

**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): June 16, 2020**

**Shockwave Medical, Inc.**

(Exact name of registrant as specified in its charter)

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

**001 - 38829**  
(Commission  
File Number)

**27-0494101**  
(IRS Employer  
Identification No.)

**5403 Betsy Ross Drive**  
**Santa Clara, California**  
(Address of principal executive offices)

**95054**  
(Zip Code)

**Registrant's telephone number, including area code: (510) 279-4262**

**Not Applicable**  
(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
<b>Common Stock, par value \$0.001</b>	<b>SWAV</b>	<b>Nasdaq Global Market</b>

Indicate by check mark whether the registrant is an emerging growth company 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 1.01. Entry into a Material Definitive Agreement.**

On June 19, 2020, Shockwave Medical, Inc. (the “Company”) issued and sold an aggregate of 1,955,000 shares (the “Shares”) of the Company’s common stock, par value \$0.001 per share (the “Common Stock”), pursuant to an underwriting agreement dated June 16, 2020 (the “Underwriting Agreement”), among the Company and Morgan Stanley & Co. LLC and BofA Securities, Inc., as representatives of the several underwriters named therein (the “Underwriters”). The Shares include the full exercise of the Underwriters’ option to purchase an additional 255,000 shares of Common Stock pursuant to the Underwriting Agreement.

The Shares were sold in a public offering (the “Offering”) pursuant to a registration statement on Form S-3ASR (File No. 333-239202) (the “Registration Statement”) and a related prospectus and prospectus supplement, in each case filed with the Securities and Exchange Commission. The Company received net proceeds from the Offering of approximately \$84.1 million, after deducting underwriting discounts and commissions and before estimated offering expenses. The description of the Underwriting Agreement set forth above is qualified in its entirety by reference to the Underwriting Agreement, which is filed as Exhibit 1.1 hereto and is incorporated herein by reference.

Certain of the Underwriters or their affiliates have, from time to time, performed, and may in the future perform, various financial advisory and investment banking services for the Company, for which they received or will receive customary fees and expenses. For example, certain of the Underwriters also served as underwriters in connection with the Company’s initial public offering in March 2019 and its public offering in November 2019.

The Company intends to use the net proceeds from the Offering for sales and marketing activities to support the ongoing commercialization of its intravascular lithotripsy system, including the expansion of its sales force, additional medical affairs and educational efforts and the expansion of its international sales presence, for research and development and clinical studies and for working capital and general corporate purposes. The Company may also use a portion of the net proceeds of the Offering for acquisitions or strategic transactions, though the Company has not entered into any agreements or commitments with respect to any specific transactions and have no understandings or agreements with respect to any such transactions at this time. The Company cannot specify with certainty the particular uses of the net proceeds that it will receive from the Offering. Accordingly, the Company will have broad discretion in using these proceeds. Pending the use of proceeds from the Offering as described above, the Company plans to invest the net proceeds that it receives from the Offering in short-term and long-term interest-bearing obligations, including government and investment-grade debt securities and money market funds.

A copy of the opinion of Davis Polk & Wardwell LLP relating to the validity of the Shares is filed as Exhibit 5.1 hereto and is incorporated by reference into the Registration Statement.

**Item 9.01 Financial Statements and Exhibits.**

(d) Exhibits

<u>Exhibit Number</u>	<u>Description of Exhibit</u>
1.1	<a href="#"><u>Underwriting Agreement, dated June 16, 2020, by and among the Company and Morgan Stanley &amp; Co. LLC and BofA Securities, Inc. as representatives of the several underwriters named therein</u></a>
5.1	<a href="#"><u>Opinion of Davis Polk &amp; Wardwell LLP</u></a>
23.1	<a href="#"><u>Consent of Davis Polk &amp; Wardwell LLP (included in Exhibit 5.1)</u></a>

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**SIGNATURES**

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: June 19, 2020

Shockwave Medical, Inc.

/s/ Dan Puckett

Chief Financial Officer

1,700,000 Shares

**SHOCKWAVE MEDICAL, INC.**

**COMMON STOCK, PAR VALUE \$0.001 PER SHARE**

**UNDERWRITING AGREEMENT**

June 16, 2020

Morgan Stanley & Co. LLC  
BofA Securities, Inc.

c/o Morgan Stanley & Co. LLC  
1585 Broadway  
New York, New York 10036

c/o BofA Securities, Inc.  
One Bryant Park  
New York, New York 10036

Ladies and Gentlemen:

Shockwave Medical, Inc., a Delaware corporation (the “**Company**”), proposes to issue and sell to the several Underwriters named in Schedule I hereto (the “**Underwriters**”), for whom Morgan Stanley & Co. LLC and BofA Securities, Inc. are acting as representatives (the “**Representatives**”), 1,700,000 shares of its common stock, par value \$0.001 per share (the “**Firm Shares**”). The Company also proposes to issue and sell to the several Underwriters not more than an additional 255,000 shares of its common stock, par value \$0.001 per share (the “**Additional Shares**”), if and to the extent that the Representatives shall have determined to exercise, on behalf of the Underwriters, the right to purchase such shares of common stock granted to the Underwriters in Section 2 hereof. The Firm Shares and the Additional Shares are hereinafter collectively referred to as the “**Shares**.” The shares of common stock, par value \$0.001 per share, of the Company to be outstanding after giving effect to the sales contemplated hereby are hereinafter referred to as the “**Common Stock**.” In the event that the Company has only one subsidiary, then all references herein to “subsidiaries” of the Company shall be deemed to refer to such single subsidiary, mutatis mutandis.

The Company has filed with the Securities and Exchange Commission (the “**Commission**”) a registration statement on Form S-3 (File No. 333-239202), including a preliminary prospectus, relating to the securities (the “**Shelf Securities**”), including the Shares, to be issued from time to time by the Company. The registration statement as amended to the date of this Underwriting Agreement (the “**Agreement**”), including the information (if any) deemed to be part of the registration statement at the time of effectiveness pursuant to Rule 430A or Rule 430B under the Securities Act of 1933, as amended (the “**Securities Act**”), is hereinafter referred to as the “**Registration Statement**,” and the related prospectus covering the Shelf Securities dated June 16, 2020 in the form first used to confirm sales of the Shares (or in the form first made available to the Underwriters by the Company to meet requests of purchasers pursuant to Rule 173 under the Securities Act) is hereinafter referred to as the “**Basic Prospectus**.” The Basic Prospectus, as supplemented by the prospectus supplement specifically relating to the Shares in the form first used to confirm sales of the Shares (or in the form first made

available to the Underwriters by the Company to meet requests of purchasers pursuant to Rule 173 under the Securities Act) is hereinafter referred to as the “**Prospectus**” and the term “**preliminary prospectus**” means any preliminary form of the Prospectus.

For purposes of this Agreement, “**free writing prospectus**” has the meaning set forth in Rule 405 under the Securities Act, “**Time of Sale Prospectus**” means the preliminary prospectus together with the documents and pricing information set forth in Schedule II hereto, and “**broadly available road show**” means a “bona fide electronic road show” as defined in Rule 433(h)(5) under the Securities Act that has been made available without restriction to any person. As used herein, the terms “Registration Statement,” “Basic Prospectus,” “preliminary prospectus,” “Time of Sale Prospectus” and “Prospectus” shall include the documents, if any, incorporated by reference therein as of the date hereof. The terms “**supplement**,” “**amendment**,” and “**amend**” as used herein with respect to the Registration Statement, the Basic Prospectus, the Time of Sale Prospectus, any preliminary prospectus or the Prospectus shall include all documents subsequently filed by the Company with the Commission pursuant to the Securities Exchange Act of 1934, as amended (the “**Exchange Act**”), that are deemed to be incorporated by reference therein.

1. *Representations and Warranties.* The Company represents and warrants to and agrees with each of the Underwriters that:

(a) The Registration Statement has become effective; no stop order suspending the effectiveness of the Registration Statement is in effect, and no proceedings for such purpose or pursuant to Section 8A under the Securities Act are pending before or, to the Company’s knowledge, threatened by the Commission. The Company meets the requirements for use of a registration statement on Form S-3 under the Securities Act, the Company is a well-known seasoned issuer (as defined in Rule 405 under the Securities Act) eligible to use the Registration Statement as an automatic shelf registration statement and the Company has not received notice that the Commission objects to the use of the Registration Statement as an automatic shelf registration statement.

(b) (i) Each document, if any, filed or to be filed pursuant to the Exchange Act and incorporated by reference in the Time of Sale Prospectus or the Prospectus complied or will comply when so filed in all material respects with the Exchange Act and the applicable rules and regulations of the Commission thereunder, (ii) each part of the Registration Statement, when such part became effective, did not contain, and each such part, as amended or supplemented, if applicable, will not contain, as of the date of such amendment or supplement, any untrue statement of a material fact or omit to state a material fact required to be stated therein or necessary to make the statements therein not misleading, (iii) the Registration Statement as of the date hereof does not contain any untrue statement of a material fact or omit to state a material fact required to be stated therein or necessary to make the statements therein not misleading, (iv) the Registration Statement and the Prospectus comply and, as amended or supplemented, if

applicable, will, as of the date of such amendment or supplement, comply in all material respects with the Securities Act and the applicable rules and regulations of the Commission thereunder, (v) the Time of Sale Prospectus does not, and at the time of each sale of the Shares in connection with the offering when the Prospectus is not yet available to prospective purchasers and at the Closing Date (as defined in Section 4), the Time of Sale Prospectus, as then amended or supplemented by the Company, if applicable, will not, contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements therein, in the light of the circumstances under which they were made, not misleading, (vi) each broadly available road show, if any, does not contain any information that conflicts with the information contained in the Registration Statement, the Time of Sale Prospectus or the Prospectus, and when considered together with the Time of Sale Prospectus, does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements therein, in the light of the circumstances under which they were made, not misleading and (vii) the Prospectus, as of its date, does not contain and, as amended or supplemented, if applicable, will not contain, as of the date of such amendment or supplement, or as of the Closing Date and each Option Closing Date (as defined in Section 2), any untrue statement of a material fact or omit to state a material fact necessary to make the statements therein, in the light of the circumstances under which they were made, not misleading, except that the representations and warranties set forth in this paragraph do not apply to statements or omissions in the Registration Statement, the Time of Sale Prospectus or the Prospectus based upon information relating to any Underwriter furnished to the Company in writing by such Underwriter through the Representatives expressly for use therein.

(c) The Company is not an “ineligible issuer” in connection with the offering pursuant to Rules 164, 405 and 433 under the Securities Act. Any free writing prospectus that the Company is required to file pursuant to Rule 433(d) under the Securities Act has been, or will be, filed with the Commission in accordance with the requirements of the Securities Act and the applicable rules and regulations of the Commission thereunder. Each free writing prospectus that the Company has filed, or is required to file, pursuant to Rule 433(d) under the Securities Act or that was prepared by or on behalf of or used or referred to by the Company complies, or if filed after the effective date of this Agreement, will comply when filed, in all material respects with the requirements of the Securities Act and the applicable rules and regulations of the Commission thereunder. Except for the free writing prospectuses, if any, identified in Schedule II hereto, and electronic road shows, if any, each furnished to the Representatives before first use, the Company has not prepared, used or referred to, and will not, without the prior consent of the Representatives, prepare, use or refer to, any free writing prospectus.

(d) The Company has been duly incorporated, is validly existing as a corporation in good standing under the laws of the State of Delaware, has the corporate power and authority to own or lease its property and to conduct its business as described in each of the Registration Statement, the Time of Sale Prospectus and the Prospectus and is duly qualified to transact business and is in good standing in each jurisdiction (to the extent the concept of good standing or an equivalent concept is applicable in such jurisdiction) in which the conduct of its business or its ownership or leasing of property requires such qualification, except to the extent that the failure to be so qualified or be in good standing (to the extent the concept of good standing or an equivalent concept is applicable in such jurisdiction) would not have a material adverse effect on the Company and its subsidiaries, taken as a whole.

