or supplement the Disclosure Package to correct such statement or omission; and (iii) supply any amendment or supplement to you in such quantities as you may reasonably request;

If, at any time when a prospectus relating to the Securities is required to be delivered under the Securities Act (including in circumstances where such requirement may be satisfied pursuant to Rule 172), any event occurs as a result of which the Prospectus as then supplemented would include any untrue statement of a material fact or omit to state any material fact necessary in order to make the statements therein in the light of the circumstances under which they were made or the circumstances then prevailing not misleading, or if it shall be necessary to amend the Registration Statement or supplement the Prospectus to comply with the Securities Act, the Issuer promptly will (i) notify the Representatives of any such event; (ii) prepare and file with the SEC, subject to the paragraph (a) of this Section 5, an amendment or supplement which will correct such statement or omission or effect such compliance; and (iii) supply any supplemented Prospectus to you in such quantities as you may reasonably request;

As soon as practicable, the Issuer will make generally available to its security holders and to the Representatives an earnings statement or statements of the Issuer and its subsidiaries which will satisfy the provisions of Section 11(a) of Rule 158 under the Securities Act;

The Issuer will furnish to the Representatives and counsel for the Underwriters, without charge, signed copies of the Registration Statement (including exhibits thereto) and to each other Underwriter a copy of the Registration Statement (without exhibits thereto) and, so long as delivery of a prospectus by an Underwriter or dealer may be required by the Securities Act (including in circumstances where such requirement may be satisfied pursuant to Rule 172), as many copies of each Preliminary Prospectus, the Prospectus and each Issuer Free Writing Prospectus and any supplement thereto as the Representatives may reasonably request. The Issuer will pay the expenses of printing or other production of all documents relating to the offering;

The Issuer will arrange, if necessary, for the qualification of the Securities for sale under the laws of such jurisdictions as the Representatives may reasonably designate and will maintain such qualifications in effect so long as required for the distribution of the Securities; provided that in no event shall the Issuer be obligated to qualify to do business in any jurisdiction where it is not now so qualified or where it would be subject to taxation as a foreign corporation or to take any action that would subject it to service of process in suits, other than those arising out of the offering or sale of the Securities, or subject itself to taxation, in any jurisdiction where it is not now so subject;

The Issuer will not, without the prior written consent of Jefferies and Cantor, offer, sell, contract to sell, pledge or otherwise dispose of (or enter into any transaction which is designed to, or might reasonably be expected to, result in the disposition (whether by actual disposition or effective economic disposition due to cash settlement or otherwise) by the Issuer or any affiliate of the Issuer or any person in privity with the Issuer or any affiliate of the Issuer) directly or indirectly, including the filing (or participation in the filing) of a registration statement with the SEC in respect of, or establish or increase a put equivalent position or liquidate or decrease a call equivalent position within the meaning of Section 16 of the Exchange Act, any other shares of Common Stock or any securities convertible into, or exercisable, or exchangeable for, shares of Common Stock; or publicly announce an intention to effect any such transaction, for a period of 90 days after the date of this Underwriting Agreement, *provided, however*, that the Issuer may (i) issue and sell shares of Common Stock pursuant to this Underwriting Agreement, (ii) issue and sell shares of Common Stock pursuant to any employee incentive plan, stock ownership plan or dividend reinvestment plan of the Issuer in effect at the Execution Time and described in the Registration Statement, the Disclosure Package and the Prospectus, (iii) issue shares of Common Stock issuable upon the conversion of securities or the exercise of warrants outstanding at the Execution Time and described in the Registration Statement, the Disclosure Package and the Prospectus, (iv) file a registration statement on Form S-8 relating to shares of Common Stock granted pursuant to or reserved for issuance under any employee incentive plan, stock ownership plan or dividend reinvestment plan of the Issuer in effect at the Execution Time and described in the Registration Statement, the Disclosure Package and the Prospectus and (v) enter into an agreement providing for the sale or issuance by the Issuer of, and sell and issue, shares of Common Stock or any securities exercisable or exchangeable for, or convertible into, a number of shares of Common Stock, in the aggregate amount of not more than 10% of the Issuer's Common Stock issued and outstanding immediately following the Closing Date on a fully-diluted basis, pursuant to one or more strategic collaborations, licensing transactions or business, product or technology acquisitions (in any event excluding transactions principally of a financing nature) without the prior written consent of Jefferies and Cantor; *provided, however*, that any such issuance under clause (v) above shall be conditioned upon the execution by each recipient of such shares of Common Stock of a letter substantially in the form of Exhibit A hereto (a "**Lock-Up Agreement**");

[Reserved];

The Issuer will not take, directly or indirectly, any action designed to or that would constitute or that might reasonably be expected to cause or result in, under the Exchange Act or otherwise, stabilization or manipulation of the price of any security of the Issuer to facilitate the sale or resale of the Shares;