(e) Each subsidiary of the Company has been duly incorporated, is validly existing as a corporation in good standing under the laws of the jurisdiction of its incorporation, has the corporate power and authority to own its property and to conduct its business as described in the Time of Sale Prospectus and the Prospectus and is duly qualified to transact business and is in good standing in each jurisdiction (to the extent the concept of good standing or an equivalent concept is applicable in such jurisdiction) in which the conduct of its business or its ownership or leasing of property requires such qualification, except to the extent that the failure to be so qualified or be in good standing would not have a material adverse effect on the Company and its subsidiaries, taken as a whole; all of the issued shares of capital stock of each subsidiary of the Company have been duly and validly authorized and issued, are fully paid and non-assessable and are owned directly by the Company, free and clear of all liens, encumbrances, equities or claims.

(f) This Agreement has been duly authorized, executed and delivered by the Company.

(g) As of the Closing Date, the authorized capital stock of the Company will conform as to legal matters in all material respects to the description thereof contained in each of the Registration Statement, the Time of Sale Prospectus and the Prospectus.

(h) The shares of Common Stock outstanding prior to the issuance of the Shares have been duly authorized and are validly issued, fully paid and non-assessable.

(i) The Shares have been duly authorized and, when issued, delivered and paid for in accordance with the terms of this Agreement, will be validly issued, fully paid and non-assessable, and the issuance of such Shares will not be subject to any preemptive or similar rights.



(j) With respect to the stock options granted pursuant to the stock-based compensation plans of the Company and its subsidiaries (the “**Company Stock Plans**”), (i) each grant of a stock option was duly authorized no later than the date on which the grant of such stock option was by its terms to be effective by all necessary corporate action, including, as applicable, approval by the board of directors of the Company (or a duly constituted and authorized committee thereof) and any required stockholder approval by the necessary number of votes or written consents, and the award agreement governing such grant (if any) was duly executed and delivered by each party thereto, and (ii) each such grant was made in accordance with the terms of the Company Stock Plans, and all applicable laws and regulatory rules or requirements, including all applicable federal securities laws.

(k) The execution and delivery by the Company of, and the performance by the Company of its obligations under, this Agreement will not contravene any provision of (i) applicable law, (ii) the certificate of incorporation or by-laws of the Company or any agreement, (iii) other instrument binding upon the Company or any of its subsidiaries that is material to the Company and its subsidiaries, taken as a whole, or (iv) any judgment, order or decree of any governmental body, agency or court having jurisdiction over the Company or any subsidiary, except that in the case of clauses (i), (iii), and (iv) as would not, individually, or in the aggregate, have a material adverse effect on the Company or on the power and ability of the Company to perform its obligations under this Agreement; and no consent, approval, authorization or order of, or qualification with, any governmental body or agency is required for the performance by the Company of its obligations under this Agreement, except such as have been obtained or waived or as may be required by the securities or Blue Sky laws of the various states or foreign jurisdictions or the rules and regulations of the Financial Industry Regulatory Authority in connection with the offer and sale of the Shares.

(l) There has not occurred any material adverse effect on the Company and its subsidiaries, taken as a whole, or any development involving a prospective material adverse effect on the Company and its subsidiaries, taken as a whole, in the condition, financial or otherwise, or in the earnings, business or operations of the Company and its subsidiaries, taken as a whole, from that set forth in the Time of Sale Prospectus.

(m) Neither the Company nor any of its subsidiaries is (i) in violation of its respective certificate of incorporation or bylaws; (ii) in default, and no event has occurred that, with notice or lapse of time or both, would constitute such a default, in the due performance or observance of any term, covenant or condition contained in any indenture, mortgage, deed of trust, loan agreement or other agreement or instrument to which the Company or any of its subsidiaries is a party or by which the Company or any of its subsidiaries is bound or to which any of the property or assets of the Company or any of its subsidiaries is subject; or (iii) in violation of any law or statute or any judgment, order, rule or regulation of

any court or arbitrator or governmental or regulatory authority applicable to the Company, any of its subsidiaries or their respective businesses and properties, except, in the case of clauses (ii) and (iii) above, for any such default or violation that would not, individually or in the aggregate, have a material adverse effect on the Company and its subsidiaries, taken as a whole.

(n) There are no legal or governmental proceedings pending or threatened to which the Company or any of its subsidiaries is a party or to which any of the properties of the Company or any of its subsidiaries is subject (i) other than proceedings accurately described in all material respects in each of the Registration Statement, the Time of Sale Prospectus and the Prospectus and proceedings that would not have a material adverse effect on the Company and its subsidiaries, taken as a whole, or a material adverse effect on the power or ability of the Company to perform its obligations under this Agreement or to consummate the transactions contemplated by each of the Registration Statement, the Time of Sale Prospectus and the Prospectus or (ii) that are required to be described in the Registration Statement, the Time of Sale Prospectus or the Prospectus and are not so described in all material respects; and there are no statutes, regulations, contracts or other documents that are required to be described in the Registration Statement, the Time of Sale Prospectus or the Prospectus or to be filed as exhibits to the Registration Statement that are not described in all material respects or filed as required.

(o) Each preliminary prospectus filed as part of the Registration Statement as originally filed or as part of any amendment thereto, or filed pursuant to Rule 424 under the Securities Act, complied when so filed in all material respects with the Securities Act and the applicable rules and regulations of the Commission thereunder.

(p) The Company is not, and after giving effect to the offering and sale of the Shares and the application of the proceeds thereof as described in each of the Registration Statement, the Time of Sale Prospectus and the Prospectus will not be, required to register as an “investment company” as such term is defined in the Investment Company Act of 1940, as amended.

(q) The Company and its subsidiaries (i) are 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 all permits, licenses or other approvals required of them under applicable Environmental Laws to conduct their respective businesses and (iii) are in compliance with all terms and conditions of any such permit, license or approval, except where such noncompliance with Environmental Laws, failure to receive required permits, licenses or other approvals or failure to comply with the terms and conditions of such permits, licenses or approvals would not, singly or in the aggregate, have a material adverse effect on the Company and its subsidiaries, taken as a whole.

(r) There are no costs or liabilities associated with Environmental Laws (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) which would, singly or in the aggregate, have a material adverse effect on the Company and its subsidiaries, taken as a whole.

(s) Except as otherwise have been validly waived or complied with in connection with the issuance and sale of the Shares contemplated hereby and as described in each of the Registration Statement, the Time of Sale Prospectus and the Prospectus, there are no contracts, agreements or understandings between the Company and any person granting such person the right to require the Company to file a registration statement under the Securities Act with respect to any securities of the Company or to require the Company to include such securities with the Shares registered pursuant to the Registration Statement.

(t) (i) None of the Company or its subsidiaries or affiliates, or any director, officer, or employee thereof, or, to the Company's knowledge, any agent or representative of the Company or of any of its subsidiaries or affiliates, has taken or will take any action in furtherance of an offer, payment, promise to pay, or authorization or approval of the payment, giving or receipt of money, property, gifts, benefits, or anything else of value, directly or indirectly, to any government official (including any officer or employee of a government or government-owned or controlled entity or of a public international organization, or any person acting in an official capacity for or on behalf of any of the foregoing, or any political party or party official or candidate for political office) ("**Government Official**") in order to influence official action, or to any person in violation of any applicable anti-corruption laws; (ii) the Company and its subsidiaries and affiliates have conducted their businesses in compliance with applicable anti-corruption laws and have instituted and maintained and will continue to maintain policies and procedures reasonably designed to promote and achieve compliance with such laws and with the representations and warranties contained herein; and (iii) neither the Company nor its subsidiaries will use, directly or indirectly, the proceeds of the offering in furtherance of an offer, payment, promise to pay, or authorization of the payment or giving of money, or anything else of value, to any person in violation of any applicable anti-corruption laws.

(u) The operations of the Company and its subsidiaries are and have been conducted at all times in material compliance with all applicable financial recordkeeping and reporting requirements, including those of the Bank Secrecy Act, as amended by Title III of the Uniting and Strengthening America by Providing Appropriate Tools Required to Intercept and Obstruct Terrorism Act of

2001 (USA PATRIOT Act), and the applicable anti-money laundering statutes of jurisdictions where the Company and its subsidiaries conduct business, the rules and regulations thereunder and any related or similar rules, regulations or guidelines, issued, administered or enforced by any governmental or regulatory agency having jurisdiction over the Company or any of its subsidiaries (collectively, the “**Anti-Money Laundering Laws**”), and no action, suit or proceeding by or before any court or governmental or regulatory agency, authority or body or any arbitrator involving the Company or any of its subsidiaries with respect to the Anti-Money Laundering Laws is pending or, to the knowledge of the Company, threatened.

(v) (i) None of the Company, any of its subsidiaries, or any director or officer thereof, or, to the Company’s knowledge, any employee, any agent, affiliate or representative of the Company or any of its subsidiaries, is an individual or entity (“**Person**”) that is, or is owned or controlled by one or more Persons that are:

(A) the subject of any sanctions administered or enforced by the U.S. Department of Treasury’s Office of Foreign Assets Control, the United Nations Security Council, the European Union, Her Majesty’s Treasury, or other relevant sanctions authority (collectively, “**Sanctions**”), or

(B) located, organized or resident in a country or territory that is the subject of Sanctions (including, without limitation, Crimea, Cuba, Iran, North Korea and Syria).

(ii) The Company will not, directly or indirectly, use the proceeds of the offering, or lend, contribute or otherwise make available such proceeds to any subsidiary, joint venture partner or other Person:

(A) to fund or facilitate any activities or business of or with any Person or in any country or territory that, at the time of such funding or facilitation, is the subject of Sanctions; or

(B) in any other manner that will result in a violation of Sanctions by any Person (including any Person participating in the offering, whether as underwriter, advisor, investor or otherwise).

(iii) For the past five years, the Company and its subsidiaries have not knowingly engaged in, are not now knowingly engaged in, and will not knowingly engage in, any dealings or transactions with any Person, or in any country or territory, that at the time of the dealing or transaction is or was the subject of Sanctions.

(w) Subsequent to the respective dates as of which information is given in each of the Registration Statement, the Time of Sale Prospectus and the Prospectus, (i) the Company and its subsidiaries have not incurred any material liability or obligation, direct or contingent, nor entered into any material transaction; (ii) the Company has not purchased any of its outstanding capital stock, other than from its employees or other service-providers in connection with the termination of their service pursuant to the terms of the equity compensation plans or agreements, as described in each of the Registration Statement, the Time of Sales Prospectus and the Prospectus, nor declared, paid or otherwise made any dividend or distribution of any kind on its capital stock other than ordinary and customary dividends; and (iii) there has not been any material change in the capital stock (other than the exercise or settlement or equity awards or grants or forfeiture of equity awards outstanding as of such respective dates as of which information is given in each of the Registration Statement, the Time of Sale Prospectus and the Prospectus, in each case granted pursuant to the equity compensation plans described in each of the Registration Statement, the Time of Sale Prospectus and the Prospectus), short-term debt or long-term debt of the Company and its subsidiaries, except in each case as described in each of the Registration Statement, the Time of Sale Prospectus and the Prospectus, respectively.

(x) The Company and its subsidiaries have good and marketable title in fee simple to all real property owned by them and good and marketable title to all personal property (other than intellectual property, which is addressed exclusively in Section 1(y)) owned by the Company and its subsidiaries, in each case free and clear of all liens, encumbrances and defects except such as are described in the Registration Statement, the Time of Sale Prospectus and the Prospectus or such as do not materially affect the value of such property and do not materially interfere with the use made and proposed to be made of such property by the Company and its subsidiaries, taken as a whole; and any real property and buildings held under lease by the Company and its subsidiaries are held by them under valid, subsisting and enforceable leases with such exceptions as are not material and do not materially interfere with the use made and proposed to be made of such property and buildings by the Company and its subsidiaries, in each case except as described in the Time of Sale Prospectus and the Prospectus.

(y) Except as disclosed in the Registration Statement, the Time of Sale Prospectus, and the Prospectus and except as would not have a material adverse effect on the Company and its subsidiaries, taken as a whole, (i) the Company and its subsidiaries own or possess the right to use all patents, patent applications, inventions, trademarks, trade names, service marks, logos, trade dress, designs, data, database rights, Internet domain names, rights of privacy, rights of publicity, copyrights, works of authorship, trade secrets, know-how and proprietary information (including unpatented and unpatentable proprietary or confidential information, inventions, systems or procedures) and other industrial property and

intellectual property rights (collectively, “**Intellectual Property**”) described in the Registration Statement, the Time of Sale Prospectus, and the Prospectus as being owned or licensed by them, as well as applicable related rights, such as moral rights and the right to sue for all past, present and future infringements or misappropriation or dilution of any of the foregoing, and registrations and applications for registration of any of the foregoing, necessary for the conduct of their business as presently conducted and as presently proposed to be conducted in the future as disclosed in the Registration Statement, the Time of Sale Prospectus, and the Prospectus (the “**Company Intellectual Property**”), and the Company Intellectual Property has not been adjudged by a court of competent jurisdiction to be invalid or unenforceable, in whole or in part; (ii) to the Company’s knowledge, the conduct of the Company’s and its respective subsidiaries’ businesses as described in the Registration Statement, the Time of Sale Prospectus, and the Prospectus does not infringe, misappropriate or otherwise violate any valid and enforceable Intellectual Property of any other person; (iii) to the Company’s knowledge, there are no third parties who have rights or will be able to establish rights to any Company Intellectual Property, except for (A) customary reversionary rights of third-party licensors with respect to Intellectual Property that are disclosed in the Registration Statement, the Time of Sale Prospectus, and the Prospectus as licensed to the Company or its subsidiaries and (B) third parties who have been granted licenses by the Company; (iv) to the Company’s knowledge, there is no infringement by third parties of any Company Intellectual Property; (v) there is no pending or, to the Company’s knowledge, threatened in writing, action, suit, proceeding or claim by others: (A) challenging the Company’s rights or any of its subsidiaries’ rights in or to any Company Intellectual Property; (B) challenging the validity, enforceability or scope of any Company Intellectual Property, or (C) asserting that the Company or any of its subsidiaries infringes, misappropriates, or otherwise violates, or would, upon the commercialization of any product or service described in the Registration Statement, the Time of Sale Prospectus or the Prospectus as under development, infringe, misappropriate, or violate, any patent, trademark, trade name, service name, copyright, trade secret or other proprietary right of others; (vi) to the Company’s knowledge, the Company and its subsidiaries have complied with the terms of each agreement to which they are a party and that is described in the Registration Statement, the Time of Sale Prospectus or the Prospectus pursuant to which Intellectual Property has been licensed to the Company, and all such agreements are in full force and effect; (vii) the Company and its subsidiaries have taken all commercially reasonable steps necessary to secure their interests in the Company Intellectual Property from their employees and contractors and to protect the confidentiality of all of their confidential information and trade secrets, including the execution of appropriate nondisclosure, confidentiality and invention assignment agreements with their employees; (viii) to the Company’s knowledge, no employee of the Company is in or has been in violation of any term of any written employment contract, patent disclosure agreement, invention assignment agreement, non-competition

agreement, non-solicitation agreement, nondisclosure agreement, or restrictive covenant agreement with a former employer where the basis of such violation relates to (A) such employee's employment with the Company and (B) the ownership by the Company or its subsidiaries of any Company Intellectual Property; (ix) none of the Company Intellectual Property (including information technology) has been obtained by the Company or its subsidiaries in violation of any contractual obligation binding on the Company or its subsidiaries or any of their respective officers, directors or employees; (x) the product candidates described in the Registration Statement, the Time of Sale Prospectus and the Prospectus as under development by the Company fall within the scope of the claims of one or more patents or patent applications owned by, or exclusively licensed to, the Company; and (xi) to the Company's knowledge, all employees of the Company who have a duty of candor and good faith to the United States Patent and Trademark Office during the prosecution of the Company's U.S. patents and patent applications have complied with that duty.

(z) Except as would not, individually or in the aggregate, reasonably be expected to result in a material adverse effect on the Company and its subsidiaries, taken as a whole, (A) each Plan (as defined below) has been maintained in compliance with its terms and the requirements of any applicable statutes, orders, rules and regulations, including but not limited to the Employee Retirement Income Security Act of 1974, as amended ("**ERISA**") and the Internal Revenue Code of 1986, as amended (the "**Code**"); (B) no non-exempt prohibited transaction, within the meaning of Section 406 of ERISA or Section 4975 of the Code, has occurred with respect to any Plan; (C) for each Plan, no failure to satisfy the minimum funding standards (within the meaning of Section 412 of the Code or Section 302 of ERISA), whether or not waived, has occurred or is reasonably expected to occur; (D) no "reportable event" (within the meaning of Section 4043(c) of ERISA, other than those events as to which notice is waived) has occurred or is reasonably expected to occur; and (E) neither the Company nor any member of its "Controlled Group" (defined as any organization which is a member of a controlled group of corporations within the meaning of Section 414 of the Code) has incurred, nor is reasonably expected to incur, any liability under Title IV of ERISA (other than contributions to any Plan or any Multiemployer Plan or premiums to the PBGC, in the ordinary course and without default) in respect of a Plan or a Multiemployer Plan. For purposes of this paragraph, (x) the term "Plan" means an employee benefit plan, within the meaning of Section 3(3) of ERISA, subject to Title IV of ERISA, but excluding any Multiemployer Plan, for which the Company or any member of its "Controlled Group" has any liability and (y) the term "Multiemployer Plan" means a multiemployer plan within the meaning of Section 4001(a)(3) of ERISA.

(aa) No material labor dispute with the employees of the Company or any of its subsidiaries exists, except as described in the Time of Sale Prospectus and the Prospectus, or, to the knowledge of the Company, is imminent; and the

Company is not aware of any existing, threatened or imminent labor disturbance by the employees of any of its principal suppliers, manufacturers or contractors that could have a material adverse effect on the Company and its subsidiaries, taken as a whole.

(bb) The Company and each of its subsidiaries are insured by insurers of recognized financial responsibility against such losses and risks and in such amounts as the Company reasonably believes are prudent and customary in the businesses in which they are engaged, taken as a whole; neither the Company nor any of its subsidiaries has been refused any insurance coverage sought or applied for; and neither the Company nor any of its subsidiaries 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 have a material adverse effect on the Company and its subsidiaries, taken as a whole, except as described in the Time of Sale Prospectus and the Prospectus.

(cc) The Company and its subsidiaries, taken as a whole possess all certificates, authorizations and permits issued by the appropriate federal, state or foreign regulatory authorities necessary to conduct their respective businesses, except where the failure to obtain such certificates, authorizations and permits would not, individually or in the aggregate, have a material adverse effect on the Company and its subsidiaries, taken as a whole, and neither the Company nor any of its subsidiaries has received any notice of proceedings relating to the revocation or modification of any such certificate, authorization or permit which, singly or in the aggregate, if the subject of an unfavorable decision, ruling or finding, would have a material adverse effect on the Company and its subsidiaries, taken as a whole, except as described in the Time of Sale Prospectus and the Prospectus.

(dd) The Company and each of its subsidiaries maintain a system of internal accounting controls sufficient to provide reasonable assurance 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 U.S. generally accepted accounting principles ("U.S. GAAP") and to maintain asset accountability; (iii) access to assets is permitted only in accordance with management's general or specific authorization; (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; and (v) the interactive data in eXtensible Business Reporting Language, if any, included or incorporated by reference in the Registration Statement is accurate. Except as described in the Time of Sale Prospectus and the Prospectus, since the end of the Company's most recent audited fiscal year, there has been (i) no material weakness in the Company's internal control over financial reporting, as defined in Rule 13(a)-15(f) under the Exchange Act (whether or not remediated) and (ii) no change in the Company's internal control



over financial reporting that has materially and adversely affected, or is reasonably likely to materially and adversely affect, the Company's internal control over financial reporting.

(ee) The financial statements of the Company filed with the Commission as a part of the Registration Statement and included or incorporated by reference in the Time of Sale Prospectus and the Prospectus comply as to form in all material respects with the applicable accounting requirements of the Securities Act and present fairly the financial position of the Company as of the dates indicated and the results of its operations and cash flows for the periods specified. Such financial statements have been prepared in conformity with U.S. GAAP applied on a consistent basis throughout the periods involved. The other financial information included or incorporated by reference in the Registration Statement, the Time of Sale Prospectus and the Prospectus has been derived from the accounting records of the Company and its subsidiaries and presents fairly in all material respects the information shown thereby.

(ff) Ernst & Young LLP, which has expressed its opinion with respect to certain of the financial statements of the Company and its subsidiaries filed with the Commission and incorporated by reference as part of the Registration Statement and included or incorporated by reference in each of the Time of Sale Prospectus and the Prospectus, is an independent registered public accounting firm with respect to the Company and its subsidiaries within the applicable rules and regulations adopted by the Commission and the Public Company Accounting Oversight Board (United States) and as required by the Securities Act.

(gg) The statistical, industry and market related data included or incorporated by reference in the Registration Statement, the Time of Sale Prospectus and the Prospectus are based on or derived from sources that the Company believes, after reasonable inquiry, to be reliable and accurate. To the Company's knowledge, after reasonable investigation, it does not require the consent of any third party for the use of any such data.

(hh) The Company maintains disclosure controls and procedures (as such term is defined in Rule 13a-15(e) under the Exchange Act) that comply with the requirements of the Exchange Act applicable to the Company; such disclosure controls and procedures have been designed to ensure that material information relating to the Company and its subsidiaries is made known to the Company's principal executive officer and principal financial officer by others within those entities; and such disclosure controls and procedures are effective.

(ii) The Company has not sold, issued or distributed any shares of Common Stock during the six-month period preceding the date hereof, including any sales pursuant to Rule 144A under, or Regulation D or S of, the Securities Act, other than shares issued pursuant to employee benefit plans, qualified stock option plans or other employee compensation plans or pursuant to outstanding options, rights or warrants.

(jj) The Company and each of its subsidiaries have filed all federal, state, local and foreign tax returns required to be filed through the date of this Agreement or have requested extensions thereof (except where the failure to file would not, individually or in the aggregate, have a material adverse effect on the Company and its subsidiaries, taken as a whole) and have paid all taxes required to be paid thereon (except for cases in which the failure to file or pay would not have a material adverse effect on the Company and its subsidiaries, taken as a whole, or, except as are currently being contested in good faith and for which reserves required by U.S. GAAP have been created in the financial statements of the Company), and no tax deficiency has been determined adversely to the Company or any of its subsidiaries which has had (nor does the Company nor any of its subsidiaries have any notice or knowledge of any tax deficiency which could reasonably be expected to be determined adversely to the Company or its subsidiaries and which could reasonably be expected to have) a material adverse effect on the Company and its subsidiaries, taken as a whole.

(kk) The Company is in compliance with all provisions of the Sarbanes-Oxley Act of 2002, as amended (the “**Sarbanes-Oxley Act**”), and all rules and regulations promulgated thereunder, currently applicable to the Company, and is taking steps designed to ensure that it will be in compliance with the other provisions of the Sarbanes-Oxley Act when they become applicable to the Company.

(ll) The Company has not taken, directly or indirectly, any action designed to or that would reasonably be expected to cause or result in any stabilization or manipulation of the price of the Shares.