The Issuer agrees to pay the costs and expenses relating to the following matters: (i) the preparation, printing or reproduction and filing with the SEC of the Registration Statement (including financial statements and exhibits thereto), each Preliminary Prospectus, the Prospectus and each Issuer Free Writing Prospectus, and each amendment or supplement to any of them; (ii) the printing (or reproduction) and delivery (including postage, air freight charges and charges for counting and packaging) of such copies of the Registration Statement, each Preliminary Prospectus, the Prospectus and each Issuer Free Writing Prospectus, and all amendments or supplements to any of them, as may, in each case, be reasonably requested for use in connection with the offering and sale of the Securities; (iii) the preparation, printing, authentication, issuance and delivery of certificates for the Securities, including any stamp or transfer taxes in connection with the original issuance and sale of the Securities; (iv) the printing (or reproduction) and delivery of this Underwriting Agreement, any blue sky memorandum and all other agreements or documents printed (or reproduced) and delivered in connection with the offering of the Securities; (v) the listing of the Securities on the NYSE; (vi) any registration or qualification of the Securities for offer and sale under the Securities Act or blue sky laws of the several states (including filing fees and the reasonable fees and expenses of counsel for the Underwriters relating to such registration and qualification); (vii) any filings required to be made with FINRA (including filing fees and the reasonable fees and expenses of counsel for the Underwriters relating to such filings), *provided, however*, that the Issuer shall not be obligated to pay the fees of counsel to the Underwriters related to matters set forth in clauses (vi) and (vii) to the extent such fees exceed \$15,000 in the aggregate; (viii) the transportation and other expenses incurred by or on behalf of the Issuer by the Representatives in connection with presentations to prospective purchasers of the Securities; (ix) the fees and expenses of the Issuer's accountants and the fees and expenses of counsel (including local and special counsel) for the Issuer; and (x) all other costs and expenses incident to the performance by the Issuer of its obligations hereunder;

The Issuer agrees that, unless it has or shall have obtained the prior written consent of the Representatives, and each Underwriter, severally and not jointly, agrees with the Issuer that, unless it has or shall have

obtained, as the case may be, the prior written consent of the Issuer, it has not made and will not make any offer relating to the Securities that would constitute an Issuer Free Writing Prospectus or that would otherwise constitute a Free Writing Prospectus required to be filed by the Issuer with the SEC or retained by the Issuer under Rule 433 under the Securities Act; provided that the prior written consent of the parties hereto shall be deemed to have been given in respect of the Free Writing Prospectuses included in Schedule II hereto and any electronic road show. Any such free writing prospectus consented to by the Representatives or the Issuer is hereinafter referred to as a “*Permitted Free Writing Prospectus*.” The Issuer agrees that (x) it has treated and will treat, as the case may be, each Permitted Free Writing Prospectus as an Issuer Free Writing Prospectus and (y) it has complied and will comply, as the case may be, with the requirements of Rules 164 and 433 under the Securities Act applicable to any Permitted Free Writing Prospectus, including in respect of timely filing with the SEC, legending and record keeping;

The Issuer will promptly notify the Representatives if the Issuer ceases to be an Emerging Growth Company at any time prior to the later of (a) completion of the distribution of the Securities within the meaning of the Securities Act and (b) completion of the 90-day restricted period referred to in Section 5(g) hereof; and

If at any time following the distribution of any Written Testing-the-Waters Communication, any event occurs as a result of which such Written Testing-the-Waters Communication would include any untrue statement of a material fact or omit to state any material fact necessary in order to make the statements therein in the light of the circumstances under which they were made at such time not misleading, the Issuer will (i) promptly notify the Representatives so that use of the Written Testing-the-Waters Communication may cease until it is amended or supplemented; (ii) amend or supplement the Written Testing-the-Waters Communication to correct such statement or omission; and (iii) supply any amendment or supplement to the Representatives in such quantities as may be reasonably requested.

6. Conditions to the Obligations of the Underwriters The obligations of the Underwriters to purchase the Firm Shares and the Option Shares, as the case may be, shall be subject to the accuracy of the representations and warranties on the part of the Issuer contained herein as of the Execution Time, the Closing Date and any settlement date pursuant to Section 3 hereof, to the accuracy of the statements of the Issuer made in any certificates pursuant to the provisions hereof, to the performance by the Issuer of its obligations hereunder and to the following additional conditions:

The Prospectus, and any supplement thereto, have been filed in the manner and within the time period required by Rule 424(b) under the Securities Act; any other material required to be filed by the Issuer pursuant to Rule 433(d) under the Securities Act shall have been filed with the SEC within the applicable time periods prescribed for such filings by Rule 433; and no stop order suspending the effectiveness of the Registration Statement or any notice objecting to its use shall have been issued and no proceedings for that purpose shall have been instituted or threatened;

The Issuer shall have requested and caused Covington & Burling LLP, counsel for the Issuer, to have furnished to the Representatives their opinion, dated the Closing Date and addressed to the Representatives, in form and substance reasonably satisfactory to the Representatives;

The Issuer shall have requested and caused DLA Piper LLP (US), special counsel for the Issuer, to have furnished to the Representatives their opinion, dated the Closing Date and addressed to the Representatives, in form and substance reasonably satisfactory to the Representatives;

The Issuer shall have requested and caused Fox Rothschild LLP, intellectual property/patent counsel for the Issuer, to have furnished to the Representatives their opinion, dated the Closing Date and addressed to the Representatives, in form and substance reasonably satisfactory to the Representatives;

The Issuer shall have furnished to the Representatives a certificate of the Issuer, signed by the Harlan W. Waksal, M.D., President and Chief Executive Officer of the Issuer, dated the Closing Date, in form and substance reasonably satisfactory to the Representatives;