(mm) The Company (i) has not alone engaged in any Testing-the-Waters Communication with any person and (ii) has not authorized anyone to engage in Testing-the-Waters Communications. The Company has not distributed any Testing-the-Waters Communication that is a written communication within the meaning of Rule 405 under the Securities Act. “**Testing-the-Waters Communication**” means any communication with potential investors undertaken in reliance on Section 5(d) or Rule 163B of the Securities Act.

(nn) As of the time of each sale of the Shares in connection with the offering when the Prospectus is not yet available to prospective purchasers, none of (A) the Time of Sale Prospectus, and (B) any free writing prospectus, when considered together with the Time of Sale Prospectus, included, includes or will include an untrue statement of a material fact or omitted, omits or will 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.

(oo) The preclinical tests and clinical trials, and other studies (collectively, “**Studies**”) that are described in, or the results of which are referred to in, the Registration Statement, the Time of Sale Prospectus 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; 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 Company has no knowledge of any other Studies the results of which are inconsistent with, or otherwise call into question, the results described or referred to in the Registration Statement, the Time of Sale Prospectus or the Prospectus; the Company has made all such filings and obtained all such approvals or authorizations as may be required by the Food and Drug Administration of the U.S. Department of Health and Human Services 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**”), except where the failure to make such filing or obtain such approval would not reasonably be expected to, individually or in the aggregate, result in a material adverse effect on the Company and its subsidiaries, taken as a whole; except as described in the Registration Statement, the Time of Sale Prospectus and the Prospectus, the Company has not received any notice of, or correspondence from, any Regulatory Agency requiring the termination, suspension or material modification of any clinical trials that are described or referred to in the Registration Statement, the Time of Sale Prospectus, nor is the Company aware of any reasonable grounds for such notice or correspondence; and the Company has operated and currently is in compliance in all material respects with all applicable laws, rules, regulations and policies of the Regulatory Agencies.

(pp) The Company and its subsidiaries are, and at all times have been, in compliance with all applicable statutes, rules and regulations applicable to the Health Care Laws, as defined below, except where failure to be in compliance would not be reasonably expected to have a material adverse effect on the Company and its subsidiaries, taken as a whole. For purposes of this Agreement, “Health Care Laws” means: (i) the Federal Food, Drug, and Cosmetic Act (21 U.S.C. §§ 301 et seq.) and the regulations promulgated thereunder; (ii) all applicable federal, state, local and all applicable foreign health care related fraud and abuse laws, including, without limitation, the U.S. Anti-Kickback Statute (42 U.S.C. § 1320a-7b(b)), the U.S. False Statements Law (42 U.S.C. § 1320a-7b(a)), the Civil Monetary Penalties Law (42 U.S.C. §1320a-7a), the U.S. Civil False Claims Act (31 U.S.C. § 3729 et seq.), all criminal laws relating to health care fraud and abuse, including but not limited to 18 U.S.C. §§ 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 Physician Payments Sunshine Act (42 U.S.C. § 1320a-7h), the exclusion law (42 U.S.C. § 1320a-7), the statutes, regulations and directives of applicable

government funded or sponsored healthcare programs, and the regulations promulgated pursuant to such statutes, including but not limited to the coverage and payment provisions of Medicare (Title XVIII of the Social Security Act) and, Medicaid (Title XIX of the Social Security Act); (iii) the Standards for Privacy of Individually Identifiable Health Information (the “**Privacy Rule**”), the Security Standards, and the Standards for Electronic Transactions and Code Sets promulgated under HIPAA, the Health Information Technology for Economic and Clinical Health Act (“**HITECH Act**”) (42 U.S.C. §§ 17921 et seq.), and the regulations promulgated thereunder and any state or non-U.S. counterpart thereof or other law or regulation the purpose of which is to protect the privacy of individuals or prescribers; and (iv) any and all other applicable health care laws and regulations applicable to the ownership, testing, development, manufacture, packaging, processing, use, distribution, marketing, advertising, labeling, promotion, sale, offer for sale, storage, import, export or disposal of any product manufactured or distributed by the Company. Neither the Company nor its subsidiaries has received written notice of any claim, action, suit, proceeding, hearing, enforcement, investigation, arbitration or other action from any court or arbitrator or governmental or regulatory authority or third party alleging that any product operation or activity is in material violation of any Health Care Laws, and, to the Company’s knowledge, no such claim, action, suit, proceeding, hearing, enforcement, investigation, arbitration or other action is threatened. Neither the Company, its subsidiaries, nor any of their officers, directors, employees, contractors and agents, is a party to any corporate integrity agreements, monitoring agreements, consent decrees, settlement orders, or similar agreements with or imposed by any governmental or regulatory authority. Additionally, neither the Company including any of its employees, contractors, agents, officers or directors, nor its subsidiaries including any of the subsidiary’s employees, contractors, agents, officers or directors has been excluded, suspended or debarred from participation in any U.S. federal health care program or human clinical research or, to the knowledge of the Company, is subject to a governmental inquiry, investigation, proceeding, or other similar action that could reasonably be expected to result in debarment, suspension, or exclusion. The Company and its subsidiaries have filed, obtained, maintained or submitted all material reports, documents, forms, notices, applications, records, claims, submissions and supplements or amendments as required by the Health Care Laws, and all such reports, documents, forms, notices, applications, records, claims, submissions and supplements or amendments were timely, complete, accurate and not misleading on the date filed in all material respects (or were corrected or supplemented by a subsequent submission).

(qq) Except as disclosed in the Registration Statement, the Time of Sale Prospectus, and the Prospectus and except as would not have a material adverse effect on the Company and its subsidiaries, taken as a whole, (i) the Company and each of its subsidiaries is, and at all prior times was, in compliance with all applicable data privacy and security laws and regulations, including the European

Union General Data Protection Regulation) (EU 2016/679), for which any non-compliance with same would be reasonably likely to create a material liability (collectively, the “**Privacy Laws**”); (ii) to ensure compliance with the Privacy Laws, the Company and its subsidiaries have in place, comply with, and take appropriate steps reasonably designed to ensure compliance with their policies and procedures relating to data privacy and security and the collection, storage, use, disclosure, handling, and analysis of personal data that is subject to the Privacy Laws (the “**Policies**”); (iii) at all times since inception, the Company has provided accurate notice of its Policies then in effect to its customers, employees, third party vendors and representatives; (iv) each of the Policies provides accurate and all required notice of the Company’s then-current privacy practices relating to its subject matter and such Policies do not contain any omissions of the Company’s then-current privacy practices; (v) the Company and its subsidiaries since inception have at all times made all disclosures to users or customers required by the Privacy Laws, and none of such disclosures made or contained in any of the Policies have been inaccurate, misleading, or deceptive in violation of any Privacy Laws or Policies; (vi) the execution, delivery and performance of this Agreement or any other agreement referred to in this Agreement will not result in a breach or violation of any Privacy Laws or Policies; and (vii) neither the Company nor any of its subsidiaries (A) has received written notice from any governmental authority 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, (B) is currently conducting or paying for, in whole or in part, any investigation, remediation, or other corrective action pursuant to any Privacy Law, or (C) is a party to any order, decree, or agreement that imposes any obligation or liability under any Privacy Law.

(rr) Except as disclosed in the Registration Statement, the Time of Sale Prospectus, and the Prospectus and except as would not have a material adverse effect on the Company and its subsidiaries, taken as a whole, (i) the Company and its subsidiaries’ information technology assets and equipment, computers, technology systems and other systems, networks, hardware, software, websites, applications, and databases (collectively, “**IT Systems**”) are adequate for, and operate and perform as required in connection with the operation of the business of the Company and its subsidiaries as currently conducted; (ii) the Company and its subsidiaries have at all times implemented and maintained commercially reasonable controls, policies, procedures, and safeguards necessary to maintain and protect its confidential information and the integrity, continuous operation and security of all IT Systems (including all personal data and sensitive, confidential or regulated data (the “**Confidential Data**”)) used in connection with the operation of the Company or its subsidiaries; (iii) the Company and its subsidiaries have established commercially reasonable disaster recovery and security plans, procedures and facilities consistent with industry standards and practice; and (iv) to the Company’s knowledge, there have been no security breaches, violations, outages or unauthorized uses of or access to the IT Systems or the Confidential Data.

(ss) The interactive data in eXtensible Business Reporting Language, if any, included or incorporated by reference in the Registration Statement fairly presents the information called for in all material respects and has been prepared in accordance with the Commission's rules and guidelines applicable thereto.

2. *Agreements to Sell and Purchase.* The Company hereby agrees to sell to the several Underwriters, and each Underwriter, upon the basis of the representations and warranties herein contained, but subject to the terms and conditions hereinafter stated, agrees, severally and not jointly, to purchase from the Company the respective numbers of Firm Shares set forth in Schedule I hereto opposite its name at \$43.005 a share (the "**Purchase Price**").

On the basis of the representations and warranties contained in this Agreement, and subject to its terms and conditions, the Company agrees to sell to the Underwriters the Additional Shares, and the Underwriters shall have the right to purchase, severally and not jointly, up to 255,000 Additional Shares at the Purchase Price, provided, however, that the amount paid by the Underwriters for any Additional Shares shall be reduced by an amount per share equal to any dividends or distribution declared by the Company and payable on the Firm Shares but not payable on such Additional Shares. The Representatives may exercise this right on behalf of the Underwriters in whole or from time to time in part by giving written notice not later than 30 days after the date of this Agreement. Any exercise notice shall specify the number of Additional Shares to be purchased by the Underwriters and the date on which such Additional Shares are to be purchased. Each purchase date must be at least one business day after the written notice is given and may not be earlier than the closing date for the Firm Shares nor later than ten business days after the date of such notice. On each day, if any, that Additional Shares are to be purchased (an "**Option Closing Date**"), each Underwriter agrees, severally and not jointly, to purchase the number of Additional Shares (subject to such adjustments to eliminate fractional shares as the Representatives may determine) that bears the same proportion to the total number of Additional Shares to be purchased on such Option Closing Date as the number of Firm Shares set forth in Schedule I hereto opposite the name of such Underwriter bears to the total number of Firm Shares.

3. *Terms of Public Offering.* The Company is advised by the Representatives that the Underwriters propose to make a public offering of their respective portions of the Shares as soon after the Registration Statement and this Agreement have become effective as in the judgment of the Representatives is advisable. The Company is further advised by the Representatives that the Shares are to be offered to the public initially at \$45.75 a share (the "**Public Offering Price**") and to certain dealers selected by the Representatives at a price that represents a concession not in excess of \$1.647 a share under the Public Offering Price.

4. *Payment and Delivery.* Payment for the Firm Shares shall be made to the Company in Federal or other funds immediately available in New York City against delivery of such Firm Shares for the respective accounts of the several Underwriters at 10:00 a.m., New York City time, on June 19, 2020, or at such other time on the same or such other date, not later than the fifth business day thereafter, as shall be designated in writing by the Representatives. The time and date of such payment are hereinafter referred to as the “**Closing Date.**”

Payment for any Additional Shares shall be made to the Company in Federal or other funds immediately available in New York City against delivery of such Additional Shares for the respective accounts of the several Underwriters at 10:00 a.m., New York City time, on the date specified in the corresponding notice described in Section 2 or at such other time on the same or on such other date, in any event not later than the tenth business day thereafter, as shall be designated in writing by the Representatives.

The Firm Shares and Additional Shares shall be registered in such names and in such denominations as Morgan Stanley & Co. LLC shall request not later than one full business day prior to the Closing Date or the applicable Option Closing Date, as the case may be. The Firm Shares and Additional Shares shall be delivered to Morgan Stanley & Co. LLC on the Closing Date or an Option Closing Date, as the case may be, for the respective accounts of the several Underwriters, with any transfer taxes payable in connection with the transfer of the Shares to the Underwriters duly paid, against payment of the Purchase Price therefor.

5. *Conditions to the Underwriters’ Obligations.* The obligations of the Company to sell the Shares to the Underwriters and the several obligations of the Underwriters to purchase and pay for the Shares on the Closing Date are subject to the condition that the Registration Statement shall have become effective not later than 5:00 p.m. (New York City time) on the date hereof.

The several obligations of the Underwriters are subject to the following further conditions:

(a) Subsequent to the execution and delivery of this Agreement and prior to the Closing Date:

(i) no order suspending the effectiveness of the Registration Statement shall be in effect, and no proceeding for such purpose or pursuant to Section 8A under the Securities Act shall be pending before or threatened by the Commission;

(ii) there shall not have occurred any downgrading, nor shall any notice have been given of any intended or potential downgrading or of any review for a possible change that does not indicate the direction of the possible change, in the rating accorded any of the securities of the Company or any of its subsidiaries by any “nationally recognized statistical rating organization,” as such term is defined in Section 3(a)(62) of the Exchange Act; and

(iii) there shall not have occurred any change, or any development involving a prospective change, in the condition, financial or otherwise, or in the earnings, business or operations of the Company and its subsidiaries, taken as a whole, from that set forth in the Time of Sale Prospectus and the Prospectus that, in the judgment of the Representatives, is material and adverse and that makes it, in the judgment of the Representatives, impracticable to market the Shares on the terms and in the manner contemplated in the Time of Sale Prospectus and the Prospectus.

(b) The Underwriters shall have received on the Closing Date a certificate, dated the Closing Date and signed by an executive officer of the Company, to the effect set forth in Sections 5(a)(i) and 5(a)(ii) above and to the effect that the representations and warranties of the Company contained in this Agreement are true and correct as of the Closing Date and that the Company has complied with all of the agreements and satisfied all of the conditions on its part to be performed or satisfied hereunder on or before the Closing Date. The officer signing and delivering such certificate may rely upon the best of his or her knowledge as to proceedings threatened.

(c) The Underwriters shall have received on the Closing Date an opinion and negative assurance letter of Davis Polk & Wardwell LLP, outside counsel for the Company, dated the Closing Date, in form and substance reasonably satisfactory to the Representatives.

(d) The Underwriters shall have received on the Closing Date an opinion and negative assurance letter of Cooley LLP, counsel for the Underwriters, dated the Closing Date, in form and substance satisfactory to the Underwriters.

With respect to Sections 5(c) and (d) above, Davis Polk & Wardwell LLP and Cooley LLP may state that their opinions and beliefs are based upon their participation in the preparation of the Registration Statement, the Time of Sale Prospectus and the Prospectus and any amendments or supplements thereto and review and discussion of the contents thereof, but are without independent check or verification, except as specified.

The opinion and negative assurance letter of Davis Polk & Wardwell LLP described in Section 5(c) above shall be rendered to the Underwriters at the request of the Company and shall so state therein.

(e) The Underwriters shall have received on the Closing Date an opinion of Morrison & Foerster LLP, intellectual property counsel for the Underwriters, dated the Closing Date, in form and substance satisfactory to the Underwriters.



(f) The Underwriters shall have received, on each of the date hereof and the Closing Date, a letter dated the date hereof or the Closing Date, as the case may be, in form and substance satisfactory to the Underwriters, from Ernst & Young LLP, independent public accountants, containing statements and information of the type ordinarily included in accountants' "comfort letters" to underwriters with respect to the financial statements and certain financial information contained in the Registration Statement, the Time of Sale Prospectus and the Prospectus; *provided* that the letter delivered on the Closing Date shall use a "cut-off date" not earlier than the date hereof.

(g) The "lock-up" agreements, each substantially in the form of Exhibit A hereto, executed by certain securityholders, and all officers and directors of the Company relating to restrictions on sales and certain other dispositions of shares of Common Stock or certain other securities, delivered to the Representatives on or before the date hereof, shall be in full force and effect on the Closing Date.

(h) The Underwriters shall have received on the Closing Date an opinion of Hogan Lovells US LLP, regulatory counsel for the Underwriters, dated the Closing Date, in form and substance satisfactory to the Underwriters.

(i) The several obligations of the Underwriters to purchase Additional Shares hereunder are subject to the delivery to the Representatives on the applicable Option Closing Date of the following:

(i) a certificate, dated the Option Closing Date and signed by an executive officer of the Company, confirming that the certificate delivered on the Closing Date pursuant to Section 5(b) hereof remains true and correct as of such Option Closing Date;

(ii) an opinion and negative assurance letter of Davis Polk & Wardwell LLP, outside counsel for the Company, dated the Option Closing Date, relating to the Additional Shares to be purchased on such Option Closing Date and otherwise to the same effect as the opinion required by Section 5(c) hereof;

(iii) an opinion and negative assurance letter of Cooley LLP, counsel for the Underwriters, dated the Option Closing Date, relating to the Additional Shares to be purchased on such Option Closing Date and otherwise to the same effect as the opinion required by Section 5(d) hereof;

(iv) a letter dated the Option Closing Date, in form and substance satisfactory to the Underwriters, from Ernst & Young LLP, independent public accountants, substantially in the same form and substance as the letter furnished to the Underwriters pursuant to Section 5(f) hereof; *provided* that the letter delivered on the Option Closing Date shall use a “cut-off date” not earlier than three business days prior to such Option Closing Date;

(v) an opinion of Hogan Lovells US LLP, regulatory counsel for the Underwriters, dated the Option Closing Date, relating to the Additional Shares to be purchased on such Option Closing Date and otherwise to the same effect as the opinion required by Section 5(h) hereof;

(vi) an opinion of Morrison & Foerster LLP, intellectual property counsel for the Underwriters, dated the Option Closing Date, relating to the Additional Shares to be purchased on such Option Closing Date and otherwise to the same effect as the opinion required by Section 5(e) hereof; and

(vii) such other documents as the Representatives may reasonably request with respect to the good standing of the Company, the due authorization and issuance of the Additional Shares to be sold on such Option Closing Date and other matters related to the issuance of such Additional Shares.

6. *Covenants of the Company.* The Company covenants with each Underwriter as follows:

(a) To furnish to the Representatives, without charge, seven signed copies of the Registration Statement (including exhibits thereto) and for delivery to each other Underwriter a conformed copy of the Registration Statement (without exhibits thereto) and to furnish to the Representatives in New York City, without charge, prior to 10:00 a.m. New York City time on the business day next succeeding the date of this Agreement and during the period mentioned in Section 6(e) or 6(f) below, as many copies of the Time of Sale Prospectus, the Prospectus and any supplements and amendments thereto or to the Registration Statement as the Representatives may reasonably request.

(b) Before amending or supplementing the Registration Statement, the Time of Sale Prospectus or the Prospectus, to furnish to the Representatives a copy of each such proposed amendment or supplement and not to file any such proposed amendment or supplement to which the Representatives reasonably object, and to file with the Commission within the applicable period specified in Rule 424(b) under the Securities Act any prospectus required to be filed pursuant to such Rule.

(c) To furnish to the Representatives a copy of each proposed free writing prospectus to be prepared by or on behalf of, used by, or referred to by the Company and not to use or refer to any proposed free writing prospectus to which the Representatives reasonably object.

(d) Not to take any action that would result in an Underwriter or the Company being required to file with the Commission pursuant to Rule 433(d) under the Securities Act a free writing prospectus prepared by or on behalf of the Underwriter that the Underwriter otherwise would not have been required to file thereunder.

(e) If the Time of Sale Prospectus is being used to solicit offers to buy the Shares at a time when the Prospectus is not yet available to prospective purchasers and any event shall occur or condition exist as a result of which it is necessary to amend or supplement the Time of Sale Prospectus in order to make the statements therein, in the light of the circumstances under which they were made, not misleading, or if any event shall occur or condition exist as a result of which the Time of Sale Prospectus conflicts with the information contained in the Registration Statement then on file, or if, in the opinion of counsel for the Underwriters, it is necessary to amend or supplement the Time of Sale Prospectus to comply with applicable law, forthwith to prepare, file with the Commission and furnish, at its own expense, to the Underwriters and to any dealer upon request, either amendments or supplements to the Time of Sale Prospectus so that the statements in the Time of Sale Prospectus as so amended or supplemented will not, in the light of the circumstances when the Time of Sale Prospectus is delivered to a prospective purchaser, be misleading or so that the Time of Sale Prospectus, as amended or supplemented, will no longer conflict with the Registration Statement, or so that the Time of Sale Prospectus, as amended or supplemented, will comply with applicable law.

(f) If, during such period after the first date of the public offering of the Shares as in the opinion of counsel for the Underwriters the Prospectus (or in lieu thereof the notice referred to in Rule 173(a) of the Securities Act) is required by law to be delivered in connection with sales by an Underwriter or dealer, any event shall occur or condition exist as a result of which it is necessary to amend or supplement the Prospectus in order to make the statements therein, in the light of the circumstances when the Prospectus (or in lieu thereof the notice referred to in Rule 173(a) of the Securities Act) is delivered to a purchaser, not misleading, or if, in the opinion of counsel for the Underwriters, it is necessary to amend or supplement the Prospectus to comply with applicable law, forthwith to prepare, file with the Commission and furnish, at its own expense, to the Underwriters and to the dealers (whose names and addresses the Representatives will furnish to the Company) to which Shares may have been sold by the Representatives on behalf of the Underwriters and to any other dealers upon request, either amendments or supplements to the Prospectus so that the statements in the Prospectus as so amended or supplemented will not, in the light of the circumstances when the

Prospectus (or in lieu thereof the notice referred to in Rule 173(a) of the Securities Act) is delivered to a purchaser, be misleading or so that the Prospectus, as amended or supplemented, will comply with applicable law.

(g) To endeavor to qualify the Shares for offer and sale under the securities or Blue Sky laws of such jurisdictions as the Representatives shall reasonably request; *provided*, however, that nothing contained herein shall require the Company to qualify to do business in any jurisdiction, to execute or file a general consent to service of process in any jurisdiction or to subject itself to taxation in any jurisdiction in which it is not otherwise subject.

(h) To make generally available to the Company's security holders and to the Representatives as soon as practicable an earnings statement covering a period of at least twelve months beginning with the first fiscal quarter of the Company occurring after the date of this Agreement which shall satisfy the provisions of Section 11(a) of the Securities Act and the rules and regulations of the Commission thereunder.