The Representatives shall have received from Cooley LLP, counsel for the Underwriters, such opinion or opinions, dated the Closing Date and addressed to the Representatives, with respect to the issuance and sale of the Securities, the Registration Statement, the Disclosure Package, the Prospectus (together with any supplement thereto) and other related matters as the Representatives may reasonably require, and the Issuer shall have furnished to such counsel such documents as they request for the purpose of enabling them to pass upon such matters;

The Issuer shall have furnished to the Representatives a certificate of the Issuer, signed by the President and the Chief Financial Officer of the Issuer, dated the Closing Date, to the effect that the signers of such certificate have carefully examined the Registration Statement, the Disclosure Package, the Prospectus and any amendment or supplement thereto, as well as each electronic road show used in connection with the offering of the Securities, if any, and this Underwriting Agreement and that:

the representations and warranties of the Issuer in this Underwriting Agreement are true and correct on and as of the Closing Date with the same effect as if made on the Closing Date and the Issuer has complied with all the agreements and satisfied all the conditions on its part to be performed or satisfied at or prior to the Closing Date;

no stop order suspending the effectiveness of the Registration Statement or any notice objecting to its use has been issued and no proceedings for that purpose have been instituted or, to the Issuer's knowledge, threatened; and

since the date of the most recent financial statements included in the Disclosure Package and the Prospectus, there has been no Material Adverse Effect.

The Issuer shall have requested and caused BDO USA, LLP to have furnished to the Representatives, at the Execution Time and at the Closing Date, letters, dated respectively as of the Execution Time and as of the Closing Date, in form and substance reasonably satisfactory to the Representatives, confirming that they are independent accountants within the meaning of the Securities Act and the Exchange Act and the applicable rules and regulations adopted by the SEC thereunder and that they have performed a review of the unaudited interim financial information of the Issuer for the nine-month period ended September 30, 2019 and as of September 30, 2019, in accordance with Statement on Auditing Standards No. 100, and in a form reasonably satisfactory to the Representatives;

Subsequent to the Execution Time or, if earlier, the dates as of which information is given in the Registration Statement (exclusive of any amendment thereof) and the Prospectus (exclusive of any amendment or supplement thereto), there shall not have been any material change, or any development involving a prospective change, in or affecting the condition (financial or otherwise), earnings, business or properties of the Issuer and its subsidiaries taken as a whole, whether or not arising from transactions in the ordinary course of business, except as set forth in or contemplated by the Disclosure Package and the Prospectus the effect of which is, in the sole judgment of the Representatives, so material and adverse as to make it impractical or inadvisable to proceed with the offering or delivery of the Securities as contemplated by the Registration Statement (exclusive of any amendment thereof), the Disclosure Package and the Prospectus (exclusive of any amendment or supplement thereto);

Prior to the Closing Date, the Issuer shall have furnished to the Representatives such further information, certificates and documents as the Representatives may reasonably request;

[Reserved.]

The Shares shall have been listed and admitted and authorized for trading on the NYSE, and satisfactory evidence of such actions shall have been provided to the Representatives; and

At the Execution Time, the Issuer shall have furnished to the Representatives a Lock-Up Agreement from each executive officer and director of the Issuer addressed to the Representatives.

If any of the conditions specified in this Section 6 shall not have been fulfilled when and as provided in this Underwriting Agreement, or if any of the opinions, certificates and letters mentioned above or elsewhere in this Underwriting Agreement shall not be reasonably satisfactory in form and substance to the Representatives and counsel for the Underwriters, this Underwriting Agreement and all obligations of the Underwriters hereunder may be canceled at, or at any time prior to, the Closing Date by the Representatives. Notice of such cancellation shall be given to the Issuer in writing or by telephone or facsimile confirmed in writing.

The documents required to be delivered by this Section 6 shall be delivered at the office of Cooley LLP, counsel for the Underwriters, at 55 Hudson Yards, New York, NY 10001, on the Closing Date.

7. Reimbursement of Underwriters' Expenses. If the sale of the Securities provided for herein is not consummated because any condition to the obligations of the Underwriters set forth in Section 6 hereof is not satisfied, because of any termination pursuant to Section 10 hereof or because of any refusal, inability or failure on the part of the Issuer to perform any agreement herein or comply with any provision hereof other than by reason of a default by any of the Underwriters, the Issuer will reimburse the Underwriters severally, through the Representatives, on demand for all reasonable documented expenses (including reasonable fees and disbursements of counsel) that shall have been incurred by them in connection with the proposed purchase and sale of the Securities; provided that if this Underwriting Agreement is terminated pursuant to Section 9 by reason of the default of one or more Underwriters, the Issuer shall not be obligated to reimburse any defaulting Underwriter on account of expenses to the extent incurred by such defaulting Underwriter provided further that the foregoing shall not limit any reimbursement obligation of the Issuer to any non-defaulting Underwriter under this Section 7.

8. Indemnification and Contribution.

The Issuer agrees to indemnify and hold harmless each Underwriter, the directors, officers, employees, affiliates and agents of each Underwriter and each person who controls any Underwriter within the meaning of either the Securities Act or the Exchange Act against any and all losses, claims, damages or liabilities, joint or several, to which they or any of them may become subject under the Securities Act, the Exchange Act or other Federal or state statutory law or regulation, at common law or otherwise, insofar as such losses, claims, damages or liabilities (or actions in respect thereof) arise out of or are based upon (i) any untrue statement or alleged untrue statement of a material fact contained in the Registration Statement or in any amendment thereof, or arise out of or are based upon the omission or alleged omission to state therein a material fact required to be stated therein or necessary to make the statements therein not misleading, (ii) any untrue statement or alleged untrue statement of a material fact included in the Base Prospectus, any Preliminary Prospectus, any other prospectus supplement relating to the Securities or the Prospectus, or any Issuer Free Writing Prospectus, any Written Testing-the-Waters Communication or in any amendment thereof or supplement thereto or arise out of or are based upon the omission or alleged omission to state therein a material fact necessary to make the statements therein, in the light of the circumstances under which they were made, not misleading, or (iii) the violation of any laws or regulations of foreign jurisdictions where Securities have been offered or sold; and agrees to reimburse each such indemnified party, as incurred, for any legal or other expenses reasonably incurred by them in connection with investigating or defending any such loss, claim, damage, liability or action; *provided, however*, that the Issuer will not be liable in any such case to the extent that any such loss, claim, damage or liability arises out of or is based upon any such untrue statement or alleged untrue statement or omission or alleged omission made therein in reliance upon and in conformity with information furnished in writing to the Issuer by or on behalf of any Underwriter specifically for inclusion therein. This indemnity agreement will be in addition to any liability which the Issuer may otherwise have.

Each Underwriter severally and not jointly agrees to indemnify and hold harmless the Issuer, each of its directors, each of its officers who signs the Registration Statement, and each person who controls the Issuer within the meaning of either the Securities Act or the Exchange Act, to the same extent as the foregoing indemnity from the Issuer to each Underwriter, but only with reference to written information relating to such Underwriter furnished to the Issuer by or on behalf of such Underwriter specifically for inclusion in the documents referred to in the foregoing indemnity. This indemnity agreement will be in addition to any liability which any Underwriter may otherwise have. The Issuer acknowledges that the statements set forth in the last paragraph of the cover page regarding delivery of the Securities and (i) in the first sentence of the third paragraph, (ii) in the first paragraph under the subheading "Commissions and Expenses" and (iii) in the first sentence of the first paragraph and the first sentence of the sixth paragraph under the subheading "Stabilization," each of (i), (ii) and (iii) under the caption

“Underwriting,” in the Preliminary Prospectus and the Prospectus constitute the only information furnished in writing by or on behalf of the several Underwriters for inclusion in the Preliminary Prospectus, the Prospectus or any Issuer Free Writing Prospectus.

Promptly after receipt by an indemnified party under this Section 8 of notice of the commencement of any action, such indemnified party will, if a claim in respect thereof is to be made against the indemnifying party under this Section 8, notify the indemnifying party in writing of the commencement thereof; but the failure so to notify the indemnifying party (i) will not relieve it from liability under paragraph (a) or (b) above unless and to the extent it did not otherwise learn of such action and such failure results in the forfeiture by the indemnifying party of substantial rights and defenses and (ii) will not, in any event, relieve the indemnifying party from any obligations to any indemnified party other than the indemnification obligation provided in paragraph (a) or (b) above. The indemnifying party shall be entitled to appoint counsel of the indemnifying party’s choice at the indemnifying party’s expense to represent the indemnified party in any action for which indemnification is sought (in which case the indemnifying party shall not thereafter be responsible for the fees and expenses of any separate counsel retained by the indemnified party or parties except as set forth below); *provided, however*, that such counsel shall be satisfactory to the indemnified party. Notwithstanding the indemnifying party’s election to appoint counsel to represent the indemnified party in an action, the indemnified party shall have the right to employ separate counsel (including local counsel), and the indemnifying party shall bear the reasonable fees, costs and expenses of such separate counsel if (i) the use of counsel chosen by the indemnifying party to represent the indemnified party would present such counsel with a conflict of interest, (ii) the actual or potential defendants in, or targets of, any such action include both the indemnified party and the indemnifying party and the indemnified party shall have reasonably concluded that there may be legal defenses available to it and/or other indemnified parties which are different from or additional to those available to the indemnifying party, (iii) the indemnifying party shall not have employed counsel satisfactory to the indemnified party to represent the indemnified party within a reasonable time after notice of the institution of such action or (iv) the indemnifying party shall authorize the indemnified party to employ separate counsel at the expense of the indemnifying party. An indemnifying party will not, without the prior written consent of the indemnified parties, settle or compromise or consent to the entry of any judgment with respect to any pending or threatened claim, action, suit or proceeding in respect of which indemnification or contribution may be sought hereunder (whether or not the indemnified parties are actual or potential parties to such claim or action) unless such settlement, compromise or consent (i) includes an unconditional release of each indemnified party from all liability arising out of such claim, action, suit or proceeding and (ii) does not include a statement as to or an admission of fault, culpability or a failure to act, by or on behalf of any indemnified party.