(i) Whether or not the transactions contemplated in this Agreement are consummated or this Agreement is terminated, to pay or cause to be paid all expenses incident to the performance of its obligations under this Agreement, including: (i) the fees, disbursements and expenses of the Company's counsel and the Company's accountants in connection with the registration and delivery of the Shares under the Securities Act and all other fees or expenses in connection with the preparation and filing of the Registration Statement, any preliminary prospectus, the Time of Sale Prospectus, the Prospectus, any free writing prospectus prepared by or on behalf of, used by, or referred to by the Company and amendments and supplements to any of the foregoing, including all printing costs associated therewith, and the mailing and delivering of copies thereof to the Underwriters and dealers, in the quantities hereinabove specified, (ii) all costs and expenses related to the transfer and delivery of the Shares to the Underwriters, including any transfer or other taxes payable thereon, (iii) the reasonably incurred, documented cost of printing or producing any Blue Sky or Legal Investment memorandum in connection with the offer and sale of the Shares under state securities laws and all expenses in connection with the qualification of the Shares for offer and sale under state securities laws as provided in Section 6(g) hereof, including filing fees and the reasonably incurred, documented fees and disbursements of counsel for the Underwriters in connection with such qualification and in connection with the Blue Sky or Legal Investment memorandum, (iv) all filing fees in respect of the reasonable fees and disbursements of counsel to the Underwriters incurred in connection with the review and qualification of the offering of the Shares by the Financial Industry Regulatory Authority (provided that the amount payable by the Company with respect to fees and disbursements of counsel for the Underwriters pursuant to subsections (iii) and (iv) shall not exceed \$15,000) (v) all fees and expenses in connection with the preparation and filing of the registration statement on

Form 8-A relating to the Common Stock and all costs and expenses incident to listing the Shares on the Nasdaq Global Market, (vi) the cost of printing certificates representing the Shares, (vii) the costs and charges of any transfer agent, registrar or depository, (viii) the costs and expenses of the Company relating to investor presentations on any “road show” undertaken in connection with the marketing of the offering of the Shares, including, without limitation, expenses associated with the preparation or dissemination of any electronic road show, expenses associated with the production of road show slides and graphics, fees and expenses of any consultants engaged in connection with the road show presentations with the prior approval of the Company, travel and lodging expenses of the representatives and officers of the Company and any such consultants, and fifty percent (50%) of the cost of any aircraft chartered in connection with the road show to be used by both the Company and Underwriters (the remaining fifty percent (50%) of the cost of such aircraft to be paid by the Underwriters), (ix) the document production charges and expenses associated with printing this Agreement and (x) all other costs and expenses incident to the performance of the obligations of the Company hereunder for which provision is not otherwise made in this Section 6(i). It is understood, however, that except as provided in this Section, Section 8 entitled “Indemnity and Contribution,” and the last paragraph of Section 10 below, the Underwriters will pay all of their costs and expenses, including fees and disbursements of their counsel, stock transfer taxes payable on resale of any of the Shares by them and any advertising expenses connected with any offers they may make and all travel and other expenses of the Underwriters or any of their employees incurred by them in connection with participation in investor presentations on any “road show” undertaken in connection with the marketing of the offering of the Shares, other than the cost of aircraft chartered in connection with the road show, for which the Underwriters agree to pay for the other fifty percent (50%) not paid for by the Company, as described above.

(j) If the third anniversary of the initial effective date of the Registration Statement occurs before all the Shares have been sold by the Underwriters, prior to the third anniversary to file a new shelf registration statement and to take any other action necessary to permit the public offering of the Shares to continue without interruption; references herein to the Registration Statement shall include the new registration statement declared effective by the Commission.

(k) The Company will promptly notify the Representatives if the Company ceases to be an Emerging Growth Company at any time prior to the later of (a) completion of the distribution of the Shares within the meaning of the Securities Act and (b) completion of the Restricted Period (as defined in this Section 6).

The Company also covenants with each Underwriter that, without the prior written consent of the Representatives on behalf of the Underwriters, it will not, during

the period ending 75 days after the date of the Prospectus (the “**Restricted Period**”), and will not publicly disclose an intention to, (1) offer, pledge, sell, contract to sell, sell any option or contract to purchase, purchase any option or contract to sell, grant any option, right or warrant to purchase, lend, or otherwise transfer or dispose of, directly or indirectly, any shares of Common Stock or any securities convertible into or exercisable or exchangeable for Common Stock or (2) enter into any swap or other arrangement that transfers to another, in whole or in part, any of the economic consequences of ownership of the Common Stock, whether any such transaction described in clause (1) or (2) above is to be settled by delivery of Common Stock or such other securities, in cash or otherwise or (3) confidentially submit any draft registration statement or file any registration statement with the Commission relating to the offering of any shares of Common Stock or any securities convertible into or exercisable or exchangeable for Common Stock.

The restrictions contained in the preceding paragraph shall not apply to (a) the Shares to be sold hereunder; (b) the issuance by the Company of shares of Common Stock issued upon the exercise of options or warrants (including net exercise) or the conversion of a security outstanding on the date hereof and described in each of the Registration Statement, the Time of Sale Prospectus and the Prospectus which the Representatives have been advised in writing; (c) the grant of options or the issuance of shares of Common Stock by the Company to its employees, officers, directors, advisors or consultants pursuant to employee benefit plans in effect on the date hereof and as described Registration Statement, provided that each newly appointed director or executive officer (including a newly appointed director or executive officer that is appointed during the Restricted Period) that is a recipient of such securities shall execute and deliver to the Representatives a lock-up agreement substantially in the form of Exhibit A hereto covering the remainder of the Restricted Period; (d) the filing of any registration statement on Form S-8 relating to securities granted or to be granted pursuant to any plan in effect on the date hereof and described in each of the Registration Statement, the Time of Sale Prospectus and the Prospectus or any assumed employee benefit plan contemplated by clause (c); or (e) the sale or issuance of or entry into an agreement to sell or issue shares of Common Stock or securities convertible into or exercisable or exchangeable for Common Stock in connection with any (1) mergers, (2) acquisition of securities, businesses, property or other assets, (3) joint ventures, (4) strategic alliances, (5) partnerships with experts or other talent to develop or provide content or (6) equipment leasing arrangements, provided that the aggregate number of shares of Common Stock or securities convertible into or exercisable for Common Stock (on an as-converted or as-exercised basis, as the case may be) that the Company may sell or issue or agree to sell or issue as described in this clause (e) shall not exceed 5% of the total number of shares of Common Stock issued and outstanding immediately following the completion of the transactions contemplated by this Agreement, and provided, further, that each newly appointed director or executive officer (including a newly appointed director or executive officer that is appointed during the Restricted Period) that is a recipient of shares of Common Stock or securities convertible into or exercisable for Common Stock pursuant to this clause (e) shall execute and deliver to the Representatives a lock-up agreement substantially in the form of Exhibit A hereto covering the remainder of the Restricted Period.

7. *Covenants of the Underwriters.* Each Underwriter, severally and not jointly, covenants with the Company not to take any action that would result in the Company being required to file with the Commission under Rule 433(d) of the Securities Act a free writing prospectus prepared by or on behalf of such Underwriter that otherwise would not be required to be filed by the Company thereunder, but for the action of the Underwriter.

8. *Indemnity and Contribution.* (a) The Company agrees to indemnify and hold harmless each Underwriter, each person, if any, who controls any Underwriter within the meaning of either Section 15 of the Securities Act or Section 20 of the Exchange Act and each affiliate of any Underwriter within the meaning of Rule 405 under the Securities Act from and against any and all losses, claims, damages and liabilities (including, without limitation, any legal or other expenses reasonably incurred in connection with defending or investigating any such action or claim) that arise out of, or are based upon, any untrue statement or alleged untrue statement of a material fact contained in the Registration Statement or any amendment thereof, any preliminary prospectus, the Time of Sale Prospectus or any amendment or supplement thereto, any issuer free writing prospectus as defined in Rule 433(h) under the Securities Act, any Company information that the Company has filed, or is required to file, pursuant to Rule 433(d) under the Securities Act, any road show as defined in Rule 433(h) under the Securities Act (a "road show"), or the Prospectus or any amendment or supplement thereto, or arise out of, or are based upon, any omission or alleged omission to state therein, a material fact required to be stated therein or necessary to make the statements therein not misleading, except insofar as such losses, claims, damages or liabilities are arise out of, or are based upon, any such untrue statement or omission or alleged untrue statement or omission made in reliance upon and in conformity with any information relating to any Underwriter furnished to the Company in writing by such Underwriter through the Representatives expressly for use therein, it being understood and agreed that the only such information furnished by the Underwriters through the Representatives consists of the information described as such in paragraph (b) below. The Company agrees and confirms that references to "affiliates" of Morgan Stanley & Co. LLC that appear in this Agreement shall be understood to include Mitsubishi UFJ Morgan Stanley Securities Co., Ltd.

(b) Each Underwriter agrees, severally and not jointly, to indemnify and hold harmless the Company, its directors, its officers who sign the Registration Statement and each person, if any, who controls the Company within the meaning of either Section 15 of the Securities Act or Section 20 of the Exchange Act to the same extent as the foregoing indemnity from the Company to such Underwriter, but only with reference to information relating to such Underwriter furnished to the Company in writing by such Underwriter through the Representatives expressly for use in the Registration Statement, any preliminary prospectus, the Time of Sale Prospectus, any issuer free writing

prospectus, road show or the Prospectus or any amendment or supplement thereto; provided that the only such information furnished by any Underwriter consists of the following information in the Prospectus furnished on behalf of each Underwriter: the third paragraph concerning the terms of the offering, the eleventh paragraph concerning stabilization by the Underwriters and the thirteenth paragraph concerning the availability of the prospectus in electronic format, the allocation of shares of common stock to online brokerage account holders and internet distributions under the caption "Underwriting."

(c) In case any proceeding (including any governmental investigation) shall be instituted involving any person in respect of which indemnity may be sought pursuant to Section 8(a) or 8(b), such person (the "**indemnified party**") shall promptly notify the person against whom such indemnity may be sought (the "**indemnifying party**") in writing and the indemnifying party, upon request of the indemnified party, shall retain counsel reasonably satisfactory to the indemnified party to represent the indemnified party and any others the indemnifying party may designate in such proceeding and shall pay the reasonably incurred, documented fees and disbursements of such counsel related to such proceeding. In any such proceeding, any indemnified party shall have the right to retain its own counsel, but the fees and expenses of such counsel shall be at the expense of such indemnified party unless (i) the indemnifying party and the indemnified party shall have mutually agreed in writing to the retention of such counsel, (ii) the named parties to any such proceeding (including any impleaded parties) include both the indemnifying party and the indemnified party and representation of both parties by the same counsel would be inappropriate due to actual or potential differing interests between them or (iii) the indemnified party shall have reasonably concluded that there may be legal defenses available to it that are different from or in addition to those available to the indemnifying party. It is understood that the indemnifying party shall not, in respect of the legal expenses of any indemnified party in connection with any proceeding or related proceedings in the same jurisdiction, be liable for the fees and expenses of more than one separate firm (in addition to any local counsel) for all such indemnified parties and that all such fees and expenses shall be reimbursed as they are incurred. Such firm shall be designated in writing by the Representatives, in the case of parties indemnified pursuant to Section 8(a), and by the Company, in the case of parties indemnified pursuant to Section 8(b). The indemnifying party shall not be liable for any settlement of any proceeding effected without its written consent, but if settled with such consent or if there be a final judgment for the plaintiff, the indemnifying party agrees to indemnify the indemnified party from and against any loss or liability by reason of such settlement or judgment. Notwithstanding the foregoing sentence, if at any time an indemnified party shall have requested an indemnifying party to reimburse the indemnified party for fees and expenses of counsel as contemplated by the second and third sentences of this paragraph, the indemnifying party agrees that it shall be liable for any settlement of any proceeding effected without its written consent if (i) such settlement is



entered into more than 30 days after receipt by such indemnifying party of the aforesaid request and (ii) such indemnifying party shall not have reimbursed the indemnified party in accordance with such request prior to the date of such settlement. No indemnifying party shall, without the prior written consent of the indemnified party, effect any settlement of any pending or threatened proceeding in respect of which any indemnified party is or could have been a party and indemnity could have been sought hereunder by such indemnified party, unless such settlement (i) includes an unconditional release of such indemnified party from all liability on claims that are the subject matter of such 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.