In the event that the indemnity provided in paragraph (a), (b) or (c) of this Section 8 is unavailable to or insufficient to hold harmless an indemnified party for any reason, the Issuer and the Underwriters severally agree to contribute to the aggregate losses, claims, damages and liabilities (including reasonable and documented legal or other expenses reasonably incurred in connection with investigating or defending the same) (collectively “*Losses*”) to which the Issuer and one or more of the Underwriters may be subject in such proportion as is appropriate to reflect the relative benefits received by the Issuer on the one hand and by the Underwriters on the other from the offering of the Securities. If the allocation provided by the immediately preceding sentence is unavailable for any reason, the Issuer and the Underwriters severally shall contribute in such proportion as is appropriate to reflect not only such relative benefits but also the relative fault of the Issuer on the one hand and of the Underwriters on the other in connection with the statements or omissions which resulted in such Losses as well as any other relevant equitable considerations. Benefits received by the Issuer shall be deemed to be equal to the total net proceeds from the offering (before deducting expenses) received by it, and benefits received by the Underwriters shall be deemed to be equal to the total underwriting discounts and commissions, in each case as set forth on the cover page of the Prospectus. Relative fault shall be determined by reference to, among other things, whether any untrue or any alleged untrue statement of a material fact or the omission or alleged omission to state a material fact relates to information provided by the Issuer on the one hand or the Underwriters on the other, the intent of the parties and their relative knowledge, access to information and opportunity to correct or prevent such untrue statement or omission. The Issuer and the Underwriters agree that it would not be just and equitable if contribution were determined by pro rata allocation or any other method of allocation which does not take account of the equitable considerations referred to above. Notwithstanding the provisions of this paragraph (d), in no event shall an Underwriter be required to contribute any amount in excess of the amount by which the total underwriting discounts and commissions received by such Underwriter with respect to the offering of the Securities exceeds the amount of any damages that such

Underwriter has otherwise been required to pay by reason of such untrue or alleged untrue statement or omission or alleged omission.

9. Default by an Underwriter. If any one or more Underwriters shall fail to purchase and pay for any of the Securities agreed to be purchased by such Underwriter or Underwriters hereunder and such failure to purchase shall constitute a default in the performance of its or their obligations under this Underwriting Agreement, the remaining Underwriters shall be obligated severally to take up and pay for (in the respective proportions which the amount of Firm Shares set forth opposite their names in Schedule I hereto bears to the aggregate amount of Firm Shares set forth opposite the names of all the remaining Underwriters) the Securities which the defaulting Underwriter or Underwriters agreed but failed to purchase; *provided, however*, that in the event that the aggregate amount of Securities which the defaulting Underwriter or Underwriters agreed but failed to purchase shall exceed 10% of the aggregate amount of Firm Shares set forth in Schedule I hereto, the remaining Underwriters shall have the right to purchase all, but shall not be under any obligation to purchase any, of the Securities, and if such non-defaulting Underwriters do not purchase all the Securities, this Underwriting Agreement will terminate without liability to any non-defaulting Underwriter or the Issuer. In the event of a default by any Underwriter as set forth in this Section 9, the Closing Date shall be postponed for such period, not exceeding five Business Days, as the Representatives shall determine in order that the required changes in the Registration Statement and the Prospectus or in any other documents or arrangements may be effected. Nothing contained in this Underwriting Agreement shall relieve any defaulting Underwriter of its liability, if any, to the Issuer and any non-defaulting Underwriter for damages occasioned by its default hereunder.

10. Termination. This Underwriting Agreement shall be subject to termination in the absolute discretion of the Representatives, by notice given to the Issuer prior to delivery of and payment for the Securities, if at any time prior to such delivery and payment (i) trading in the Issuer's securities shall have been suspended by the SEC or the NYSE or trading in securities generally on the NYSE shall have been suspended or limited or minimum prices shall have been established on such exchange, (ii) a banking moratorium shall have been declared either by Federal or New York State authorities, (iii) there shall have occurred a material disruption in commercial banking or securities settlement or clearance services or (iv) there shall have occurred any outbreak or escalation of hostilities, declaration by the United States of a national emergency or war, or other calamity or crisis the effect of which on financial markets is such as to make it, in the sole judgment of the Representatives, impractical or inadvisable to proceed with the offering or delivery of the Securities as contemplated by the Preliminary Prospectus or the Prospectus.

11. Representations and Indemnities to Survive. The respective agreements, representations, warranties, indemnities and other statements of the Issuer or its officers and of the Underwriters set forth in or made pursuant to this Underwriting Agreement will remain in full force and effect, regardless of any investigation made by or on behalf of any Underwriter or the Issuer or any of the officers, directors, employees, agents, affiliates or controlling persons referred to in Section 8 hereof, and will survive delivery of and payment for the Securities. The provisions of Sections 7 and 8 hereof shall survive the termination or cancellation of this Underwriting Agreement.

12. Notices. All communications hereunder will be in writing and effective only on receipt, and will be mailed, delivered or telefaxed to:

If to the Representatives:

Jefferies LLC 520 Madison Avenue New York, NY 10022 Attention: General Counsel Facsimile: (646) 619-4437	Cantor Fitzgerald & Co. 499 Park Avenue New York, NY 10022 Attention: General Counsel Facsimile: (212) 829-4708	<i>With copy (which copy shall not constitute notice) to:</i> Cooley LLP 55 Hudson Yards New York, NY 10001 Attention: Divakar Gupta Facsimile: (212) 479-6275
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If to the Issuer:

With copy (which copy shall not constitute notice) to:
Covington & Burling LLP
620 Eighth Avenue
New York, NY 10018
Attention: Eric W. Blanchard
Facsimile: (646) 441-9111

13. Successors. This Underwriting Agreement will inure to the benefit of and be binding upon the parties hereto and their respective successors and the officers, directors, employees, agents and controlling persons referred to in Section 8 hereof, and no other person will have any right or obligation hereunder.