(d) To the extent the indemnification provided for in Section 8(a) or 8(b) is unavailable to an indemnified party or insufficient in respect of any losses, claims, damages or liabilities referred to therein, then each indemnifying party under such paragraph, in lieu of indemnifying such indemnified party thereunder, shall contribute to the amount paid or payable by such indemnified party as a result of such losses, claims, damages or liabilities (i) in such proportion as is appropriate to reflect the relative benefits received by the indemnifying party or parties on the one hand and the indemnified party or parties on the other hand from the offering of the Shares or (ii) if the allocation provided by clause 8(d)(i) above is not permitted by applicable law, in such proportion as is appropriate to reflect not only the relative benefits referred to in clause 8(d)(i) above but also the relative fault of the indemnifying party or parties on the one hand and of the indemnified party or parties on the other hand in connection with the statements or omissions that resulted in such losses, claims, damages or liabilities, as well as any other relevant equitable considerations. The relative benefits received by the indemnifying party or parties on the one hand and the indemnified party or parties on the other hand in connection with the offering of the Shares shall be deemed to be in the same respective proportions as the net proceeds from the offering of the Shares (before deducting expenses) received by the Company and the total underwriting discounts and commissions received by the Underwriters, in each case as set forth in the table on the cover of the Prospectus, bear to the aggregate Public Offering Price of the Shares. The relative fault of the indemnifying party or parties on the one hand and the indemnified party or parties on the other hand shall be determined by reference to, among other things, whether the untrue or alleged untrue statement of a material fact or the omission or alleged omission to state a material fact relates to information supplied by the Company or by the Underwriters and the parties' relative intent, knowledge, access to information and opportunity to correct or prevent such statement or omission. The Underwriters' respective obligations to contribute pursuant to this Section 8 are several in proportion to the respective number of Shares they have purchased hereunder, and not joint.

(e) The Company and the Underwriters agree that it would not be just or equitable if contribution pursuant to this Section 8 were determined by *pro rata* allocation (even if the Underwriters were treated as one entity for such purpose) or by any other method of allocation that does not take account of the equitable considerations referred to in Section 8(d). The amount paid or payable by an indemnified party as a result of the losses, claims, damages and liabilities referred to in Section 8(d) shall be deemed to include, subject to the limitations set forth above, any legal or other expenses reasonably incurred by such indemnified party in connection with investigating or defending any such action or claim. Notwithstanding the provisions of this Section 8, no Underwriter shall be required to contribute any amount in excess of the amount by which the total price at which the Shares underwritten by it and distributed to the public were offered to the public 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. No person guilty of fraudulent misrepresentation (within the meaning of Section 11(f) of the Securities Act) shall be entitled to contribution from any person who was not guilty of such fraudulent misrepresentation. The remedies provided for in this Section 8 are not exclusive and shall not limit any rights or remedies which may otherwise be available to any indemnified party at law or in equity.

(f) The indemnity and contribution provisions contained in this Section 8 and the representations, warranties and other statements of the Company contained in this Agreement shall remain operative and in full force and effect regardless of (i) any termination of this Agreement, (ii) any investigation made by or on behalf of any Underwriter, any person controlling any Underwriter or any affiliate of any Underwriter or by or on behalf of the Company, its officers or directors or any person controlling the Company and (iii) acceptance of and payment for any of the Shares.

9. *Termination.* The Underwriters may terminate this Agreement by notice given by the Representatives to the Company, if after the execution and delivery of this Agreement and prior to or on the Closing Date or any Option Closing Date, as the case may be, (i) trading generally shall have been suspended or materially limited on, or by, as the case may be, any of the New York Stock Exchange, the NYSE MKT, the Nasdaq Global Market, the Chicago Board of Options Exchange, the Chicago Mercantile Exchange or the Chicago Board of Trade or other relevant exchanges, (ii) trading of any securities of the Company shall have been suspended on any exchange or in any over-the-counter market, (iii) a material disruption in securities settlement, payment or clearance services in the United States or other relevant jurisdiction shall have occurred, (iv) any moratorium on commercial banking activities shall have been declared by Federal or New York State authorities or (v) there shall have occurred any outbreak or escalation of hostilities, or any change in financial markets or any calamity or crisis that, in the judgment of the Representatives, is material and adverse and which, singly or together with any other event specified in this clause (v), makes it, in the judgment of the

Representatives, impracticable or inadvisable to proceed with the offer, sale or delivery of the Shares on the terms and in the manner contemplated in the Time of Sale Prospectus or the Prospectus.

10. *Effectiveness; Defaulting Underwriters.* This Agreement shall become effective upon the execution and delivery hereof by the parties hereto.

If, on the Closing Date or an Option Closing Date, as the case may be, any one or more of the Underwriters shall fail or refuse to purchase Shares that it has or they have agreed to purchase hereunder on such date, and the aggregate number of Shares which such defaulting Underwriter or Underwriters agreed but failed or refused to purchase is not more than one-tenth of the aggregate number of the Shares to be purchased on such date, the other Underwriters shall be obligated severally in the proportions that the number of Firm Shares set forth opposite their respective names in Schedule I bears to the aggregate number of Firm Shares set forth opposite the names of all such non-defaulting Underwriters, or in such other proportions as the Representatives may specify, to purchase the Shares which such defaulting Underwriter or Underwriters agreed but failed or refused to purchase on such date; *provided* that in no event shall the number of Shares that any Underwriter has agreed to purchase pursuant to this Agreement be increased pursuant to this Section 10 by an amount in excess of one-ninth of such number of Shares without the written consent of such Underwriter. If, on the Closing Date, any Underwriter or Underwriters shall fail or refuse to purchase Firm Shares and the aggregate number of Firm Shares with respect to which such default occurs is more than one-tenth of the aggregate number of Firm Shares to be purchased on such date, and arrangements satisfactory to the Representatives and the Company for the purchase of such Firm Shares are not made within 36 hours after such default, this Agreement shall terminate without liability on the part of any non-defaulting Underwriter or the Company. In any such case either the Representatives or the Company shall have the right to postpone the Closing Date, but in no event for longer than seven days, in order that the required changes, if any, in the Registration Statement, in the Time of Sale Prospectus, in the Prospectus or in any other documents or arrangements may be effected. If, on an Option Closing Date, any Underwriter or Underwriters shall fail or refuse to purchase Additional Shares and the aggregate number of Additional Shares with respect to which such default occurs is more than one-tenth of the aggregate number of Additional Shares to be purchased on such Option Closing Date, the non-defaulting Underwriters shall have the option to (i) terminate their obligation hereunder to purchase the Additional Shares to be sold on such Option Closing Date or (ii) purchase not less than the number of Additional Shares that such non-defaulting Underwriters would have been obligated to purchase in the absence of such default. Any action taken under this paragraph shall not relieve any defaulting Underwriter from liability in respect of any default of such Underwriter under this Agreement.

If this Agreement shall be terminated by the Underwriters, or any of them, because of any failure or refusal on the part of the Company to comply with the terms or to fulfill any of the conditions of this Agreement, or if for any reason the Company shall be unable to perform its obligations under this Agreement, the Company will reimburse

the Underwriters or such Underwriters as have so terminated this Agreement with respect to themselves, severally, for all out-of-pocket expenses (including the fees and disbursements of their counsel) reasonably incurred by such Underwriters in connection with this Agreement or the offering contemplated hereunder.

11. *Entire Agreement.* (a) This Agreement, together with any contemporaneous written agreements and any prior written agreements (to the extent not superseded by this Agreement) that relate to the offering of the Shares, represents the entire agreement between the Company and the Underwriters with respect to the preparation of any preliminary prospectus, the Time of Sale Prospectus, the Prospectus, the conduct of the offering, and the purchase and sale of the Shares.

(b) The Company acknowledges that in connection with the offering of the Shares: (i) the Underwriters have acted at arm's length, are not agents of, and owe no fiduciary duties to, the Company or any other person, (ii) the Underwriters owe the Company only those duties and obligations set forth in this Agreement, any contemporaneous written agreements and prior written agreements (to the extent not superseded by this Agreement), if any, and (iii) the Underwriters may have interests that differ from those of the Company. The Company waives to the full extent permitted by applicable law any claims it may have against the Underwriters arising from an alleged breach of fiduciary duty in connection with the offering of the Shares.

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

For purposes of this Section a "**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. “**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.

13. *Counterparts.* This Agreement may be signed in two or more counterparts, each of which shall be an original, with the same effect as if the signatures thereto and hereto were upon the same instrument.

14. *Applicable Law.* This Agreement shall be governed by and construed in accordance with the internal laws of the State of New York.

15. *Headings.* The headings of the sections of this Agreement have been inserted for convenience of reference only and shall not be deemed a part of this Agreement.

16. *Notices.* All communications hereunder shall be in writing and effective only upon receipt and if to the Underwriters shall be delivered, mailed or sent to the Representatives in care of Morgan Stanley & Co. LLC, 1585 Broadway, New York, New York 10036, Attention: Equity Syndicate Desk, with a copy to the Legal Department; and BofA Securities, Inc., One Bryant Park, New York, New York 10036, Attention: Syndicate Department (facsimile: (646) 855-3073), with a copy to ECM Legal (facsimile: (212) 230-8730); and if to the Company shall be delivered, mailed or sent to Shockwave Medical, Inc., Corporate Secretary; Attn: Haj Tada, 5403 Betsy Ross Drive, Santa Clara, California 95054.

*[Signature page follows]*

Very truly yours,

**SHOCKWAVE MEDICAL, INC.**

By: /s/ Doug Godshall

Name: Doug Godshall

Title: President and CEO

Accepted as of the date hereof

Morgan Stanley & Co. LLC  
BofA Securities, Inc.  
Acting severally on behalf of themselves and  
the several Underwriters named in  
Schedule I hereto.

Morgan Stanley & Co. LLC

By: /s/ Chris Rigoli

Name: Chris Rigoli

Title: Vice President

BofA Securities, Inc.

By: /s/ Brandon Rice

Name: Brandon Rice

Title: Managing Director

*[Signature page to Underwriting Agreement]*

<u>Underwriter</u>	<u>Number of Firm Shares To Be Purchased</u>
Morgan Stanley & Co. LLC	715,790
BofA Securities, Inc.	662,105
Wells Fargo Securities, LLC	322,105
Total:	<u>1,700,000</u>

**Time of Sale Prospectus**

1. Preliminary Prospectus dated June 16, 2020
2. Schedule of other information included in the Time of Sale Prospectus:

Issuer:	Shockwave Medical, Inc.
Exchange Listing:	SWAV / Nasdaq
Size:	\$77,775,000.00
Base Shares Offered:	1,700,000
Option to Purchase Additional Shares:	255,000
Price to Public (per share):	\$45.75
Trade Date:	June 17, 2020
Closing Date:	June 19, 2020
Underwriters:	Morgan Stanley & Co. LLC BofA Securities, Inc. Wells Fargo Securities, LLC



## FORM OF LOCK-UP LETTER

, 2020

Morgan Stanley &amp; Co. LLC

BofA Securities, Inc.

c/o Morgan Stanley & Co. LLC  
1585 Broadway  
New York, NY 10036

c/o BofA Securities, Inc.  
One Bryant Park  
New York, NY 10036

Ladies and Gentlemen:

The undersigned understands that Morgan Stanley & Co. LLC ("**Morgan Stanley**") and BofA Securities, Inc. ("**BofA**") propose to enter into an Underwriting Agreement (the "**Underwriting Agreement**") with Shockwave Medical, Inc., a Delaware corporation (the "**Company**"), providing for the public offering (the "**Public Offering**") by the several Underwriters, including Morgan Stanley and BofA (the "**Underwriters**"), of shares (the "**Shares**") of common stock, par value \$0.001 per share, of the Company (the "**Common Stock**").