14. Jurisdiction. The Issuer agrees that any suit, action or proceeding against the Issuer brought by any Underwriter, the directors, officers, employees, affiliates and agents of any Underwriter, or by any person who controls any Underwriter, arising out of or based upon this Underwriting Agreement or the transactions contemplated hereby may be instituted in any State or U.S. federal court in The City of New York and County of New York, and waives any objection which it may now or hereafter have to the laying of venue of any such proceeding, and irrevocably submits to the non-exclusive jurisdiction of such courts in any suit, action or proceeding. Notwithstanding the foregoing, any action arising out of or based upon this Underwriting Agreement may be instituted by any Underwriter, the directors, officers, employees, affiliates and agents of any Underwriter, or by any person who controls any Underwriter, in any court of competent jurisdiction in Delaware.

15. Recognition of the U.S. Special Resolution Regimes

(a) In the event that any Underwriter that is a Covered Entity (as defined below) becomes subject to a proceeding under a U.S. Special Resolution Regime (as defined below), the transfer from such Underwriter of this Underwriting Agreement, and any interest and obligation in or under this Underwriting Agreement, will be effective to the same extent as the transfer would be effective under the U.S. Special Resolution Regime if this Underwriting Agreement, and any such interest and obligation, were governed by the laws of the United States or a state of the United States.

(b) In the event that any Underwriter that is a Covered Entity or a BHC Act Affiliate (as defined below) of such Underwriter becomes subject to a proceeding under a U.S. Special Resolution Regime, Default Rights (as defined below) under this Underwriting Agreement that may be exercised against such Underwriter are permitted to be exercised to no greater extent than such Default Rights could be exercised under the U.S. Special Resolution Regime if this Underwriting Agreement were governed by the laws of the United States or a state of the United States.

As used in this Section 15, “BHC Act Affiliate” has the meaning assigned to the term “affiliate” in, and shall be interpreted in accordance with, 12 U.S.C. § 1841(k); “Covered Entity” means any of the following: (i) a “covered entity” as that term is defined in, and interpreted in accordance with, 12 C.F.R. § 252.82(b), (ii) a “covered bank” as that term is defined in, and interpreted in accordance with, 12 C.F.R. § 47.3(b) or (iii) a “covered FSI” as that term is defined in, and interpreted in accordance with, 12 C.F.R. § 382.2(b); “Default Right” has the meaning assigned to that term in, and shall be interpreted in accordance with, 12 C.F.R. §§ 252.81, 47.2 or 382.1, as applicable; and “U.S. Special Resolution Regime” means each of (i) the Federal Deposit Insurance Act and the regulations promulgated thereunder and (ii) Title II of the Dodd-Frank Wall Street Reform and Consumer Protection Act and the regulations promulgated thereunder.

16. No Fiduciary Duty. The Issuer hereby acknowledges that (a) the purchase and sale of the Securities pursuant to this Underwriting Agreement is an arm’s-length commercial transaction between the Issuer, on the one hand, and the Underwriters and any affiliate through which it may be acting, on the other, (b) the Underwriters are acting as principal and not as an agent or fiduciary of the Issuer, and (c) the Issuer’s engagement of the Underwriters in connection with the offering and the process leading up to the offering is as independent contractors and not in any other capacity. Furthermore, the Issuer agrees that it is solely responsible for making its own judgments in connection

with the offering (irrespective of whether any of the Underwriters has advised or is currently advising the Issuer on related or other matters). The Issuer agrees that it will not claim that the Underwriters have rendered advisory services of any nature or respect, or owe an agency, fiduciary or similar duty to the Issuer, in connection with such transaction or the process leading thereto.

17. Integration. This Underwriting Agreement supersedes all prior agreements and understandings (whether written or oral) between the Issuer and the Underwriters, or any of them, with respect to the subject matter hereof.

18. Applicable Law. This Underwriting Agreement will be governed by and construed in accordance with the laws of the State of New York applicable to contracts made and to be performed within the State of New York.

19. Waiver of Jury Trial. The Issuer hereby irrevocably waives, to the fullest extent permitted by applicable law, any and all right to trial by jury in any legal proceeding arising out of or relating to this Underwriting Agreement or the transactions contemplated hereby.

20. Counterparts. This Underwriting Agreement may be signed in one or more counterparts, each of which shall constitute an original and all of which together shall constitute one and the same agreement.

21. Headings. The section headings used herein are for convenience only and shall not affect the construction hereof.

If the foregoing is in accordance with your understanding of our agreement, please sign and return to us the enclosed duplicate hereof, whereupon this letter and your acceptance shall represent a binding agreement among the Issuer and the several Underwriters.

Very truly yours,

Kadmon Holdings, Inc.

By: /s/ Harlan W. Waksal,
M.D.

Name: Harlan W. Waksal, M.D.

Title: President and Chief Executive Officer

The foregoing Underwriting Agreement is hereby confirmed and accepted as of the date first above written.

Jefferies LLC

By: Jefferies LLC

By: /s/ Gil Bar-Nahum

Name: Gil Bar-Nahum

Title: Managing Director

Cantor Fitzgerald & Co.

By:

By: /s/ Bala Murty

Name: Bala Murty

Title: COO

For themselves and the other several Underwriters named in Schedule I to the foregoing Underwriting Agreement.

SCHEDULE I

Underwriters	Number of Firm Shares to be Purchased	Number of Option Shares to be Purchased
Jefferies LLC	10,400,000	1,560,000
Cantor Fitzgerald & Co	5,200,000	780,000
H.C. Wainwright & Co., LLC	3,900,000	585,000
Oppenheimer & Co. Inc.	3,900,000	585,000
Nomura Securities International, Inc.	2,600,000	390,000
Total	26,000,000	3,900,000

SCHEDULE II

None.

SCHEDULE III

None.

SCHEDULE IV

1. Kadmon Corporation, LLC
 2. Kadmon Pharmaceuticals, LLC
-

[Form of Lock Up Agreement]**Kadmon Holdings, Inc.
Public Offering of Common Stock**

Jefferies LLC
Cantor Fitzgerald & Co.

As Representative of the several Underwriters,

c/o Jefferies LLC
520 Madison Avenue
New York, New York 10022

c/o Cantor Fitzgerald & Co.
499 Park Avenue
New York, New York 10022

Ladies and Gentlemen:

This letter agreement is being delivered to you in connection with the proposed underwriting agreement (the "**Underwriting Agreement**"), among Kadmon Holdings, Inc., a Delaware corporation (the "**Issuer**"), and Jefferies LLC ("**Jefferies**") and Cantor Fitzgerald & Co., as Representatives (the "**Representatives**") of a group of underwriters named therein (the "**Underwriters**"), relating to a proposed underwritten public offering of common stock, \$0.001 par value (the "**Common Stock**"), of the Issuer (the "**Offering**").

In order to induce you and the other Underwriters to enter into the Underwriting Agreement, the undersigned will not, without the prior written consent of Jefferies, on behalf of the several Underwriters, offer, sell, contract to sell, pledge or otherwise dispose of (or enter into any transaction which is designed to, or might reasonably be expected to, result in the disposition (whether by actual disposition or effective economic disposition due to cash settlement or otherwise) by the undersigned or any affiliate of the undersigned), directly or indirectly, including the filing (or participation in the filing) of a registration statement with the Securities and Exchange Commission ("**SEC**") in respect of, or establish or increase a put equivalent position or liquidate or decrease a call equivalent position within the meaning of Section 16 of the Securities Exchange Act of 1934, as amended (the "**Exchange Act**"), and the rules and regulations of the SEC promulgated thereunder with respect to, any shares of capital stock of or other equity interests in the Issuer, or any securities convertible into, or exercisable or exchangeable for such capital stock or equity interests, or publicly announce an intention to effect any such transaction, for a period from the date hereof through 90 days after the date of the Underwriting Agreement (the "**Lock-up Period**").

The foregoing paragraph shall not apply to: (A) shares of Common Stock disposed of as *bona fide* gifts, including as a result of the operation of law, including pursuant to a domestic order or a negotiated divorce settlement, or estate or intestate succession; (B) if the undersigned is a natural person, transfers of shares of Common Stock to (i) the legal representative, heir, beneficiary or a member of the immediate family of the undersigned (for purpose of this letter agreement, "immediate family" shall mean any relationship by blood, marriage, or adoption, not more remote than first cousin), (ii) any trust for the direct or indirect benefit of the undersigned or the immediate family of the undersigned, and/or charitable organizations or (iii) a corporation, partnership, limited liability company or other entity of which the undersigned and the immediate family of the undersigned are the direct or indirect legal and beneficial owners of all the outstanding equity securities or similar interests of such corporation, partnership, limited liability company or other entity; (C) if the undersigned is a corporation, partnership, limited liability company or other entity, transfers of shares of Common Stock to (i) any trust or other entity for the direct or indirect benefit of the undersigned or any affiliate, wholly-owned subsidiary, limited partner, member or stockholder of the undersigned, (ii) a corporation, partnership, limited liability company or other entity of which the undersigned and any affiliate, wholly-owned subsidiary, limited partner, member or stockholder of the undersigned are the direct or indirect legal and beneficial owners of all the outstanding equity securities or similar interests of such corporation, partnership,

limited liability company or other entity, or (iii) partners, members or shareholders of the undersigned; (D) transfers of shares of Common Stock to the undersigned's affiliates or to any investment fund or other entity controlled or managed by the undersigned; and (E) the establishment of a trading plan pursuant to Rule 10b5-1 under the Exchange Act for the transfer of shares of Common Stock, *provided* that such plan does not provide for the transfer of shares of Common Stock during the Lock-up Period and, other than any filing required to be made pursuant to Section 13 or Section 16 of the Exchange Act after the expiration of the Lock-up Period, no public announcement of the establishment or existence of such plan and no filing with the SEC or other regulatory authority in respect of such plan or transactions thereunder or contemplated thereby, by the undersigned, the Issuer or any other person, shall be made by the undersigned, the Issuer or any other person, prior to the expiration of the Lock-up Period; *provided*, that in the case of any transfer or distribution pursuant to clause (C)(i)-(iii) or clause (D), such transfers shall not involve a disposition for value; *provided further, however*, that in the case of any transfer or distribution pursuant to clause (A), (B), (C) or (D), it shall be a condition to such transfer that (i) each recipient of shares of Common Stock agrees in writing to be bound by the same restrictions in place for the undersigned pursuant to this letter agreement for the duration that such restrictions remain in effect at the time of transfer and (ii) prior to the expiration of the Lock-up Period, no public disclosure or filing under the Exchange Act by any party to the transfer (donor, donee, transferor or transferee) shall be required, or made voluntarily, reporting a reduction in beneficial ownership of shares of Common Stock in connection with such transfer.