To induce the Underwriters that may participate in the Public Offering to continue their efforts in connection with the Public Offering, the undersigned hereby agrees that, without the prior written consent of Morgan Stanley and BofA on behalf of the Underwriters, it will not, and will not publicly disclose an intention to, during the period commencing on the date hereof and ending 75 days after the date of the final prospectus supplement (the "**Restricted Period**") relating to the Public Offering (the "**Prospectus**"), (1) offer, pledge, sell, contract to sell, sell any option or contract to purchase, purchase any option or contract to sell, grant any option, right or warrant to purchase, lend, or otherwise transfer or dispose of, directly or indirectly, any shares of Common Stock beneficially owned (as such term is used in Rule 13d-3 of the Securities Exchange Act of 1934, as amended (the "**Exchange Act**")), by the undersigned or any other securities so owned convertible into or exercisable or exchangeable for Common Stock or (2) enter into any swap or other arrangement that transfers to another, in whole or in part, any of the economic consequences of ownership of the Common Stock, whether any such transaction

described in clause (1) or (2) above is to be settled by delivery of Common Stock or such other securities, in cash or otherwise. The foregoing sentence shall not apply to:

- (a) transactions relating to shares of Common Stock or other securities acquired in open market transactions after the completion of the Public Offering, *provided* that no filing under Section 16(a) of the Exchange Act or other public announcement shall be required or shall be voluntarily made in connection with subsequent sales of Common Stock or other securities acquired in such open market transactions during the Restricted Period;
- (b) transfers of shares of Common Stock or any security convertible into Common Stock (i) as a bona fide gift, (ii) to an immediate family member or a trust for the direct or indirect benefit of the undersigned or such immediate family member of the undersigned (for purposes of this lock-up letter, “**immediate family**” shall mean any relationship by blood, marriage or adoption, not more remote than first cousin), (iii) if the undersigned is a trust, to a trustor or beneficiary of the trust or to the estate of a beneficiary of such trust, (iv) if the undersigned is a corporation, partnership, limited liability company, investment fund or other entity, distributions of shares of Common Stock or any security convertible into shares of Common Stock to stockholders, limited partners, members or affiliates or to any other entity that is controlled or managed by, or under common control or management with, the undersigned or (v) by will, other testamentary document or intestate succession to the legal representative, heir, beneficiary or a member of the immediate family of the undersigned; *provided* that in the case of any transfer or distribution pursuant to this clause (b), (i) each donee or distributee shall sign and deliver a lock-up letter substantially in the form of this letter, (ii) no filing under Section 16(a) of the Exchange Act or other public announcement, reporting a reduction in beneficial ownership of shares of Common Stock, shall be required or shall be voluntarily made during the Restricted Period and (iii) such transfer shall not involve a disposition for value;
- (c) transfers of shares of Common Stock or any securities convertible into or exercisable or exchangeable for Common Stock that occur by operation of law pursuant to a qualified domestic order or in connection with a divorce settlement, *provided* that (i) each transferee shall sign and deliver a lock-up letter substantially in the form of this letter, (ii) any public report or filing required to be made under Section 16(a) of the Exchange Act shall clearly indicate in the footnotes thereto that such transfer is pursuant to a qualified domestic order or in connection with a divorce settlement and (iii) such transfer shall not involve a disposition for value, and *provided, further* that no other public announcement shall be required or shall be made voluntarily in connection with such transfer;
- (d) transfers of shares of Common Stock or any securities convertible into or exercisable or exchangeable for Common Stock to the Company pursuant to agreements entered into pursuant to a stock incentive plan disclosed in the Prospectus and in effect on the date of the Prospectus under which the Company has the option to repurchase such shares or securities upon termination of service of the undersigned, *provided* that if

the undersigned is required to file a report under Section 16(a) of the Exchange Act during the Restricted Period, the undersigned shall clearly indicate in the footnotes thereto that such transfer is pursuant to the circumstances described in this clause (d), and *provided, further* that no other public announcement shall be made voluntarily in connection with such transfer;

- (e) the exercise of outstanding warrants by the undersigned described in the Prospectus or any stock option by the undersigned that was granted under a stock incentive plan or stock purchase plan described in the Prospectus, *provided* that the shares received upon exercise shall continue to be subject to the restrictions on transfer set forth in this lock-up letter and *provided, further* that if the undersigned is required to file a report under Section 16(a) of the Exchange Act during the Restricted Period, the undersigned shall clearly indicate in the footnotes thereto that the filing relates to the exercise of a stock option or warrant, that no shares were sold by the reporting person and that the shares received upon exercise of the stock option or warrant are subject to a lock-up letter agreement with the Underwriters of the Public Offering, and *provided, further* that no other public announcement shall be made voluntarily in connection with such exercise;
- (f) the transfer of shares of Common Stock or any security convertible into Common Stock to the Company upon the exercise of options or warrants to purchase the Company's securities outstanding as of the date hereof or pursuant to a stock incentive plan or stock purchase plan described in the Prospectus, on a "cashless" or "net exercise" basis, *provided* that the shares received upon exercise shall continue to be subject to the restrictions on transfer set forth in this lock-up letter and *provided, further* that if the undersigned is required to file a report under Section 16(a) of the Exchange Act during the Restricted Period, the undersigned shall clearly indicate in the footnotes thereto that the filing relates to the "cashless" or "net" exercise of a stock option or warrant, that no shares were sold by the reporting person and that the shares received upon exercise of the stock option or warrant are subject to a lock-up letter agreement with the Underwriters of the Public Offering, and *provided, further* that no other public announcement shall be made voluntarily in connection with such transfer;
- (g) the transfer of shares of Common Stock or any security convertible into Common Stock to the Company, or the withholding of shares of Common Stock by the Company, in connection with a vesting event of the Company's securities granted pursuant to a stock incentive plan or stock purchase plan described in the Prospectus, to cover tax withholding obligations or the payment of taxes due in connection with the vesting event, *provided* that if the undersigned is required to file a report under Section 16(a) of the Exchange Act during the Restricted Period, the undersigned shall clearly indicate in the footnotes thereto that the purpose of such transfer is to cover such tax withholding obligations or the payment of taxes due in connection with the vesting event, and *provided, further* that no other public announcement shall be made voluntarily in connection with such transfer;

- (h) a merger, consolidation or other similar transaction involving a Change of Control (as defined below) of the Company after the closing of the Public Offering and approved by the Company's board of directors, *provided* that in the event that such Change of Control is not completed, the undersigned's shares shall remain subject to the restrictions contained in this lock-up letter and title to the undersigned's shares shall remain with the undersigned;
- (i) the establishment of a trading plan pursuant to Rule 10b5-1 under the Exchange Act (a "**Trading Plan**") for the transfer of shares of Common Stock, *provided* that (i) such plan does not provide for the transfer of Common Stock during the Restricted Period and (ii) to the extent a public announcement or filing under the Exchange Act, if any, is required of or voluntarily made by or on behalf of the undersigned or the Company regarding the establishment of such plan, such announcement or filing shall include a statement to the effect that no transfer of Common Stock may be made under such plan during the Restricted Period; and
- (j) the transfer of shares of Common Stock pursuant to a Trading Plan, provided that such plan was established prior to the execution of this letter agreement by the undersigned (such Trading Plan, an "**Existing Plan**"), provided further, that if the undersigned reports any such sale or transfer on a Form 4 under Section 16(a) of the Exchange Act, the undersigned shall cause such Form 4 to include a statement that such transfer was effected pursuant to an Existing Plan that was in effect on the date that the undersigned executed this letter agreement; and provided further that the undersigned shall not, without the prior written consent of the Representatives, amend any Existing Plan to permit any sales or transfers of additional shares during the Restricted Period unless such transfer is otherwise permitted under the terms of this letter agreement.

In addition, the undersigned agrees that, without the prior written consent of Morgan Stanley and BofA on behalf of the Underwriters, it will not, and will not publicly disclose an intention to, during the Restricted Period, make any demand for or exercise any right with respect to, the registration of any shares of Common Stock or any security convertible into or exercisable or exchangeable for Common Stock. "Change of Control" means the transfer (whether by tender offer, merger, consolidation or other similar transaction), in one transaction or a series of related transactions, to a person or group of affiliated persons (other than an Underwriter pursuant to the Public Offering), of the Company's voting securities if, after such transfer, such person or group of affiliated persons would hold more than a majority of the outstanding voting securities of the Company (or the surviving entity).

The undersigned also agrees and consents to the entry of stop transfer instructions with the Company's transfer agent and registrar against the transfer of the undersigned's shares of Common Stock except in compliance with the foregoing restrictions.

The undersigned understands that the Company and the Underwriters are relying upon this agreement in proceeding toward consummation of the Public Offering. The undersigned further understands that this agreement is irrevocable and shall be binding upon the undersigned's heirs, legal representatives, successors and assigns.

This lock-up letter shall automatically terminate and the undersigned shall be released from all obligations under this lock-up letter upon the earliest to occur, if any, of (i) the date the Company advises Morgan Stanley and BofA, in writing, prior to the execution of the Underwriting Agreement, that it has determined not to proceed with the Public Offering, (ii) the date of the termination of the Underwriting Agreement (other than the provisions thereof which survive termination) if prior to the closing of the Public Offering or (c) June 30, 2020 if, and only if, the Underwriting Agreement has not been signed by such date.

Whether or not the Public Offering actually occurs depends on a number of factors, including market conditions. Any Public Offering will only be made pursuant to an Underwriting Agreement, the terms of which are subject to negotiation between the Company and the Underwriters.

This agreement and any claim, controversy or dispute arising under or related to this agreement shall be governed by and construed in accordance with the laws of the State of New York, without regard to the conflict of laws principles thereof.

*[Signature page follows]*

Very truly yours,

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Name of Securityholder *(Print exact name)*

By: \_\_\_\_\_  
Signature

If not signing in an individual capacity:

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Name of Authorized Signatory *(Print)*

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Title of Authorized Signatory *(Print)*

*(indicate capacity of person signing if signing as custodian, trustee, or on behalf of an entity)*

*[Signature Page to Lock-Up Letter]*

**New York**  
**Northern California**  
**Washington DC**  
**São Paulo**  
**London**

**Paris**  
**Madrid**  
**Hong Kong**  
**Beijing**  
**Tokyo**

## Davis Polk

Davis Polk & Wardwell LLP  
1600 El Camino Real  
Menlo Park, CA 94025

650 752 2000 tel  
www.davispolk.com

June 19, 2020

Shockwave Medical, Inc.  
5403 Betsy Ross Drive  
Santa Clara, CA 95054

Ladies and Gentlemen:

Shockwave Medical, Inc., a Delaware corporation (the “**Company**”), has filed with the Securities and Exchange Commission a Registration Statement on Form S-3 (File No. 333-239202) (the “**Registration Statement**”) for the purpose of registering under the Securities Act of 1933, as amended (the “**Securities Act**”), certain securities, including the 1,955,000 shares of its common stock, par value \$0.001 per share (the “**Securities**”) to be sold pursuant to the Underwriting Agreement dated June 16, 2020 (the “**Underwriting Agreement**”) among the Company and the several underwriters named therein (the “**Underwriters**”). The Securities include 255,000 shares that the Underwriters have the option to purchase pursuant to the Underwriting Agreement.

We, as your counsel, have examined originals or copies of such documents, corporate records, certificates of public officials and other instruments as we have deemed necessary or advisable for the purpose of rendering this opinion.

In rendering the opinion expressed herein, we have, without independent inquiry or investigation, assumed that (i) all documents submitted to us as originals are authentic and complete, (ii) all documents submitted to us as copies conform to authentic, complete originals, (iii) all signatures on all documents that we reviewed are genuine, (iv) all natural persons executing documents had and have the legal capacity to do so, (v) all statements in certificates of public officials and officers of the Company that we reviewed were and are accurate and (vi) all representations made by the Company as to matters of fact in the documents that we reviewed were and are accurate.

Based upon the foregoing, we advise you that, in our opinion, when the Securities have been issued and delivered against payment therefor in accordance with the terms of the Underwriting Agreement, the Securities will be validly issued, fully paid and non-assessable.

We are members of the Bars of the States of New York and California and the foregoing opinion is limited to the laws of the State of New York and the General Corporation Law of the State of Delaware.

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We hereby consent to the filing of this opinion as an exhibit to a report on Form 8-K to be filed by the Company on the date hereof and its incorporation by reference into the Registration Statement and further consent to the reference to our name under the caption "Legal Matters" in the prospectus supplement, which is a part of the Registration Statement. In giving this consent, we do not admit that we are in the category of persons whose consent is required under Section 7 of the Securities Act.

Very truly yours,

/s/ Davis Polk & Wardwell LLP