Furthermore, notwithstanding the restrictions imposed by this letter agreement, the undersigned may, without the prior written consent of Jefferies,

(i) (A) exercise an option to purchase shares of Common Stock granted under any equity incentive plan, stock option plan, stock bonus plan or stock purchase plan of the Issuer in effect at the time of the Offering and disclosed in the Prospectus (as defined in the Underwriting Agreement), (B) exercise any warrants outstanding at the time of the Offering and disclosed in the Prospectus or (C) convert any loans, notes, or debt (together, the "*Convertible Securities*"), *provided* that, in the case of clauses (i)(A), (i)(B) and (i)(C), the underlying shares of Common Stock shall continue to be subject to the restrictions on transfer set forth in this letter agreement, and *provided*, further that, except as permitted below, if the undersigned is required to make a filing under the Exchange Act, the undersigned shall include a statement in such report to the effect that the report relates to the exercise of a stock option or warrant or conversion of any Convertible Security, that no shares of Common Stock were sold by the reporting person and that the shares of Common Stock received upon exercise of the stock option or warrant or conversion of any Convertible Security are subject to restrictions on transfer set forth in this letter agreement, and

(ii) transfer shares of Common Stock (A) to pay taxes (including estimated taxes) of the undersigned in connection with the vesting or exercise of equity awards by the undersigned pursuant to the Issuer's equity incentive, stock option, stock bonus or other stock plan or arrangement described in the Prospectus, (B) pursuant to a net exercise or cashless exercise by the undersigned of outstanding equity awards pursuant to the Issuer's equity incentive, stock option, stock bonus or other stock plan or arrangement, *provided* that any shares acquired upon the net exercise or cashless exercise of equity awards described in clause (ii)(B) shall be subject to the restrictions set forth in this letter agreement; *provided further*, that no filing under the Exchange Act or other public announcement shall be required or shall be made voluntarily in connection with such transfer or disposition pursuant to this clause (ii) during the Lock-up Period.

If (i) the Issuer notifies the Representatives in writing that it does not intend to proceed with the Offering, (ii) the Underwriting Agreement is not executed before December 31, 2019, or (iii) the Underwriting Agreement (other than the provisions thereof that survive termination) terminates or is terminated prior to payment for and delivery of the shares of Common Stock, then in each case, this letter agreement shall automatically, and without any action on the part of any other party, terminate and be of no further force and effect, and the undersigned shall automatically be released from the obligations under this letter agreement.

[Signature Page Follows]

Yours very truly,

Date:

Shareholder (if an entity)

Signature

Printed Name of Person Signing

Capacity of Person Signing (if signing as
custodian, trustee or on behalf of an entity)

COVINGTON

BEIJING BRUSSELS DUBAI FRANKFURT JOHANNESBURG
LONDON LOS ANGELES NEW YORK PALO ALTO
SAN FRANCISCO SEOUL SHANGHAI WASHINGTON

Covington & Burling LLP
The New York Times Building
620 Eighth Avenue
New York, NY 10018-1405
T +1 212 841 1000

November 14, 2019

Kadmon Holdings, Inc.
450 East 29th Street
New York, NY 10016
Ladies and Gentlemen:

We have acted as counsel to Kadmon Holdings, Inc., a Delaware corporation (the “*Company*”), in connection with the registration by the Company under the Securities Act of 1933, as amended (the “*Securities Act*”), of up to 29,900,000 shares (the “*Shares*”) of the Company’s common stock, par value \$0.001 per share, pursuant to the Underwriting Agreement, dated November 13, 2019 (the “*Underwriting Agreement*”), by and among the Company and Jefferies LLC and Cantor Fitzgerald & Co., as representatives of the several underwriters named therein. The offer and sale of the Shares are registered under the Securities Act pursuant to the Company’s Registration Statement on Form S-3 (File No. 333-233766), which was filed with the Securities and Exchange Commission (the “*Commission*”) on September 13, 2019 (such registration statement, as amended to the date hereof, is herein referred to as the “*Registration Statement*”).

We have reviewed such corporate records, certificates and other documents, and such questions of law, as we have considered necessary or appropriate for the purposes of this opinion.

We have assumed that all signatures are genuine, that all documents submitted to us as originals are authentic and that all copies of documents submitted to us conform to the originals.

We have relied as to certain matters on information obtained from public officials, officers of the Company and other sources believed by us to be responsible.

Based upon the foregoing, we are of the opinion that the Shares have been duly authorized and, when the terms of the issuance and sale of the Shares have been duly approved by all necessary corporate action by the Company, the Shares, when duly issued and sold by the Company as contemplated by the Underwriting Agreement, will be validly issued, fully paid and non-assessable.

We are members of the bar of the State of New York. We do not express any opinion herein on any laws other than the Delaware General Corporation Law and reported judicial decisions interpreting such law.

We hereby consent to the filing of this opinion as Exhibit 5.1 to the Company’s Current Report on Form 8-K dated the date hereof relating to the offering of the Shares. We also hereby consent to the reference to our firm under the heading “Legal Matters” in the Prospectus constituting part of the 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/ Covington & Burling LLP
